

ベトナム国
ゲアン省人民委員会

ベトナム国
ゲアン省農業振興開発計画策定支援
プロジェクト

ファイナルレポート
(ANNEXES)

平成 31 年 3 月
(2019 年)

独立行政法人国際協力機構 (JICA)

NTC インターナショナル株式会社
株式会社オリエンタルコンサルタンツグローバル

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Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

Final Report (Annexes)

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Annex 1 List of Minutes on JCC Meeting Held During Project

Minutes of Meetings
of
First Joint Coordinating Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as “the Project”) has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on 15th October, 2015.

The Project Team, which consisted of the JICA experts, JICA Consultant Team and Vietnamese counterparts of Nghe An PPC, has carried out a series of the works since march 2016. The first Joint Coordinating Committee (JCC) meeting was held with officials concerned in attendance at the conference hall of Saigon Kimlien Hotel in Vinh city on 10th May, 2016.

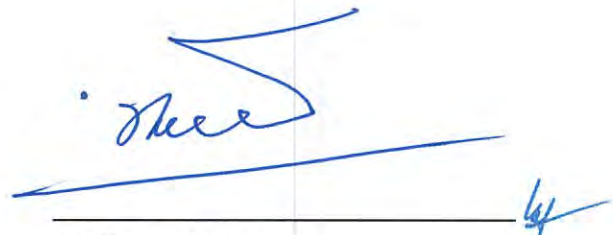
In the meeting, the Project implementation policy/plan and some important issues were explained by the Project Team. In response to these presentations, animated discussion was made by the attendants. The main discussion points in the meeting are described in the attached document.

10th May, 2016



Mr. Naoki Kakioka
Senior Representative
JICA Vietnam Office





Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee

Minutes of Meetings of First Joint Coordinating Committee Meeting on Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An


The first Joint Coordinating Committee meeting of the Project was held on 10th May, 2016, at the conference hall of Saigon Kimlien Hotel in Vinh city. The agenda and attendants are listed in Attachment 1. After the opening address of Vice-Chairman of Nghe An PPC, three presentations were made: 1) Outline of the Project by Mr. Nguyen Van Lap, the chairman of the PMU; 2) Important Issues regarding agricultural marketing platform and pilot projects by Mr. Mitsuo Nishiya, a the leader of the JICA Consultant Team; and 3) Suggestion for Promoting Agricultural Restructuring by Mr. Susumu Uchiumi, the JICA Expert to Ministry of Agriculture and Rural Development (MARD). Then, the attendants discussed on the following issues related to the Project.

(1) Outline of the Project

The Director of the Project Management Unit (PMU) explained the outline, basic policy and work methods of the Project, based on the Inception Report drafted by the JICA Consultant Team. It was reminded that the final output of the Project, "Agricultural Development Plan for Nghe An Province" shall be one of the component of the 5-year Plan for Agriculture and Rural Development (2021 - 2015).

(2) Agricultural Marketing Platform

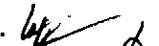
The leader of the JICA Consultant Team proposed the structure of the Agricultural Marketing Platform (AMPF), which was revised from the description in the Inception Report. The attendants agreed the following structure.

- The AMPF will be established under the PMU by Nghe An provincial government, to improve food value chain through information sharing.
- In the district level, the heads of agricultural extension stations under provincial Department of Agriculture and Rural Development (DARD) will be assigned to collaborate with the AMPF.
- The main staffs of the AMPF will be consists of two PMU members from DARD, one from Department of Industry and Trade (DOIT) and one from Department of Planning and Investment (DPI). In order to effectively manage the extension stations, Nghe An PPC will newly assign the Director of the agricultural extension station to the staff of the AMPF as a new member of the PMU. Therefore, the total number of the AMPF main staffs shall be five. 

(3) Schedule of AMPF operation and pilot project implementation

The leader of the JICA Consultant Team proposed the below schedule of the AMPF operation and the Director of PMU and all attendant agreed on it.

- Nghe An PPC will officially establish the AMPF, which consists of two divisions of market promotion and market information, by May.
- The AMPF shall start data and information collection in June. The AMPF shall analyze market information and needs to prepare marketing promotion strategies by August.
- The AMPF shall prepare the pilot project plans based on the tentative ideas prepared by the JICA Consultant Team and other information collected.
- To support the AMPF activities, the JICA Consultant Team shall provide two seminars in Nghe An and a training in Japan mainly for the PMU members and the AMPF staffs.
- The AMPF shall start working group operation and pilot projects with assistance of the JICA Consultant Team from October and/or November.

The Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes. 

End

Attachment-1**Agenda:**

Time	Item
14:00 - 14:10	Introduction of attendants (Deputy Director of DARD)
14:10 - 14:20	Opening Address (Vice-Chairman of Nghe An PPC)
14:20 - 14:35	Presentation of Outline of the Project (Deputy Director of DARD)
14:35 - 15:10	Presentation of Important Issues (Leader of JICA Project Team)
15:10 - 15:30	Presentation of Suggestion for Promoting Agriculture Restructuring (JICA Expert to MARD)
15:50 - 16:45	Discussions
16:45 - 17:00	Closing Address (Senior Representative of JICA Office, Vice-Chairman of Nghe An PPC)
17:00 -	Reception

Attendants:

Name	Position, Organization
Vietnamese side	
PSC	
Mr. Dinh Viet Hong	Vice Chairman, Nghe An Provincial People's Committee (PPC) - Chairman
Mr. Nguyen Van Lap	Deputy Director, Department of Agriculture and Rural Development (DARD) - Vice Chairman
Mr. Vo Hong Duong	Deputy Administrator, Nghe An PPC's Administration Office
Mr. Nguyen Ngoc Duc	Deputy Director, Department of Finance (DOF)
Mr. Bui Tram	Deputy Director, Department of Industry and Trade (DOIT)
Mr. Nguyen Ngoc Vo	Deputy Director, Department of Natural Resources and Environment (DONRE)
Ms. Hoang Thi Quynh Anh	Deputy Director, Department of Culture, Sport and Tourism (DOCST)
Mr. Dau Huy Hoan	Deputy Director, Department of Health (DOH)
PMU	
Mr. Truong Minh Chau	Head of Crop Production Division, DARD, Project Vice Standing Director
Ms. Tran Thi Anh Hue	Head of Cultural and Foreign Affairs, Nghe An PPC, Project Officer
Mr. Pham Hoai Duc	Head of Financial Planning Division, DOIT, Project Vice Director
Ms. Luong Thi Minh Hang	Chief accountant, DARD, Project Chief accountant
Mr. Nguyen Van Hoi	Officer of Crop Production Division, DARD, Project Officer
Ms. Ho Thi Xuan	Deputy Head of District and Commune Budget Division, Department of Finance (DOF), Project Officer
Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, DPI, Project Officer
Mr. Tran Nguyen Truyen	Head of Health Professional Division, Department of Health (DOH), Project Officer
Mr. Le Van Khanh	Deputy Head of Scientific Management Division, Department of Science and Technology (DOST), Project Officer
Mr. Nguyen Tran Quang	Deputy Head of General Planning Department, DOT, Project Officer
Mr. Dinh Sy Khanh Vinh	Officer of Financial Planning Division, DONRE, Project Officer
Mr. Hoang Duc Chung	Officer of Business Tourism Division, DOCST, Project Officer
Mr. Trinh Ba Quan	Deputy Head of General Economics Department, Provincial Cooperative Alliance, Project Officer
Mr. Le Van Luong	Sub Department of Rural Development, DARD
Mr. Pham Van Linh	Head of Agricultural Science Institute of North Central of Viet Nam
Mr. Nguyen Van Tuat	Vice-director of Agricultural Science Institute of North Central of Viet Nam
Japanese Side	
Mr. Naoki KAKIOKA	Senior Representative, JICA Vietnam Office
Mr. Satoshi YAMAMOTO	Lead Advisor for Agri-business, JICA Vietnam Office


Ms. Hoang Thu Thuy	National Staff in charge, JICA Vietnam Office
Mr. Susumu UCHIUMI	JICA Expert, Integrated Agriculture and Rural Development, Ministry of Agriculture and Rural Development (MARD)
Mr. Mitsuo NISHIYA	Leader of JICA Consultant Team
Mr. Yoshihiro FUJITA	Member of JICA Consultant Team
Mr. Takashi KOTEGAWA	Member of JICA Consultant Team
Mr. Keiji IIZUKA	Member of JICA Consultant Team
Mr. Yuta TAKENO	Member of JICA Consultant Team
Ms. Ho Thi Trang	Assistant of JICA Consultant Team
Ms. Nguyen Thi Hai Anh	Assistant of JICA Consultant Team
Ms. Nguyen Hong Thai	Assistant of JICA Consultant Team
Mr. Kazuya TAKAHASHI	JICA Expert for Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An
Ms. Nguyen Hai Chau	Assistant for JICA Expert for Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An


Minutes of Meetings
of
Second Joint Coordinating Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as "the Project") has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on October 15, 2015.

Project Management Unit (PMU) which was established under Nghe An PPC has carried out a series of the works since March 2016 with support of the JICA Project Team which consists of the JICA experts and the JICA consultant team. The second Joint Coordinating Committee (JCC) was held with officials concerned in attendance at the conference room of Department of Agriculture and Rural Development in Vinh city on October 14, 2016.

In the meeting, the progress of the Project and some important issues were explained by the Project Team. The main discussion points and agreed matters in the meeting are described in the attached document.

October 14, 2016 


for

Mr. Naoki Kakioka
Senior Representative
JICA Vietnam Office



Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee

**Minutes of Meetings of Second Joint Coordinating Committee Meeting on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An**

The second JCC meeting of the Project was held on October 14, 2016, at the conference room of Department of Agriculture and Rural Development (DARD) in Vinh city. The agenda and attendants are listed in Attachment 1. After the opening address of Vice-Chairman of Nghe An PPC, four presentations were made:

- 1) Overall progress of the Project by Mr. Nguyen Van Lap, the chairman of the Project Management Unit (PMU);
- 2) Supplemental presentation on pilot project implementation by Mr. Kazuya Takahashi, JICA project coordinator;
- 3) Supplemental presentation on pilot project design, AMPF activity and modification of the Work Flow for 3 years, which was presented and approved in 1st JCC, by Mr. Mitsuo Nishiya, leader of the JICA Consultant Team and
- 4) Report of the Training in Japan by Mr. Truong Minh Chau, Project Vice Standing Director.

Then, the attendants discussed on the following issues related to the Project and made consensus.

(1) Progress of the Project

The project has been implemented in line with schedule proposed in the 1st JCC meeting. The following major progresses were confirmed by the attendants.

- The Agricultural Marketing Platform (AMPF), whose structure was agreed in the 1st JCC meeting, was formally established with five core members and 21 Agricultural Extension Stations (AES).
- The seminar for PMU and AMPF was carried out twice in July and September, 2016. The role of public sector was explained in the first seminar, and profit sharing in agriculture value chain was explained in the second seminar.
- Database of producers was almost completed with assistance of AES. The AMPF shall accumulate customers' information. The AMPF is expected to share and utilize the database to support for value chain establishment.
- Plans of the pilot projects have been prepared under the concept of market-oriented approach. The specific market needs were identified, and then improvement plans of production system were prepared.
- Some pilot projects have been started with participation of agricultural enterprises, farmers groups, customers, and local government staffs. Technical support and proper

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monitoring are required under management of AMPF/PMU.

- Two workshops for information exchange of Japanese and Nghe An companies have been implemented in Nghe An and Hanoi. Various Japanese companies took part in the workshop to get precious information and to prepare their business plans. Another workshop will be held in Nghe An in the middle of December, 2016.
- Business trip and training in Japan were carried out with participation of Nghe An government officers and some private company staffs to understand agricultural value chain in Japan from the view point of public and private sector.

(2) Principle of Pilot Project Design

The Project Team explained the design concept of pilot projects, which was more clearly based on market-oriented approach than the explanation in the previous JCC meeting.


- The Project strongly focuses on value chain of agricultural products in Nghe An. The pilot projects are designed aiming at establishment of the value chain from production to consumption. In this concept, specific demands of customers are identified and then the production systems shift to meet the demands.
- The Project Team explained the list of the pilot project plans, which were based on specific needs of market/customers. Applying the same principle, the AMPF shall prepare additional plans through market research, data collection and sharing, support to Working Group activities, etc.

(3) Strengthening of Agricultural Marketing Platform

The ways to keep the AMPF active were discussed among the attendants. The main points were as follows.

- Departments involved in Project Steering Committee (PSC) are expected to keep high concern to the Project. To activate the AMPF activities, proper allocation of financial and human resources is a crucial factor.
- The JICA consultant proposed to implement regular joint work with core members of the AMPF and JICA members, and share the work progress among the members.
- The sustainable system of the AMPF operation shall be established by the end of the Project.

(4) Work Flow for 3 years

The revised Work Flow of the Project was explained by the Project Team and it was agreed by the attendants. The main points of the revision are as follows. 

- Some pilot projects have started since August 2016 in order to obtain useful results as much as possible, although they were planned to start in early 2017 in the original Work Flow.
- Because of concentration on the pilot project, the fundamental study on agriculture sector and formulation of draft Master Plan was not deeply carried out yet. The draft M/P will be prepared by the middle of 2017, with results of verification of the pilot projects.
- The Project Team and the AMPF will continuously plan and implement the pilot projects for verification of establishment of agricultural value chain in the following project period.

(5) Others

Representative of JICA Vietnam Office requested following things to JCC and it was agreed by the attendance.

- Member of PMU belonging to DARD has played main role of the project implementation since the beginning, because most of business matching were made in Crop Production area. However from now on other department such as DPI, DOIT and DONRE must be involved into the project implementation more. (DPI and DOIT will be concerned with Business Registration in case Japanese private enterprises want to establish agri-business in Nghe An Province. And if Japanese private enterprises want to have its own farm land, DONRE will be concerned.)
- Grassroots Project has been also implementing simultaneously with DOCST in Nghe An. The Grassroots project creates Agri-Product like souvenir with crops and fruits. If the Project improves quality of crops and fruits for Food Value Chain, the Grassroots project will also use such high value materials for Agri-Products and make more values. Thus both project must exchange information and cooperate.
- In case Japanese private company requires farm land in Nghe An for new Ari-Business, PPC and PSC would be required much effort to allocate it. It would be contributed to local economic development.

This Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes.

End 

Attachment-1

Agenda:

Time	Subject	Personnel	Remarks
14:00 – 14:10	Introduction of participants <ul style="list-style-type: none">• PSC/PMU• JICA Project/Consultant	PSC/Mr. Lap JICA/Mr. Yamamoto	
14:10 – 14:15	Opening Remarks <ul style="list-style-type: none">• Opening Remarks	PSC/Mr. Hong	
14:15 – 14:55	General Explanation of Progress of the Project <ul style="list-style-type: none">• Project operation/management• New concept of the Project	PMU/Mr. Lap	
14:55 – 15:15	Progress of Projects <ul style="list-style-type: none">• Specific Projects	JICA Project/ Mr. Takahashi	
	Break		
15:30 – 15:55	Progress of Projects <ul style="list-style-type: none">• AMPF Activities• Design and Progress of Pilot Projects	JICA Consultant/ Mr. Nishiya	
15:55 – 16:20	Report of "Training in Japan"	PMU/Mr. Chau	
16:20 – 17:00	Overall Discussion and Wrap Up <ul style="list-style-type: none">• Overall discussion• Way forward• Closing Remarks	PSC/Mr. Hong	

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List of Participants

No	Name	Position, Organization
Project Steering Committee (PSC)		
1	Mr. Dinh Viet Hong	Vice chairman, Nghe An Provincial People's committee (PPC) - Chairman
2	Mr. Nguyen Van Lap	Deputy director, Department of Agriculture and Rural Development (DARD) – Vice chairman
3	Mr. Nguyen Ngoc Duc	Deputy director, Department of Finance (DOF)
4	Mr. Bui Tram (Mr. Pham Hoai Duc)	Deputy director, Department of Industry and Trade (DOIT)
5	Mr. Pham Van Vinh (Mr. Nguyen Quang Loi)	Deputy Director, Department of Planning and Investment (DPI)
6	Mr. Dau Huy Hoan (Mr. Tran Nguyen Truyen)	Deputy Director, Department of Health (DOH)
7	Mr. Nguyen Ngoc Vo (Mr. Dinh Sy Khanh Vinh)	Deputy Director, Department of Natural Resources and Environment (DONRE)
8	Mr. Hoang Van Hue	Deputy Director, Department of Transportation
9	Mr. Nguyen Manh Cuong	Deputy Director, Department of Culture, Sport and Tourism (DOCST)
Project Management Unit (PMU)		
	Mr. Nguyen Van Lap	Deputy director, Department of Agriculture and Rural Development (DARD) – Chairman
1	Mr. Truong Minh Chau	Head of Technical, Scientific and Technologic Management Division, DARD, Project Vice Standing Director
	Mr. Pham Hoai Duc	Head of Financial Planning Division, Department of Industry and Trade (DOIT)
	Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, Department of Planning and Investment (DPI)
	Mr. Dinh Sy Khanh Vinh	Officer of Financial Planning Division, Department of Natural Resources and Environment (DONRE)
	Mr. Tran Nguyen Truyen	Head of Health Professional Division, Department of Health
Japan International Cooperation Agency (JICA)		
1	Mr. Satoshi Yamamoto	JICA Vietnam Office, Lead Advisor for Agri-business
2	Mr. Yasuo Watanabe	JICA Expert, MARD
3	Mr. Hiroyuki Sakuma	Project Advisor, JICA Nghe An Project
4	Mr. Kazuya Takahashi	Coordinator, JICA Nghe An Project
5	Mr. Mitsuo Nishiya	Leader of Consultant, JICA Nghe An Project
6	Mr. Tateo Morita	Consultant, JICA Nghe An Project
7	Mr. Kazuhiro Naruo	Consultant, JICA Nghe An Project
8	Mr. Keiji Iizuka	Consultant, JICA Nghe An Project
9	Mr. Yasuyuki Maeda	Consultant, JICA Nghe An Project
10	Ms. Miki Kasai	Consultant, JICA Nghe An Project
11	Mr. Tran Quang Duong	JICA Vietnam Office, Program Coordinator
Assistants of JICA Project Team		
1	Ms. Bui Thi Minh Quynh	Assistant for JICA Coordinator
2	Ms. Nguyen Hai Chau	Assistant for JICA Coordinator
3	Ms. Ho Thi Thuy Duyen	Assistant for JICA Coordinator
4	Mr. Bien Quang Tu	Technical Assistant of JICA Consultant
5	Mr. Hien Nguyen Huu	Technical Assistant of JICA Consultant
6	Ms. Nguyen Hong Thai	Assistant of JICA Consultant
7	Ms. Ho Thi Trang	Assistant of JICA Consultant
8	Ms. Nguyen Thi Hai Anh	Assistant of JICA Consultant

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Attachment 3 Concept and List of Pilot Project

Concept of Pilot Project

Basic concept of formulating pilot project is to create the production system based on the needs and demand of markets. The pilot projects shown in the table below are formulated based on this “Market In” concept as described in the figure right.



List of Pilot Project

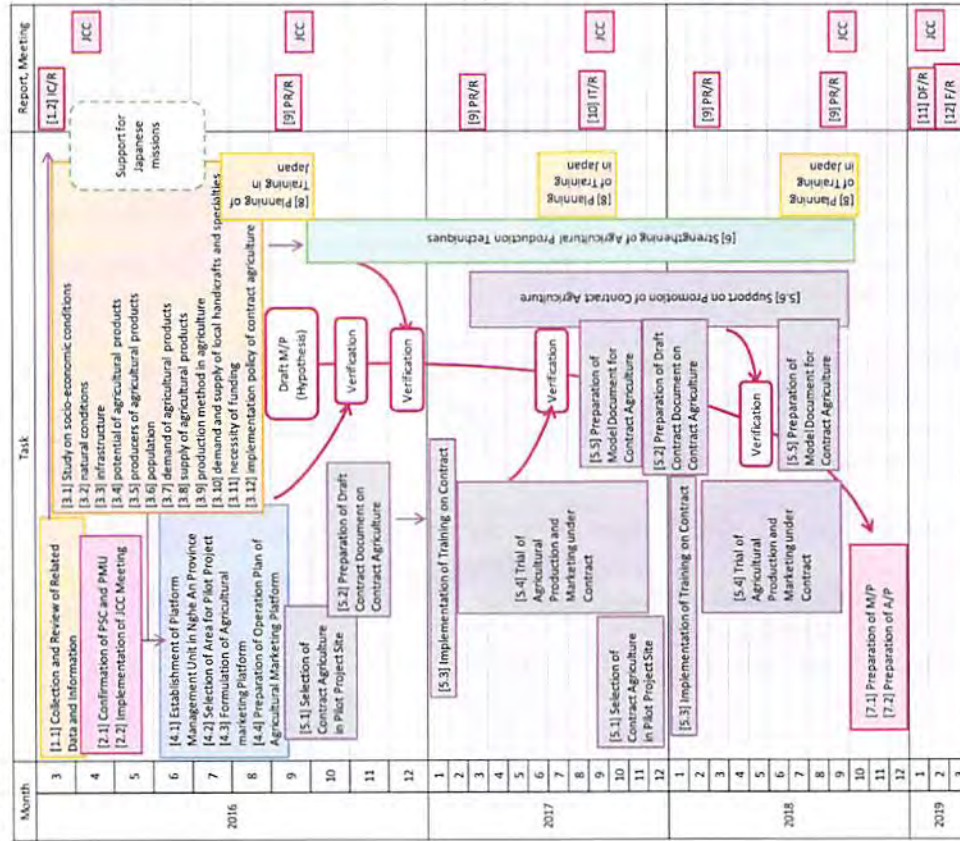
	Pilot Project	Producer	Processor	Demand	Stage
1	Quality Improvement of passion fruit puree for competitive marketing	Nafoods/ Que Phong FG	Nafoods	Maruzen Chemical, etc.	On-going
2	Production of competitive fresh passion fruit for domestic market			AEON-Hanoi, Maximark, etc.	On-going
3	Evaluation of passion fruit seed quality for Piceatannol extraction			Morinaga, etc.	Sample test
4	Evaluation of passion fruit peel quality for Pectin extraction			Maruzen Chemical, etc.	Planning
5	Introduction of cultivation technique of spinach for IQF processing	Tam Nguyen/ Quynh Luu FG	Nafoods	Korean traders, Maruzen Chemical	On-going
6	Improvement of competitiveness of ginger production for export market	Ky Son FG	Nafoods	Maruzen Chemical, Zensho	Sample test
7	Introduction of contract farming for efficient delivery of fresh bamboo shoot	Yen Thanh FG	Nafoods	Maruzen Co. Other demand include China	Planning
8	Promotion of Thanh Chuong Chicken brand	Chicken farmers groups in Thanh Chuong district	Truong Lan co., Tam Nong co., etc.	Maximark Tam Nong (hotel, restaurant, school, etc) Thanh Chuong Chicken Restaurant	On-going
9	Improvement of distribution system of Thanh Chuong Chicken				On-going
10	Acquisition of VietGAHP certificate by Thanh Chuong chicken farmers group				On-going
11	Rice husk charcoal production for competitive vegetables and fruits production	Vinh Hoa	Vinh Hoa	Local farmers, companies	On-going
12	Introduction of cultivation technique to improve quality of PQ orange	Xuan Thanh	Xuan Thanh	Maximark, BigC, etc.	Under preparation
13	Development of orange processed production and distribution system	Phu Quy	Phu Quy	AEON Fivimart (Hanoi), Hotel, Gift shop	Planning
14	Improvement of sesame quality for export market	Dien Chau FG, TH group	TH group, Sy Tang	ITOCHU	Sample test
15	Improvement of mango chunk product specification for exportation to Japan	Nafoods	Nafoods	ASC	Planning
16	Development of value chain of organic pork	Organic Pig Farm in Do Luong district	Pig Farms (Mr.Duc, Mr.Du, Mr.Ngoan)	Maximark	Under preparation

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Attachment 2 Workflow of the Project

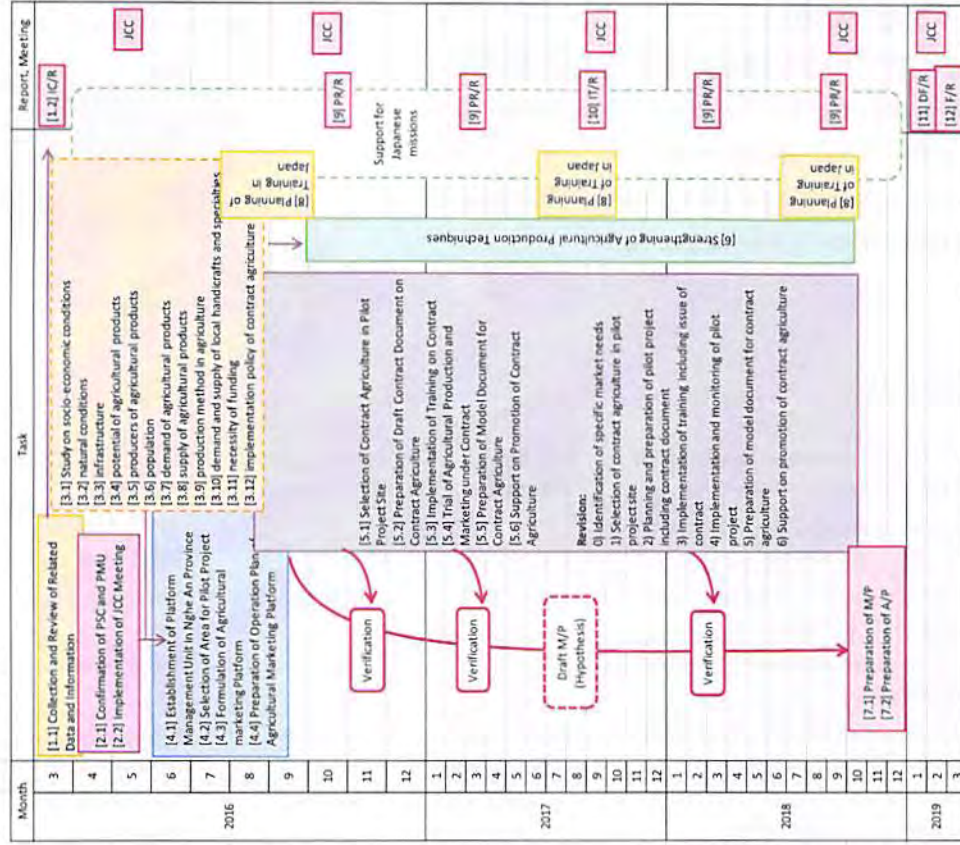
Before (1st JCC)

Workflow (Inception Report, March 2016)



After (2nd JCC)

Workflow (2nd JCC, October 2016)



Minutes of Meetings
of
Third Joint Coordinating Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as "the Project") has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on October 15, 2015.

Project Management Unit (PMU) which was established under Nghe An PPC has carried out a series of the works since March 2016 with support of the JICA Project Team which consists of the JICA experts and the JICA consultant team. The third Joint Coordinating Committee (JCC) was held with officials concerned in attendance at the conference room of Giao Te Hotel in Vinh city on September 26, 2017.

In the meeting, the progress of the Project and some important issues were explained by the Project Team including PMU, JICA experts and JICA consultants. The main discussion points and agreed matters in the meeting are described in the attached document.

September 26, 2017 



Mr. Naoki Kakioka
Senior Representative
JICA Vietnam Office



Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee

Minutes of Meetings of Third Joint Coordinating Committee Meeting on Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An


The third JCC meeting of the Project was held on September 26, 2017, with 38 attendants listed in Attachment 1. After the opening address of Mr. Hong, Vice-Chairman of Nghe An PPC and Mr. Kakioka, Senior Representative of JICA Vietnam Office, following presentations were made:

- 1) AMPF activities and progress of pilot projects by PMU, JICA Expert, and JICA Consultant Team;
- 2) Concept of draft master plan and way forward by JICA Consultant Team; and
- 3) Report of training in Japan by PMU.

Then, the attendants discussed on the following issues related to the Project and reached a general consensus.

(1) Progress of the Project

The project has been implemented in line with revised work schedule agreed in the 2nd JCC meeting. The following major progresses were confirmed by the attendants.

- Agricultural Marketing Platform (AMPF) was formally established under PMU with five core members and 21 Agricultural Extension Stations (AES) in June 2016. For enhancement of the activities, 2 more core members from Department of Science and Technology and Department of Tourism were appointed by Nghe An PPC in July 2017.
 - AMPF prepared database of producers and customers of agricultural products for value chain establishment. AMPF is preparing AMPF's webpage for communication among potential actors in value chain. Several agricultural marketing promotion activities were also carried out in various places in Vietnam.
 - Total 39 pilot projects have been carried under responsibility of the JICA consultant team (27), the JICA experts (6), and AMPF (6). Out of them, 6 pilot projects, targeting Thanh Chuong chicken, safe vegetables, spinach, eco-pork, pomelo and ginger, already advanced to contract stage between producers and customers. On the contrary, 10 pilot projects were unfortunately terminated in idea or negotiation stage. The pilot projects are small-scale trials on value chain development with contract agriculture. Lessons from these activities will be reflected in formulation of Master Plan (M/P) to establish value chain of agriculture.
- 

(2) Draft Master Plan and Action Plan

JICA Consultant Team proposed the draft M/P and Action Plan (A/P) in the meeting. The attendants basically agreed the proposal from JICA Consultant Team although those plans shall be considered deeply by the end of Project. The followings are the main points to be recognized by the attendants.

- It was reconfirmed that M/P and A/P shall be developed by the end of the Project period, and the expected goal of the proposed M/P shall be establishment of value chain of agriculture (crop and livestock) in Nghe An province, as stated in the R/D.
- It was basically agreed that pillars of M/P would be 1) Market Needs, 2) Production System, and 3) Fundamental Condition. Development and improvement of these 3 pillars shall be core issues to develop agricultural value chain in Nghe An province, while additional pillars might be added as necessary through the further discussion conducted by the end of the Project.
- JICA Consultant Team proposed the draft A/P which described the actions to be conducted, responsible organization and implementation schedule. The concept of A/P was basically agreed by attendants although it is necessary to consider in detail of A/P through the further discussion conducted by the end of the Project.

(3) Training in Japan

The attendants of this meeting confirmed that the training in Japan was successfully carried out with participation of Nghe An government officers and some private company staffs to understand agricultural value chain in Japan from a viewpoint of public and private sector.

(4) Way Forward and Recommendations

The Project shall be implemented in line with work flowchart agreed in the second JCC meeting in the latter half of the Project period. Following points shall be considered deeply by the end of the Project.

- The Project Team shall continue to implement pilot project to obtain more successful cases and useful lessons. Scaling up of the successful pilot projects shall be considered in following season. It was also considered to implement additional pilot projects on other major agricultural products in Nghe An province.
- AMPF shall continue to work including pilot projects, information management, periodical meetings and trade promotion activities.
- The government of Nghe An province shall prepare sustainable platform organization, called as AMPF in this Project, after termination of the Project. The Project Team and Nghe An government shall keep discussion on the function and structure of this

platform.

- To create and sustain this platform, full-time staff under PPC shall be dispatched to current AMPF for capacity development through on-the-job training by the Project Team. Nghe An PPC accepted this recommendation and ensured to dispatch full-time staff from Department of Agriculture and Rural Development to current AMPF.
- It was confirmed that the master plan shall be incorporated in the Socio-economic Development Plan in Nghe An Province 2021-2025. Therefore, the Project Team shall keep close communication with Nghe An PPC on this matter.

Following important recommendations were stated by the participants and those recommendations were recognized to be considered by the end of the Project.

- Senior representative of JICA Vietnam Office stressed that we shall pay attention to sustainability of the Project Outputs and create suitable platform organization, involving responsible organizations such as Department of Agriculture and Rural Development and Department of Trade and Industry.
- Senior Advisor of JICA headquarters suggested sorting government function in agricultural value chain development, in order to prepare efficient organization after the Project.

(5) Others

The participants kindly made following statements to JCC.

- Senior Advisor of JICA headquarters mentioned that many Japanese companies were strongly interested in Vietnam as business partners. In this connection, expert to Agri-business Japan Desk of MARD suggested that the Japan Desk could support connection with Japanese companies in transaction of agricultural products in Nghe An.
- JICA Expert to International Cooperation Department of MARD recommended strengthening agricultural cooperatives in terms of agricultural extension services to individual farmers like a Japanese case.

Second Secretary of Embassy of Japan concluded the JCC meeting with appreciation to Nghe An government for participation to various events relating to the Project.

This Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes.


End

List of Participants

No	Name	Position, Organization
Project Steering Committee (PSC)		
1	Mr. Dinh Viet Hong	Vice chairman, Nghe An Provincial People's committee (PPC) - Chairman
	<i>Mr. Nguyen Van Lap (absent by business trip)</i>	<i>Deputy director, Department of Agriculture and Rural Development (DARD) – Vice chairman</i>
2	Mr. Nguyen Ngoc Duc	Deputy director, Department of Finance (DOF)
3	Mr. Bui Tram	Deputy director, Department of Industry and Trade (DOIT)
4	Mr. Pham Van Vinh	Deputy Director, Planning and Investment Department (DPI)
5	Mr. Vo Hong Duong	Deputy Administrator, Nghe An PPC's Administration Office
6	Mr. Dau Huy Hoan	Deputy Director, Department of Health (DOH)
7	Mr. Nguyen Ngoc Vo	Deputy Director, Department of Natural Resources and Environment (DONRE)
	<i>Mr. Hoang Van Hue (vacant by retirement)</i>	<i>Deputy Director, Department of Transportation</i>
8	Mr. Nguyen Manh Cuong	Director, Department of Tourism
Project Management Unit (PMU)		
1	Mr. Truong Minh Chau	Head of technical, scientific and technologic management Division, DARD, Project Vice Standing Director (AMPF)
2	Mr. Pham Hoai Duc	Head of Financial Planning Division, Department of Industry and Trade, Project Vice Director (AMPF)
3	Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, Department of Planning and Investment, Project Officer (AMPF)
4	Mr. Nguyen Quy Linh	Director of Agricultural Extension Center, DARD, Project Officer (AMPF)
5	Mr. Hoang Duc Chung	Officer of Business Tourism Division, Department of Tourism, Project Officer (AMPF)
6	Mr. Le Van Khanh	Deputy Head of Scientific Management Division, Department of Science and Technology, Project Officer (AMPF)
7	Mr. Nguyen Van Hoi	Officer of Technical, Scientific and Technologic Management Division, DARD, Project Officer (AMPF)
8	Ms. Tran Thi Anh Hue	Head of Cultural and Foreign Affairs, Nghe An PPC
Ministry of Agriculture and Rural Development		
1	Representative Officer	Representative, International Cooperation Dept. MARD
Embassy of Japan		
1	Mr. Kosaburo Shimose	Second Secretary, Embassy of Japan, Hanoi
Japan International Cooperation Agency (JICA)		
1	Mr. Naoki Kakioka	Senior Representative, JICA Vietnam Office, Hanoi
2	Mr. Satoshi Yamamoto	Project Formulation Advisor, JICA Vietnam Office, Hanoi
3	Mr. Makoto Inaba	JICA Headquarters, Tokyo
4	Mr. Yasuo Watanabe	JICA Expert, MARD, Hanoi
5	Mr. Ichiro Abe	JICA Expert, MARD, Hanoi
6	Mr. Hiroyuki Sakuma	Project Advisor, JICA Nghe An Project
7	Mr. Kazuya Takahashi	Coordinator, JICA Nghe An Project
8	Mr. Mitsuo Nishiya	Leader of Consultant, JICA Nghe An Project
9	Mr. Takashi Kotegawa	Deputy Leader of Consultant, JICA Nghe An Project
10	Mr. Tateo Morita	Consultant, JICA Nghe An Project
11	Mr. Shohei Sendo	Consultant, JICA Nghe An Project
12	Ms. Nguyen Thi Thu Hang	JICA Vietnam Office, Hanoi

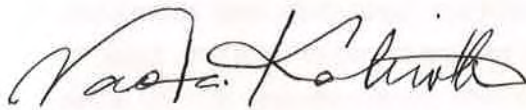
Minutes of Meetings
of
Fourth Joint Coordination Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as "the Project") has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on October 15, 2015.

Project Management Unit (PMU) which was established under Nghe An PPC has carried out a series of the works since March 2016 with support of the JICA Project Team which consists of the JICA experts and the JICA consultant team. The fourth Joint Coordination Committee (JCC) was held with officials concerned in attendance at the conference room of Giao Te Hotel in Vinh city on March 15, 2018.

In the meeting, the progress of the Project and some important issues were explained by the Project Team including PMU, JICA experts and JICA consultants. The main discussion points and agreed matters in the meeting are described in the attached document.

March 15, 2018



Mr. Naoki Kakioka
Senior Representative
JICA Vietnam Office



Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee



**Minutes of Meetings of Fourth Joint Coordination Committee Meeting on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An**

The fourth JCC meeting of the Project was held on March 15, 2018, with 35 attendants listed in Attachment 1. After the opening address of Mr. Hong, Vice-Chairman of Nghe An PPC and Mr. Kakioka, Senior Representative of JICA Vietnam Office, following presentations were made:

- 1) Progress of AMPF activities and annual plan of AMPF activities in 2018 by AMPF and JICA Consultant Team.
- 2) Progress of pilot projects by JICA Expert, and JICA Consultant Team;
- 3) Concept of draft master plan, development approaches, and way forward by JICA Consultant Team;

Then, the attendants discussed the following issues related to the Project and reached a general consensus.

(1) Progress of AMPF activities and annual plan of AMPF activities in 2018

The project has been implemented in line with revised work schedule agreed at the 2nd JCC meeting. The following major progresses were confirmed by the attendants.

- For enhancement of the AMPF activities, Nghe An Provincial People's Committee dispatched 1 full-time staff from Department of Agriculture and Rural Development to current AMPF in January 2018.
- JICA Consultant Team explained several duties to be conducted by AMPF after the end of the Project, which are 1) Market needs research and facilitation of business matching in the field of agriculture and 2) Facilitation of contract agriculture and commercial transaction. The former should be conducted by a) hearing survey of candidate buyer, b) organizing exchange meeting in cooperation with private company engaging in the works on business matching and c) Establishment of Exhibition Booth for Agricultural Products in Cooperation with Trade Promotion Center for Agriculture (Under MARD). The latter should be conducted by the application of existed administration scheme called "Model Building Program" and the role of AMPF is to a) conduct training on formulation of pilot projects based on market needs for the person in charge of pilot project planning, b) support those stakeholders to formulate pilot project plan by sharing information on market needs and c) prioritize the pilot project plans based on its feasibility in cooperation with AEC.

AMPF proposed the annual plan of AMPF activities in 2018 as follows. This plan was

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confirmed by the attendants.

- It was emphasized that annual plan of AMPF activities in 2018 should be regarded as the “trial” for the determination of “Responsibility and Duties” and “Routine Work” of the newly developed organization in Nghe An province.
- The annual plan includes the activities on 1) Market needs research and Facilitation of business matching in the field of agriculture and 2) Preparation of Model Building Plan based on the market needs. These activities will be conducted from March to December 2018.

(2) Progress of pilot projects by JICA Expert, and JICA Consultant Team;

- Total 41 pilot projects have been carried under responsibility of the JICA Consultant Team (29), the JICA experts (6), and AMPF (6). So far, approximately 25% of the pilot projects has reached the “Contract Stage”, which is greater achievement than expected. It was emphasized that the continuous trial and accumulation of lessons derived from the failure of pilot project is the critical matter to facilitate contract agriculture.
- The pilot projects are small-scale trials on value chain development with contract agriculture. Lessons from these activities will be reflected in formulation of Master Plan (M/P) to establish value chain of agriculture.

(3) Draft Master Plan

JICA Consultant Team proposed the concept of M/P in the meeting. The attendants basically agreed those proposals from JICA Consultant Team although those plans should be considered deeply by the end of Project. The followings are the main points to be recognized by the attendants.

- It was basically agreed that the development policy of M/P is “Realization of strong development of Nghe An agriculture by proving worthy of market trust and needs”. Based on this development policy, JICA Consultant Team proposed three development approaches that are 1) Establishment of Market Needs gathering and Sharing System, 2) Improvement of Agricultural Administration Service and Infrastructure for the Development of FVC and 3) Capacity Development of Organization and Human Resources Related to FVC Development. JICA Consultant Team also explained the remaining activities to be conducted for the development of M/P and A/P.

(4) Way Forward and Recommendations

The Project shall be implemented in line with work flowchart agreed in the second JCC meeting. Following points shall be considered deeply by the end of the Project.

- The Project Team shall continue to implement pilot projects to obtain more successful cases and useful lessons. Scaling up of the successful pilot projects shall be considered in following season.

- AMPF shall work on their tasks based on the annual plan in 2018 which is agreed at this JCC meeting.
- The government of Nghe An province shall prepare administrative organization called as AMPF in this Project after the termination of the Project. The Project Team and Nghe An government shall keep discussion on the function and structure of this organization.
- It was confirmed that the M/P shall be incorporated in the Socio-economic Development Plan in Nghe An Province 2021-2025. Therefore, the Project Team shall keep close communication with Nghe An PPC on this matter.

(5) Others

The participants kindly made following statements to JCC.

- Mr, Lap, Deputy Director of Department of Agriculture and Rural Development (DARD) mentioned that DARD shall submit the letter to PPC to establish AMPF officially after finishing the Project. However the organization framework of AMPF should be considered deeply by the end of Project. Mr. Vinh (current permanent AMPF staff) will be dispatched in future organization of AMPF to manage the AMPF activities based on his experience obtained through the on the job training of JICA consultant team.
- Mr. Thanh, Director of Department of Science and Technology (DOST) mentioned that several pilot projects have showed good results in value chain creation and utilization. He agreed with the proposed ideas of M/P and recommended that AMPF should be under management of Extension Center with contribution of the enterprises and in cooperation with existing Business Associations.

Second Secretary of Embassy of Japan concluded the JCC meeting with appreciation to Nghe An government for participation to various events relating to the Project.

This Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes.

End

List of Participants

No	Name	Position, Organization
Project Steering Committee (PSC)		
1	Mr. Dinh Viet Hong	Vice chairman, Nghe An Provincial People's committee (PPC) - Chairman
2	Mr. Nguyen Van Lap	Deputy director, Department of Agriculture and Rural Development (DARD) – Vice chairman
3	Mr. Bui Tram	Deputy director, Department of Industry and Trade (DOIT)
4	Mr. Tran Quoc Thanh	Director, Department of Science and Technology (DoST)
5	Mr. Nguyen Manh Loi	Vice Director of Department of Tourism – On behalf of Mr. Nguyen Manh Cuong
Project Management Unit (PMU)		
1	Mr. Truong Minh Chau	Head of technical, scientific and technologic management Division, DARD, Project Vice Standing Director (AMPF)
2	Mr. Pham Hoai Duc	Head of Financial Planning Division, Department of Industry and Trade, Project Vice Director (AMPF)
3	Mr. Nguyen Sy Vinh	Full-time AMPF member
4	Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, Department of Planning and Investment, Project Officer (AMPF)
5	Mr. Nguyen Quy Linh	Director of Agricultural Extension Center, DARD, Project Officer (AMPF)
6	Mr. Hoang Duc Chung	Officer of Business Tourism Division, Department of Tourism, Project Officer (AMPF)
7	Mr. Le Van Khanh	Deputy Head of Scientific Management Division, Department of Science and Technology, Project Officer (AMPF)
8	Mr. Nguyen Van Hoi	Officer of Technical, Scientific and Technologic Management Division, DARD, Project Officer (AMPF)
9	Ms. Tran Thi Anh Hue	Head of Cultural and Foreign Affairs, Nghe An PPC
10	Mr. Nguyen Tran Quang	Department of Transportation – On behalf of Mr. Nguyen Que Su (PSC)
Embassy of Japan		
1	Mr. Kosaburo Shimose	Second Secretary, Embassy of Japan, Hanoi
Japan International Cooperation Agency (JICA)		
1	Mr. Naoki Kakioka	Senior Representative, JICA Vietnam Office, Hanoi
2	Mr. Satoshi Yamamoto	Project Formulation Advisor, JICA Vietnam Office, Hanoi
3	Mr. Naoki Kayano	Project Formulation Advisor, JICA Vietnam Office, Hanoi
4	Mr. Hiroyuki Sakuma	Project Advisor, JICA Nghe An Project
5	Mr. Kazuya Takahashi	Coordinator, JICA Nghe An Project
6	Mr. Takashi Kotegawa	Deputy Leader of Consultant, JICA Nghe An Project
7	Mrs. Kyoko Miyachi	Consultant, JICA Nghe An Project
8	Mr. Tateo Morita	Consultant, JICA Nghe An Project
9	Mr. Yasuyuki Maeda	Consultant, JICA Nghe An Project
10	Mr. Shohei Sendo	Consultant, JICA Nghe An Project
11	Ms. Nguyen Thi Thu Hang	JICA Vietnam Office, Hanoi
12	Mr. Bien Quang Tu	Technical Assistant, JICA Consultant Team
13	Mr. Vo Hoang Nguyen	Technical Assistant, JICA Consultant Team
14	Mr. Hoang Nghia Duyet	Technical Assistant, JICA Consultant Team
15	Mr. Nguyen Huu Hien	Technical Assistant, JICA Consultant Team
16	Ms. Nguyen Thi Hong Thai	Assistant, JICA Consultant Team
17	Ms. Ho Thi Trang	Assistant, JICA Consultant Team
18	Ms. Ho Thi Thuy Duyen	Assistant, JICA Nghe An Team
19	Ms. Nguyen Thi Thanh Hue	Assistant, JICA Nghe An Team

Minutes of Meetings
of
Fifth Joint Coordination Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as "the Project") has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on October 15, 2015.

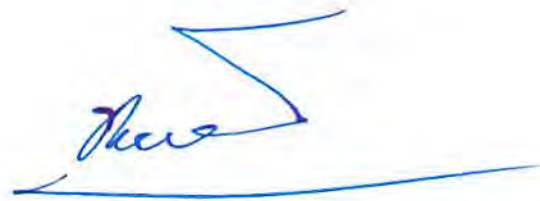
Project Management Unit (PMU) which was established under Nghe An PPC has carried out a series of the works since March 2016 with the support of the JICA Project Team which consists of the JICA experts and the JICA consultant team. The fifth Joint Coordination Committee (JCC) was held with officials concerned in attendance at the conference room of Giao Te Hotel in Vinh city on September 27, 2018.

In the meeting, the progress of the Project and some important issues were explained by PMU, key persons of Pilot Projects and JICA consultants. The main discussion points and agreed matters in the meeting are described in the attached document.

September 27, 2018



Mr. Naomichi Murooka
Senior Representative
JICA Vietnam Office



Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee

Minutes of Meetings of Fifth Joint Coordination Committee Meeting on Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The fifth JCC meeting of the Project was held on September 27, 2018, with 39 attendants listed in Attachment 1. After the opening address of Mr. Hong, Vice-Chairman of Nghe An PPC, following presentations were made:

- 1) "Introduction and brief summary of contents" by JICA Consultant Team;
- 2) "Progress and future vision of AMPF" by AMPF staff;
- 3) "Progress and evaluation of pilot projects" by their key persons; and
- 4) "Master plan and action plan" by JICA Consultant Team.

Then, the attendants discussed the following issues related to the Project and reached a general consensus.

(1) Progress of AMPF activities and future vision

- Agricultural Marketing Platform (AMPF) under PMU has eight core members and 21 Agricultural Extension Stations (AES) in June 2016. A full-time staff has been dispatched from Agriculture Extension Center.
- JICA Consultant Team and AMPF have organized 5 exchange meetings for the domestic market and 3 exchange meetings for the international market. AMPF has also organized trade exhibition and business matching event in Nghe An province. Through those activities, JICA Consultant Team and AMPF could identify the specific market needs and potential buyers regarding the groundnut, orange, pomelo, ginger, etc. Further, AMPF could connect those potential buyers to the local producers in Nghe An province and succeed to create the model of FVC through the implementation of Pilot Project. AMPF has also prepared an annual plan of AMPF activities in 2018. This annual plan is formulated as the trial of AMPF activities after the termination of the Project.
- JCC members discussed a vision of future AMPF, which would be established under management of Department of Agriculture and Rural Development (DARD). The attendants tentatively agreed the new AMPF structure, consisted of Director (Vice Director of DARD), Vice Director (Director of AEC), 1-2 full-time staffs (AEC), and 3 part-time members (DARD, DOIT, DPI).

(2) Progress of pilot projects by key persons of pilot projects

- The JICA Expert, JICA Consultant Team and AMPF have conducted 42 pilot projects to establish the model of FVC in Nghe An province. Based on the market needs obtained

through the JICA Consultant Team and AMPF activities, the Project has already created 12 FVC models including orange, pomelo, potato, and local chickens. On the other hand, 18 pilot projects were terminated due to the technical issues.

- In the JCC meeting, responsible persons presented good practices in pilot projects on; Spinach, Herbal plant, Safe vegetable, and Pomelo. The lessons learned obtained through the pilot projects will be reflected to the Master Plan (M/P) and Action Plan (A/P) that will be formulated by the Project Team at the end of the Project.

(3) Draft Master Plan and Action Plan

JICA Consultant Team presented the draft M/P and A/P, which were summarized below.

- Development vision of M/P is; "Realization of strong development of Nghe An agriculture by proving worthy of market trust and needs".
- Three development policies are; 1) Establishment of market needs gathering and sharing system; 2) Improvement of agricultural administration service and infrastructure for FVC development; and 3) Capacity development of organization and human resources related to FVC development.
- Four FVC development zones are set for; 1) Promotion of Safe Agricultural Production; 2) Promotion of raw material production for food processing and exporting; 3) Promotion of high value-added agricultural production; and 4) Promotion of agricultural products for special use.
- Total 32 A/Ps were proposed in keeping with those policies and zones. They would be formulated in detail and prioritized for implementation. Also, some A/Ps would be combined into a comprehensive plan to suit for Nghe An Socio-economic Development Plan (2021-2025).

The attendants basically agreed on those plans with some comments described in (5), and they would be discussed more and finalized by the end of Project.

(4) Way Forward and Recommendations

The Project shall be implemented in line with work flowchart agreed in the second JCC meeting by the end of the Project period. The followings are the main activities of the Project Team.

- Share final draft of M/P and A/P with C/Ps for review by November 2018
- Evaluate the priority of A/P based on the evaluation criteria
- Hold sixth JCC meeting in January 2019, and finalize M/P and A/P



The followings are recommendations for Nghe An PPC.

- Discussion and preparation of establishment of new AMPF under AEC
- Allocation of 2019 budget to follow-up the project activities
- All 25 attendants of "Training in Japan" shall support this development plan

(5) Comments

The participants kindly made following comments and statements to JCC.

- Mr. Kimura, JICA Expert to MARD, made comments that; to consider to involve not only administration side but also other actors related to FVC development in the prioritization process of A/Ps; to reconsider expression of first A/P evaluation criteria; and to implement projects flexibly to meet shifting market needs.
- Mr. Lap, Deputy Director of DARD mentioned that; new AMPF would be established under DARD with use of AEC facilities; some A/P could be flexibly implemented in 2 zones; number of A/Ps should be reduced by combining related A/Ps; A/Ps should be divided into 2 categories: the one is for A/Ps which have small scale, narrow scope and can be implemented right after completion of the Project; the another is for A/Ps which have large scale, wide spread and big impact. These two categories will be integrated into Socio-Economic Development Plan (2021-2025); JICA Consultant team should provide M/P and A/P to Nghe An side as soon as possible, so that Nghe An side also can advise and improve those plans. Besides that, a summary of M/P and A/P also should be prepared to select main contents to be put in Socio-Economic Development Plan (2021-2025).
- Mr. Murooka, Senior Representative of JICA Vietnam Office, recommended providing more quantitative information in the process of zoning in order to make each development directions clearer.

Mr. Hong concluded that:

- 1) Agreed with progress of the Project and main activities by the end of the Project proposed by JICA Consultant team.
- 2) Regarding M/P, A/P: JICA Consultant Team should soon finalize and send to Vietnamese side for advising.
- 3) Regarding future vision of AMPF, Mr Hong agreed with following visions:
 - New AMPF would be established under DARD with use of AEC facilities
 - New AMPF structure would consist of Director (Vice Director of DARD), Vice Director (Director of AEC), 1-2 full-time staffs (AEC), and 3 part-time members

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(DARD, DOIT, DPI)

- Budget for AMPF activities: annually allocate through cost estimation by AEC.

Mr. Murooka recommended and concluded that; Nghe An side should not wait to proceed A/Ps by the approval of Socio-Economic Development Plan (2021-2025); Several succeeded pilot projects should be continuously promoted by PPC and relative DPC even after the completion of the Project; Nghe An side should recognize that the function of AMPF is indispensable not only to facilitate communication among actors of FVC in Vietnam but also to attract foreign investors by giving necessary information and coordinating them as required.

This Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes.



End 

Attachment 1: Attendant List


	Name	Office and Position
Project Steering Committee (PSC)		
1	Mr. Dinh Viet Hong	Vice Chairman, Nghe An Provincial People's Committee (PPC) - Chairman
2	Mr. Nguyen Van Lap	Deputy Director, Dept. of Agriculture and Rural Development (DARD) - Vice chairman
3	Mr. Tran Quoc Thanh	Director, Dept. of Science and Technology (DOST)
4	Mr. Nguyen Ngoc Duc	Deputy Director, Dept. of Finance (DOF)
5	Mr. Nguyen Que Su	Dept. of Transportation
6	Mr. Bui Tram	Deputy Director, Dept. of Industry and Trade (DOIT)
7	Mr. Nguyen Manh Cuong	Director of Dept. of Tourism
8	Mr. Dau Huy Hoan	Dept. of International Cooperation DARD
Project Management Unit (PMU)		
1	Mr. Truong Minh Chau	Head of Technical, Scientific and Technologic Management Division, DARD, Project Vice Standing Director (AMPF)
2	Ms. Tran Thi Anh Hue	Head of Cultural and Foreign Affairs, Nghe An PPC, Project Officer
3	Ms. Nguyen Thi Thanh Hieu	Dept. of Industry and Trade, Project Vice Director (AMPF)
4	Ms. Ho Thi Xuan	Deputy Head of District and Commune Budget Division, Dept. of Finance, Project officer
5	Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, Dept. of Planning and Investment, Project Officer (AMPF)
6	Mr. Tran Nguyen Truyen	Head of Health Professional Division, Dept. of Health, Project Officer
7	Mr. Tran Nguyen Quang	Deputy Head of General Planning Dept. Dept of Transportation, Project Officer
8	Mr. Dinh Sy Khanh Vinh	Officer of Financial Planning Division, Dept. of Natural Resources and Environment, Project Officer
9	Mr. Hoang Duc Chung	Officer of Business Tourism Division, Dept. of Tourism, Project Officer (AMPF)
10	Mr. Nguyen Quy Linh	Director of Agricultural Extension Center, DARD, Project Officer (AMPF)
11	Mr. Le Van Luong	Head of Sub Dept. of Rural Development, DARD, Project Officer
12	Mr. Nguyen Sy Vinh	Full-time AMPF member
Other Presenters		
1	Mr. Dang Thai Hoa	Head of Agricultural Extension Station in Thai Hoa town
2	Mr. Tran Van Phuc	Chairman, Bibi Green company
Japan International Cooperation Agency (JICA)		
1	Mr. Naomichi Murooka	Senior Representative, JICA Vietnam Office, Hanoi
2	Mr. Naoki Kayano	Project Formulation Advisor, JICA Vietnam Office, Hanoi
3	Mr. Yoshihisa Kimura	JICA Expert, MARD, Hanoi
4	Mr. Hiroyuki Sakuma	Project Advisor, JICA Nghe An Project
5	Mr. Mitsuo Nishiya	Leader of Consultant, JICA Nghe An Project
6	Mr. Takashi Kotegawa	Deputy Leader of Consultant, JICA Nghe An Project
7	Mr. Tateo Morita	Consultant, JICA Nghe An Project
8	Mr. Shohei Sendo	Consultant, JICA Nghe An Project
9	Ms. Miki Kasai	Consultant, JICA Nghe An Project
10	Ms. Sayako Tai	Consultant, JICA Nghe An Project
11	Ms. Nguyen Thi Thu Hang	JICA Vietnam Office, Hanoi
12	Mr. Bien Quang Tu	Technical Assistant, JICA Consultant Team
13	Mr. Vo Hoang Nguyen	Technical Assistant, JICA Consultant Team
14	Mr. Hoang Nghia Duyet	Technical Assistant, JICA Consultant Team
15	Ms. Nguyen Thi Hong Thai	Assistant, JICA Consultant Team
16	Ms. Ho Thi Trang	Assistant, JICA Consultant Team
17	Ms. Ho Thi Thuy Duyen	Assistant, JICA Nghe An Project

Minutes of Meetings
of
Sixth Joint Coordination Committee Meeting
on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An

The Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An (hereinafter referred to as "the Project") has been implemented under a technical assistance of the Japan International Cooperation Agency (JICA) and Nghe An Provincial People's Committee (Nghe An PPC) in accordance with the Record of Discussions (R/D) that was signed on October 15, 2015.

Project Management Unit (PMU) which was established under Nghe An PPC has carried out a series of the works since March 2016 with the support of the JICA Project Team which consists of the JICA experts and the JICA consultant team. The sixth Joint Coordination Committee (JCC) was held with officials concerned in attendance at the conference room of Giao Te Hotel in Vinh city on January 25, 2019.

In this last JCC meeting of the Project, PMU and JICA consultants explained the main contents of the Draft Final Report, i.e., Master Plan and Action Plan for agriculture development in Nghe An province. The discussion points and agreed matters in the meeting are described in the attached document.

January 25, 2019 



Mr. Naomichi Murooka
Senior Representative
JICA Vietnam Office



Mr. Dinh Viet Hong
Vice Chairman
Nghe An Provincial People's Committee



**Minutes of Meetings of Sixth Joint Coordination Committee Meeting on
Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An**

The sixth JCC meeting of the Project was held on January 25, 2019 with 46 attendants listed in Attachment 1. After the opening address of Mr. Hong, Vice-Chairman of Nghe An PPC, following presentations were made:

- 1) "Project Management" by JICA Consultant Team;
- 2) "Development Approach" by JICA Consultant Team;
- 3) "Results and Lessons of AMPF Activities and Pilot Projects" by PMU and JICA Consultant Team; and
- 4) "Master Plan and Action Plan" by JICA Consultant Team.

Then, the attendants discussed the following issues related to the Project and reached a general consensus.

(1) Project Management

JICA Consultant Team explained this 3-year technical cooperation project had implemented in accordance with the R/D, and it will be concluded in this JCC meeting. The Draft Final Report of the project was distributed to JCC members. The JCC members were requested to give comments on the Report within 17 days after this JCC meeting. JICA Consultant Team will finalize the Report and submit in March.

(2) Development Approach

JICA Consultant Team presented the development approach for agriculture sector in Nghe An province, based on a zoning and a SWOT analysis. The development approach consists of 3 development policies and 4 development zones, as follows.

- Three development policies are; 1) Establishment of market needs gathering and sharing system; 2) Improvement of agricultural administration service and infrastructure for FVC development; and 3) Capacity development of organization and human resources related to FVC development.
- Four FVC development zones are set for; 1) Promotion of Safe Agricultural Production; 2) Promotion of raw material production for food processing and exporting; 3) Promotion of high value-added agricultural production; and 4) Promotion of agricultural products for special use.

(3) Results and Lessons of AMPF activities



As a practical trial regarding "development policy 3: capacity development related to FVC development", Agricultural Marketing Platform (AMPF) was established under PMU to implement the various tasks and evaluated as follows.

- 1) Preparation of database: Database was developed sufficiently, and to be updated when necessary.
- 2) Trade exhibition: As effect on promotion is limited and it is overlapped with other organizations, it should be reconsidered.
- 3) Matching event and exchange meeting: As there was positive effect to find partners, it shall be a main duty of AMPF.
- 4) Planning of pilot projects: Pilot projects shall be planned by local extension staffs and AMPF shall select qualified projects.
- 5) Implementation of pilot projects: Pilot project shall be implemented by extension staffs and AMPF shall monitor and evaluate the projects.

Through the AMPF activities in the project period, the following consequential recommendations were brought about.

- 1) Suitable persons should be assigned to collect market information not only in Nghe An but also inside and outside of the country.
- 2) Extension staffs should understand customers' requirement deeply through matching events and opinion exchange meetings.
- 3) As the public resources are limited, collaboration with private enterprises or Chamber of Commerce and Industry should be considered for FVC development.

The JCC agreed that AMPF shall be sustained under management of Department of Agriculture and Rural Development (DARD). The new AMPF structure shall be consisted of Director (Vice Director of DARD), Vice Director (Director of Agricultural Extension Center, AEC), Secretary and 1-2 full-time staffs (AEC), and 3 part-time members (DARD, DOIT, DPI).

(4) Results and Lessons of pilot projects

The JICA Expert, JICA Consultant Team and AMPF have conducted 42 pilot projects, consisting of 5 in the safe agricultural production zone, 15 in the raw material production zone, 11 in the high value-added agricultural production zone, and 10 in the special use agricultural production zone. The main lessons obtained from various trial activities in each zone are as follows.

1) Safe agricultural production zone:

- To produce and sell agricultural products by exchanging information with retailer.
- To create formal contract over time to convince each other.



- To improve techniques of summer vegetables.
 - To establish logistics base including cold chain.
- 2) Raw material production zone:
- To develop competitive production area through subsidies and credit service.
 - To promote infrastructure development of such production base (drainage).
 - To develop varieties and cultivation technologies based on market needs.
 - To promote consolidation of cooperatives and to develop efficient production system.
 - To standardize cultivation methods.
- 3) High value-added agricultural production zone:
- In branding agricultural and livestock products, strong commitment of local government, and common awareness of producers' groups are essential.
 - To consider safety as food as well.
 - To further improve orange production by distributing disease-free seedlings, setting quality standard, installing cold storage, etc.
- 4) Special use agricultural production zone:
- To improve access road and storage for FVC development.
 - To develop the quarantine procedure support system to export products (ex. fresh ginger).
 - To improve veterinary services and disseminate feed storage technologies.
 - To make appropriate production and sales strategies for rare livestock.

(5) Master Plan

As feedback of the results of verifications of the development approach, the Master Plan for agriculture sector in Nghe An province was established. The development vision of the M/P. is "Realization of strong development of Nghe An agriculture by proving worthy of market trust and needs". The M/P is composed of 3 FVC development policies for entire area together with 4 FVC development strategic zones.

Policy 1: Establishment of Market Needs Gathering and Sharing System:

- 1) Institutionalization of AMPF Activities and Capacity Development of AMPF
- 2) Development of Human Resource regarding marketing
- 3) Facilitation of collaboration with private enterprises

Policy 2: Improvement of Agricultural Administration Service and Infrastructure for FVC Development:

- 1) Introduction of institutions to develop competitive agricultural producing area
- 2) Development of infrastructures on food distribution
- 3) Diversification of domestic market and international market

Policy 3: Capacity Development of Organization and Human Resources Related to FVC





Development

- 1) Capacity development of agricultural cooperative and enterprise
- 2) Strengthening of agricultural research
- 3) Strengthening of agricultural extension

Zone 1: Safe Agricultural Production

- 1) To develop reliable and stable producing area of safe agricultural products as a model for its extension, in order to meet increasing demand of safe foods in urban area.
- 2) To conduct supporting activities such as introducing heat-tolerant varieties and other agricultural materials such as cheesecloth, in order to supply fresh vegetables in hot summer season.

Zone 2: Raw Material Production

- 1) To develop a farming model which produces agricultural products matching the specification effectively and increases farmer's income by reducing production cost or increasing production volume more than the cost to be spent.
- 2) To develop producing area with strong market competitiveness in the target market, selecting several cooperatives and providing various supports to encourage those cooperatives to become model of this region.

Zone 3: High Value-Added Agricultural Production

- 1) To develop sales channel of processed products made by high name-valued products such as orange and tea.
- 2) To develop trustable brand by standardization of product quality and obtaining certificate of origin.
- 3) To promote production efficiency improvement of fodder crops.
- 4) Promotion of branding on local variety of livestock.
- 5) Promotion of safe meat production by utilizing organic feed made from unused resource.

Zone 4: Special Use Agricultural Production

- 1) To increase farmers' income to promote production of highly demanded products.
- 2) To formulate agricultural cooperative and strengthen those capacities to manage ginger, garlic and other high-demanded products.
- 3) To realize stable production of rare livestock by sanitary management and veterinary service.
- 4) To reduce production cost by utilizing unused resources.

(6) Action Plan

Total 15 action plans (A/Ps), consisting of 7 A/Ps for "Investment Plan" and 8 A/Ps for "Capacity Development Plan", were prepared to be incorporated into the Nghe An



Socio-economic Development Plan (2021-2025).

(7) Conclusion and Recommendations

JICA Consultant Team presented the following contents as conclusion and recommendation.

- 1) M/P and A/P formulated by JICA Expert and JICA Consultant Team is the practical plan developed based on the lessons learned through the various pilot activities to develop FVC in Nghe An province. Thus, it is recommended those plans to incorporate Socio-economic Development Plan (2021-2025).
- 2) AMPF will be the key organization in implementing A/P proposed by JICA Consultant Team since the major role of AMPF is to facilitate communication among the actors of FVC and A/P regarding "Investment Plan" requires contribution of private sectors in developing FVC. Since the organizational capacity of AMPF is still not sufficient especially for collecting market information in outside of Nghe An province including international market, it is recommended to dispatch an external marketing specialist who has strong network with private sectors in AMPF for its efficient operation and management at beginning stage.
- 3) Nghe An side should energetically work to attract private investment to implement "Investment Plan" of A/P since it is the critical matter for FVC development.
- 4) JICA Consultant Team has prepared the "Guideline of Contract Farming", which is attached as annex of draft final report. This guideline is developed based on the lessons learned through the contract farming in pilot projects, and shows know-how for realizing sustainable contract farming in Nghe An province. It is recommended especially for the local extension staffs to refer this guideline in facilitating contract farming.

The attendants basically agreed on those plans with some comments described as follows.

Mr. Murooka, Senior Representative of JICA Vietnam Office commented that JICA Consultant Team should consider the tourism potential of Nghe An province when they conduct SWOT analysis. In addition, JICA Consultant Team should states the target market in A/P (especially in "Investment Plan").

Mr. Lap, Deputy Director of DARD commented that several "Investment Plan" should be divided into two or three A/P as it focuses on only single product. Hence, Mr. Lap asked JICA Consultant Team to re-calculate the cost of several A/P since they seem too small scale of budget when we compare it with the activity of A/P.

JICA Consultant Team agreed to those comments and mentioned that they will revise necessary points when they finalize the final report.

Mr. Hong, Vice Chairman of Nghe An PPC concluded that:

- 1) New AMPF would be established under DARD. New AMPF structure would consist of 



Director (Vice Director of DARD), Vice Director (Director of AEC), 1-2 full time staffs (AEC) and 3 part-time members (DARD, DOIT, DPI). The budget for AMPF activities will annually be allocated through cost estimation by AEC.

- 2) M/P and A/P prepared by JICA Experts and JICA Consultant Team will be incorporated to Socio-economic Development Plan (2021-2025) for securing necessary budget of its implementation.

As closing remarks, Mr. Murooka concluded that;

- 1) JICA Vietnam expects Nghe An side would fully utilize the final report prepared by JICA Expert and JICA Consultant Team in considering future agricultural development policy and plan in Nghe An province since it contains much useful and suggestive information. Hence, it is strongly recommended to incorporate M/P and A/P into Socio-economic Development Plan (2021-2025).
- 2) This Project will be completed after JICA Consultant Team finalize and submit Final Report. However, this does not mean the end of cooperation between Nghe An province and JICA. JICA commits the continuous support and cooperation with Nghe An province for realization of socio-economic development of Nghe An province.

This Minutes of Meetings is prepared in English and Vietnamese. When there are discrepancies, the English version precedes.

End 



Attachment 1: Attendant List**List of Participants**

No	Name	Position, Organization
Project Steering Committee (PSC)		
1	Mr. Dinh Viet Hong	Vice Chairman, Nghe An Provincial People's committee (PPC) – Chairman
2	Mr. Nguyen Van Lap	Deputy Director, Department of Agriculture and Rural Development (DARD) – Vice Chairman
3	Mr. Pham Van Vinh	Deputy Director, Planning and Investment Department (DPI)
4	Mr. Nguyen Ngoc Duc	Deputy Director, Department of Finance (DOF)
5	Mr. Nguyen Viet Hung	Deputy Director, Department of Science and Technology (DOST)
6	Mr. Nguyen Que Su	Deputy Director, Department of Transportation (DOT)
7	Mr. Nguyen Huy Cuong	Deputy Director, Department of Industry and Trade (DOIT)
8	Mr. Nguyen Manh Cuong	Director, Department of Tourism (DOT)
9	Mr. Cao Truong Son	Representative, Department of Health (DOH)
Project Management Unit (PMU)		
10	Mr. Truong Minh Chau	Head of Technical, Scientific and Technologic Management Division, DARD, Project Vice Standing Director (AMPF)
11	Ms. Tran Thi Anh Hue	Head of Cultural and Foreign Affairs, Nghe An PPC, Project Officer
12	Mr. Nguyen Thi Thanh Hieu	Vice Head of Financial Planning Division, Department of Industry and Trade, Project Vice Director
13	Ms. Tran Thi Anh Lien	Accountant, DARD, Project Chief Accountant
14	Mr. Nguyen Van Hoi	Deputy Head of Technical, Scientific and Technologic Management Division, DARD, Project Officer (AMPF)
15	Ms. Ho Thi Xuan	Deputy Head of District and Commune Budget Division, Department of Planning and Investment, Project Officer
16	Mr. Nguyen Quang Loi	Deputy Head of Agricultural Science and Rural Development Division, Department of Planning and Investment, Project Officer
17	Mr. Tran Nguyen Truyen	Head of Health Professional Division, Department of Health, Project Officer
18	Mr. Le Van Khanh	Deputy Head of Scientific Management Division, Department of Science and Technology, Project Officer
19	Mr. Tran Nguyen Quang	Deputy Head of General Planning Division, Department of Transportation, Project Officer
20	Mr. Dinh Sy Khanh Vinh	Vice Director of Environment Protection Sub- Department of DONRE, Project Officer
21	Ms. Nguyen Thi Minh Hong	Officer of Resource Department, Planning Division, Department of Tourism, Project Officer
22	Mr. Trinh Ba Quan	Deputy Head of General Economics Department, Provincial Cooperative Alliance, Project Officer
23	Mr. Nguyen Quy Linh	Director of Agricultural Extension Center, DARD, Project Officer
24	Mr. Le Van Luong	Vice Director of Rural Development Sub-Department, DARD, Project Officer
25	Mr. Nguyen Sy Vinh	Vice Manager of Consultancy Services Division, Agriculture Extension Center, DARD, Project Officer
Other Presents		
26	Mr. Hiroshi Yanagi	Oriental Consultants Global Co,Ltd
27	Mr. Richard D McClellan	McKinsey & Company
28	Mr. Satoshi Yamamoto	JICA Expert, JICA Safe Crop Project, Hanoi

29	Mr. Ryan	Nafoods Group JSC
30	Ms. Cao Ngoc	Nafoods Group JSC
Japan International Cooperation Agency (JICA)		
31	Mr. Naomichi Murooka	Senior Representative, JICA Vietnam Office, Hanoi
32	Mr. Naoki Kayano	Project Formulation Advisor, JICA Vietnam Office, Hanoi
33	Mr. Yoshihisa Kimura	JICA Expert, MARD, Hanoi
34	Mr. Hiroyuki Sakuma	Project Advisor, JICA Nghe An Project
35	Mr. Mitsuo Nishiya	Leader of Consultant, JICA Nghe An Project
36	Mr. Takashi Kotegawa	Deputy Leader of Consultant, JICA Nghe An Project
37	Ms. Nguyen Thi Thu Hang	JICA Vietnam Office, Hanoi
38	Mr. Hoang Nghia Duyet	Technical Assistant, JICA Nghe An Project
39	Mr. Bien Quang Tu	Technical Assistant, JICA Nghe An Project
40	Mr. Nguyen Huu Hien	Technical Assistant, JICA Nghe An Project
41	Mr. Vo Hoang Nguyen	Technical Assistant, JICA Nghe An Project
42	Ms. Nguyen Thi Hong Thai	Assistant, JICA Nghe An Project
43	Ms. Ho Thi Trang	Assistant, JICA Nghe An Project
44	Ms. Nguyen Thi Hai Anh	Assistant, JICA Nghe An Project
45	Ms. Nguyen Thi Thuy Duyen	Assistant, JICA Nghe An Project
46	Ms. Bui Thi Minh Quynh	Assistant, JICA Nghe An Project




Annex 2: Report of Pilot Projects

2.1 Introduction

2.1.1 Objectives of the Pilot Projects

Pilot projects were implemented, along with general study, between April 2016 and October 2018 in the study area. The objectives of the pilot projects were as follows.

1. **Verification of the assumptions prepared for Draft Basic Development Strategy**
2. **Reflect the lessons obtained through implementation of pilot projects to the revision of Draft Basic Development Strategy**
3. **Identify the adoptable model for the promotion of contract agriculture to establish more efficient and advanced food system in the target area**
4. **Capacity development of the DARD staff through their involvements in planning, implementation, and management of pilot projects**

Connection with actual business was the main criteria for designing the pilot project; therefore, the implementation timing was based on the actual business transaction rather than the schedule of study mission. However, the pilot projects were planned and implemented with taking into consideration of multiple aspects in study concept of contract agriculture, e.g., documentation, transaction, marketing, and organization strengthening. Various components within the trial were designed to verify the Draft Basic Development Strategy. The outcomes from the pilot projects were used for the improvement of approach as well as for its further expansion of the idea in the future. Because of the limited implementation period, projects that are expected to generate tangible lessons and outcomes within the period were chosen. General aspects considered for designing the pilot projects are explained below.

(1) Business Transaction Oriented Approach

Preliminary study (2014) conducted by JICA Vietnam office indicated that project should pay more attention to actual business-oriented practice rather than research specific aspect within this master plan study. Therefore, the project started to identify the specific demand rather than general market demand. Generally, in public managed program, demand-side target tends to become more general than specific individual in order to maintain a broad public interest. Therefore, the target of demand-side become such as general consumer, and it is rather vague and invisible. However, in this pilot project, primary criteria for selection of pilot project was possibility to develop into an actual business transaction in adequate condition, so the project initiated from identifying specific clients for each pilot project idea. Criteria of adequate condition are continuity of business. Transaction based on a substantial business background was sought to ensure continuous business. Project tried not to finance nor intervene the negotiation; therefore, both parties agree their transaction at reasonable profitability that the business can be continued by themselves.

(2) Contract Between Farmer and Demand Side

JICA Vietnam office suggested to install stronger legal enforcement on agricultural transaction in order to establish more reliable relationship between farmers and demand side. This idea came up from findings of the study that diminishing marketability for major commodities in Nghe An agriculture is caused by unfaithful practice in their business transaction. Not only farmer but also demand-side often neglect the agreement at some point before closing their transaction. Contract agriculture with legal enforcement was one recommendation from the view point of the study. However, the project team presented different idea. The project team also agreed with the idea of contract agriculture but approach for fulfillment of the contract is different. Contract will not be fulfilled even if the penalty was enforced. Moreover, stipulation of severe penalty in a contract may even discourage to initiate the deal at first place. Therefore, the project recommended to seek system of profitability for each transaction in order to maintain a motivation to carry out the agreed

transaction. Another main idea of contract agriculture in this study is to specify the client. One of major cause for decreasing profitability of agriculture in Nghe An is increasing competition especially strong presser from international market. Farmers used to be able to sell their crops without having specific market in traditional practice. Farmers just produce whatever and whenever they could cultivate according to their schedule. Traditionally, Nghe An market could absorb majority of local production; however, more products from other regions, including international imports, fulfilling the markets where Nghe An products used to occupy. Market competitiveness of alternative products is relatively higher compared to Nghe An products in qualities and/or prices; consequently, Nghe An agricultural products are losing their marketability. Market is getting more saturated in general these days under intense international competition; therefore, many commodities produced without specific target tends to overflow from adequate sales opportunity. Finding a specific demand is one of the most important factors for marketing. When the specific demand is identified, farmers should secure this kind of sale opportunity by making some kind of agreement with that specific buyer. This agreement is going to be a contract. So, the pilot projects implemented in this study sought to identify specific clients with specific commodities to be transacted in specific conditions. Those conditions stipulated as an agreement become a written contract. And preparation of this contract was the primary process to initiate the pilot projects.

(3) Profitability and Mutual Benefit Oriented Design

One of main objectives of this study is to identify how to adopt contract agriculture in Nghe An province. To promote contract agriculture, contract itself must be profitable for both parties in the transaction. Since the most important factor for business is a profit, attractive contract means potential of profitability of the transaction.

Profitability has been misunderstood in many cases of aid-related projects. There are many projects focusing on value addition without really paying attention to cost. Those projects tend to spend more cost than the value incurred form the activity. Or, if they focus on the cost, they try to reduce cost without paying attention to value. In that case, they tend to reduce more value than cost. Consequently, both of those activities eventually make loss instead of profit; therefore, there are no sustainability.

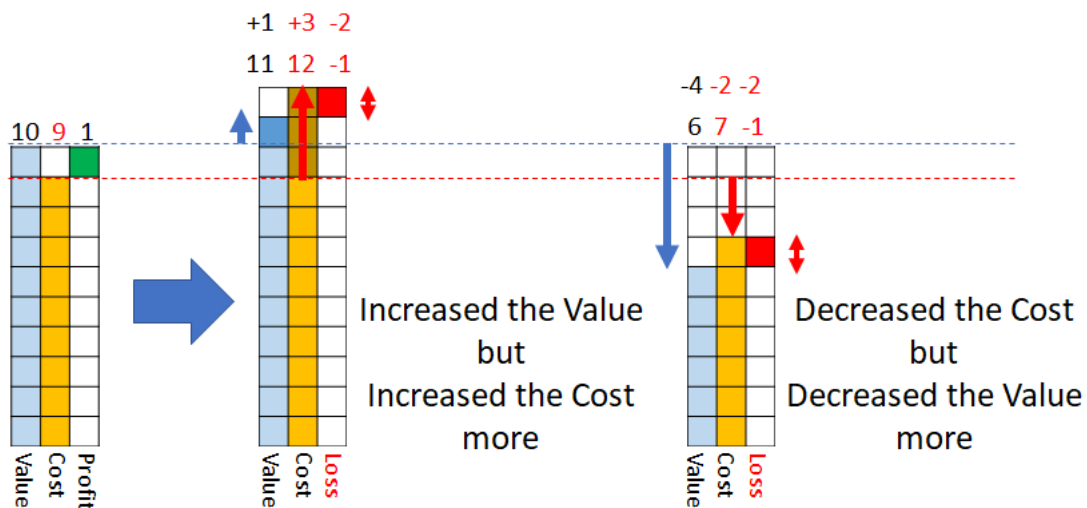


Figure 1 Relationship between Profit and Value / Cost

Figure 01 indicates typical condition of misunderstanding about profit and value. Activity such as value addition is often heard. However, most of the case, those activities just accumulate cost by inputting extra work or materials but not actually increasing appropriate value of the outputs. Definition of value is willingness to pay. Typical mistake often formulated under aid program is food processing. There are many projects exist that they produce products spend more costs than the value created. So, even if the project is successful to create value, many of those projects never create profit, therefore the project is not sustainable. It may look obvious that nobody misunderstands such simple fact, but it is in fact so common to make this kind of elementary mistake in many aid-related projects

because many projects are operated apart from real business where profit is the ultimate goal. On the contrary to many aid programs, this project intended to promote appropriate understanding of profit, instead of value, as in actual business transaction. All the pilot projects were implemented under actual business. To attract actual business players such as traders, wholesalers and retailers into the project, transactions proposed by this project had to reveal potentials of profit for all participants. Project utilized the idea of above figure to examine the profitability of each project idea. And project team also examined how the profit generated from the transaction can be shared by both sides, buyer and seller, to develop an attractive contract for both parties.

Many people try to identify quantity of product traded in the market as market research. And they express there is big demand when the traded quantity is big, but it does not mean there is a potential demand for our producers because the demand is already fulfilled by current suppliers. Ultimate purpose of market research is to find a demand who will actually buy our own product. Figure 02 indicates basic idea of market research. Marketing can be successful if the shortage is fulfilled by our product. So, what kind of shortage exists in the market must be identified under market research.

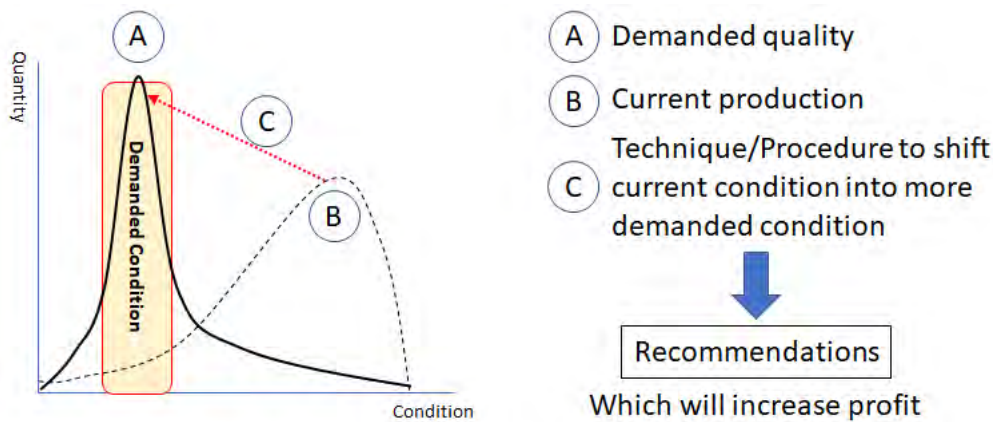


Figure 2 Deviation between Demand and Supply

Demand side’s requirement for the product they procure is not always satisfied because there is no such product or service available in the market. Therefore, demander compromise to take the product or service which quality is unsatisfactory for his preference. If anyone can propose such product which can fulfill the gap of demander’s requirement, there will be a potential demand for proposed product. Pilot projects for this project were designed based on this concept, to propose product or service to fulfill the gap between demander’s request and product available now. Concept of pilot project is to propose idea to fulfill the gap between demanded condition and currently available condition. Procedure taken here to identify the gap is indicated in Figure 02. Point A in Figure 02 is the demanded condition. Point B is the condition of currently available product. So, if the buyer wants to have a product which have condition of A, but he is buying B because that is only product available. It means the buyer is compromising his demand because of the current availability. However, if there is any technique to improve the condition of the product to what the demander wants, this product will be more attractive for this buyer, which means this product will be demanded more. So, the procedure is to identify Point A, actual demanded condition for specific demander, and Point B, current condition of available product. Then propose an idea to fulfill the gap between A and B, which is C on the Figure 02. Basic idea of pilot project is to verify the proposed idea whether it is technically and economically feasible or not. It might be quite possible to improve the condition of product if unlimited resources are available; however, it would not be profitable. So, not only technical but also economical feasibility must be evaluated within the pilot projects. All pilot projects were designed based on this understanding. In order to follow the procedure, following criteria were considered to select participants.

2.1.2 Criteria for Selection of Pilot Projects

Primary objective of the study is to create an agricultural development plan which may directly contribute

to initiate actual business transactions; therefore, economic factors were the major priorities. Although it was taken into account, no specific restrictions concerning sociological, environmental or demographical factors were imposed.

1st Criteria

Potential of business transaction

Identification of specific demand for specific client is the first criteria to initiate the discussion. JICA Project Team was seeking to develop a commercial transaction based on actual business utilizing Nghe An products by implementing the pilot project. So, the actual marketing of local product was conducted at the beginning of the study. Market research conducted under aid program generally tends to look more general demand for general consumers without specifying actual client. Therefore, the demand identified under such study become rather vague. However, in this project, demand must be clearly identified to the level of specific transaction. Which means, all the projects prepared written format as a contract that who is going to buy what product at what condition. Therefore; at least one person must express willingness to buy the product, so the contents of transaction can be clearly stated.

2nd Criteria

Capacity of participant

Production capacity is the second criteria. Ability of local producers to meet the requirements of demand side such as quality and quantity was assessed. Proposed projects are expected to be sustainable as private business, capacity of participants to continue operation needed to be evaluated. Capacity is not necessarily of current situation, but future potential can be developed after the project implementation was evaluated more importantly.

3rd Criteria

Socio and environmental effect

After 1st and 2nd criteria were met, brief evaluation was discussed before designing the pilot project. If there were obvious negative impact, design and/or site of the project needed to be modified.

2.1.3 Proposed Composition of Pilot Projects

Pilot projects were implemented to cover all area of Nghe An province in following 3 fields in agriculture, horticulture, agronomy and livestock, at 4 geographic regions, urban, coastal planes, mid hill and mountain. Project team intended to implement at least pilot in each category, so there will be examples to be shown for all area of activities. 3 fields and 4 regions were categorized on the following matrix and the pilot projects were listed in the matrix.

Table 1 Matrix of Pilot Projects

	Horticulture	Agronomy	Livestock
Urban	Potential commodities and potential approaches for each of these 3 fields at 4 regions to be recommended for trial to verify the development ideas		
Coastal plane			
Mid-hill			
Mountain			

In addition to the category, there were 2 topics targeted in operation of the pilot projects in each of 3 fields and 4 reasons. First topic is contracted agriculture. And the second topic is capacity building of government institutions in providing more commercial oriented agricultural support for the industry.

Contract Agriculture

Profitability of agriculture has been deteriorating in Nghe An province as international competition is increasing. Farmers used to be able to sell their products without much of efforts because the market was less competitive when international trade was not so active. Increasing imports has been substituting demand for local agricultural products of Nghe An. Local farmers have been experiencing hard time to make profit from agricultural activity because of the severe competition from imports. It is becoming very important even for farmers to know and understand clients' needs under such

competitive market. However, clients' needs are not universal. Each client has unique requirements according to their condition. Therefore, finding specific needs for each of different clients is an important objective to become competitive in the market. Since the required condition for each transaction is different, it is recommended to agree on criteria for each transaction between seller and buyer. This agreement will be a contract. So, contract agriculture is the basic concept of the pilot projects to establish more competitive agriculture in Nghe An agriculture.

Establishment of AMPF

AMPF was established to promote more business-oriented approach in local agricultural activity. Local government agencies have been assisting farmers in promotion of marketing by holding many activities such as participate or organize trade fair, assist to introduce demanders and so on. But those event-like activities are sporadic and information flow is rather one way from government side. Information flow concerning marketing activity is continuous; therefore, temporally event is not enough for sustainable business. Function of AMPF is to provide more constant opportunity to access market information for both farmers and demanders. AMPF is a government organization, but any entities and individuals who are working in the agricultural industry in the area can participate. Main function of the government is facilitation. Government support private industry instead of control is a new idea for local government agencies, so this concept needs be understood by related officers and disseminated for efficient operation of the AMPF.

Capacity Building of C/P Agencies

5 pilot projects were initiated by AMPF beside regular activity. Objective of this activity is capacity building for C/P agencies in project formulation. Local government agencies have been implementing projects more on technical aspect but less attention to economic feasibility. Project team has tried to let government officers to improve the understanding of profit-oriented business activity through the participation in formulation and implementation process of pilot projects design to aim profit. AMPF members coordinate the projects, but not operate. They supported actual participants such as farmers, processors, traders, retailers and so forth. AMPF members formulate and coordinate participants to operate actual business. The project provided an opportunity for AMPF members to learn more about actual business through this AMPF initiated pilot projects.

2.1.4 Selection of the Pilot Sites

Project team proposed to categorize the province into following 4 regions, urban, costal plane, mid-hill and mountain, by different recommendations of development approach. Pilot projects present ideas to be an example of development approach for each of 4 regions. Therefore, these 4 regions are the criteria for selecting pilot site. There were no other restrictions to limit the geographical area. Moreover, if the farming activity is executed within the Nghe An province, rest of the activities such as post-harvest or processing can be any location.

2.1.5 Implementation Structure of Pilot Projects

AMPF is expected to be a central agency for implementing all activities concerning business promotion of agricultural projects in future. Therefore, the pilot projects were designed to manage by AMPF, so the organization can obtain experience from the operation of the project.

AMPF was aimed to take main function for the supervision of operation, and JICA expert team and other member of PMU support the AMPF activity. However, all the pilot projects were operated under actual business transaction, so all the operation of the projects were performed by farmers and other business entities as participants of the project. AMPF with JICA expert team designed the activity, initiate and support the negotiation whenever they needed.

Local government offices such as city hall and peoples' committee in each district were also involved directly. So, AMPF contact local farmers through local government office. Local government office took very important roll especially in witnessing the transaction since most farmers have less experience in legal matters. Local government office supported their farmers in issuing legal documents such as licenses and tax certificates. And they even provided financial support to improve

the cultivation or operation for their farmers during this pilot activity.

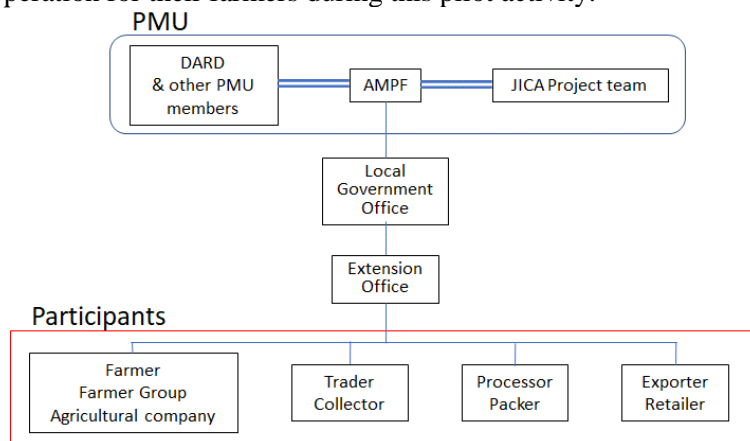


Figure 3 Implementation Structure of Pilot Projects

Monitoring was also performed within this structure. Farmers are not used to take records. Not only technical record such as such as quantities of input material and production but cost of input and sales were monitored to record in order farmers to realize condition of profit. Many participated farmers to this pilot project experienced first time for more rigid tax system to do business with regally registered companies, so book keeping became important work. AMPF supported daily record keeping in accounting within the monitoring activity.

2.1.6 Selection of the Beneficiaries

Project did not impose any specific exclusion for participating farmers as long as they are active in agriculture within Nghe An Province. Either individual or member of any group could participate in the pilot project. Although most of the pilot projects were implemented with regular farmers, several agricultural companies were also selected for the projects which aim to perform more advanced experimental techniques because those companies which have more capacities especially in finance and personnel can take risks for uncertain outcomes.

There was no restriction concerning types of farmer, but all the farmers must agree to follow the agreement in contract agriculture. This agreement was applied to all other participants if they were directly involved in the pilot.

2.2 Pilot Projects in Contract Agriculture

Contract means both farmer and buyer agreed on conditions for transaction in detail. Farmers should know what their specific clients want. If so, farmers can have clearer target for their operation. Master plan proposed in this report mentioned the slogan that “establish agriculture reliable to market needs”. Each pilot project presented an idea to verify the process to attain the objective of this slogan. Demand is specific for each client. Even if a farmer is producing same crop at equal quality, this crop may exactly satisfy the demand for one customer, but it may not fulfill the other clients’ needs at all. Which means demand is not universal but rather unique for each client; therefore, identify the specific client is the first step to know market needs. And if those needs are satisfied, those who supply the product can be “reliable to market needs”. Contract agriculture is a procedure proposed to attain this concept in this study. All pilot projects were designed and implemented to verify the hypotheses that this concept of contract agriculture which will lead to establish “the agriculture reliable to market needs”.

2.2.1 Commencement of Pilot Projects

Performing business transaction under agreed condition between farmers and buyers is the basic concept to attain “reliable agriculture” in this study; therefore, preparation of specific contract between the participants of each pilot project was the initial activity. A legally effective written contract, which includes all necessary conditions of transaction, was prepared and signed by both parties of participants to commence the pilot projects. The format of the contract document was prepared by a

regal advisor of JICA expert team. Purpose of signing contract is not to impose any extra responsibilities by stating restrictions which may cause some penalties. Main purpose of the contract is to agree to the condition which benefits both parties. So, such contents like penalties and fines are not main issues in the contract, but it indicates how to reach a settlement when the contracted condition could not be met. Seller and buyer generally have opposite interest. Seller wants higher price while buyer wants lower. However, in this activity, project team promote to cooperate with each other rather than compete against other party. Disseminate this idea of mutual benefit for all participants is the main objective of the commencement. Main part of the contract was carefully prepared under this concept. Other necessary conditions for transaction such as price, quality, quantity and so forth were listed and attached on the contract. And these conditions were also confirmed in commencement.

2.2.2 Pilot Projects Conducted During Project

(1) List of Pilot Projects

The JICA Project Team has planned and carried out 29 pilot projects, AMPF have planned and carried out 6 pilot projects, and JICA Expert Team has planned 7 pilot projects so far, as listed in Table 2. The progress of each pilot project differs from idea level to operation level with a contract. The progress of pilot projects is classified into 14 cases of Terminated in Contract / Undertaking stage and 28 projects have terminated by some reasons or completed PP. The detailed of the pilot projects are described in the next section.

Table 2 List of Pilot Projects

PP	Title of Pilot Project	Producer	Processor	Demand	Progress*
C1	Production of competitive fresh passion fruit for domestic market	Nafoods Que Phong farmers group (FG)	Nafoods	Domestic Retailers (Japanese supermarket, BigC, etc.)	Terminated
C2	Improve processing yield of passion fruit for competitive marketing			Japanese food company More other possible clients	Terminated
C3	Value chain development of passion fruit seed as health functional supplement			Japanese food company	Terminated in Contract/ Undertaking Stage
C4	Production and marketing of pectin extracted from peel of passion fruits			Japanese trading company, Confectionery makers	Terminated
C5	Large size spinach production for IQF processing	Tam Nguyen / Quynh Luu FG	Nafoods	Korean food company, Japanese trading company, etc.	Terminated
C6	Cultivation of cost-efficient Chinese cabbage for processing			Korean food company, Japanese trading company, etc.	Terminated
C7	Improvement of ginger production to meet international market demand	FG in Ky Son	Nafoods	Japanese trading company, Japanese food company	Terminated
C8	Improving bamboo shoot production for export demand	FG in Quynh Luu	Nafoods	Japanese trading company, etc.	Terminated
C9	Brand promotion and production improvement of Thanh Chuong chicken	Chicken FG in Thanh Chuong	Distributors	Maximark, Tam Nong, Bibi Green, restaurant	Terminated in Contract/ Undertaking Stage
C10	Improvement of value chain of oranges in Quy Hop	FG, Phu Quy Agriculture co. (Quy Hop)	Phu Quy Agriculture co. (Hanoi)	Vinpearl Cua Hoi, Saigon Kim Lien Cua Lo	Terminated
C11	Production of black sesame for oil extraction for Japanese market	FG, TH Group	Sy Tang Co. TH group	Japanese trading company	Terminated
C12	Improvement of mango and lime specification for Japanese market	FG	Nafoods	ASC	Terminated

PP	Title of Pilot Project	Producer	Processor	Demand	Progress*
C13	Production and marketing Improvement of Eco-Pork	Nghe An ECOFARM, Duc Anh Farm	District Slaughter House	Maximark, Bibi Green, etc.	Terminated in Contract/ Undertaking Stage
C14	Safe vegetable production and distribution in Vinh city	Hong Phong Green Agricultural Cooperative	Hong Phong Green Agricultural Cooperative	Bibi Green	Terminated in Contract/ Undertaking Stage
C15	Improve the cultivation technique for higher yield and quality of mandarin	XuanTanh	XuanTanh	Bibi Green, Maximark	Terminated
C16	Production of potato for producing processed foods	FG in Hoang Mai	Hoang Mai FG	Japanese food company	Terminated in Contract/ Undertaking Stage
C17	Introduction of lotus root production	Rice farmers	Nafoods	Japanese trading company	Terminated
C18	Promotion of scallion for exportation to Japan	Quynh Luu FG	Nafoods	Japanese trading company	Terminated
C19	Improvement of fresh passion fruit conservation	Que Phong FG	Nafoods	European company	Terminated
C20	Promotion and marketing of honey produced in Nghe An province	Yen Thanh FG	UNIMEX NGHEAN	Honey renaissance	Terminated
C21	Contract farming for safe vegetable	Phu Luong Cooperative	Phu Luong Cooperative	Bibi Green	Terminated
C22	Production and sales of cassava silage for dairy farms	Thanh Chuong FG	Vinamilk	Vinamilk	Terminated
C23	Sales Promotion of Black Garlic Products	Thanh Chuong FG	Tam Duc Garlic	Hotel, Retailing shop	Terminated
C24	Rice production for processing of rice snack	Dien Chau FG	Trang An 2 JSC	Trang An 2 JSC	Terminated
C25	Promotion of Jew's ear mushroom for exportation to Japan	Doan Ket Mushroom Production Cooperative	Doan Ket Mushroom Production Cooperative	Japanese trading company	Terminated
C26	Trial cultivation of spinach for the demand of domestic fresh market	Quynh Luu FG	Bibi Green	Bibi Green	Terminated in Contract/ Undertaking Stage
C27	Production and Sales of H'mong Chicken and Local Black Pig	Ky Son FG	Huong Son Cooperative	Bibi Green	Terminated
C28	Promotion and marketing of ground nuts for exportation to Japan	FG in Dien Chau/ Nghi Long	Sy Thang Co,	Companies (Domestic, Japanese)	Terminated
C29	Improvement of garlic production and marketing	Thanh Chuong FG	Bibi Green	Bibi Green	Terminated in Contract/ Undertaking Stage
A1	Vegetable Production in Cua Lo tourism town	Cua Lo FG	-	Summer Hotel	Terminated
A2	Production and sales of eggs in urban areas	Vinh FG	-	Bibi Green, Tam Nong, etc.	Terminated in Contract/ Undertaking Stage
A3	Improvement of quality of Quang Tien pomelo to satisfy the market needs	Thai Hoa FG	Thai Hoa FG	Thien Phuc Safe Food Store, Hotels in Vinh, etc.	Terminated in Contract and Undertaking Stage
A4	Sales promotion of Nhut	Thanh Chuong FG	Thanh Chuong FG	Local Restaurant, Hotel and Retail shop	Terminated in Contract and Undertaking Stage
A5	Improvement of production and competitive power of silk products	Dien Chau FG	Dien Chau FG	Silk Traders from Hanoi and Laos	Terminated
A6	Improvement of herbal trees production and marketing	Con Cuong FG	Pu Mat JSC	Retailers, Pharmacy, Clinic	Terminated in Contract/ Undertaking Stage
E1	Production and sales of Matcha	Farmer in Anh Son	Econuti / Ecofarm	Quantum Leaps Corporation	Terminated
E2	Sales of rice for brewing of Shochu	Seedling Center, DARD	Khai Sang Co.	Hue Foods Company	Terminated in Contract/ Undertaking Stage
E3	Branding of rice noodles as a tourism resource	Quy Chinh rice noodle	Nam Dan DPC	Department of Tourism	Terminated in Contract/ Undertaking Stage

PP	Title of Pilot Project	Producer	Processor	Demand	Progress*
		cooperative			
E4	Production of garlic seed for export to international market	Huong Son Cooperative	Youth Volunteer Team No. 10, Youth Union	Farmer's Co-op in Japan	Terminated
E5	Production of endemic tomato as a special local product	Tuong Duong FG	AES in Tuong Duong	Tuong Duong DPC	Terminated in Contract/Undertaking Stage
E6	Development of silk products	Dien Chau FG	Textile cooperatives	AES, Dien Chau DPC	Terminated
E7	Production of Endemic Mango as a Special Local Product	Mango Production & Trade Cooperative	AES	Tuong Duong DPC	Terminated

Note*:

A - Idea: Identifying actors in the supply chain, including inspection of sample products.

B - Preparation/Negotiation: Negotiating among actors in the supply chain or preparing plan and materials for trial.

C - Trial/Verification: Verifying production, processing, and selling under a basic agreement among actors in the supply chain.

D - Contract/Undertaking: Implementing under contract among actors in the supply chain.

E - Terminated: Terminated by some reasons or completed the PP.

2.2.3 Detailed Activities of Each Pilot Projects

2.2.4 C1: Production of Competitive Fresh Passion Fruit for Domestic Market

Actor	Production	Processing	Sale	Stage
FG in Que Phong	Passion fruit production			Terminated
Nafoods		Sorting fresh passion fruit for the domestic market and packaging the fruit.		
Japanese supermarket, Maximark			Sell to the Vietnamese customers.	
Contract	FG in Que Phong - Nafoods, Nafoods – Japanese supermarket, Nafoods - Maximark			

(1) Objective of PP

Passion fruit is widely cultivated in Que Phong district and is processed to produce several kinds of products such as juice by Nafoods, while the flesh passion fruit is not distributed to the domestic market due to its low quality. The one of the reasons for low quality on passion fruit produced in Que Phong is inadequate harvesting method; Nafoods and contracted farmer harvest the passion fruit before maturing to prevent the natural drop. However, earlier harvesting of passion fruit causes the less purple coloring and less sugar content which leads to low quality of the product. Since Nafoods has the vision to expand their business related to passion fruit not only processed products to international market but also flesh products to domestic market, this PP is conducted to develop the harvesting technique which is appropriate for selling flesh passion fruit to the domestic market.

(2) Activities and Results

On December 2016, in cooperation with Nafoods and local farmers, the JICA Project team had experimented the passion fruit harvesting by the application of fruit net as shown in the pictures below. The net harvesting method increased rate of fully matured purple skin color fruits compared with control (control: 67%, net harvesting 100%) in the experiment field. It was found from the result of the sensory evaluation that fully matured passion fruits have better aroma, color, and taste than after-ripening passion fruits. Especially, fully matured passion fruits do not have the astringency in comparison with the after-ripening passion fruits. However, based on the cost calculation on the harvesting technique including the cost of fruit net and labor works, the fruit net application method is evaluated as inadequate; this technique needs considerable cost which is more than the profit gained

through applying this technique. On the other hand, The JICA Project Team introduced the fully matured passion fruit to Japanese supermarket. The Japanese supermarket was highly interested in fully matured passion fruits, and they approved to start a transaction on flesh passion fruit.



Fully matured passion fruit harvested with net



After-ripening passion fruit



Net harvesting method (1st trial)

Therefore, JICA Project team has planned to apply another net harvesting technique as shown in the pictures below. In December 2017, JICA Project team started another experiment regarding the net harvesting technique. The experiment was conducted in the farmland with the size of 200 m² which is owned by Nafoods. After the planting passion fruit seedling on December 21, the passion fruit was grown well to produce the fruits. However, before the harvesting started, the passion fruit trees in the experimental plot were all cut down by somebody. After the interview with Nafoods, it is revealed that local resident who is under dispute with Nafoods regarding the land ownership has cut down all the passion fruit trees planted in the farmland owned by Nafoods. Due to this incident, JICA Project Team has decided not to continue this PP.



Image of net harvesting method (2nd trial)



Growth of passion fruit before being cut down

(3) Lessons Learned

- It was verified that fully matured fruits have better quality and higher demand for urban market in the 1st trial.
- It is dispensable to have a good relationship with local residents especially when we conduct contract agriculture.

2.2.5 C2: Improve Processing Yield of Passion Fruit for Competitive Marketing

Actor	Production	Processing	Sale	Stage
Nafoods	Production of passion fruits	Production of puree of passion fruits		Terminated
Japanese food company			Selling to an ordinary customer	
Contract	Nafoods – Japanese food company			

The JICA Project Team has concluded not to continue this PP because the preparation of products which satisfies the needs of the customer is judged to be impossible.

Japanese food company analyzed the puree of passion fruits produced by Nafoods and figured out that the puree does not contain sufficient amount of Vitamin C. To solve this problem, it will be required to improve it from the production and processing stage such as the introduction of new varieties of passion fruits or the improvement of the processing techniques. Thus, the JICA Project Team has concluded that this issue cannot be solved during the project term and stopped to continue this PP.

2.2.6 C3: Value Chain Development of Passion Fruit Seed as Health Functional Supplement

Actor	Production	Processing	Sale	Stage
FG in Que Phong	Passionfruit			Terminated in Contract/ Undertaking Stage
Nafoods		After passion fruit puree extraction, collect passion fruit seed. Then wash and dry seed.		
A Japanese trading company			Import passion fruit seed	
A Japanese anti-aging supplement producing company			Produce an anti-aging supplement with the seed. Sell to Japanese customers.	
Contract	FG in Que Phong -Nafoods, Nafoods - A Japanese trading company, A Japanese trading company - Japanese anti-aging supplement producing company			

(1) Objective of PP

Passion fruit contains many seeds occupying 20 % of the dry matter. However, the seeds after extraction of juice currently have no market value in Vietnam. A Japanese company produces anti-aging supplements made from passion fruit seeds. The company intends to widely import the material. If Nafoods in Nghe An can sell the seed to the company, income of the Nafoods and the contracted farmers would be increased.

In this trial, quality of the passion fruit seed from Nafoods for anti-aging supplements production is evaluated to check its feasibility of exporting Japan.

(2) Activities and Results

Passion fruit seed from Nafoods successfully passed the anti-aging supplement sample production test by the Japanese company. Now the Japanese company is conducting anti-aging component quantity and sanitation stability check using the small sample, and they will continue the test until September 2018. If the sample shows good result, the Japanese company will purchase a large amount of passionfruit seed from Nafoods depend on the market demand of the Passenol.

Passion fruit seed from Nafoods successfully passed the anti-aging supplement sample production test, anti-aging component quantity and sanitation stability check and small quantity importing test for Japan by the Japanese company. Therefore, the Japanese company decided to buy the passion fruit seed continuously from Nafoods. The Japanese company bought 1 container (24 t) of the passion fruit seed in November 2018.

(3) Lessons Learned

- Intervention to private trade

The Japanese company intends to buy passion fruit seed from Nafoods. However, detail of the test result and actual demand of the passion fruit seed for the anti-aging supplements are confidential to avoid information leakage to competitors. The Project cannot fully control such sensitive private information.

- Effective use of food processing wastes

There are other wastes that may be able to be added market value like passion fruit seeds in Nghe An.

For example, passion fruit, orange and pomelo peels have high pectin contents, these have possibility to get market value as raw material for pectin. Effective use of food processing waste can reduce disposal cost, increase income. It is recommendable to continue this kind of activity for finding possibility of effective use of other food processing wastes.

2.2.7 C4: Production and Marketing of Pectin Extracted from Peel of Passion Fruits

Actor	Production	Processing	Sale	Stage
Farmer's Group	Production of passion fruit			Terminated
Nafoods		Preparation of peel of passion fruits by the washing and drying		
Pectin producing enterprise		Extraction of pectin from the peel of passion fruit peel	Selling to the food processing enterprise	
Contract	Farmer's group - Nafoods, Nafoods – Pectin producing enterprise			

The JICA Project Team has concluded not to continue this PP because it is judged to be difficult to find the demanders of pectin.

2.2.8 C5: Large Size Spinach Production for IQF Processing

Actor	Production	Processing	Sale	Stage
Tam Nguyen and FG in Quynh Luu	Large size spinach			Terminated
Nafoods		Production of IQF products to meet Korean demand.		
Korean importer and domestic			Korean importer (100 ton/year), Offseason supply for the domestic market	
Contract	Nafoods – Tam Nguyen and FG Quynh Luu			

(1) Objective of PP

Most of the frozen spinach in the international market is occupied by Chinese product, but recently, the demand of frozen spinach produced by other countries is increasing because of increased production cost for agricultural products in China and problems related to food safety. Although Nafoods is receiving orders of frozen spinach from Korean company frequently, Nafoods were not able to take that opportunity because there was no appropriate raw material available in Nghe An province. If local farmers can cultivate spinach appropriate for IQF (Individual Quick Freezing), new demand might be created. To verify the feasibility of IQF spinach production for the international market, PP produces raw material of spinach cooperation with Nafoods to examine cost efficiency through technical support to local farmers.

(2) Activities and Results

Although spinach is a winter vegetable, it was identified that cultivation in Quynh Luu district was feasible. Trial production of IQF spinach was implemented. However, in order to process spinach for IQF at Nafoods' factory, it was identified that extra investment is required at the washing process of spinach before applying IQF treatment. The washing machine of spinach in Nafoods cannot remove foreign materials such as mud attached leaves properly. It was clarified to add washing process by workforce (hand) to process spinach using present facilities. In case of a cost calculation included in that process, it was judged not to maintain cost competition in the international market. Therefore, the project team concluded to stop IQF production of leaf vegetable.

According to Nafoods, though washing process can be improved by installing new equipment and machine, it is necessary to invest about 10 billion VND, and additional investment is difficult at present. Therefore, the verification trial to produce market competitive IQF spinach is completed by providing a recommendation to improve facility such as the installation of the new washing machine for the processing of leafy vegetable.

There were not appropriate facilities installed at Nafoods' factory, so the project concluded processing

for IQF spinach in Nghe An is not feasible. However, another factory, Doveco Co., which already equipped an appropriate facility for IQF spinach was found in Ninh Binh. Hence, the project team visited the factory to discuss the possibility to use Quynh Luu product at the factory. Doveco is procuring other vegetables such as green onion from Quynh Luu, so the logistics to transport product already exists. Therefore, the price of the raw material is the major concern for this transaction.



IQF facility of Doveco Co. in Ninh Binh.



The company has a facility to meet the international standard for export.



IQF spinach produced by Doveco Co. This product has been exporting to Japan already

Farm gate price offered by the company is too low at this point since the farmers are selling their product at the fresh market which is relatively high. Thus, it is not economically feasible to supply spinach as low material now. However, Doveco has extra demand for IQF spinach, so there will be a potential to expand the production in Quynh Luu if the cost of production can lower in future.

(3) Lessons Learned

Although the cost is not feasible at this PP case, the existence of potential demand was identified for IQF spinach. Production cost is still high because the scale is still small at current production. However, the main product of Quynh Luu is green onion, and most of this green onion is utilized for processing at an equivalent price as IQF spinach which was offered from Doveco. If the spinach becomes next main product of the area, cost efficiency may reach to an acceptable level for processing demand too. Quynh Luu district has been cultivating green onion very intensively, so the replant failure is becoming an issue. This area needs another main crop for rotation. In order to maintain the sustainability of green onion production, the introduction of spinach might be an important option.

2.2.9 C6: Cultivation of Cost Efficient Chinese Cabbage for Processing

Actor	Production	Processing	Sale	Stage
Tam Nguyen	Production of Chinese Cabbage			Terminated
Nafoods		Production of IQF products, Exporting to Korea		
Korean enterprise			Selling to the ordinary customer in Korea	
Contract	Tam Nguyen-Nafoods, Nafoods-Korean enterprise			

The JICA Project Team has concluded not to continue this PP, because of a policy change by the Team.

This PP was planned to implement the experiment similar to PP C5. Since there is no difference between PP C5 and this PP regarding the created value chain, the JICA Project Team has decided to focus on PP C5 and not to continue this PP.

2.2.10 C7: Improvement of Ginger Production to Meet International Market Demand

Actor	Production	Processing	Sale	Stage
FG in Ky Son	Yellow ginger production			Terminated in Trial and Verification
Nafoods		Production of IQF products such		

		as a ginger paste. Packaging of fresh ginger. Export ginger products.		Stage
Japanese trading company, Japanese food company			Import of ginger products. Sell to Japanese customers.	
Contract	FG in Ky Son			

(1) Objective of PP

Most of the imported gingers consumed in Japan are produced in China. Due to the anxiety of food safety of Chinese products, considerable numbers of Japanese enterprises who import the gingers from China are promoting to diversify the suppliers of ginger. The objective of this PP is to establish the ginger value chain which connects the ginger producing area in Ky Son district, Nghe An province and Japanese consumers by the implementation of technical support for the production of gingers which meets the needs of those Japanese enterprises.

The ginger cultivation conducted by shifting cultivation is one of the important means for the local farmers to earn cash income. Currently, 2 local ginger varieties are produced in Ky Son district. The one is locally called as "Gùng xê" which is small-sized ginger and sold mainly in the domestic market. Another is locally called as "Gùng trâu" which is rather large-sized ginger and sold in the domestic and international market. This PP focuses on the production of gingers for the processing due to its high demands from Japanese enterprises. Although the Gùng trâu has suitable characteristics such as its large size for the processing, this local variety does not meet the needs of Japanese enterprises since the color of Gùng trâu variety is rather whitish and the requirement of ginger color from Japanese enterprises is yellowish. Thus, the yellow ginger variety that meets the needs of Japanese enterprises is introduced for the cultivation experiment in this PP. In addition, this PP also covers the trial on the series of activities regarding the ginger trade such as post-harvest, transportation, processing and sale necessary for the establishment of the ginger value chain.

(2) Activities and Results

1) Pilot Project Design (1st trial)

3 plots with the size of 300 m² in Pha Xac village, Huoi Dum village, and Huoi Giang village were prepared for the trial for yellow ginger cultivation. Besides, 0.22 ha of the land in Huai Uc village was prepared for the extra cultivation field to supply the raw material to Nafoods. The fertilizer application trial was also conducted in Huai Uc village to check the effect of fertilizer on the yield of yellow ginger. The amount of applied fertilizer is as follows.

- without Fertilizer:
- with Fertilizer: 16-16-8+Te (50kg/0.1ha)
- with Fertilizer +: 16-16-8+Te (100kg/0.1ha)

The yellow ginger seeds with the amount of 3,350 kg in total were procured through the Nafoods. However, the 1,400 kg of those seeds were not well preserved, and some of those were already ruined. As a result, the germination rate of the 1,400 kg of ginger seed was quite low (5-20 %) while that of the rest of ginger seeds were 90-95 %.

2) Result of the Experiment (1st trial)

The growth of yellow ginger was well until August 2017. However, since the fungus disease caused in all the experiment plots due to the heavy rain and high moisture condition in August 2017, JICA Project team had to apply pesticide to the fields. After the application of a pesticide, the growth of yellow ginger was recovered and harvested in January 2018. The yield survey was conducted by the random sampling method. 10 samples were taken in each treatment. The figure below showed the results of the survey. As a result, there was no significant difference regarding the yield of yellow ginger between "with fertilizer" plot and "with fertilizer+" plot. On the other hand, the yield of "without fertilizer" was less compared with "with fertilizer" plot. Thus, it can be concluded that the application of fertilizer is desirable for the cultivation of yellow ginger.

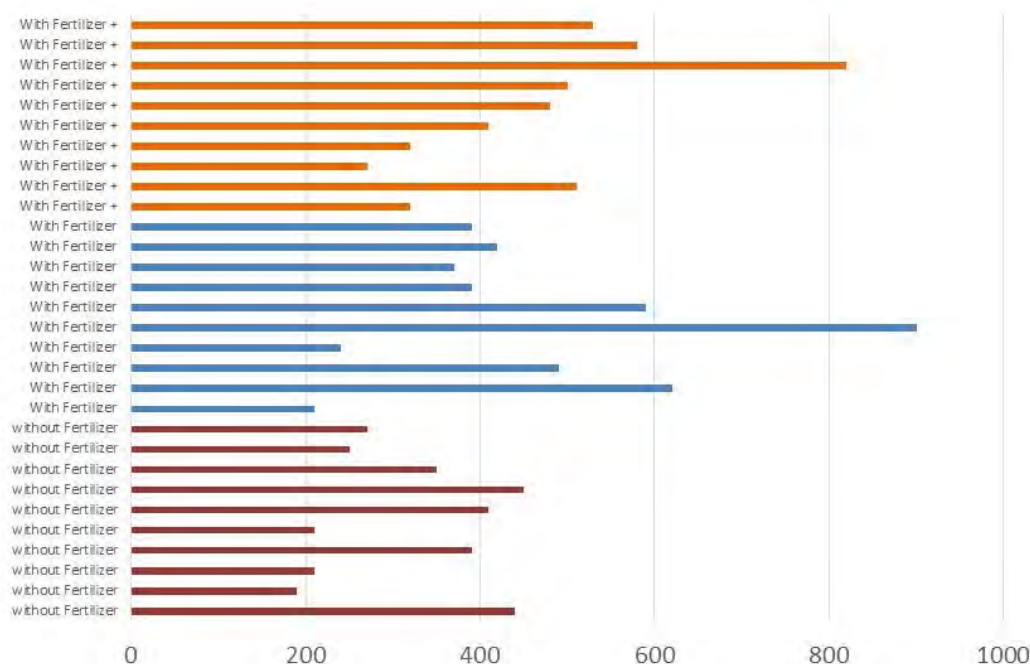


Figure 4 Yield of Yellow Ginger (g/plant)



Gingers cultivated in Huai Uc (April, 2017)



Gingers cultivated in Huai Uc (June, 2017)



Gingers cultivated in Huai Uc (July, 2017)

3) Candidate Buyer and Requirement (1st trial)

This PP is expected to export yellow ginger to Japan through Japanese trading company. The Japanese trading company has several customers who are willing to buy flesh yellow ginger and processed yellow ginger such as frozen ginger slice and frozen ginger paste. In the case of exporting flesh ginger to Japan, it is necessary to fulfill the following conditions according to the Japanese quarantine system.

- It is proven that Nematode on Banana does not exist in the ginger field, or it is proven that Nematode has existed before, but it does not exist at present.
- It is proven that Nematode does not exist in the roots of fresh gingers to be exported to Japan.

Based on the above conditions, the project team conducted soil sampling and analysis to examine Nematode existing in cooperation with an analysis organization under the DARD in Nghe An. According to the analysis result, it is clarified that there was no Nematode in all fields. At harvest season, the root of ginger should be examined whether Nematode is existing or not. However, the Japanese trading company visited the yellow ginger cultivation site on December 5, 2017 and concluded that it would be difficult to export flesh ginger to Japan due to the issues on the preservation and transportation of gingers. Thus, the JICA Project Team has decided to use all the yellow gingers harvested in this season as the raw materials to produce a yellow ginger paste.

4) Result of Yellow Ginger Trade (1st trial)

The Japanese Trading company requested Nafoods to supply 10 tons of Yellow Ginger Paste. To respond to this request, JICA Project team and Nafoods tried to supply raw materials produced in Ky Son district. However, it was not succeeded since 1) the amount of gingers harvested was not enough and 2) the local farmers wanted to keep harvested gingers as the seed for the next season to expand the cultivation scale. Thus, the trial of trading yellow ginger was continued to conduct in the next season.

5) Pilot Project Design (2nd trial)

To expand ginger value chain model developed in 1st trial, JICA Project Team has conducted 2nd trial cultivation of yellow ginger in cooperation with AMPF, Ky Son district, Nafoods and local communities. The cultivation plan for 2nd trial is shown in the table below.

Table 3 Planted Area and No. of Participants of 2nd Trial Cultivation of Yellow Ginger

	Huoi Uc Village	Huoi Dun Village	Central Village	Total
Area planted (m ²)	3,630	1,170	2,230	7,030
No. of farmers	10	6	8	24

Source: JICA Project Team

In cooperation with Nafoods, JICA Project Team had procured ginger seed roots and distributed to the participants of trial cultivation. The participants started to plant ginger seed root from beginning of April 2018. After planting ginger seed root, Nafoods and JICA Project Team conducted to monitor and give technical advises to the farmers regarding ginger cultivation.

6) Result of the Experiment (2nd trial)

The ginger cultivation was well proceeded till August 2018. However, due to the following matters, much of planted ginger showed poor growth.

- ✓ The typhoon hit in Nghe An province in the middle of August to September. Due to this, several ginger cultivation area got damaged by severe land erosion.
- ✓ The pastured buffalo entered into the cultivation field and destroyed most of planted gingers.

Although most of the gingers were damaged and destroyed, there are several fields that can harvest yellow ginger as planned. However, the total production amount of ginger was quite low so that it was not possible to trade with Nafoods.



Eroded land due to the typhoon that hit in September 2018



Harvested gingers (December 2018)

(3) Lessons Learned

- It is necessary to train local farmers how to preserve the ginger seed for next cultivation since the ginger is easily ruined by the unfavorable preserving condition such as high humidity.
- The fertilizer application is desirable for yellow ginger cultivation, while it should be considered the farmers capacity to procure fertilizer since they live in the remote area and the access to that agricultural material is not well.
- The local farmers cultivate ginger by the shifting cultivation. Thus, the cultivation field is supposed to be scattered if the cultivation area is expanded. Therefore, it should be noted that the

local traders and cooperative role will be very important to expand the yellow ginger cultivation area to control and manage local farmers.

- The ginger demand is still very high especially from the international market including Japan. Thus, the expanding ginger cultivation area is desirable for local farmers to get stable partner and income. However, the production condition in mountainous area is severe as experienced in this PP. the governmental side should pay special attention to support those local farmers who participate in yellow ginger cultivation by providing frequent technical advice and monitoring.
- In order to develop trustable ginger producing area, Nghe An side should attract private company to invest and to become core actor of ginger trading business by providing subsidy to develop necessary facilities including pick-up point, and primary processing shed. It is also necessary to improve the farm-to-market road for the efficient distribution of ginger in mountainous area.

C8: Improving Bamboo Shoot Production for Export Demand

Actor	Production	Processing	Sale	Stage
Farmers in Quynh Luu	Bamboo shoot for processing			Terminated in Trial and Verification Stage
Nafoods		Production of IQF products for export		
Japanese trading company, Japanese food company			Ingredient for Japanese food company's product	
Contract	Nafoods – Bamboo farmer in Quynh Luu			

(1) Objective of PP

Based on the request from Japanese trading company, Nafoods has been producing frozen bamboo shoot. To produce frozen bamboo products, it is necessary to process raw materials within 24 hours after harvesting. Nafoods is procuring bamboo shoots from Northern Vietnam, transportation incurring extra cost to decrease cost competitiveness. There are small bamboo production areas in Quynh Luu which is located relatively near the Nafoods factory. If the raw material of bamboo could procure near the factory, the production cost of frozen bamboo shoots will be reduced and may become more attractive to the customers who are interested in Nafoods products including Japanese companies. The objective of this PP is to support bamboo shoots farmer in Quynh Luu in cultivation technique to be able to supply raw material for Nafoods in order to establish the model of the efficient supply chain of bamboo and bamboo products in Nghe An province.

(2) Activities and Results

The experiment of the Bamboo production was conducted in Tien Son village, Quynh Luu district. The bamboo variety applied for this PP is *Dendrocalamus latiflorus Munro*. The three kinds of cultivation method were applied to this PP. The harvest of bamboo was started from June 2017 and continued until October 2017. The project team has produced IQF product sample of bamboo and sent it to the Japanese customer in July 2017. The sample had sent to the trading company in Japan, and it was delivered to one of a potential client, a Japanese food company, but the quality was not accepted. There was some bitter after taste from the product. The cause is not clear, and no probable countermeasure has not been identified, so the project has been pending until some countermeasure is identified.

Table 4 Outline of Experiment of Bamboo Production

	MARD Method*	NAEC Method**	Conventional Method
Weeding	- Remove weeds and under-ground vegetation around the area of bamboo	- Remove weeds and under-ground vegetation around the area of bamboo	NA
Fertilizer	- Fertilize 30kg compost and 3kg NPK 5,10,3-8 each bush	- Fertilize 30kg compost and 3kg NPK 5,10,3-8 each bush	- NPK is applied in small holes around each bamboo shoot (no specific measurement of NPK)
Pruning	- Prune and trim all the small, old and diseased bamboos, Leave 4 to 8 strong bamboos in each bush	- Prune and trim all the small, old and diseased bamboos, Leave 4 to 8 strong bamboos in each bush - Cut the bamboo top (at the height of 4m from the ground)	- Old bamboos in each bush are cut down

	MARD Method*	NAEC Method**	Conventional Method
Plowing	- Plow around the bamboo bushes covering the bamboo feet/stumps with soil at a depth of 20-25cm	- Plow around the bamboo bushes covering the bamboo feet/stumps with soil at a depth of 20-25cm	- Land between the bamboo bushes are plowed
Other	- Earth-up: cover the fertilizer and earth up the bamboo bushes with soil (by 2/3 of the first bamboo sections)	- Earth-up: cover the fertilizer and earth up the bamboo bushes with soil (by 2/3 of the first bamboo sections)	NA

* Recommended Method by MARD, ** Recommended Method by National Agricultural Extension Center (NAEC)
 Source: JICA Project Team



Bamboo Production Site

Bamboo shoot before harvesting

Harvested Bamboo shoot

(3) Lessons Learned

- It is necessary to complete processing of bamboo shoot when the raw material is still flesh in order to produce high quality processed products. Thus, there is a potential in Nghe An province to become the competitive supplier of processed bamboo products due to the existence of a processing factory in Nghe An province. On the other hand, only a limited number of farmers produces the *Dendrocalamus latiflorus Munro*, which makes it difficult to supply enough volume of raw material to the factory. Therefore, it is necessary to propose several policies regarding the categorical assistance to increase the cultivation area of bamboo as well as the plan to improve the quality of processed products of bamboo shoot.
- Quality of IQF bamboo shoots was not accepted this time from Japanese client, but the improved productivity of trial field improved the profitability of bamboo farmer in Quynh Luu for selling his product at the local market. Therefore, improvement in cultivation technique is recommended even for targeting the local market.

2.2.11 C9: Brand Promotion and Production Improvement of Thanh Chuong Chicken

Actor	Production	Processing	Sale	Progress
FG in Thanh Chuong	Production suits to demander’s request			Terminated in Contract/ Undertaking Stage
Distributors		Processing suits to demander’s request		
Maximark, Tam Nong, BiBi Green			Sale to common consumers	
Contract	FG – Distributor – Bibi Green, Maximark, etc.			

(1) Objective of PP

Thanh Chuong chicken is specialty products with a nationwide name recognition produced in Thanh Chuong district. It is a free-range chicken traditionally raised in this area by using the local breed and local feed resources. Vietnamese people prefer this kind of meat which has chewy and better flavor than ordinary tender broiler meat.

But the amount of production is not enough to meet the market demand and effective marketing is not implemented by taking advantage of the high reputation of Thanh Chuong chicken. Also in terms of techniques, there was no chicken farmer’s group or cooperative to unify the production method and

the quality in Thanh Chuong district, and specification of chicken meat was not standardized among the farmers.

The objective of this PP is to promote Thanh Chuong chicken brand and improve its value chain by (1) establishing the farmer's group, (2) standardizing the production method, (3) improving the distribution and retail system and (4) getting certificate of food safety. The lessons learned through the PP are to be examined and reflected on the Master Plan and Action Plan of the Project.

(2) Activities and Results

1) Agreement Among Stakeholders and Formation of Farmers Group

The project agreed to sign on the MOU (Memorandum of Understanding) with stakeholders on implementing the activity of this PP with DARD district office, Thanh Chuong Chicken Association, Agriculture Extension office, Thanh Xuan commune, Veterinary officer of the commune, Farmer group leaders, Tam Nong Company as a wholesaler and Maximark and BiBi Green as retailers.

The project and commune office have set 3 pilot farmers group and selected 80 pilot farms in Thanh Xuan commune, Thanh Chuong district.

2) Improvement of Techniques on Thanh Chuong Chicken Raising

The project has conducted technical training such as "Basic techniques for producing standardized Thanh Chuong chicken", "Cassava silage utilization for feed cost reduction", "Earthworm growing to secure the high protein feed resource" and "Pure breed egg incubation for breeding farms" for the farmers group. These introduced techniques have been applied in most of the pilot farms. In particular, the Cassava silage utilization has become a popular technique among not only the pilot farms but also all kind of livestock farms because of its high palatability and it can reduce feed cost by using cassava leaves which were thrown away after harvesting the root. The pilot farms have reduced the feed cost of 30% on average by using cassava silage. Most of the farms increased the production of cassava silage significantly because of its high-cost reduction effect and improvement of chicken growth, and their feed cost will be decreased more in next season.

In addition, as a result of discussion with demanders, the following issues become obvious; The quality of chicken is significantly different depends on the farms because the method of chicken raising is not unified. Therefore, the PP supported DPC of Thanh Chuong district and Thanh Chuong Chicken Association to develop the unified shipping standard. If the farmers, distributors and retailers ship the chickens by using the brand name of "Thanh Chuong chicken", they have to follow the standard; (1) The farmer has to be the member of Thanh Chuong Chicken Association, (2) To use the chicks of pure "Ri" breed produced within the district, (3) To use the local feed resources as the alternative to the industrial mixed feed, (4) To raise chickens in free-range during the daytime, and (5) To ship the chicken at 5-6 months of age.

3) Development of an Integrated Production System within the District

The buyers have requested to improve the following points on Thanh Chuong chicken; (1) improvement of size and quality variation among farmers, (2) differentiation from broiler chickens by not using the industrial concentrate feed, (3) acquisition of DARD certificate (DARD Certificate of Compliance with Safety Regulation). As a priority issue to be resolved, the buyers request the stabilization of chicken quality by unifying the chicken breed. In response to this, Thanh Chuong DPC launched a program and decided to establish the system to supply pure Ri breed chicks in the commune. Then, 3 model breeding farms were selected and they installed an incubation machine and power supply unit. They started the incubation in August 2017. By operating this system, about 300 thousand/ year pure Ri chicks have been supplied to the chicken farms in the commune. Most of the chicken farmers had bought cross-bred chicks from Hanoi and Ha Tinh province, but currently, they have procured the pure Ri chicks within the commune.

A pilot breeding farm supplied 2,000 chicks every month in the area and sells about 20 million VND/ month. The farmers' profit margin is high because the production cost of chicks is about 5

million VND/ month in total cost of the electricity, feed, vaccine and introduction of breeding cocks and hens. Many new customers from outside of the commune who heard the reputation of high-quality chicks are also purchasing them. As the supply of chicks is not catching up with demand, the reproduction farms have been intending to expand the production scale. The chickens fattened by using these locally supplied chicks have been started to be shipped, and the price is about 20% higher than that of using cross-bred chicks from Hanoi.

4) Registration of Collective Mark and Brand Promotion

The brand name of “Thanh Chuong chicken” has been registered as a collective mark by National Office of Intellectual Property (NOIP), Ministry of Science and Technology, and DPC of Thanh Chuong district held a workshop with gathering more than 100 stakeholders in May 2017 to promote the “Thanh Chuong chicken” brand. In the near future, the brand name of “Thanh Chuong chicken” can be used by only the farmers who belong to Thanh Chuong Chicken Association and follow the technical standard. It is expected that this will protect the brand name properly and strengthen competitiveness by improving its credibility.

5) Trial Trading for Examining Efficient Distribution Channel and Conclusion of the Official Contract

The farmers group has conducted trial trading with retailers such as Tam Nong cooperative and BiBi Green Company. The leaders of the farmer's group negotiated with retailers and controlled the amount of chicken among the member farms. As a result of trial trading, the following issues were found: (1) The capability of the farmers group is not sufficient and it was difficult to collect the required amount of chickens, (2) For both farmers group and retailers, the burden of transport from Thanh Chuong district to Vinh City was very large. Therefore, it was thought that it is better to make contract through a local trader who is responsible for the collection and distribution of chickens. In addition, the scale of the individual chicken farm is quite small, and it is difficult for them to ship the chicken stably and periodically. In response to this result, the stakeholders decided to make farmers ship to local traders as usual, and a trader and BiBi Green sign on the contract. BiBi Green currently purchases about 10 chickens per day from a trader. The trader purchases live chickens from the farmer at VND 110,000/ kg, then transports and slaughters them. BiBi Green buys them at VND 140,000/ kg and sells them at VND 200,000/ kg at their shops. Thanh Chuong chicken can be sold at a price of VND 20,000/ kg higher than crossbred ones. Hence the significance of branding is gradually being understood by stakeholders.

6) Training for the Acquisition of DARD Certificate

As a result of discussion with demanders such as retailers and traders, they have requested the quality standardization of Thanh Chuong chicken and acquisition of DARD certificate by farmers. Therefore, the PP researched the raising method of each pilot farms and listed up the farmers who fulfill the conditions of accreditation. For these 38 farmers, the PP and sub-Department of Veterinary and Livestock Production conducted the training on DARD certificate in November 2018.

7) Establishment of Thanh Chuong Chicken Cooperative

Sub-department of Animal Health and Livestock Production has decided the new policy that DARD certificate on poultry farm will be issued for cooperative but not for individual farms because of the difficulty on monitoring. The PP has supported the establishment of Thanh Chuong chicken cooperative as the acquiring DARD certificate for branding is one of the main objectives of the PP. In cooperation with the People's committee of the district, the farmers prepared the draft statute, member list, management board, etc., and held a general meeting in July 2018. 49 farmers in the commune attended the meeting and unanimously approved the establishment of cooperative; then the management board members were appointed. The PP has continued supporting their acquisition of DARD certificate and business license.

8) Enhancement on Activity of Thanh Chuong Chicken Cooperative

In accordance with the establishment of Thanh Chuong chicken cooperative, the PP supported

their actual activities. By the end of 2018, the trading system was established, and they have been collecting chickens from member farmers, slaughtering them, cutting meat and packaging, transporting under cool condition to urban areas and delivering to demanders as cooperative. As a result, contract tradings are being carried out with 8 retailers and restaurants in Vinh city, and further contract trading is expected to be expanded.

Table 5 Improvement of Thanh Chuong Chicken Production in Pilot Farms

	2016	2018
Number of pilot farms	66 farms	88 farms
Corn production for feed	1,950 kg/year	2,390 kg/year
Farms who have proper chicken shed	18%	81%
Farms who use cassava silage	35%	77%
Amount of chicken sold	720 kg/farm	952 kg/farm
Ave. farm-gate price of chicken	VND 93,182 /kg	VND 97,500 /kg
Total production cost per farm	VND 41.1 million	VND 56.6 million
Total sales amount per farm	VND 70.8 million	VND 110.2 million
Ave. income per farm	VND 29.6 million	VNC 53.6 million



Negotiation of conditions between farmers group and BiBi Green



Brand logo of "Thanh Chuong chicken" is put by a contract trader



1st General meeting of Thanh Chuong chicken cooperative

(3) Lessons Learned

1) Appropriate Actor for Contracting

Thousands of farmers raising Thanh Chuong chicken in the district, and also so many traders have been trading the chicken in each area. The price of chicken is stably high because of the high demand and the intense competition among traders, and there is no room for the traders to exploit farmers. Most of the Thanh Chuong chicken farmers are small-scale, and the shipment time and production amount of individual farmers are not stable. It means that it is difficult for them to trade individually by concluding a contract with buyers. Also, the PP tried the transaction form that farmers or retailers themselves distribute the chicken from the farm to the retail store in order to reduce the distribution costs, but it couldn't continue because of their new burden and inefficiency. Therefore, regarding the contract trading of Thanh Chuong chicken, rather than promoting direct trading with retailers by excluding traders, it is better to utilize the reliable traders who have high procurement capacity as the contract traders for the effective operation of FVC and brand promotion on Thanh Chuong chicken. In addition, along to the establishment of Thanh Chuong chicken cooperative, they have concluded the contracts with demanders as a cooperative by collecting chickens from members, slaughtering chickens, processing meat, packaging products and transporting to urban areas by themselves. In this way, the form of contract should be reviewed according to the capabilities of the producers.

2) Branding of Agriculture and Livestock Products

As a result of discussion with demanders, the stakeholders have recognized the importance of the stabilization of quality by standardizing the raising method and the preservation of original characteristics of Thanh Chuong chicken in order to promote the brand. Before the PP, the quality of the chicken is not stable depends on the farms because the raising method such as feed and fattening period is not standardized. Also, in recent years, most of the farmers introduce the day-old cross-bred chicks from Hanoi due to its faster growth than local breed. However, the meat of the cross-bred

chicken fattened in short period with mixed industrial feed is completely different from the conventional Thanh Chuong chicken, and its backyard price was low.

For this reason, the Thanh Chuong Chicken Association made the regulation that only the local breed chickens raised with the standard method can use the name of “Thanh Chuong chicken”. This brand name has been accredited as a collective mark. The initiative of this PP will become a reference case for branding agriculture and livestock products in Nghe An.

3) Clarifying the Responsible Organization of Brand Management

The name of “Thanh Chuong chicken” has been registered as a collective mark, and only the chickens which fulfill the standard can be shipped by using this brand name. In this PP, Thanh Chuong Chicken Association under the DPC of Thanh Chuong district has become the main organization for managing the brand, registering and updating farmers who use trademarks, monitoring proper use of the brand logo, operating traceability system, supervising distribution and sales channels of Thanh Chuong chicken. In this way, it is required to clarify the organization responsible for brand management for branding agricultural and livestock products.

2.2.12 C10: Project of Market Expansion due to Market Diversification of Brand Orange in Quy Hop

Actor	Production	Processing	Sale	Stage
Orange farmers	Fresh oranges certificated by “Viet GAP”, Grading			Terminated in Trial and Verification Stage
Phu Quy Corporation	Monitoring cultivation and grading	Fresh oranges: Packaging and labeling Processed oranges: Orange peel, Dried orange, etc.	Sales to Vinh city and large cities such as Hanoi and Ho Chi Minh City. Sales through own website	
Vinpearl Cua Hoi, Saigon Kim Lien Cua Lo			Sales for general customers	
Contract	Phu Quy-Vinpearl Cua Hoi			

(1) Objective of PP

Oranges produced in Nghe An province is famous in the whole of Vietnam as “Cam Vinh¹”, and have been sold mainly to wealthy people as luxury fruits or souvenirs. However, the situation of the orange market is changing recently. Many farmers in and out of Nghe An province have started orange cultivation expecting higher income, and the market price has much fluctuated. Furthermore, many kinds of branded orange are sold in the domestic market recently, and some of them are sold at lower prices, and the orange in Nghe An is becoming less competitive.

In the light of this situation, as measures to expand and diversify markets for orange produced in Nghe An, this PP tried to improve post-harvest activities such as i) Grade standardization of fresh oranges and sales by different grade in harvest season, ii) Longtime preservation for sales in off-season, and iii) Trial sales of processed oranges. With results of the PP, a favorable value chain of orange would be developed enabling to expand the market of oranges in Nghe An and to stabilize of farmer’s income.

(2) Activities and Results

Main actors of the PP are Phu Quy Corporation (hereinafter referred to as “Phu Quy”) which sells oranges produced in Quy Hop, its contract orange farmers, retailers, hotels, and restaurants in Vinh city and Qua Lo town. Phu Quy buys oranges from 4 farm households which have obtained Viet GAP

¹ “Cam Vinh” can be used as a brand name for oranges which are produced in 10 communes of 5 districts: Nghi Loc (Nghi Hoa, Nghi Diên), Quy Hop (Minh Hop), and Tan Ky (Tân Phú, Tân Long, Tân An), but it is not strictly distinguished in the market.

certificate in Quy Hop. Their fresh oranges are sold in good quality with a brand name as “Cam Vinh Ky Yen” through Phu Quy at a relatively higher price to the retailer shops and consumers in Hanoi and Ho Chi Minh City. The company also started developing processed products such as orange peel, dried fruit, jam, essential oil, and mooncake by using less quality oranges. The period of this PP has been implemented from November 2017 to January 2019.

1) Grade Standardization of Fresh Oranges and Sales in Harvest Season

Based on the marketing needs, Phu Quy under the support of JICA Project Team set three different grades and each criterion by variety; a “Premium” which is top quality and a “Regular” which is high quality but inferior in appearance to the Premium for fresh oranges and “Processing” which cannot be sold as a fresh orange but be used for processed products to sell them to different markets.

According to the hearing from orange buyers in Vinh city, when consumers purchase any variety of orange, they select the ones which are fresh and juicy as a criterion of orange selection. These can be checked on the upper part of the orange; if the surface of the part is uneven and “bumpy”, the fruit is regarded as juiceless. On the contrary, consumers care less, tiny fungus damage and dry part on the surface of oranges and its size. Thus, state of surface and size are set as the criteria for grading in common.

After selecting the oranges harvested, focusing on “Regular”, the PP has tried to see its marketability at retail shops and hotels in Vinh city and Cua Lo town. Besides, oranges of “Premium” were sold in the regular customers of Phu Quy and used for the trial of off-season sales. The oranges of “Processing” were used for Phu Quy’s trial processing.

(a) Xa Doai variety

The oranges of Xa Doai variety are harvested from the end of October to the beginning of February. The grading criteria and percentage of each grade are shown in the following table.

Table 6 Grading Criteria of Xa Doai

Grade		Premium	Regular	Processing
Target customers		Hanoi, Ho Chi Minh City	Vinh city, Cua Lo town	Whole of Vietnam
Weight (g)		200~300	200~300	<200, 300<
Size (cm)		6~10	6~10	<6, 10<
Damage	Fungus	×	○	○
	Spider bite	○	○	○
	Cut	×	×	○
	Juiceless (Bumpy surface)	×	○(less 20%)	○
Percentage by grade of harvested oranges	in 2017/2018	54%	30%	16%
	in 2018/2019	40%	20%	40%

Source: JICA Project Team

After setting the grading criteria, Phu Quy and JICA Project Team have conducted a grading training for 10 farmers including 4 contract farmers of Phu Quy in December 2017.

As above mentioned, the Premium grade oranges were sold to large cities such as Hanoi and Ho Chi Minh City with a high price at 80,000VND/ kg, which were appreciated as a gift for Tet Holiday. As for the Regular grade, although some hotels and retailers in Vinh city were interested in purchasing them at the beginning of the trade negotiation, it did not reach a contract trading. Because Phu Quy proposed the wholesale price at 40,000~45,000VND/ kg to all interested retail shops and hotels in Vinh city in the first year (2017-2018). The all interested retail shops and hotels did not agree on the shipping quantity and the balance of price and quality. In addition, there naturally were many kinds of orange at 35,000~40,000VND/ kg in the market after harvest, and it was easy to get oranges for buyers upon their needs. Reflecting on the first year, Phu Quy offered the wholesale price at 30,000~40,000VND/ kg to some other retail shops and hotels in Vinh city in the second year (2018-2019), however, the result was same as the first year. It is

because the general market price is much lower than the offering price. Some retailers purchase oranges from other provinces even at 20,000~30,000VND/ kg. Additionally, there are opinions that the quality is not as good as the cheaper ones from other provinces and fungus parts of the Regular proposed by Phu Quy are not allowed selling for long time in the shop.

Nevertheless, as the grading is important to diversify orange market in the future, a contract regulated sorting method by specific grade was concluded between Phu Quy and seven farmers at the beginning of December 2018 in order for orange farmers to disseminate properly how to sort harvested oranges. A technical training of the grading was held and the contract farmers started sorting by specific grade. After the training, Phu Quy has been monitoring and instructing every contract farmers to sort and ship the oranges based on the grading criteria.

(b) Valencia variety

The harvesting of Valencia has been started from the end of February to the end of April in 2018. As above mentioned, retailers do not prefer the oranges which have a dry part for Xa Doai, and thus Phu Quy and JICA Project Team planned to reset grading criteria for Valencia variety as shown in the following table.

Table 7 Grading Criteria of Valencia

Grade		Premium	Regular	Processing
Target customers		Hanoi, Ho Chi Minh City	Vinh city, Cua Lo town	Whole of Vietnam
Weight (g)		200~250	200~250	<200, 250<
Size (cm)		6~9	6~9	<6, 9<
Damage	Fungus	×	○	○
	Spider bite	○	○	○
	Cut	×	×	○
	Juiceless (Bumpy surface)	×	○(less 20%)	○
Percentage by grade of harvested oranges in 2017/2018		60%	40%	

Source: JICA Project Team

Although weather condition was favorable in this producing and harvesting season, Phu Quy had not had enough oranges of Valencia variety to grade as planned due to insufficient production. According to the orange farmers and Phu Quy, half of the oranges which have been produced were not harvested due to fruit drop. Most of harvested oranges were sold to big cities and for storing to sell in off-season.

2) Trial Sale in Off-season

(a) Identification of appropriate refrigerating storage

Many tourists who visit Nghe An in the summer season from May to August especially to Vinh city and Cua Lo town want to buy “Cam Vinh” as a signature production of the province. However, there are not enough oranges in this season in Nghe An because harvesting time is almost finished. Thus, the PP had tried preservation of fresh oranges in cold storage for sales in the summer ‘tourist’ season. After grading, Premium grade of oranges sterilized by alcohol was stored from the harvesting time in a refrigerated container at around five degrees Celsius. In order to control humidity inside plastic bags, oranges were packed into unsealed bags. As a result, it was found that the appearance and taste of the oranges can be kept for 3 months for Xa Doai variety and 2 months for Valencia variety. It could confirm that quantity and season of a shipment can be managed through this verification.

(b) Trial sales of fresh oranges

Luxury hotels in Cua Lo such as Vinpearl Cua Hoi and Saigon Kim Lien Cua Lo were interested in trial sale of stored fresh oranges. The result of trial sales from June to the end of August are shown in the table below.

Table 8 Result of Trial Sales of Fresh Oranges

Hotels	Period of the trial sales	Quantity (kg)
Vinpearl Cua Hoi	27 days	128
Saigon Kim Lien Cua Lo	14 days	33

Source: JICA Project Team

For the trial sales, the wholesale price was set at 55,000 VND/ kg as the promotion price, and the retail price was set at 75,000~85,000 VND/ kg. Until the finishing of shipment of all stored fresh oranges, Vinpearl Cua Hoi sold 128 kg and Saigon Kim Lien Cua Lo sold 33 kg. All stored fresh oranges have sold out by 2nd July earlier than expected. A questionnaire interview was conducted for shopkeepers and guests on the hotels to hear their opinions of the products. According to the shopkeepers in the hotels, the retail price of fresh oranges was reasonable. However, some guests have not necessarily appreciated for fresh oranges with the reasons as follows; i) there are some dry parts, ii) they do not look fresh, iii) the size is not standardized and iv) it is too heavy to bring to their home. To solve the comments of iv), Phu Quy will introduce the new shipment system such as deliver the oranges from Quy Hop to houses of the customers who want to purchase. From the result of the trial sale, it was confirmed there is a demand for fresh oranges for tourists in the summer season.

3) Trial Sales of Processed Oranges

In this PP, Phu Quy and JICA Project Team verified needs of processed oranges which the company processes with its own recipe.

Luxury hotels in Cua Lo town such as Vinpearl Cua Hoi and Saigon Kim Lien Cua Lo were also interested in the trial sale of processed oranges such as orange peel and dried fruits. The hotels started selling some packages from the tourism season in June and sold out all stocks for about two months. It can be said there is a demand for processed oranges by tourists. The result of trial sales from June to the end of August are shown in the table below.

Table 9 Result of Trial Sales of Stored Oranges and Processed Oranges

Hotels	Period of the trial sales	Number of sales	
		Orange peel (85,000 VND/ 200g/ box)	Dried orange (95,000 VND/ 200g/ box)
Vinpearl Cua Hoi	77 days	104	34
Saigon Kim Lien Cua Lo	64 days	9	4

Source: JICA Project Team

Vinpearl Cua Hoi sold 104 boxes of orange peel and 34 boxes of dried oranges. Saigon Kim Lien Cua Lo sold 9 boxes of orange peel and 4 boxes of dried oranges by the end of July. In this trial sale, questionnaire interview was also conducted for shopkeepers and guests in the hotels to hear their opinions for the processed oranges. Some guests said that the taste of orange peel and dried orange are too bitter. Reflect the comment, Phu Quy started improving the quality of the processed products.

Having had a good result of the trial sale, for sustainable trading in the future, both parties started discussing contents of a trading contract based on Phu Quy's original contract from July 2018. After various talks about the contents, both parties finalized the contract in September 2018, and they signed on 7th October, which are newly mentioned three points to the original one namely; i) "Breaches and remedies", ii) "Force Majeure" and iii) "new shipping method" such as Phu Quy delivers directly to customers when the hotel receives orders from hotel guests not to miss a sales opportunity due to lack of stock.



Training of grading
(21st December 2017)



Orange field of contract farmer
(11th January 2018)



Sales of orange products at Vinpearl
Cua Hoi (22th June 2018)

(3) Lessons Learned

1) Diversification of Market Channel by Grading

Through the PP, Phu Quy and JICA Project Team have confirmed that setting Premium grade is almost matching with current market needs as a souvenir of wealthy consumers in big cities. On the other hand, the Regular grade oranges for ordinal consumers in Vinh city could not be sold officially. The fungus part should not be allowed to store in the shop as well as in refrigerator for off-season sales in Cua Lo town. Considering that hotels and customers prefer fresh oranges from other provinces or countries rather than Regular grade of “Cam Vinh”, the possible reasons are; i) Cam Vinh is not necessarily a prestige brand in Vinh city or ordinal consumers, in contrary ii) Cam Vinh is valuable in the case of the high quality only.

However, the grading should be still promoted to diversify the market channel. The PP verified that the Premium grade could be preserved for two or three months under the low temperature condition and sold to tourists coming to Nghe An province in summer, as well as the processed oranges used the Processing grade. Therefore it is desirable to promote the value added activities such as preservation and processing with grading in order to raise and keep the orange farmers income in the future. Incidentally, Phu Quy could not try to sort Valencia variety following grading criteria in the PP because their contract farmers could not harvest enough quantity to sell as Regular grade due to poor growth and low productivity. According to the Agriculture Extension Station and orange farmers in Quy Hop, many of orange trees of Valencia as well as other varieties have been getting weak and bearing fruits with less quality and quantity in a short time, 5~6 years after planting seedlings. Evidently, improvement of a certain quality and quantity of production is required to diversify market channel by grading oranges not to waste the products.

2) Importance of Improvement of Poor Production of Oranges

As above-mentioned, the quality of the Valencia variety was deteriorated and yield was decreased in Quy Hop even though the weather condition was quite good in 2018. According to Agriculture Extension Station in Quy Hop, Valencia was introduced to Quy Hop in 2007 because this variety can be produced in different season from Xa Doai and other varieties. In general, the orange tree requires 3-5 years to produce the first fruits and keep producing 8 to 15 years. The age of Valencia trees are maximum 10 years old, thus the natural aging may not be a reason for the deterioration of the fruit quality and the decrease in yield. As said most of the experts of Agriculture Extension Center/ Station on fruit cultivation, the possible reasons are that farmers are cultivating with inappropriate soil improvement and plant management and frequently use low quality and likely diseased seedlings. Therefore, it is necessary to introduce appropriate cultivation techniques including soil improvement and plant management and to take measures to disseminate high-quality seedlings.

3) Importance of Securing Appropriate Seedlings

As mentioned above, dissemination of high quality and disease-free seedlings are one of the keys to improve yield and quality of the orange fruits and to keep current competitiveness of Cam Vinh for

sustainable marketing. For this purpose, the following detailed countermeasures should be taken.

(a) To train skillful farmers and leaders who can produce appropriate seedlings

According to the Agriculture Extension Station in Quy Hop and the information from the internet, there are no disease-free seedlings certified or verified the quality by some authorities in Nghe An province. Hence, nobody knows the reliability of seedlings unless farmers produce in a proper way or procure from the governmental agriculture institutes in big cities such as Hanoi. Therefore it is also necessary to build the seedling production center and make an opportunity to purchase high-quality seedlings for sustainable orange production in Nghe An.

(b) To Train Skillful Farmers and Leaders who can Produce Appropriate Seedlings

Farmers and local dealers produced seedlings by their own methods in Quy Hop as well as other districts. Additionally, the lack of soil improvement and appropriate plant management cause occurrences of damages by pests and overuse of chemicals. Therefore, they must learn appropriate techniques for seedling production. However, the extension officers in Quy Hop do not have enough chance to learn and update the new technical information of the seedling. Hence it is necessary to develop the capacity of the governmental human resource at first place, and then to improve the extension system to train skillful farmers and leaders gradually.

4) Threat on the Competitiveness of Cam Vinh

Recently in Vietnam, oranges produced in other provinces and imported from overseas are sold at lower prices than Cam Vinh due to their advantages of large scale shipment, and less shipping cost. According to the retailers in Vinh city, it is difficult to reduce shipping cost because Cam Vinh is generally shipped through a poor condition of the road from individual farmers scattered in hilly areas in Nghe An. In addition, in terms of quality, Cam Vinh is being threatened by other provinces and imported ones as said. The quality of the other oranges has been improved in recent years. According to the Agriculture Extension Station in Quy Hop, some collectors who falsely sell oranges from other provinces as Cam Vinh are appearing recently. Under the current situation, Cam Vinh has risks to decline sales and competitiveness.

In order to keep its brand name and current competitiveness of Cam Vinh, farmers and the governmental authority need to understand the current market situation and to take measures as; i) to develop low-cost cultivation techniques to improve productivity while keeping the quality, ii) to develop road transport and logistics system to decrease shipping cost and iii) to establish an organization to control quality and trademark of the product not only for orange.

2.2.13 C11: Production of Black Sesame for Japanese Market

Actor	Production	Processing	Sale	Stage
FG in Dien Chau	Black sesame production			Terminated in Trial/ Verification Stage
Sy Tang Co.		Sorting and packaging of sesame.		
Some Japanese companies			Import of the sesame. Sell to Japanese customers.	
Contract	FG in Dien Chau - Sy Tang Co., Sy Tang Co. - Some Japanese companies			

(1) Objective of PP

Some Japanese companies intend to buy black sesame from Vietnam. Dien Chau district is the biggest sesame production area in Nghe An province. The objective of this PP is to establish the sesame value chain which connects the sesame producing area in Dien Chau district and Japanese companies by the technical support for the production of sesame fulfilling the Japanese needs.

(2) Activities and Results

The JICA Project Team sent many sesame samples to a Japanese trading company, but all samples could not pass test by the Japanese trading company due to oxidization. As the sesame harvesting

season in Dien Chau district is in September (rainy season), it is difficult to dry the sesame well. If the sesame is wet, the sesame is easily oxidized. Therefore, an improvement of drying process is necessary. In this PP, a trial to evaluate the effect of plastic cover to dry the sesame will be implemented.

The JICA Project Team implemented pilot projects to produce sesame which satisfies specification required by the Japanese trading companies in Dien Chau district in 2017 and 2018. However, sesame was seriously damaged by big typhoon which hit Nghe An province for two consecutive years.

(3) Lessons Learned

1) Natural Disasters and Climate Change

Natural disaster is one of the concerns because of the climate in the rainy season. According to National Center for Hydro-Meteorological Forecasting in Vietnam, once every 5 to 10 years, big typhoons hit north region of Vietnam in the season. However, big typhoon hit Nghe An province for two consecutive years. It is very difficult to protect sesame from typhoon. If these extreme climate conditions continue, any alternative crops which are tolerant of typhoon should be suggested.

1) Quality of the Sesame in Nghe An

The JICA Project Team collected a lot of sesame samples from Nghe An and checked the level of oxidation. However, all of the sesame samples showed high oxidation level. Oxidized sesame is not good for health. Thus it is highly recommendable to develop technique to improve oxidation of sesame to promote sales of sesame. In Nghe An, harvest of sesame is conducted in rainy season. Therefore, it is difficult to dry well the sesame. Wet condition accelerates oxidation of sesame. It is recommendable to dry the sesame under transparent plastic sheet roof to protect from rain.

2.2.14 C12: Improvement of Mango and Lime Specification for Japanese Market

Actor	Production	Processing	Sale	Stage
FG	Mango and lime production			Terminated
Nafoods		Production of IQF mango chunk and lime juice. The packaging of the products.		
A Japanese company			Import of the mango chunk and lime juice. Sell to Japanese customers.	
Contract	FG - Nafoods Nafoods - A Japanese company			

The JICA Project Team has concluded not to continue this PP due to the difficulty to find the customer of mango and lime product.

Since ASC company shows interest in the IQF mango chunk and lime juice produced by Nafoods, the sample of those was sent to ASC by Nafoods. Although ASC tries to find the potential customer of those products, they could not find it. Thus, it is concluded that the project team cannot find customers of those products.

2.2.15 C13: Production and Marketing Improvement of Eco-Pork

Actor	Production	Processing	Sale	Progress
Pig farms (Nghe An Eco-farm, Duc Anh Ecofarm)	Production by non-industrial feed	Slaughtering and processing		Terminated in Contract/ Undertaking Stage
Slaughterhouse		Slaughtering		
Maximark, Bibi Green, etc.			Sale to common consumers	
Contract	Pig farm – Maximark, Bibi Green, etc.			

(1) Objective of PP

Traditionally, small scale farms raise pig with home-grown feed such as cassava, rice bran and corn in Vietnam. But recently, most of the pig farms use formula feed (concentrate feed) to improve feed efficiency. On the other hand, the demand for the traditional pork by consumer is high and this kind of meat is traded at higher price than ordinary pork. Maximark company and Bibi Green company which has supermarket in Vinh city have been looking for the supplier of this kind of traditional safe pork produced in Nghe An.

In Nghe An province, there are some traditional pig farms which use only home-grown feed. But in most cases, there is a problem that the labor cost of this method is high, finishing weight is inferior to ordinary pig and there is no advantage on unit price of the meat. For this reason, the number of pig farms which take traditional methods is decreasing, but the demand for consumers has been increasing because of their high consciousness of food safety.

Therefore, the project implements the activities such as improvement of pig raising method by using local feed and local breed, improvement of meat processing and distribution system to differentiate the product price and promotion for the expansion of safe pork market with the brand name of "Eco-Pork".

(2) Activities and Results

1) Matching of Producer and Demander for the Trading of Eco-Pork

The project introduced Maximark and Bibi Green to 2 pig farms that raise pig by traditional method in Nghe An. Both of these farms use only the local feed, but they have a problem that they could not sell the pig with a sustainable price. These buyers agreed to implement this PP with 2 pig farms and signed on MOUs.

Nghe An ECOFARM is located in Hung Nguyen district, and it is about 15km from the central area of Vinh city. He has 16 ha of land and producing maize and tilapia as the pig feed. The total production of the pig is about 100 fattening pigs per year. After the pig weaned, they feed rice bran, maize, cassava, peanuts cake and fish meal produced on his farm.

Duc Anh Farm is located in Thanh Chuong district, and it is about 30 km from Vinh city. This farm has modern facilities and pure breed breeding males imported from USA. The total pig production is about 3,000 heads per year. Their farm was an ordinary pig farm until last year, but they have been changed the production method into Eco-Pork way by reflecting on the increasing demand of consumers on safe pork.

2) Consideration of Sales Method

At the beginning, Maximark has a plan to sell the meat as "Organic Pork". But the project explained that we are not able to use the name of "Organic" before the farm gets any organic certificate. Then we suggested Maximark to make a new brand of "Eco-Pork" and they agreed to it.

In Vietnam, there is no public organic certificate system although the government published "Standard for organic agricultural Production and Processing" on the decision of 10TCN 602 - 2006. If producers want to get an organic certificate, they need to apply to the international authorities or private activity such as PGS (Participatory Guarantee System). The project has discussed with PGS secretariat in Hanoi, and they agreed to accept Eco-Pork farms if they want to join. But it takes time and needs the cost to get an organic certificate. Thus, this PP verifies only the production and sales method of Eco-Pork, and after evaluating the results of trading and request of consumers, the farm may try to get an organic certificate of PGS.

3) Acquisition of DARD Certificate

Nghe An ECOFARM and Duc Anh ECOFARM applied DARD for the accreditation of DARD certificate (DARD Certificate of Compliance with Safety Regulation) because one of the conditions from Bibi Green is to get it before the trading. The farm has acquired this certificate after the evaluation of compliance with standards and antibody test on important livestock disease (FMD and

Hog cholera). The validity of the certificate is 3 years, and the farms bore 5 million VND for the application.

4) Construction of Slaughtering and Processing Facility

The pilot farms have negotiated with supermarkets in Vinh cities such as Maximark, Metro, Big C, INTIMEX and BiBi Green regarding the contract trading of Eco-Pork. Most of these supermarkets have requested to the farms to ship the Eco-Pork under the condition of processed and packed meat. Therefore, Duc Anh ECOFARM planned to build the slaughtering and processing facility, and it was approved by the sub-Department of Veterinary and Livestock Production of Nghe An and DPC of Thanh Chuong district. As for the funds, LIFSAP (Livestock Competitiveness and Food Safety Project), a project of World Bank has decided to support. The construction of the facility which has a total area of 50 m² and processing capacity of 10 min/head was completed in December 2017. In the facility, treatment compartments such as holding pen, slaughtering, suspension, hot water, visceral excision, partial meat processing, packaging and freezing treatment were installed. This facility has passed the evaluation by LIFSAP and DARD and been issued the official certificate.

5) Implementation of Trial Trading

In response to the acquisition of DARD certificate and construction of slaughtering and processing facility, trial trading of Eco-Pork with Bibi Green and Maximark has been started. From December 2017 to February 2018, just after the Tet holiday, the produced Eco-Pork has been sold out. The results of the profitability analysis are as follows. The farmer's profit was about VND 500,000/ head in the standard method, whereas the Eco-Pork was about VND 1.05 million/ head. The fattening period of the Eco-Pork was 167 days, which is 1.4 times of standard method, but the annual income in Eco-Pork was estimated to be about 1.5 times of the standard method.

6) The Issue of Eco-Pork Production and Reflection to Official Contract

The following issues were found in trial trading of Eco-Pork. (1) Difficulty of securing raw feed materials, (2) Increase of labor on feed mixing, (3) Low turnover rate due to its long fattening period, (4) High retail price, etc. Since Maximark satisfied the quality of Eco-Pork and expected to conclude an official contract, they offered to increase the purchase price from VND 39,000/ kg LW to VND 47,000/ kg LW to solve the above issues, and the farmer agreed on it. In the trading under the offered condition, the annual income of farmer is expected to be 2.7 times higher than that of the standard method.

BiBi Green also expected to continue the trading, but they could not agree on the payment method, and they did not reach an agreement in this time. However, the possibility to conclude a contract is high for them because it is not a serious issue. Besides this, several demanders in Vinh city has been expecting the trading of Eco-Pork, the farmer intends to expand the production scale gradually. The farmer has planned to build a new shed for Eco-Pork by next year when their cash flow is improved, and then contract trading is to be implemented.

Table 10 Profitability of Eco-Pork Production per Head

	Test Result on PP			Expenditure					Revenue			Annual Income		
	N	Average initial weight (kg)	Average finishing weight (kg)	Feed cost (VND)	Vaccin cost (VND)	Piglet cost (VND)	Electricity & labaoor cost (VND)	Total cost (VND)	Average sales price (VND)	Profit (VND)	Profit ratio	Fattening period (days)	Turnover rate (times/year)	Annual income by raising 100 heads (VND)
Industrial feeding method	100	13.0	100.0	2,287,500	163,000	600,000	150,000	3,200,500	3,700,000	499,500	13.5%	120	3.0	151,931,250
Eco-Pork method (Trial trading)	86	13.8	99.6	1,695,942	189,535	600,000	300,000	2,785,477	3,831,430	1,045,953	27.3%	167	2.2	228,082,529
Eco-Pork method (Official trading)	-	13.8	99.6	1,695,942	189,535	600,000	300,000	2,785,477	4,681,419	1,895,942	40.5%	167	2.2	413,432,546



Eco-Pork is produced under the clean environment



Trial selling of Eco-Pork at Bibi Green shop



Packed and labeled Eco-Pork sold at Maximark supermarket

(3) Lessons Learned

1) Utilization of Financial Support and Subsidy for New Agriculture Business

The PP has developed pork raised with safe local feed resources, and sold them under the brand name of “Eco-Pork”. JICA Project Team has supported the pilot farms technically, such as establishing a fattening method, designing of feed composition, slaughtering and processing techniques, acquisition of DARD certificate and matching with demanders. On the other hand, the farmers bore the necessary expenses by utilizing the bank loan and subsidy of World Bank LIFSAP project. The pig farms need to invest in building new facilities and improve the pig raising system, but usually, their capital capacity is very limited. In such a case, the utilization of subsidies and loan provided by local governments or foreign donors is very effective. However, it is often difficult for farmers to access such information and know the available programs. Thus it is necessary to establish a system for providing information for farmers by DARD and extension offices.

2) Improvement of Safety and Hygiene at Slaughterhouse and Promotion of Registration

In order to fulfill the condition that the buyer request, the PP established a system including slaughtering pigs, processing meat and delivering them. The problem was that there were no public slaughter facilities in the area. In Nghe An province, there are many districts that do not have public slaughterhouses. In these areas, usually traders slaughter and process livestock at their garden. These slaughter places are not registered and monitored by the Sub-department of Veterinary and Animal Husbandry, and there are many problems in terms of safety and hygiene. It is very important to establish slaughter facilities that meet official standards and to improve and register existing slaughter facilities.

3) Setting of Price for New Agricultural and Livestock Products

In the case of producing new agricultural and livestock products in a different method, it is often difficult to set an appropriate price in advance. In the test production of this PP, Eco-Pork was produced with new feed composition, and the fattening period and the working time for mixing feed became longer than we expected. The quality was also concerned, but as a result, there was no problem at all. The farmers and buyers examined this result and revised the trading conditions accordingly to proceed to the official contract. In this way, testing and verification are necessary when producing and selling agricultural and livestock products in a new method. In particular, in case of livestock products, it is necessary to ensure the buyer before the testing because the price of livestock is high and farmers may suffer serious loss if they cannot sell the products. Furthermore, by analyzing the test results, it is necessary to decide an appropriate trading price that benefits both farmers and buyers.

4) Branding Based on Market Needs and Promoting Contract Farming

Basically, ordinary agriculture and livestock products including pork have a large number of producers and buyers, and the distribution volume is also extremely large. In such circumstances, there are many choices of producers and buyers, and both producers and consumers have little benefit from contract farming. To promote contract farming for agriculture and livestock products, it is necessary to differentiate from ordinary products. This PP confirmed the demand for pork produced with safe

natural feed, and conclude contract by differentiating from ordinary products through establishment of production techniques, acquisition of DARD safety certificate and branding. In this way, when promoting branding of agriculture and livestock products, confirmation of market needs and differentiation from other products are important.

2.2.16 C14: Safe Vegetable Production and Distribution in Vinh City

Actor	Production	Processing	Sale	Stage
Safe Vegetable Farmers Group (SVFG)/ Hong Phong Green Agricultural Cooperative (HP Cooperative)	Leafy and fruit vegetables production following DARD certificate as “Compliance of Safe Food”	Cleaning, Packaging, and Labeling	After selling safe vegetable as ordered by Bibi, selling the remainders in local market	Terminated in Contract/ Undertaking Stage
Bibi Green Joint Stock Company (safe food retailer shop in Vinh city)	Monitoring and supporting materials	Instructing SVFG/ HP Cooperative for cleaning, packaging, and labeling	Advertisement and selling general consumers in shops and intermediating sales to kinder gardens	
People’s Committee of Vinh city PC and Nghi Lien commune (CPC)	Monitoring/ Support infrastructures	Monitoring	Monitoring Advertisement for general consumers	
Contract	SVFG/ HP Cooperative-Bibi Green			

(1) Objective of PP

Food safety has been the main concern in Vietnam, and demand for “safe food”, especially vegetables may increase alongside with the economic growth in the near future. In light of the situation, the MARD decided in a decree No. 38/2012/ND-CP and a circular No. 45/2014/TT-BNNPTNT to develop safe food supply chain and to establish own certificate “Compliance with Safety Regulation” which is to be issued by the DARD (hereinafter referred to “DARD certificate”). No exception in Nghe An province, the number of retail shops which sell safe food are increasing rapidly as well as primary schools and kindergartens which prefer using ingredients with the safety-certified vegetables for school meals. For that purpose, the People’s Committee (hereinafter referred to as “PC”) in Vinh city had established a plan to develop safe vegetables (hereinafter referred to as “SV”) production area in the suburbs aligned with an Economic Development Master Plan called “Vinh city agricultural development plan in 2020”. Although the PC of Vinh city has been promoting the production and distribution of SV in accordance with the above-mentioned Master Plan, the attempt has not been succeeded because of the insufficient involvement of buyers such as retailers and collectors. In the light of the situation, this Pilot Project (hereinafter referred to as “PP”) aims i) to establish the value chain of SV with a commitment of retailers and local governmental authorities, ii) to establish a feasible model of SV value chain along with the Master Plan of Vinh city. The PP is to be conducted with voluntary farmers in Nghi Lien commune and “safe food” retailers in Vinh city with a strong commitment of the local government such as DARD, PC of Vinh city, Communal People’s Committee (hereinafter referred to as “CPC”) of Nghi Lien.

(2) Progress of PP

The activities by phase in the PP are described in the following table.

Table 11 Activities by Phase in this PP

Year	Phase (Period)	Activities
First	Phase 1 (2016.11-2017.2)	Establish a SVFG in Nghi Lien commune
		Obtain the DARD certificate
		Conduct a trial production and trade of SV with a retailer under a provisional contract as called “Pre-contract” which prescribed less responsibility for each party
	Phase 2 (2017.3-6)	Produce and trade SV with a retailer under a formal contract between SVFG and Bibi Green

	Phase 3 (2017.7-10)	Try to produce and trade SV with a retailer in off- season in summer under a formal contract
Second	Phase 4 (2017.11-2018.2)	Establish “HP Cooperative” including member of the SVFG in Nghi Lien
		Conduct trial production and trades of SV with a retailer under a formal contract
	Phase 5 (2018.3-6)	Produce and trade SV under a formal contract and expand the market of SV through effective advertisement by retailer
	Phase 6 (2018.7-10)	Obtain DARD certificate as the HP Cooperative
Produces SV by using drainage system developed by the PC of Vinh city and CPC of Nghi Lien in off season in summer Trades with a retailer under a formal contract		

The eighteen (18) voluntary farmers from Village 2 and Village 3 in Nghi Lien commune in the Vinh city were selected and formed a Safe Vegetable Producers Groups (hereinafter referred to as “SVFG”) in the first year from November 2016 to October 2017. The SVFG obtained the DARD certificate and traded the SV with Bibi Green Joint Stock Company (hereinafter referred to as “Bibi Green”), a SV retailer company under a contract, and the sales of SV and farmers income of the members of SVFG were increased significantly.

In order to expand this good practice in the first year in and out of Nghi Lien commune, Hong Phong Green Agricultural Cooperative (hereinafter referred to as “HP Cooperative”) was established with 53 members in total from Village 2 and Village 3 in Nghi Lien commune with original SVFG’s members for the second year.

As a result of two-years activities in the PP, 17 kinds of vegetable were produced in the first year following “Basic GAP” standard which is required for issuing DARD certificate and sold to Bibi Green under a contract and to the local markets freely. Increasing kind and variety of the vegetables in the second year, 28 were produced and sold mainly to the Bibi Green under a contract. The significant results of the PP are described below.

1) Introduction of a Contract Farming

The SVFG and Bibi Green stated trading under the “Pre-contract” which was minimized responsibilities both parties in the first year, because SVFG had not had any certificate to show the safety of their vegetables and less experience of contract farming. Many disputes had arisen among members of both parties at the beginning of the PP. However, in due course, they started discussing positively contents of the contract to benefit both parties.

Finally, HP Cooperative and Bibi Green thought out three original devices to continue working together effectively namely, i) conclusion of a yearly contract, ii) introduction of "The Monthly Order" which described all kind of vegetable and purchasing quantity prior 2~3 months to production to adapt to the buyer’s needs and iii) introduction of the “Minimum trading quantity” of the SV for each crop which the buyer guaranteed the quantity to be purchased and paid for. These devices enabled both parties to continue to produce and sell or purchase SV and to build effectiveness of the contract farming.

Through the discussion and working together, a trusting relationship had been raised among all participants. The farmers started producing according to Bibi Green’s order as a market needs under a contract, which raised the sales and farmers’ income from SV. The quantitative results of the contract farming are described in the next section.

2) Contract Farming to Understand the Market-Oriented Production

Having implemented the PP for two years, the sales and the cost-effectiveness of the SV production and contract farming were confirmed. First of all, the annual total sales of the SV by destination (market) are shown below.

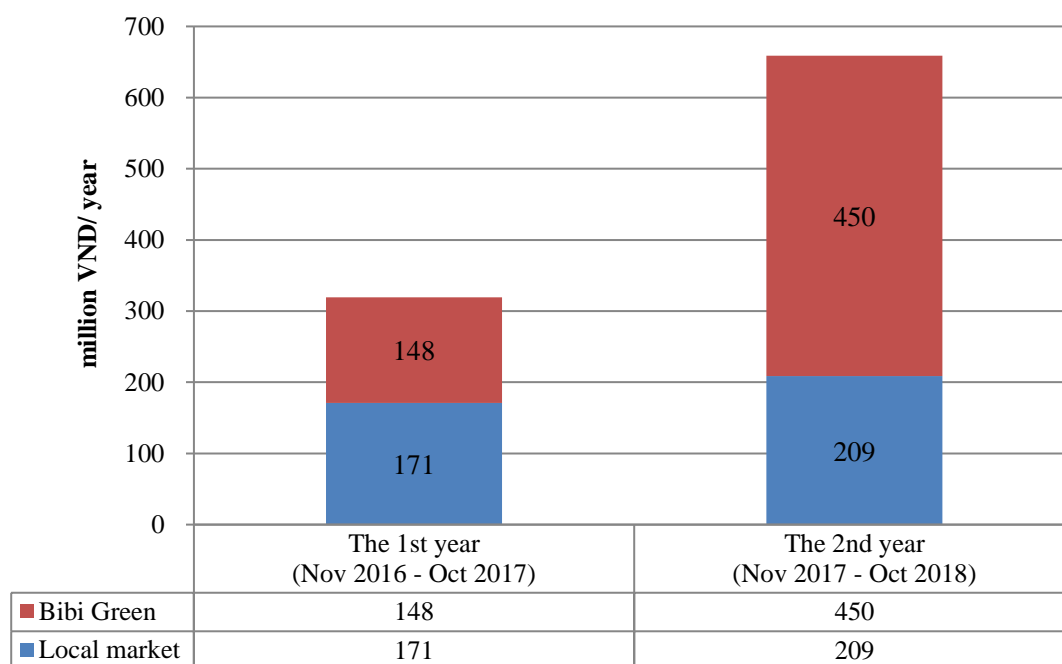


Figure 5 Annual Total Sales of the SV by Destination

The total sales of the SVFG with 17 members (one member was dropped out after the first year implementation) were VND 319 million in the first year and doubled in the second year, reached VND 659 million. The SVFG produced as the members want and sold some of the total products to Bibi Green at a higher price than local markets in the first year, whereas the SVFG planned the SV production schedule and produced according to market needs provided by Bibi Green in the second year. That means the farmer of SVFG started applying a market-oriented production so-called “market-in” but not a conventional practice as called “product-out”. In consequence, the sales of farmers by contract sales with Bibi Green increased to about three times; from VND 148 million to VND 450 million, which brought about much income from the SV. In particular, the introduction of a new variety of melon (*Kim Hoàng Hậu*) production in the second year contributed to raising suddenly the HP Cooperative members’ income. At first, the producing members had no idea on the variety, but started growing it because the variety is needed in market currently. The farm gate price was approximately 21,500 VND/ kg for the new variety, while 18,000 VND/ kg for the variety they used to grow.

Owing to the increase in sales, annual income from SV also surged. The annual average income per hectare from SV, which is calculated based on the sales and production cost spend of 16 members of the SVFG by village are shown in the table below.

Table 12 Annual Income from SV Production per Hectare by Village*

	The first year (VND /ha/ year)	The second year (VND /ha/ year)	Income Growth from 1 st yr to 2 nd yr (VND /ha/ year)	SV Income Growth Rate (%)
Village 2	145,728,367	216,613,876	70,885,509	49
Village 3	140,407,740	179,025,466	38,617,727	28

*The labor cost is not considered in the production cost.

Source: JICA Project Team

According to some farmers of the SVFG, production cost such as for input and labor of SV production was not so high but the yield and sales were much more increased than the ones for conventional vegetable production. The reasons why the farmers of the SVFG practiced market-oriented production as above mentioned and also farmers produced vegetables with appropriate method and input, regulated in the standard of “Basic GAP” which led the increase of the yield.

The annual income was increased in both villages. However, the increase rate of income from SV had a gap between villages; the income was raised at 49% in Village 2, while it was 28% in village 3. It is because the environment condition in Village 3 is not suitable to grow the new variety of melon and the grown vegetables instead were affected by a flood and heavy rain at the beginning of summer season due to a delay of drainage system construction. SV production in the summer season is explained in the next section.

3) Safe Vegetable Production in Off Season (in Summer)

Most of the farmers in Vinh city usually had not produced vegetables in summer season as off-season from May to August because of high temperature, a strong wind called “Lao wind”, heavy rain, and flood by a typhoon. In the first year, the SVFG tried to produce vegetables in a summer season, but produced and traded quantities were very low because of climate factors especially high temperature and a flood. Hence, Bibi Green has supported financially for purchase of the net in Village 3 for leafy vegetables and the PC of Vinh city and CPC of Nghi Lien have decided to construct drainage system in Village 2 and Village 3 to encourage farmers to produce SV in summer for the second year in order to sell SV with higher price and to supply SV all year round in the future. Additionally, some production techniques were introduced to alleviate the climate factors, for example; i) making ridges 5 to 10 cm higher than the usual before coming heavy rain and ii) choosing short cycle vegetables to the reduction of damage by climate factors.

As a result, farmers in Village 3 were able to produce SV especially leafy vegetables for a longer time than before. They still have difficulty, however, to products in summer because the drainage system construction has not been finished yet as planned. On the contrary, farmers in Village 2 have improved the yield and quality of SV, and thus the income became much higher because the drainage system had been constructed before begging of the summer and the SV production in summer realized.

4) Strengthening Capacity of the Cooperative Members

The HP Cooperative management board members recognized themselves that they didn't have enough function as a cooperative after working and discussing with PC of Vinh city, CPC of Nghi Lien, Bibi Green, and JICA Project Team. For that reason, they decided to attend a series of cooperative management training, even though this activity had not been planned initially. After several sessions of training, the HP Cooperative's management board members began to try aggressively to find new markets with PC of Vinh city and CPC of Nghi Lien and started holding a regular meeting to share the information of vegetables and market with the HP Cooperative members. If cooperatives will be better functioned in the future, they can get many opportunities for developing and sustainable as SV production area with many large traders.



Field training on plant protection
(January 2017)



Cultivation field of SV in Village 3
(11st December 2017)



Safe Vegetables produced by SVFG and
sold in Bibi Green



New variety of melon called
“Kim Hoàng Hậu”
(12th June 2018)



Training for capacity building
of the HP Cooperative
(4th May 2018)



Drainage system built in Village 2
(20th November 2018)

(3) Lessons Learned

1) Key to the Success of the Contract Farming

Through the implementation of the PP, the key to success of the contract farming can be concluded to make up contents of the contract by thorough discussion among parties and to build a trusting relationship among actors, for example the farmers and buyers as realized in the PP. While represented persons of both parties were discussing the contents of the contract and marketability of the SV for a long time in the PP, they were modifying and customizing the contents proposed by the JICA Project Team for them and ended up in building a trusting relationship. Then the farmers have come to grow vegetables gradually following the order of Bibi Green.

2) Market-Oriented Production

This PP convinced all parties concerned including government authorities in Nghe An that the contract farming based on a trusting relationship between farmer and buyer can extend the “Market-Oriented Production”, which generate more sales and income than the conventional production and sales.

However, most of the farmers and related government officers have still not gotten instinctively yet such notion of the “Market-Oriented (or “Market-in) production” because they used to produce vegetables as they want and still believe some of buyers are not trustworthy. In order to change the farmers’ way of thinking, it is important to take times to discuss with potential buyers to establish a trusting relationship and to show the effect on sales or income of the market-oriented production by production according to the trustworthy buyers’ demand.

3) Necessity of Appropriate Infrastructure Facilities and Materials

Through this PP, it was realized that producing stable quantity of SV through a year is important not only for buyers but also for farmers to gain more income by taking advantage of rising farm gate price in off-season. However, farmers could not trade the SV because of the climate factor. The main reason is; i) a hot and dry strong wind led by foehn phenomenon from Laos which is called “Lao wind” ii) flood caused by typhoon and heavy rain from May to September and iii) less disseminated production techniques for summer. As a result, it is difficult for farmers to produce SV with “stable quality and quantity”, which impedes entering of large buyers who need certain quantity of SV regularly, and development of SV production and sales in the province.

Nevertheless, SV is produced in several areas of the province even low land costal area in summer by installing facilities and materials suitable for the weather condition and there is potential to do in certain areas but no development. Thus it is important to construct or improve the infrastructure facilities such as irrigation, drainage system or materials such as shadow net in order to produce SV throughout the year including summer season, and to sell them to the large vegetable buyers.

4) Effectiveness of a Capacity Building of the Cooperative

The capacity building on the cooperative members can also be the key to success to collect market information, to share the information with other members and other stakeholders and to increase opportunities for promotion of SV. This will lead farmers to be known as SV producers in the area and

to trade SV regularly, which will establish a strong SV value chain. Therefore it is important to utilize the human network of all stakeholders to develop the food value chain.

5) Cross-Cutting Issues: Necessity to Strengthen Management Capacity on Agricultural Input Control and Environmental Management

As mentioned in the beginning, food safety is a critical social issue not only in Nghe An but also in whole of Vietnam. That is why the PP had planned and implemented to response the issue and the “Market Needs”. DARD and JICA Project Team have been realizing rampant illegal and poor quality of agriculture inputs and environmental problems of farm areas, which impede to produce real SV through the implementation of the PP. However, DARD barely has capacity and means for quantitative analysis to manage illegal agricultural inputs and farm environment in the province.

In order to continue producing and expanding the SVs, it is necessary to strengthen the input control and farm environment management system by capacity building of the concerned officers and to introduce simple analysis equipment that can inspect the quality of inputs, agricultural environment, and contamination of products in the DARD of Nghe An province. It would be thus favorable to promote to obtain safe food certificate in the Nghe An to avoid all hazardous factors for food safety and human health in the future.

2.2.17 C15: Improve Cultivation Technique to Improve Yield and Quality of Oranges and Mandarin Oranges

Actor	Production	Processing	Sale	Stage
Xuan Thanh	Introduce improved cultivation techniques including reflection sheet to improve quality	Selection, packaging		Terminated in Trial and Verification Stage
Bibi Green			Improve competitiveness in existing market	
Maximark				
Contract	Xuan Thanh-Bibi Green, Maximark			

(1) Objective of PP

Oranges and mandarins are one of the major crops in Nghe An province, and those are considered as a specialty crop of the area. However, the quality of those oranges is significantly lower than the international standard because of the inappropriate cultivation practice. Therefore, the products are generally sold at a lower price compared with high-grade imports.

Pest damaged fruits are degraded not only in appearances but also lower Brix from inappropriate growth. Therefore, eating quality is also inferior to imports. Orchard is not maintained at appropriate training and pruning; therefore, the uniformity of fruits quality is very low since the maturity of each bare fruits is uneven from not properly managed the condition of sunlight and leaf numbers. Also, farmers often harvest the fruits in the premature condition in green color. This lack of understanding about the relationship between maturity and skin color is enhancing the unstable condition of quality.

Purpose of this PP is to establish more competitive marketing capacity by stabilizing the quality of harvested fruits at a higher level. This can be attained by introducing the idea of harvest at uniform maturity. Observation of fruits harvested at target orchard indicates better maturity and coloration with higher Brix at the south side of trees where it receives more sunlight. This PP intends to experiment the possibility of improvement in stable quality at a high level for shady north side fruits by improving the training and pruning method along with utilization of reflection sheet to improve sunlight efficiency.

(2) Activities and Results

1) Competitive Marketing by Improvement of Maturity Condition:

Improvement in maturity and Brix were observed from harvested fruits in a trial plot, where applied reflection sheet during the fruiting period, compared to traditional plot. Reflection sheet improved the uniformity of coloration on the same tree. Improved fruits from this trial were introduced to

several buyers, and a few including Bibi Green company, local retailers, expressed interests in improvement concerning higher Brix from better maturity condition. The experiment of a reflection sheet for quality improvement was decided to be continued since the significant interests were identified from several buyers. The experiment of a reflection sheet was continued to examine other elements such as moisture and weed control, too. In addition, 2 plots of fertilization experiments are also implemented to test changes in fruits quality in appearance and Brix. Fruits from this trial started to harvest from the end of February 2018. Another negotiation was arranged with other potential buyers in order to promote more contract transaction as soon as sample fruits were harvested from the trial plot.

2) Effects of Mulching Sheets on Orchard

Reflection sheet has been installed at 2 different orchards in Quy Hop district.

The reflection sheet was expected to have multiple effects besides colorization such as weed control, prevention of flowing away of fertilizer, control of soil moisture and temperature. The Project determined to implement the trial of reflection sheet for all season around of oranges to examine any improvement can be observed in cultivation and management.

Experiment on mulching sheets was implemented in 3 locations including Nghi Loc district. 2 locations in Quy Hop are reflection sheet, and 1 location in Nghi Loc was for weed prevention mulch.



Mulch for weed control installed at Xa Doai plot



Installation condition of reflection sheet at Xuan Thanh



Installation condition of reflection sheet at Phu Quy Agriculture

Some effects on weed control were observed at all 3 fields; however, extensive rain induced the growth of weed even over the plastic mulching field. Installation of mulching should be overviewed for the better improved result. Extensive weed, like waterweeds, was observed to grow even over the mulching sheet especially at Xa Doai plot, where the groundwater level was high, after heavy rain from a typhoon to raise the water level above the ground. A significant increase in soil temperature was also observed at weed control mulching plot. Fortunately, the temperature stays lower than a regular year after the typhoon, so there were no adverse effects in the growth of trees observed from increased soil temperature by the mulching sheet. Soil temperatures were maintained lower at reflection sheet than a mulching sheet. Thus the vigorous growth of new shoots on trees was observed.

3) Sales Promotion

Maximark required food hygiene certificate for the transaction. Therefore, 62 farmers belong to Xuan Thanh company received training course designated by food hygiene department, Xuan Thanh company acquired a food hygiene certificate. However, the quality of Xa Doai orange (early maturing variety) was not good because of a big typhoon. Negotiation between Xuan Thanh and Maximark was arranged after the harvesting of late maturing varieties (V2 and PQ1).

Xuan Thanh company has sold 500 kg of oranges to Bibi green from December 2017 to March 2018 with the high-quality of fruit (brix is up to 12, no physical damage or fungus on the fruit)

Xuan Thanh company preserved 200 kg of Valencia and 1000 kg of PQ1 in cold storage from 24 April to 12 June 2018. Xuan Thanh company sold 100kg of Valencia oranges to Maximax on June 6. However, the fruit quality of Valencia orange was not good because orange fruit has dried during storage. Damage was on the top of fruit (around 1 cm dried on the top of fruit). The PQ1 mandarin cannot sell to Maximax or Bibi green, because the price of PQ1 (around 18,000 VND/kg) was high

compared to mandarin oranges from another district, even though Xuan Thanh could offer higher brix oranges.

(3) Lessons Learned

1) Benchmark for Quality Improvement

Participated producers in the trial of reflection sheet tend to focus only on the direct effects of cost, such as labor on weeding, by the installation of the material. Evaluating cost is important, but improvement in marketing is a more prioritized factor in this trial. It is important to let participants understand more concerning this concept. On the other hand, reflection sheet may be an effective tool to attain the target of improved fruits quality such as higher Brix, but it is more important to know how to combine any available techniques to maximize the efficiency to attain the target, which is stable quality at the more demanded condition.

Orange fruits should harvest from December to March (depend on varieties, Xa Doai oranges should harvest from December to January, Valencia oranges should harvest from January to March) to reduce fruit dried. Storage orange has a certain demand, but the deterioration of fruit quality was observed. So, storing technique needs to be improved to gain off-season demand.

2) Clarification of Harvesting Standard for Quality Stabilization

Fruits are harvested at no specific requirement concerning maturity under traditional practice. Some fruits are totally ripe, but others are still premature in green skin. Therefore, fruits at different levels of maturity are mixed in the same harvest causing no uniformity or no guarantee of quality for fruits. The skin color of fruits is not considered important as a quality indicator. The maturity of fruit is rather evaluated by fruit size than skin color. This ambiguous standard of maturity might be a major cause of no uniformity of quality in harvested fruits. Introducing the standard to measure maturity by skin color makes significantly clear by having a visual standard for farmers about harvest timing. It will lead to stabilize the quality of the fruit, which is highly requested from the demand side. Quality improvement for better marketing can be attained by introducing the system of harvesting at appropriate maturity. The reflection sheet is one method to attain this target but not only. It is important to promote understanding about methodology of how to attain competitiveness in the market by attaining a demanded improvement in order to understand the concept of this pilot project.

2.2.18 C16: Production of Potato for Producing Processed Foods

Actor	Production	Processing	Sale	Stage
Mai Hun commune FG	Production of Atlantic variety	Selection		Terminated in Contract/ Undertaking Stage
A Japanese trading company		Instruction on the potato selection based on the criteria by A Japanese food company Transportation of the potato		
A Japanese food company		Potato chip production	Sell to the customers.	
Contract	Mai Hun commune FG – A Japanese trading company A Japanese trading company – A Japanese food company			

(1) Objective of PP

Currently, a Japanese food company located in southern Vietnam is procuring the potatoes mainly from Ha Noi and foreign countries. However, the Japanese food company intends to diversify the potato procuring site to avoid the insufficiency of the quantity of potato due to bad weather. Thus, the target of this PP is to make a trial for the production of potato suitable for the processing and evaluate the business reliability of supplying potatoes to the Japanese food company.

(2) Activities and Results

1) Result of 1st Trial Cultivation

The 1st trial harvesting of potato was conducted on April 13, 2017, which was the 82 days after the planting. The harvested potatoes in each experimental plot were measured to compare the yield results. The results are shown in the table below. This experiment focuses on the comparison of two potato varieties and the existence of mulch and rice husk charcoal application. As for the comparison of potato variety, the experiment shows that the yield of all plots of Marvel variety is higher than Atlantic variety. Besides, the mulch application plot shows a higher yield than the other plot which does not apply mulch. Since the average potato yield of Japan is 3,231 kg per 10a, the results of this experiment indicate the insufficiency of yield. Besides, the size of harvested potatoes was rather small which is not adequate for the processing.

Table 13 Yield of Potato for Processing

	Without Charcoal (kg/10a)		With Charcoal (kg/10a)	
	With Mulch	Without Mulch	With Mulch	Without Mulch
Atlantic	1,500	950	1,450	1,000
Marvel	2,100	1,950	2,010	1,320



Marvel and Atlantic variety



Marvel variety classified by its size

2) Plan of 2nd Trial Cultivation

Based on the result of the 1st trial cultivation, the 2nd trial was planned as follows.

- Since the Japanese food company requested the supplement of Atlantic variety, JICA Project Team focuses on the experiment on the cultivation of Atlantic variety.
- The JICA Project Team has selected the Mai Hung commune in the Hoang Mai district to conduct the 2nd cultivation trial since the farmland in Hoang Mai town is more suitable in terms of soil characteristic as well as the local farmers in Hoang Mai town have enough experience of the potato cultivation.
- The planting of potato seedling should be started in November 2017 and the estimated harvesting time would be the end of February 2018.
- This trial aims to produce 2-3 tons of Atlantic potato which is required by the Japanese food company for the trial processing of the potato chips.

3) Result of 2nd Trial Cultivation

In the 2nd trial, the potato was planted approximately 2.2 ha; the production amount was 5.5 t. The yield was about 25 t/ha, according to the Japanese food company, this result is 5 t higher than potato yield in Hanoi. A Japanese trading company located in North of Vietnam contracted with Mai Hung commune farmers group and the Japanese food company as a transporter, the company bought the potato from the farmer's group and transported it to the Japanese food company.

Table 14 Potato Planted Area, Production Amount and Yield




	Planted Area (m ²)	Production Amount (kg)*	Yield (kg/ha)
Local Farmer 1	152	423	27,890
Local Farmer 2	443	1,380	31,128
Local Farmer 3	132	371	28,177
Local Farmer 4	135	243	18,000

	Planted Area (m ²)	Production Amount (kg)*	Yield (kg/ha)
Local Farmer 5	133	330	24,750
Local Farmer 6	133	313	23,623
Local Farmer 7	143	354	24,698
Local Farmer 8	57	145	25,588
Local Farmer 9	260	604	23,231
Local Farmer 10	201	299	14,888
Local Farmer 11	137	456	33,366
Local Farmer 12	125	364	29,120
Local Farmer 13	157	340	21,702
Total	2,207	5,622	-
Average	170	432	25,089

*Weight of the potato selected by farmers based on the criteria from the Japanese food company

According to the Japanese food company, of the total 17 inspection items, 5 items exceeded the standard value. However, as the whole product, there is no big problem. Thus, 98 % of the potato sent from farmers was bought by the Japanese food company. Items evaluated as over standard include potato size, bruise and cracked, hollow heart, internal browning, etc. In particular, it became clear that many bruises and cracked potatoes were supplied. In order to continue the transaction, it is important to clarify the selection criteria and repeatedly communicate to the farmer's side.

Table 15 Evaluation Result by the Japanese Food Company about the Potato Produced in the 2nd Trial

Criteria	Within Standard	Over Standard	Picture
General Standard	- Gravity - Foreign material and soil, clay	- Potato size (Minimum and Maximum)	 too big size
Outside Defect	- Sprout - Scab - Green Skin - Damaged by physical - Damaged by insects - Rotten/wet breakdown - Dry breakdown - 2 nd growth	- Bruise - Cracked	 Cracked
Inside Defect	- Blackheart - Internal damage	- Hollow heart - Internal browning	 hollow heart

In the wrap-up meeting of the pilot project, farmers in Mai Hung commune evaluated contract farming as follows; they requested us to confirm whether the Japanese food company will continue contract farming with them.

- Production plan becomes easy to making by contract farming.
- An advantage of contract farming is that shipping date is fixed, the transaction is completed within the day (normally, farmers have to carry the product to the local market and sell it by themselves).
- The purchase price is not so high, but profit is increased depending on the production amount.

(3) Lessons Learned

- The potato seed was planted at the end of January 2017 in the 1st experiment. The potato plant was grown well until the end of March. However, the growth of potato was got worse in April due to the

increase in temperature. Besides, the fungus disease was spread in entire experimental plots even the Project Team applied proper pesticide for it. Therefore, the project team had to harvest the potatoes at the timing of 82 days after the planting which is about 10 days earlier than general cultivation. These facts indicate that potato cultivation in Nghe An climate should be started at least from the end of December to avoid the high-temperature starts from April.

- Actually, the Japanese food company is purchasing potato from Nghe An, Ha Noi and European countries. However, Nghe An is not such an attractive procuring site for the Japanese food company and Japanese trading company, because harvesting period and weather condition of Nghe An and Ha Noi are similar, farmer’s gate price of potato in Nghe An is higher than Ha Noi. In order to continue contract farming with the Japanese companies, it is recommendable to develop production technique to harvest different period from Ha Noi and decrease production cost by establishing cooperative and mechanization.

2.2.19 C17: Introduction of Lotus Root Production

Actor	Production	Processing	Sale	Stage
Rice farmer	Lotus root			Terminated
Nafoods		Preparation for export		
Japanese trading company			Japanese Food company	
Contract	Nafoods – local farmer			

(1) Objective of PP

Rice has a tendency of oversupply and profitability for rice farmers are becoming an issue even for the local government of Nghe An. DARD is promoting to develop a new product such as red rice for conversion crop of regular rice to alleviate the general surplus condition of rice. However, the market for red rice is still very limited therefore, the issue of rice conversion is yet a major one for DARD. DARD has been looking for other potential crops for conversion, but there has not been very successful yet. Under this circumstance, Japanese trading company. Suggested lotus root as a potential conversion crop of rice, and the project planned to experiment this trial by utilizing paddy field.

The national flower of Vietnam is lotus. Hence it is a very popular plant, too. Lotus seed is a common snack, but root is not so general in Nghe An; therefore, no commercial production of lotus root is practiced around here. Currently, lotus seeds for local demand are supplied enough from the collection of wildly grown plants.

There are lotus root productions in the southern region of Vietnam, but the root size is smaller as compared with the Japanese demand standard. If appropriate grade lotus root is harvested at a reasonable cost, exportation will be possible because there is relatively large market demand in Japan under Japanese trading company's clients. Therefore, the pilot project was planned to conduct trial cultivation of lotus root whether to meet the size requirement of the Japanese buyers.

(2) Activities and Results

In order to enlarge the size of the root, appropriate cultivation such as planting pattern and fertilization based on a Japanese standard was introduced. Along with cultivation technique, a lotus root variety from Japan had been planned to be introduced. However, it was later revealed that, before field test in Vietnam, any new crop variety needed formal variety registration, which might take more than one-year processes by the authorities concerned. Accordingly, introduction of a Japanese lotus variety was given up for this pilot project even though packing of lotus seedlings had been completed in Japan in May 2017. Instead of the Japanese lotus variety, local lotus seedlings were procured from Soc Trang Province located about 1,000 km south of Vinh.

After applying both chemical and organic fertilizers, lotus seedlings were planted on 18 May 2017 at Hung Tien Commune, Nam Dan District. During the growing period in 2017, several typhoons hit Nghe An Province and brought severe damages not only to agricultural production but also to infrastructure facilities. Fortunately, lotus leaves did not receive serious damages and grew vigorously. At the end of August 2017, many lotus flowers were in bloom and leaves started wilting in October.

After waiting for a while to be lowered water level, roots were manually harvested on 1 November 2017.

Since lotus roots are located deep in the soil, both hoe and crowbar were used to dig them out. The photos of harvested lotus roots are shown below. The maximum diameter of the harvested root was about 5 cm, which means that it was far smaller than that of the Japanese lotus varieties.



Harvested lotus roots (Nov. 2017)



The maximum diameter of root was only 5cm.

(3) Lessons Learned

- Climate**
 The summer in 2017 was very hot in northern Vietnam. The highest temperature at Vinh often reached 40 degree Celsius in May and June. Two-year trial cultivation of the Japanese lotus root varieties in Cambodia showed that there were no successful results to grow into the root as the size of market requirement. The hot climate in Cambodia was attributed to this unfortunate experiment result. Considering this, the extremely hot summer in Nghe An in 2017 might adversely affect lotus root formation in our pilot project.
- Variety**
 Because the introduction of Japanese lotus varieties was canceled due to the above-mentioned reason, lotus seedlings were purchased from a cooperative in Soc Trang Province in the south. According to the cooperative, member farmers produce fairly large lotus roots and export them to overseas markets. In Soc Trang Province, the large roots of this variety are successfully harvested, but here in Nghe An Province, the roots did not grow well even though stems and leaves grew vigorously. This implies that crop varieties adaptive to the south do not necessarily grow well in the north. Therefore careful variety selection is very important for a new crop introduction even though it commonly takes several years.
- Demand for lotus root**
 The demand for lotus root is very limited in Nghe An. However, there are always some lotus root products on the shelf of supermarkets, and their size is smaller than Japanese requirement. Although the local demand is small, there still exists some potential to sell locally. If there is certain necessity to convert paddy cultivation to other crops, gradual development of lotus cultivation mainly for local demand is a possible option to be implemented. In that case, it is recommendable to introduce lotus root seedlings from the northern areas, not from the southern areas because it was found that there were some farmers who produce lotus roots and export their lotus roots overseas in the vicinity of Hanoi at the end of 2017.

2.2.20 C18: Promotion of Scallion for Exportation to Japan

Actor	Production	Processing	Sale	Stage
Quynh Luu FG	Production of scallion			Terminated
Nafoods		Production of pickles of scallion		
Japanese trading company			Selling to ordinary consumers	
Contract	Quynh Luu FG-Nafoods, Nafoods - Japanese trading company			

JICA Project Team has concluded not to continue this PP because the preparation of products which satisfies the needs of the customer is judged to be impossible.

Although the farmer's group in Quynh Luu can cultivate the scallion, Nafoods cannot participate in this PP due to the lack of human and monetary resources. The JICA Project Team tried to find another appropriate candidate enterprise for this PP. However, there is no proper enterprise to be able to process the scallion as requested by the Japanese trading company. Thus, the JICA Project Team has concluded to stop the activities of this PP.

2.2.21 C19: Improvement of Fresh Passion Fruit Conservation

Actor	Production	Processing	Sale	Stage
Que Phong FG	Passion fruit production			Terminated
A Vietnamese food processing company		Sorting and packaging of the product.		
European companies			Sell to European customers.	
Contract	Que Phong FG - A Vietnamese food processing company A Vietnamese food processing company – European companies			

(1) Objective of PP

A Vietnamese food processing company is interested in the exportation of fresh passion fruit to European market. However, they do not have fresh passion fruit long-time conservation technology to keep freshness of the passion fruit until Europe. The Vietnamese food processing company is considering to buy a passion fruit coating machine. However, the machine is very expensive. On the other hand, a Japanese trading company has a special plastic bag which has already evaluated the long-time conservation effect for passion fruit in Japan. Therefore, in this trial passion fruit long time conservation effect of the special plastic bag is evaluated and the cost-effectiveness is compared with the coating machine.

(2) Activities and Results

The Vietnamese food processing company found a chemical for long time conservation of passion fruit cheaper than the special plastic bag. Therefore, the special plastic bag was not accepted by the Vietnamese food processing company.

2.2.22 C20: Promotion and Marketing of Honey Produced in Nghe An Province

Actor	Production	Processing	Sale	Stage
Yen Thanh FG	Production of honey			Terminated
UNIMEX Nghe An		Preparation of the products for exporting Japan		
A Japanese company			Selling to Japanese consumers	
Contract	Yen Thanh FG- UNIMEX Nghe An UNIMEX Nghe An - A Japanese company			

The JICA Project Team has concluded not to continue this PP because the preparation of products which satisfies the needs of the customer is judged to be impossible.

The Japanese company requires the honey cultivated from cashew nuts, coffee and rubber. Since the beekeepers in Yen Thanh district moves to southern Vietnam to collect those honey and does not produce those in Nghe An, the JICA Project Team has concluded to stop the activities of this PP.

2.2.23 C21: Contract Farming for Safe Vegetable

Actor	Production	Pre-processing	Sale	Stage
Phu Luong Coop. in Quynh Luu	Viet GAP certified vegetable	Grading, Cleaning and Packing		Terminated
Bibi Green (retailer)		Instruction of Grading, Cleaning and Packing	Sale to general customers	
Contract	Phu Luong Coop.- Bibi Green			

The JICA Project Team has concluded not to continue this PP due to the non-agreement between the stakeholders.

Based on the request from Bibi Green company who sells safe vegetables, this PP tried to arrange the contract farming between Bibi Green and Phu Luong cooperative which has already obtained the Viet GAP certificate. It was estimated to increase the sales volume of safe vegetable in the retailing shop owned by Bibi Green at the preparation stage of this PP. However, Phu Luong cooperative insisted that the minimum trade volume of safe vegetables should be in the range of 200 - 300 kg per trade which is too much for Bibi Green. Therefore, the contract farming between them was canceled.

2.2.24 C22: Production and Sales of Cassava Silage for Dairy Farms

Actor	Production	Processing	Sale	Progress
FG in Thanh Chuong district	Production of cassava			Terminated
Vinamilk		Silage processing and transportation	Sale to contract dairy farms	
Contract	FG in Thanh Chuong district - Vinamilk			

(1) Objective of PP

Cassava is produced in 2,400 ha in Thanh Chuong district, and it is the second largest production in Nghe An. Recently, the price of cassava root for processing tapioca powder has become low and the income of cassava farmers has been decreased. The trading price of cassava root in the district has been changed as 1,500VND/kg (2014), 1,200VND/kg (2015), 800VND/kg (2016). On the other hand, the value of cassava as a feed resource is very high; especially the leaves contain high nutrition of protein. However, in Thanh Chuong district, cassava leaves are not utilized at all, and they have been thrown away at the time of harvesting.

The objective of this PP is to utilize the unused local feed resources and establish a new value chain of cassava and its by-products.

(2) Activities and Results

The project has been discussed with farmers group and officer of Thanh Xuan commune about the trading of cassava root and leaves. They wanted to sell them even 1,000VND/kg because they have been selling the cassava root at 800VND/kg to tapioca processing factory.

The PP offered to Vinamilk company about the trading of cassava and discussed with them. Vinamilk company has shown strong interest in this trading because they have been looking for local feed resources to provide for dairy farms contracted with them. But the price offered by Vinamilk was 400VND/kg. The difference in offered price between farmers and Vinamilk was too big to agree with. The project has tried to negotiate among them but the condition requested by both parties could not be changed.

Also, the cassava silage was introduced by “Thanh Chuong chicken PP” of our project, and the cassava by-products have been started to utilize rapidly by livestock farmers in this area. Then, the motivation of farmers to sell the cassava by-products has become lower.



Staff of Vinamilk company checked the quality of cassava silage



The cassava by-product has been fermented well and become good silage.

(3) Lessons Learned

1) Introduction and Extension of New Feed Resources

Vinamilk company has not known the techniques to use the cassava by-product as a feed for dairy cow and its high feed value. This technique is not common in Vietnam and they might hesitate to buy the new feed resources. If the cassava silage becomes popular in this area, there might be a possibility to establish a new value chain to trade it. In actual, Thanh Chuong chicken PP of our project has implemented the activity of technical extension on cassava silage for 2 years, and due to its feed value and cost saving effect, it has been spreading rapidly among livestock farmers in the district. Some farmers have already started to trade the cassava silage individually. It seems that there is a high possibility that large scale demanders such as Vinamilk company will start contract farming just like the case in corn.

In this way, when introducing new materials including feed, it takes time for extension, but if there are market demand and proper quality, there is a possibility that extension is promoted widely.

2.2.25 C23: Sales Promotion of Black Garlic Products

Actor	Production	Processing	Sale	Stage
Tam Duc garlic	Procurement of Garlic for Processing	Processing of Garlic to produce Black Garlic		Terminated in preparation and negotiation stage
Hotel, Retailing shop			Sales to general consumer	
Contract	Tam Duc Garlic – Hotel, Retailing shop etc.			

(1) Objective of PP

Tam Duc Garlic company in Thanh Chuong district conducts the processing of black garlic. The black garlic products are already sold in Hanoi and HCM while the sales channel of this product is still insufficient. The objective of this PP is to establish FVC by the diversification of customer through the implementation of support to sell the products to various markets such as hotel, supermarket and souvenir shops.

(2) Activities and Results

The project team supports Tam Duc Garlic company to sell three potential customers who are Kim Lien Hotel, Xanh Mart and Bibi Green. The project team has arranged to support and improve the sales method based on the requests from customers to conclude the sales contract. However, the sales of black garlic products were not well. The reason for poor sales can be concluded as follows.

- Price: the price of black garlic product is VND 150,000 /per 150g package which is very expensive for the general consumer in Vietnam. Although the target of this product should be wealthy people, the market that Tam Duc Garlic company tried to focus on was not an appropriate target for this product.
- High cost to procure raw material to produce black garlic: the reason for the high retail price of black garlic is derived from high procurement cost of raw material. Tam Duc Garlic company has

to collect all material from out of the province which increases the cost of raw material procurement.

(3) Lessons Learned

- It is necessary to consider the market positioning of the products carefully before we proceed the supporting activities. If the producers want to change the target of their products, we should consider customizing the product characteristics such as raw material to be processed, package design and selling methods.

2.2.26 C24: Rice Production for Processing of Rice Snack

Actor	Production	Processing	Sale	Stage
Dien Chau FG	Rice for processing			Terminated in Trial/Verification Stage
Trang An 2 JSC		Processing of rice snack	Sell the products to retailers	
Contract	FG in Thanh Chuong and Dien Chau and Trang An 2 confectionary Joint Stock Company.			

(1) Objective of PP

Trang An 2 Confectionary Joint Stock Company in Nghe An is a branch of Trang An Hanoi Joint Stock Company. The company has 483 officers and employees, and its products are a snack, rice cake, French cake, and cookie. The main raw materials are BC15 and DS1 rice with the monthly need of 50 tons of BC15 rice and 15 tons of DS1 rice for production of the company. However, for now, these two types of rice are brought from the traders in the Northern provinces. The demand for these rice for confectionary processing is high. In order to meet the large demand for rice to factories and processors, the PP was planned to produce rice of DS1 and BC15 in Thanh Chuong and Dien Chau for the supply of the rice to the company.

(2) Activities and Results

1) Trial Cultivation in 2017 Summer Season

The contents of the Memorandum of Understanding and monitoring system were well discussed between the farmers and the company. The content is that the company purchase rice from the farmers if the quality of rice meets the company's criteria. Therefore, farmers in Dien Chau and Thanh Chuong Districts, and the company had an MOU in June 2017. The rice grew very well and flowered in August in spite of typhoons. However, the harvest was affected by high temperature (35-40 degree Celsius). As a result, the yield levels were lower than average, especially DS1 variety. The estimated yield of BC15 was 4.0-4.5 ton/ha, and that of DS1 was 2 ton/ha.

2) Evaluation by Trang An 2 Confectionary JSC in 2017

The result was that the quality of rice did not meet their criteria. Because the rate of broken rice was higher than their criteria and the color was not good (yellow or opal rice were mixed). The criteria are based on the National Standards, TCVN5644:2008. According to the company, they currently procure the raw material from Hanoi. The purchase price is 11,000 VND/kg for BC15 and 15,000 VND/kg for DS1. In addition, they pay a transportation fee, and the total cost is not low. For those reasons, the company is still looking for the rice for confectionary processing within/near Nghe An Province.

3) Trial Cultivation in the Spring Season, 2018

People's Committee in Dien Chau District recommended Dien Lien Cooperative for implementation of trial cultivation since it had an experiment cultivating BC15 variety and a transaction with Seed Center in Hanoi. According to the advice, the cooperative was selected as a pilot site. General information and the project information are shown in the tables below.

Table 16 General Information of Dien Lien Cooperative

Number of Households	1,300 HH
Farmland Area	400 ha (2 Times / Year)
Yield	600kg / 1,000m ²
Varieties of Rice	ADI30, BC15, AC5, BT7, etc.
Sales Contact	ADI30 (70 ha): Seed Center in Hanoi Other Varieties: Local Market, House Consumption
Selling Price	ADI30 with Husk: 8,300 VND / kg for Seed Center Other Varieties: Below 10,000 VND / kg
Specification	Nursing Seedling, Threshing Machine and Milling Machine in a Factory

Table 17 Pilot Project Information in Dien Lien Cooperative

Number of Participants	8 households
Cultivation Area	6,250m ² for BC15, 1,250 m ² for DS1
Date of Training	December 14 th , 2017
Contents of Training	Soil Fertility Management, Pesticide Information, Nursing Seedling, etc.
Date of Seeding	BC15: January 8 th , 2018, DS1: January 10 th , 2018
Date of Planting	January 31 st , 2018 (20 days after Nursing Seedling)

After giving training for the cooperative members, the seedlings of the two varieties were planted in January 2018. The initial growth of BC15 was negatively affected by the severe cold climate in this winter, but DS1 was not so badly affected. Since February, both rice varieties had been grown well and harvested on June 3, 2018. The estimated yield of BC15 was very high, 8.6 ton/ha (430kg/500m²), and that of DS1 was 6.8 ton/ha (342kg/500 m²).

4) Evaluation by Trang An 2 Confectionary JSC in 2018

After drying, husking and milling processes, white rice samples of DS1 and BC15 were delivered to Trang An 2 Company in Cua Lo on June 19, 2018. The rice samples were soon tested by the company, and the result was satisfactory. Therefore, at the end of June, both parties (Trang An 2 Company and Dien Lien Cooperative) agreed to have a contract of rice sale in the future. At the end of July 2018, the sale and/or purchase price had not yet agreed between the two parties.



The sample of DS1 in the summer season, 2017



Training for Cooperative members in January 2018



The sample of BC15 in the spring season, 201



Delivering rice samples to Trang An 2, June 2018

In August 2018, it was revealed that the two parties failed to have a contract agreement of the harvested DS1 and BC15 rice. Although three meetings for price negotiation had been held so far, Trang An 2 Company could not offer good purchase prices to the cooperative member farmers.

(3) Lessons Learned

- Demand for the rice for confectionary processing:
It was verified that there was a high demand for rice for confectionary processing. However, confectionary companies normally have their own (1) variety preferences, (2) material quality standards, and (3) upper purchase price limit, so farmers need to produce appropriate rice varieties which satisfy these requirements of the confectionary companies. Hence market research prior to cultivation is very important for rice producers.
- Post-harvest handling:
It is necessary to train farmers how to harvest and store the rice (not to mix with other varieties nor spoil the rice under inappropriate storage condition) in order to provide the rice to processing companies. In the PP area, rental machine services of combine harvesters are commonly practiced while various rice varieties are chosen and cultivated by many farmers. Therefore, the careful and appropriate use of combine harvesters and milling machines (through cleaning of these machines before service) is indispensable to prevent mixture of rice varieties.
- Preparedness against natural disaster:
Natural disaster is one of the concerns in agricultural production because the summer season often has an extremely high temperature, high humidity and typhoon damages. According to the National Center for Hydro-Meteorological Forecasting in Vietnam, once every 5 to 10 years, big typhoons hit the northern region of Vietnam. Because it is impossible to control natural disaster such as typhoons, drought, flood, etc., it is highly recommended for farmers to have training on preparedness against natural disaster.

2.2.27 C25: Promotion of Jew’s Ear Mushroom for Exportation to Japan

Actor	Production	Processing	Sale	Stage
Jew’s ear mushroom Production Cooperative	Production of Jew’s ear mushroom	Production of dried Jew’s ear mushroom		Terminated in preparation and negotiation stage
Japanese Trading Company			Sales to the general consumer	
Contract	Cooperative – Japanese Trading Company			

(1) Objective of PP

Doan Ket Mushroom Production Service Cooperative in Yen Thanh district produce the Jew’s ear mushroom for 2 times per year (harvesting in April and October). Currently, the cooperative sells their products to middleman with the price of 100,000 VND/kg. However, the cooperative feels that the sales channel of their products are still insufficient and wish to expand it. The objective of this PP is to check the feasibility of sales of Jew’s ear products to Japanese market through the matching of the cooperative and Japanese trading company and arrange the agricultural transaction of the products.

(2) Activities and Results

The JICA Project Team had sent the sample of dried jew’s ear produced by Doan Ket Mushroom Production Service Cooperative to Japanese trading company to check the feasibility of its sale to Japanese market. The feedback regarding the sample of dried jew’s ear product was shared by the Japanese trading company as follows.

- The quality of the sample has several issues to sell in the Japanese market. The color of the product should be black while the color of the sample is rather brown. Besides, the product should be thicker.
- It is necessary to introduce the metal detector in the processing line since the small metal piece could be mixed in the dried product of jew’s ear due to its appearance and shape.

Therefore, it is revealed that the cooperative should introduce the metal detector as well as improve the

production method of the product in order to sell in Japanese market. Since the cooperative does not have the financial capacity to invest for a metal detector, it is difficult to enter into Japanese market with current production condition.

(3) Lessons Learned

The target jew's-ear production cooperative of this PP has the most advanced facilities regarding its production in Nghe An province. However, it was found that getting extra facility investment and technical improvement is indispensable to supply jew's-ear to Japanese market. Since the domestic demand of jew's-ear is still high, the sales expansion of jew's-ear should be considered in Vietnam domestic market.

2.2.28 C26: Trial Cultivation of Spinach for Demand of Domestic Fresh Market

Actor	Production	Processing	Sale	Stage
Quynh Luu FG	Year-round cultivation for fresh market	Packaging		Terminated in Contract/ Undertaking Stage
Bibi Green			Local demand	
Contract	Quynh Luu FG – Bibi Green			

(1) Objective of PP

Examine the cost efficiency to cultivate spinach for processing in order to supply raw materials for IQF spinach has implemented. However, even before the examination of the cost of raw material, the processing cost of IQF itself significantly exceeded the expected price of the final product. Therefore, this IQF trial had terminated.

Spinach cultivated for cost estimation of raw material for IQF has converted to fresh market since the trial for processing had canceled. As a result of marketing, demand from a local retailer was identified. Therefore, this trial spinach for IQF was converted to fresh demand to continue the cultivation.

(2) Activities and Results

1) Expansion of Spinach Production for Domestic Fresh Market

Though spinach is still considered as a high-class vegetable by many local consumers, it is realized by Bibi Green and the farmer group that the local market for fresh spinach is good. Therefore, Bibi Green and the farmer group agrees to renew their contract of spinach production and trade for another period from March 2018 to end of February 2019. For this one-year contracting period, the two sides agree to adjust the sale quantity and price monthly. During the time from March to July 2018, the price is kept unchanged at VND 14.000 per kg, while the sale quantity was 50 kg per day during March to May and 30 kg to 40 kg per day during June to July. The availability of many other types of vegetables in these months was seen as a key reason for the reduction of the spinach sale quantity.

In addition to producing spinach to sell to Bibi Green, the farmers continue their spinach production for other markets in Hue, Da Nang, and Thanh Hoa. To these markets, the farmers can sell 70 to 100 kg of their spinach per day with prices varies from VND 8.000 to 12.000 per kg. Thus, on average, the farmer group can sell 100 kg to 150 kg of spinach per day.

2) Using an Appropriate Variety for the Summer Time

In the second week of April, the “cold weather resistance spinach F1” started getting worse because of hot weather. Though the farmers had tried their best in cultivating the cold weather resistance spinach variety to have better taste spinach preferred by the customers, the cold weather resistance spinach did not grow well. Hence, the farmers decided to grow the “hot weather resistance spinach” variety from the third week of April. The farmer group agreed with Bibi Green to produce the hot weather resistance variety from April to September, and cold weather resistance variety from September to April.

In the effort of solving the hot weather problem, the project team proposed a trial of a Japanese spinach plantation under the shade, and a farmer who has a net house agreed to conduct the trial, but because of delay in getting the Japanese spinach seed, the trial plan has been canceled.

3) Halt of Spinach Production due to the Regular Flooding Problem

During the last two weeks of July, due to heavy rain, the field of the farmers got flooded destroying all of their vegetables including their spinach. The farmer group informed Bibi Green about this force majeure to halt the provision of spinach as contracted. The flooding is seen as a regular local climate phenomenon that occurs at this time every year. The spinach production is forecasted to be halted for about two to three weeks, and the spinach provision for Bibi Green will be resumed in late August.

Production is not resumed at the end of August, yet the market demand is high, and Bibi Green is waiting for the shipment to be recovered. Bibi Green is accepting even a small amount from the farmers' home garden cultivation until the actual production is resumed.



The “cold weather resistance spinach” got stunted when the weather became hot in middle April



The spinach destroyed by flood in late July

4) The Project Effort in Expanding the Farmer Production for IQF Spinach for Export

In the second week of July, the project team made a working visit to Dong Giao Foodstuff Export Joint Stock Company (Doveco) in Ninh Binh province to find possibilities for the farmer group to expand their spinach production for export. Doveco is currently producing IQF spinach to export to Japan. The company wants to cooperate with Quynh Luong farmers with some basic conditions such as: Doveco can buy a ton of fresh spinach per day including both Indian spinach variety; in contracting spinach production with the farmer group, the company can support fertilizer, pesticide, advance spinach seed, and provide technical support; the company will buy all of the product for the farmers with a fixed price of VND 4,000 per kg of fresh spinach at the field. The project team then facilitated a discussion about the cooperation possibility with the farmer group, and the farmers did not agree with Doveco conditions, especially with the price. The fresh spinach price offered by Doveco is evaluated not profitable for the farmers.

5) Introduction of Heat Resistant Winter Variety for Better Marketing

Summer variety was less accepted in the market; therefore, the project team looked for alternative variety may improve the condition. Project contacted Japanese seed company, Sakata Seed Co., which is operating in Vietnam to ask some advice. One variety was recommended by the company, and sample seeds were provided from them.



Recommended variety for trial. Winter type with heat resistance character



The trial will be conducted in this net house.

If the trial is successful, Indian variety can be replaced, and marketability during summer may be

improved.

(3) Lessons Learned

The spinach production for domestic fresh market is evaluated to be more profitable than other conventional vegetables for the farmers in this area. However, the contract sale for the local market is still limited. For other domestic fresh market, the farmer group has not found a regular transaction that is causing unstable sales quantity and price. Therefore, more diversification of market is changing temperature in the middle of April, and flooding field problem from mid-July to mid-August annually in Quynh Luong are regular climate phenomena that should be considered in production planning and contracting of vegetables including spinach.

2.2.29 C27: Production and Sales of H’mong Chicken, Local Black Pig and H’mong Cattle

Actor	Production	Processing	Sale	Progress
FG in Ky Son district	Production of livestock			Terminated in Trial and Verification Stage
Huong Son cooperative		Collection and Distribution		
Bibi Green			Sales to consumers	
Contract	FG – Cooperative – Bibi Green			

(1) Objective of PP

Livestock is the main product in the agriculture sector in Ky Son district because of the difficulty of irrigation in the mountainous area. Most of the livestock farmers are Thai and Mong peoples of an ethnic minority. In general, Thai people live in middle altitude area, and Mong people live in high altitude area in the mountain of Ky Son district. It is said that Thai and Mong peoples have raised the local black pig for several hundred years ago in the district. According to the Commune People’s Committee, raising local black pig has the following problems. (1)Insufficient production amount to meet the market demand, (2)Cross-breeding with other breed is progressing, (3)Poor growth by the lack of protein feeds, (4)Low reproduction because of low weaning technics, (5)Disease outbreak caused by the lack of vaccination program. H’mong chicken which is called Devil Chicken in Ky Son district is one kind of the Silkie breed. It is said that the H’mong chicken has been raised by Mong people from long times ago. But similar to the local black pig, there are some technical problems recently. (1)Cross-breeding with other chicken breed is progressing and pure breed are decreasing, (2)About 30% of chicks die because of the lack of egg worming technics in winter season, (3)Farmers consume most of the H’mong chicken by themselves and cannot keep enough amount for selling. In addition, the potential of beef cattle production is very high in Ky Son district since there are a lot of unused forest areas and abundant feed resources such as grass and cassava. The H’mong cattle with low-fat lean meat raised by Mong people is a special product of Ky Son. However, (1)The farmer’s level on fattening cattle is low and it takes 4 to 5 years to sell, (2)The fattening period is too long to prepare enough space of cattle shed, and they cannot fatten all calves, and (3)The abundant feed resources are not fully utilized. Farmers have realized these issues, and they are willing to improve the situation.

On the other hand, local black pig, H’mong chicken and H’mong cattle have high name recognition by Vietnamese people as the special products of Ky Son district, and the market demand by buyers are very high. However, the supply of the products to the market is not enough because the production scale of each farm is small and its productivity is low. Also, as described above, the proportion of home consumption and gift for neighborhoods are still high because of its historical background that this livestock has been raised not for the purpose of market business. The stakeholders and JICA Project Team decided to improve the production and distribution system of these products in this PP, as it is expected that they have a high potential of expanding new value chain because of their scarcity, popularity and high consumer’s demand.

(2) Activities and Results

1) Agreement on PP Implementation and Selection of Pilot Farms

Ten (10) pilot farms in Huoi Tu commune was selected as this commune is one of the major production area of local black pig, H'mong chicken and H'mong cattle. All of these farmers are Mong people, and they have been raising about 100 local black pigs, 800 H'mong chickens and 100 H'mong cattle in total. Although their technical level is low and because they apply the traditional breeding style, farmers' motivation for improving production and sales methods is high. Also, they are willing to participate in this PP. They are located in the mountainous area, but the distance from the main road is close and there is no problem with the product distribution.

At the start of this PP, the stakeholders such as Ky Son District People's Committee, Huoi Tu Commune People's Committee, Huong Son Cooperative, BiBi Green, TNXP Nghe An Farm and pilot farmers discussed the contents of the PP and agreed on its implementation.

2) Improvement of Raising Techniques for Strengthening Production System

Several technical training for pilot farms were held in 2017 and 2018. The contents include (1) Proper management and shed construction for each livestock, (2) Utilization of local feed resources and agricultural byproducts, (3) Preparation and usage of cassava silage, (4) Urea treatment and storage techniques of rice straw, (5) Silage making of corn, Napier grass and sugarcane top, (6) Concentrate feed and feeding method, (7) Utilization of paddy straw and hay to prevent cold in winter, and (8) Vaccination program. After the training, all the farmers have constructed new sheds by themselves and started to prepare and use silage. By securing the livestock sheds and feeds, almost all farmers have begun to increase the number of H'mong chicken and local black pig. Also, as a result of carrying out vaccination with the veterinarian of the commune, the occurrence of sporadic animal diseases has been stopped in the pilot site.

On the other hand, H'mong chicken and local black pig have been hybridized with Western breeds, and the characteristics as a local breed are being lost. The PP asked the extension workers in the district to provide information and found the pure breed of local black pig, and introduced them as breeding sows and boars in the pilot site. As for the H'mong chicken, the PP introduced cocks from TNXP Nghe An Farm which maintains pure breed and has started breeding in the pilot site.

3) Confirmation of the Production Area by Demanders and Negotiation for Trial Trading

JICA Project Team visited the pilot site with the staff of Bibi Green since they have been looking for suppliers of local black pig and H'mong chicken. They checked the situation of the farms and decided to consider the trading of both products after the farms establish the production system. Regarding the distribution from Ky Son district to Vinh city, all the stakeholders agreed that Huong Son cooperative would collect the products from the farms and transport them to BiBi Green shop in Vinh city. In addition, Huong Son cooperative has planned to open a branch office and an own farm in the pilot commune in order to facilitate the trade, and they have started to prepare the land.

4) Discussion with Livestock Traders

Several traders were interested in the distribution of H'mong chicken, local black pig and H'mong cattle. The PP visited the pilot site with these traders in May 2018 and discussed the possibility of trading. Those who wanted to trade H'mong cattle were intended to ship 15 to 20 cattle to Hanoi, but they gave up to start trading because the distance from Vinh to Ky Son is farther than they expected. Another trader was interested in the trading of H'mong chicken, but they also gave up trading considering the collection and transportation cost. Regarding the Huong Son cooperative which was initially to be the distributor, government procedures related to land borrowing are difficult because it is the residential area of ethnic minorities, and they cannot start trading for the time being. Whereas BiBi Green continues demanding the products and looking for an appropriate distributor. At the end of this PP in December 2018, small trading is being carried out between pilot farmers and fresh food retailer in Vinh city. As these livestock products are demanded stably in urban areas, if the farmer's production capacity is further strengthened, the sales channel will be expanded.



Pure H'mong chicken raised by Mong People



Local black pig raised by Mong People



Negotiation of trading condition between farmers and BiBi Green

(3) Lessons Learned

1) Protection and Promotion of Rare Livestock as Special Products

Due to their scarcity, the local black pig is traded with about 3.5 million VND/head (double price of ordinary pig), and H'mong chicken is about 300 thousand VND/head (double price of other free-range chicken, and 4 times price of broiler). The demand of H'mong cattle is high in urban area, and they are traded with about 25 million VND/head. This is because not only the reputation as special products in Ky Son but also the insufficient supply in the market. It means that they have been losing sales opportunities. Also from the viewpoint of genetic resource protection, no concrete measures have been taken and cross-bred with exotic breed has been progressed rapidly. Recently, it is very difficult to find their pure breed in the district. It is necessary to promote agriculture and livestock special products in each area in the province as activities of AMPF and extension workers.

2) Full Utilization of Unused Local Feed Resources

Land and feed resources are limited in urban area around Vinh city, and beef cattle have been raised mainly on riversides where slightly sliver-type pasture is available. On the other hands, the potential of beef cattle production is very high in Ky Son district since there are a lot of unused forest areas and abundant feed resources such as grasses and cassavas. However, production of feed crops in unused land and utilization of natural feed resources have not been sufficient because most farmers do not know such techniques. There are farmers who purchase cassava residue and beer lees from processing factories even though unutilized raw cassava and wild-taro are available in their garden. By utilizing such unutilized lands and feed resources, it is possible for farmers to reduce the production cost and shorten the fattening period. Therefore, it should be promoted by province as well.

3) Expansion of Production Followed Risk Reduction

While extension officers are placed in each commune, there are few opportunities for ethnic minorities in mountainous areas to access these services, especially for public veterinary services. The biggest risk for livestock farmers is to lose all animals by infectious diseases, and vaccination is the most fundamental service for them. However, the pilot farmers of this PP have never received vaccination service other than cattle, and have often experienced the death of all livestock. In addition, many young chicks and piglets have died due to the low temperature in winter. They were one of the reasons for preventing the expansion of production scale. Neighboring farmers who did not participate in the PP lost all of their livestock as usual, but the pilot farmers who vaccinated animals and implemented anti-cold measures have no dead pigs and chickens. By the reduction of the management risk, all the pilot farmers have raised their motivation and built new livestock sheds to expand the production scale. Providing public veterinary services is indispensable to improve the management of livestock farms. It is strongly needed for strengthening government support for livestock farmers and disease prevention system by Sub-department of Veterinary and Animal Husbandry of Nghe An province.

4) Contract Farming of Rare Agricultural and Livestock Products

All of H'mong chicken, Local black pig and H'mong cattle have high market demand, and farmers do not have difficulty in selling them in local. Due to the small supply amount, farm-gate prices are very high. In order to motivate farmers to conclude a contract, the buyer side needs to propose a high

enough price. However, the purchase price proposed by BiBi Green is lower than the market price, and it seems difficult to conclude a contract. Considering the transportation cost from Ky Son to Vinh, the selling price at store in Vinh city becomes too high. In seller’s market on agricultural and livestock products which supply amount is small, farmers' motivation on contract farming doesn’t rise unless the trading conditions are advantageous enough, while also it is difficult for retailers to sell the too expensive products to consumers.

5) Value Addition by Processing Livestock Products in the Province

A trader who wanted to trade H’mong cattle intended to ship cattle to Hanoi, however they gave up to start trading because the distance from Vinh to Ky Son is farther than they expected. Another trader was interested in the trading of H’mong chicken, though, they also gave up trading considering the collection and transportation cost of live chicken. Although Nghe An province has the largest number of cattle in Vietnam, many of which are distributed outside the province in living state. In order to commercialize these products within the province to add higher value, it is necessary to consider introducing processing and distributing facilities for livestock products.

2.2.30 C28: Promotion and Marketing of Groundnuts for Domestic and Overseas Demands

Actor	Production	Processing	Sale	Stage
FG in Dien Chau/Nghi Loc	Trial cultivation of big size groundnut varieties			Terminated in Trial and Verification Stage
Sy Thang		Grading and processing groundnuts		
Domestic/overseas companies			Sell to the domestic/overseas customers	
Contract	FG in Dien Chau/Nghi Loc – Domestic customers, Domestic customers – overseas customers			

(1) Objective of PP

Groundnuts are still one of the famous specialties of Nghe An, and the planted area reaches 15,700 ha in 2016 although the area had been decreasing in the last six years from 21,900 ha in 2010. The cropping area in Nghe An in 2016 still occupied 8.5 % of the national cropping area, 185,000 ha, and was the largest area among all the provinces in Vietnam. In Vietnam, small seed size varieties are more popular than large size varieties. Hence most farmers in Nghe An currently produce small seed size varieties. The weight of 100 seeds of “L14” variety, one of the widely planted local variety in Nghe An, ranges between 56 and 60 grams.

Tat Tang, which is one of local groundnut processing and trading companies based in Dak Nong Province, purchased about 300 tons of groundnuts from Nghe An in the past. However, it temporarily stopped the procurement three years ago because of the low quality of groundnuts produced in Nghe An (blackish-colored shell appearance). Their procurement specifications are the followings.

- Unshelled raw groundnuts
- Local variety “L14” is preferable. (L14 is tolerant of damages during transportation due to its hard shell.)
- No disease infections as well as no blackish color or bruises on the shell surface
- Expected purchase price: 10,000-13,000 VND/kg (price of fresh groundnut with shell)

If these requirements are fulfilled, Tat Tang has intentions to procure groundnuts produced in Nghe An again. Therefore several experimental cultivation plots for L14 were planned to verify how the differences of harvest timing, fertilizer and pesticide applications affected the quality of shell surface.

Japan continuously imports both small and large size groundnuts, but the large size groundnuts are more popular with higher prices than the small ones among trading companies. At the moment, the large size groundnuts market is dominated by two countries, China and the USA. In the small size

groundnuts market, competition is more severe since there are more major players such as South Africa, Argentina and India. Taking these situations into consideration, the competition in the large size groundnuts market was considered to be less competitive. To boost both production and sales of the groundnuts produced in Nghe An mainly for the Japanese market, trial cultivation of the large seed size varieties was also planned.

(2) Activities and Results

For L14, three experimental plots were designed as (1) a plot with calcium carbonate as well as pesticide application, (2) a plot with calcium carbonate only, and (3) a plot without calcium carbonate nor pesticide application (control). For the plots of (1) and (2), a base dose of calcium carbonate is 125 kg per 1,000m² and the same dose of calcium carbonate was applied at a flowering stage. As for pesticide in the plot (1), diazinon was applied. Plant spacing was 25 x 20 cm for all plots.

To collect information on the availability of the large seed size groundnut varieties, the JICA Project Team visited two research institutes, Agricultural Science Institute of Northern Central Vietnam (ASINCV) under the MARD and Nghe An Plant Seed Center under the DARD. Although ASINCV did not have available seeds of the large size varieties, it was confirmed that the seeds of several large size groundnut varieties could be procured through the Nghe An Plant Seed Center. After consultations with the Nghe An Plant Seed Center, two varieties (TK10 and L29) were finally chosen for trial cultivation. Brief descriptions of the two selected varieties are shown in the table below.

Table 18 Characteristics of the Two Large Seed Size Groundnut Varieties

Variety	Growth period in spring season (day)	Some characteristics	Weight of 100 fruits (g)	Weight of 100 seeds (g)	Proportion of seed/fruit (%)	Yield of dried peanut (quintal/ha)
L29	110 - 115	Straight plant, pink skin	170	67 - 71	72.6 - 77.5	35 - 45
TK10	110 - 115	Straight plant, pink skin	174	69 - 71	72.9 - 78.2	30 - 38

Source: Nghe An Plant Seed Center

Trial cultivation of the large seed size groundnut is summarized in the table below.

Table 19 Brief Descriptions of the Trial Cultivation of Large Seed Size Groundnut

Item	Content
Variety	TK10 (Seeds were purchased from the Plant Protection Institute, Hanoi.) L29 (Seeds were purchased from the Legumes Research and Development Center, Hanoi.)
Plot size	500 m ² for each variety
Plot venue	Nghi Long Commune, Nghi Loc District
Cultivation period	From February to May/June 2018

Source: JICA Project Team

Seeds of the three groundnut varieties were sown on February 9, 2018, after land preparation of respective trial plots. All groundnut varieties flowered at the end of March and formulation of seeds started at the beginning of April. In May, harvesting of L14 was done four times (85, 90, 97 and 104 days after sowing) and shell appearance of sample groundnuts was surveyed at each time. The table below shows the result of shell appearance evaluation by plot.

Table 20 Result of Shell Evaluation by Plot and Harvest Time

(Unit: %)

Plot	(1) Calcium carbonate + Pesticide			(2) Calcium carbonate			(3) Control		
	A	B	C	A	B	C	A	B	C
85 DAS	46.1	9.2	44.7	65.6	6.3	28.1	69.4	15.7	14.9
90 DAS	50.3	32.3	17.4	47.8	36.1	16.1	51.2	32.5	16.3
97 DAS	25.4	68.9	5.6	22.2	67.8	10.0	18.1	77.5	4.4
104 DAS	12.1	63.7	24.2	20.1	58.1	21.8	8.3	76.0	15.7

Note: DAS means days after sowing. Grade A- Good appearance shells (2 seeds in a shell without darkening color nor holes), Grade B- Bad appearance shells (2 seeds in a shell with darkening color or holes), Grade C- 1 or 3 seeds in a shell

Source: JICA Project Team

When samples were harvested 85 and 90 days after sowing, the majority of groundnut shells (46-70%) in the three plots were ranked as grade A, but grade B shells dominated (58-78%) in all plots for groundnut samples harvested 97 and 104 days after sowing. There is a tendency that the grade A rates decrease in all plots as harvesting time delays and there seem to be no differences among the plots. This implies that the application of calcium carbonate and pesticide has no positive effects on groundnut shell appearance with regard to blackish color. Apart from low soil pH and soil-borne diseases and pests, other causes may exist for the issue, blackish shell appearance.

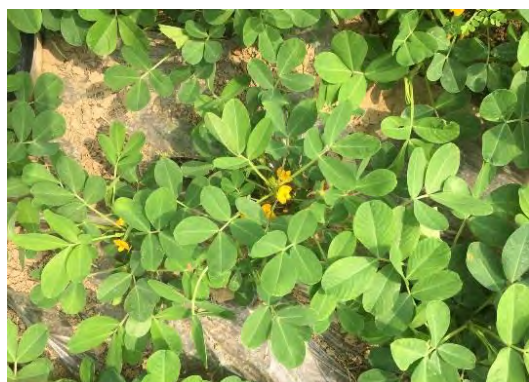
All varieties including two large seed varieties, TK10 and L29, were harvested in May and June (L14 and TK10 were harvested 109 days after sowing and L29 was harvested 116 days after sowing). To check the effect of planting density on yield, two plots, namely 25 x 20 cm and 30 x 20 cm, were prepared for TK10 and L29 and calcium carbonate and pesticide were applied in both plots. The yield data of the three varieties are shown in the table below.

Table 21 Yield Data of Groundnut Trial Cultivation by Variety and Treatment

Variety	Treatment	No. of plants/m ²	Total good fruits/plant	Weight of 100 seeds (g)	Yield (quintal/ha)
L29	25x20 cm spacing	32	9.8	61.9	35.5
	30x20 cm spacing	26	10.0	61.2	30.0
TK10	25x20 cm spacing	32	9.3	62.4	34.0
	30x20 cm spacing	26	9.4	61.3	30.0
L14	Control	32	9.3	61.7	30.0
	Calcium carbonate + pesticide	32	9.5	63.1	31.0
	Pesticide	32	9.9	60.5	30.0

Source: JICA Project Team

The yield of wide spacing (30 x 20 cm) plot was 3.0 ton/ha for both L29 and TK10 while that of normal spacing (25 x 20 cm) plot recorded 3.4-3.55 ton/ha. Therefore the normal planting plot is better than the wide planting plot in terms of yield level. In addition, there are no yield differences among the three plots of L14, ranging from 3.0 to 3.1 ton/ha, hence the application of calcium carbonate and pesticide did not give any positive effects on yield level of L14.



Flowering stage of L29 in March 2018



Seed formulation of L14 on 20 April 2018



L14 with calcium carbonate + pesticide application (104 days after seeding)



Comparison of shell size (104 days after seeding)

(3) Lessons Learned

From the trial cultivation of L14, it was revealed that the grade A rate was relatively higher than the rates of grade B and C in all plots in case harvesting was done before 90 days after sowing. This implies that early harvesting is another option to have more grade A groundnuts. Since the farm gate price of grade A groundnut is higher than that of grade B and C according to the buyer survey, it is recommendable to try to harvest the grade A shell groundnuts more. Followings are some estimated gross income of grade A groundnut sale by early harvesting.

Table 22 Estimated Gross Income of Grade A Groundnut Sale by Early Harvesting

Control	Assumed Unit Yield: 3.9 ton/ha (fresh groundnut with shell) Average Farm gate Price: 10,500 VND/kg (farmer interview in 2018) Gross Income: 40,950,000 VND (3,900 x 10,500)
Case 1	Assumed Farm gate Price: 12,000 VND/kg (price of grade A fresh groundnut with shell) To gain gross income of 40,950,000 VND per ha, the yield of grade A groundnut should be higher than 3.413 ton/ha. (40,950,000 / 12,000 = 3,413) If blackish shells occupy less than 12.5% of 3.9 ton of groundnuts by early harvesting, the gross income will be more than 40,950,000 VND per ha. (3.413 / 3.9 = 0.875)
Case 2	Assumed Farm gate Price: 13,000 VND/kg (the highest price of grade A fresh groundnut with shell) To gain gross income of 40,950,000 VND per ha, the yield of grade A groundnut should be higher than 3.15 ton/ha. (40,950,000 / 13,000 = 3,150) If blackish shells occupy less than 19.3% of 3.9 ton of groundnuts by early harvesting, the gross income will be more than 40,950,000 VND per ha. (3.15 / 3.9 = 0.807)

Source: JICA Project Team

L29 and TK10 are regarded as large seed size varieties (67-71 grams per 100 seeds), but neither had big seeds. Their actual seeds' size ranged 61-62 grams per 100 seeds in this trial cultivation, which were the same level of L14. Location difference in trial plots may be a possible reason for this. The trial plots of L14 and these of L29 and TK10 are located separately, and the distance between these plots is about 1 km. Different location of farmland may differentiate the growth conditions including soil nutrition, which in turn may affect yield level.

2.2.31 C29: Improvement of Garlic Production and Marketing

Actor	Production	Processing	Sale	Stage
FG in Thanh Chuong	Production of garlic	Drying, cleaning and packing		Terminated in Contract/Undertaking Stage
Bibi Green		Instruction of Drying, Cleaning and Packing	Sale to general customers	
Contract	FG in Thanh Chuong – Bibi Green			

(1) Objective of PP

Retail stores for agricultural products in Vinh city such as Bibi Green, Xanh Mart, etc. constantly have a large demand for garlic throughout the year. However, it is rather difficult to procure garlic within Nghe An province and these retail stores currently procure garlic from southern Vietnam (Quang Nam, Quang Ngai, Ninh Thuan, etc.). However, the purchase price and delivery cost are relatively high, which, in turn, makes the retail price high.

On the other hand, garlic production was once successful in Thanh Tien Commune, Thanh Chuong district. Recently the cultivation area of garlic in Thanh Tien has decreased due to the damages of disease. Hence, the production of garlic has also dropped.

If the farmers there can improve cultivation of garlic and increase the production, retail stores in Vinh city will be able to procure the garlic produced within Nghe An province. Therefore, the procurement cost will be saved, and they can sell the garlic at a reasonable price. Thus, this pilot project aims to produce garlic with appropriate cultivation technique to provide them at a reasonable price for retail stores in Vinh city.

(2) Activities and Results

1) Trial Cultivation in Winter Season (October 2017 to March 2018) and Contract with Bibi Green

Four individual farmers living in Thanh Tien Commune, Thanh Chuong, were selected through the cooperative there. The total cultivation area of the four farmers is 1,000m². In September 2017, the project supported technical training for the participated farmers. The Project Team provided the knowledge and practical instruction on land preparation with manure, organic fertilizer, lime, and sand application of fertilizer, and integrated pest management. The farmers cultivated successfully and harvested 435kg garlic /1,000m². The detail of the schedule is shown in the table below.

Table 23 Schedule of Garlic Cultivation

Date	Activities	Remarks
2017/10/18	Purchase and delivery of garlic seeds	Garlic seeds (100 kg)
2017/10/26	Land preparation	Inorganic fertilizers (phosphorous: 40 kg, urea: 40kg, potassium: 44 kg, NPK compound: 30 kg) Organic fertilizers: 30 kg, Lime: 80 kg
2017/10/27	Final land preparation and seeding guidance	Manure: 1,000 kg
2017/10/27-11/2	Seeding by farmers	
2017/11 - 2018/2	Daily management by farmers	Top dressing (3 times in Nov, Dec, Jan). Pesticide (spinetoram) application (1 time in Nov)
2018/3/5	Harvesting by farmers	Harvested garlic (435kg: dry weight)
2018/3/23	Selling to Bibi Green and local market	Contract with Bibi Green



Seeding guidance to the farmers
(October 2017)



Formation of cloves
(December 2017)



Bibi Green discussed the transaction with
the farmers (March 2018)

2) Contract with Bibi Green and Profitability of Garlic Production is Very High

Bibi Green and the farmers had a contract farming regarding the transaction after confirmation the quality of garlic. The farmers sold 100kg (dry weight) garlic at 70,000 VND/kg to Bibi Green shop. Cultivation of garlic is evaluated by the farmer to be more profitable than their conventional crops such as leafy vegetables and rice. The productivity and profitability of garlic are calculated in the table below. It was found that the profitability of garlic cultivation in winter season is very high.

Table 24 Profitability of Garlic Production

Product	Production Yield (kg/1,000m ²)	Selling Price (VND/kg)	Gross Income (VND)	Production Cost (VND)	Profit (VND)
Garlic	435 (Dry weight)	70,000-100,000	40,500,000	8,093,000	32,407,000
Leafy Vege	It depends on crops	It depends on crops	13,729,000	2,610,000	11,119,000
Rice	870	7,500	6,525,000	1,010,240	5,514,760

Note: Labor cost is not included in production cost. The farmers sold 100kg garlic to Bibi Green based on the contract and 335kg garlic to the local market.

3) Trial Cultivation in Summer Season (March to July 2018)

The garlic seed was planted in the middle of April 2018 in the 2nd trial. Farmers installed shade net and mulching materials to avoid the heat and applied gibberellin (plant hormone) as a rooting

promotion. However, germination of garlic is not well because of too high temperature over 35 degree Celsius. It was verified that there is no possibility to grow garlic in plain and hill area in the province even farmers apply the appropriate technique.



Land preparation for garlic cultivation (March 2018)



Germination was poor because of high temperature (April 2018)

(3) Lessons Learned

- Promoting and branding agriculture products

In general there are few support on the marketing of the agriculture products in Nghe An province, hence most farmers cannot decide the price and timing of the sales by themselves. Through the pilot project, the farmers have learned that they can sell garlic at high price according to the market needs. The farmers have been aware of market-oriented production by estimating the cost and selling price properly. It is important to provide market information to farmer groups and cooperatives by the government and companies, however the production scale is still not large. It is necessary to develop providing market information system and matching system of farmers and demanders in order to promote agriculture products in Nghe An province. Therefore, the farmers can expand the production of garlic and its branding.

- Vulnerable against climate and natural disaster

The summer in 2018 was very hot in central northern Vietnam. The highest temperature at Vinh often reached 40 degree Celsius between April and May. 2nd trial cultivation of garlic in summer showed that there was no success to grow garlic in Thanh Chuong district, even another variety from Thailand was failed growing in the district. It is concluded that farmers in Thanh Chuong district should focus on cultivation entirely in the winter season. Currently, agriculture production is vulnerable to climate and natural disaster. The government should consider the analysis of climate risk and its countermeasure such as zoning of agricultural production, developing infrastructure, etc.

2.2.32 AMPF1: Vegetable Production in Cua Lo Tourism Town

Actor	Production	Pre-processing	Sale	Stage
Nghi Hong ward FG	Cucumber, Malabar spinach			Terminated in Trial and Verification Stage
Summer Hotel			Cook the vegetables to tourists in Cua Lo	
Contract	FG in Nghi Huong ward - People's Committee in Nghi Huong ward – Summer Hotel in Cua Lo			

(1) Objective of PP

Cua Lo town is a famous tourist destination in Viet Nam. The number of tourists visiting Cua Lo town has been increasing over the years. In fact, in 2016 Cua Lo town attracted 1,652,000 visitors. Therefore, hotels and restaurant in the area have a large demand for vegetables, especially cucumber and Malabar spinach, in summer when Nghe An in general and Cua Lo town in specific do not produce much. Farmers in Nghi Huong ward has been cultivating cucumber for years but they have neither experience nor facility for summer cucumber production. Moreover, hotels and restaurants

never approached them directly to order cucumber in tourist season before. Thus, this pilot project aims to produce vegetables in net house with heat resistant variety and summer cultivation technique to provide for hotels whose demand was confirmed by extension officers and the JICA Project Team. Also, this pilot project is to find an appropriate way to develop sustainable vegetable value chain through contract farming between producers and hotels.

(2) Activities and Results

1) Survey on Market Needs of Vegetables in Cua Lo

JICA Project Team and People's Committee in Nghi Huong ward interviewed with several hotels such as Summer Hotel, Xanh Hotel, Saigon Kim Lien Resort Hotel, etc. in Cua Lo town. As a result of discussion with hotels, it was found that there are market needs on cucumber and leafy vegetables. The farmers in Nghi Huong ward and Summer Hotel agreed to make MOU regarding the transaction of cucumber in summer season, 2017.

2) Trial Cultivation in Summer, 2017

In May 2017, the project supported technical training for four farmers in Nghi Huong ward. An extension officer in Nghi Huong ward provided the knowledge and practical instruction on cucumber cultivation in summer. Therefore, JICA Project Team provided the materials for installation of the net house in cooperation with farmers in Nghi Hong ward. The farmers sowed cucumber seeds which varieties are G7 and TN739 on the end of May 2017. Then, both varieties grew very well and bore fruits in July. However, both varieties of cucumbers and Malabar spinach were damaged by a big typhoon which hit Nghe An province on July 17, 2017. All the cucumbers were broken down in Nghi Hong. As the result of the typhoon, the transaction was canceled between the farmers and Summer Hotel in the summer, 2017.

3) Trial Cultivation from Spring to Summer, 2018

Farmers, People's Committee and Summer Hotel would like to continue the transaction of cucumber, malabar spinach, okra, and leafy lettuce in summer 2018. JICA Project Team provided the heat tolerance seed and materials for installation of shade net and mulching material to avoid the heat. Also, we instructed farming method such as forcing farming making ridge, applying manure, etc. In fact, farmers could harvest cucumber and malabar spinach from February to May on 1st cultivation. However, vegetables were damaged due to typhoon and flood in July 2018. However, most vegetables were ruined due to typhoon and flood in July 2018, only malabar spinach was survived.

(3) Lessons Learned

- Vulnerable against climate and natural disaster

Natural disaster is one of the concerns because of the summer season had a high temperature, high humidity and several typhoons in 2017 and 2018. According to the National Center for Hydro-Meteorological Forecasting in Vietnam, once every 5 to 10 years, big typhoons hit north region of Vietnam in the season. It is not possible for stakeholders to control natural disasters such as typhoons, drought, flood, etc. The government should consider the analysis of climate risk and its countermeasure such as zoning of agricultural production, developing infrastructure, therefore it is necessary to promote the heat tolerance varieties and short crops with high demand by the extension officers.

- Lack of infrastructure, especially drainage

The drainage of farmland around Vinh city is poor, especially the coast area and there are no facilities to solve the issue. The growth of vegetables will be not good if it has been raining. This is a big issue for the farmers who would like to convert crops from rice cultivation to vegetables with high demand. It is necessary to develop a drainage system if the government promotes safe vegetable production based on market-oriented agriculture production.

2.2.33 AMPF2: Production and Sales of Eggs in Urban Areas

Actor	Production	Processing	Sale	Progress
FG in Dong Vinh	Production of egg			Terminated in Contract/ Undertaking Stage
BiBi Green and Tam Nong, etc.		Packaging, etc.	Sale to consumers	
Contract	FG – BiBi Green, Tam Nong			

(1) Objective of PP

There is a demand of 30 to 40 thousand chicken eggs from supermarkets, retail stores and schools in Vinh city every day. But most of these eggs are purchased from the companies located in Hanoi or Ha Tinh province. This is because there are no producers satisfying the quality and safety standards required by demanders within Nghe An province.

Meanwhile, in the Dong Vinh ward of Vinh city, there are layer farmers named Yen Due Farmers' Group that produce 30,000 eggs a day, and this is the largest poultry farming group in the province. This association consists of six layer farmers. They are procuring materials from the international group company CP group, and the technical level is not low. However, at present, they do not make contract with any buyers, and they sell all eggs to the local market through traders. Thus, the trading price of the egg fluctuates every day. As a farmers' group, from the viewpoint of price stability, they are willing to start contract farming with large-scale buyers.

Therefore, this PP will improve the production and distribution system of Yen Due farmers group to meet the demands of buyers, and aims to establish a value chain of chicken eggs in Vinh city by the contract farming.

(2) Activities and Results

1) Survey on Market Needs of Egg Demanders in Vinh City

In order to know the market demand of egg in Vinh city, the PP surveyed some demanders with Mr. Long (Director of extension station in Vinh city). The PP interviewed to retailers such as Tam Nong, BiBi Green, Tam Nguyen, Big C, Maximark, Young Clean cooperative, Lien Minh cooperative and hotels such as Song Lam Hotel, Muong Thanh Thanh Nien Hotel, Muong Thanh Phuong Dong Hotel, Mong Thanh Vinh Hotel. Among the demanders, we found that the daily amount required by hotels fluctuates greatly depending on the schedule of events such as a wedding ceremony. It means that daily shipping amount is not stable, and it was difficult to make direct contracts with farmers. Therefore, we decided to trade with Tam Nong and BiBi Green of retail and wholesalers who are interested in contract trading of this egg PP. At the same time, Bao Ngoc SG Bakery, a bakery manufacturing company in Vinh city, is also interested in trading eggs for processing and we have continued discussing with them.

In discussions with these demanders, it was confirmed that the required conditions for contract trading are as follows. (1) possession of bank account and business license, (2) acquisition of DARD certificate, and (3) farmer's record keeping that can track production history. As for (1), the license of Thong Nhat Agricultural Cooperative, to which the farmer group belongs, was permitted to be used, thus the project decided to focus on technical assistance for (2) and (3). The farmer group has been in production for over 10 years, but they did not know about DARD certificate. They agreed to join in this PP and pay bear the application cost by themselves, and ask stakeholders to support to obtain the certificate.

2) Support for Acquisition of DARD Certificate

In order to obtain DARD certificate, it is necessary for each farmer to satisfy six technical standards; (1)improvement of poultry houses, (2)vaccination program, (3)feed safety, (4)proper use of livestock medicine, (5)technical guidance from extension station, (6)safety compliance and trading records. The veterinary station of Vinh city, the organization that is responsible for the examination to issue this certificate, plans to implement a project on promoting DARD certificate for livestock farmers in this year. We agreed on the MOU to cooperate with them to implement activities of the PP.

From June 2017, together with the related organizations such as Veterinary station of Vinh city, Extension Station and Farmer group member, JICA Project Team has visited pilot farmers to investigate the situation to satisfy the certification standards and give technical support to improve them. In September, by collaborating with the sub-Department of Veterinary and Livestock Production, the PP held training on DARD certificate for 70 livestock farmers in the province, including the 6 pilot farmers. All pilot farmers passed the examination after the training and received the certificate of completion. After that, all the farms fulfilled the standard of water quality of their poultry houses (total bacteria count, coliform bacteria group, residual mercury, residual lead and residual arsenic). In response to this, each pilot farmer received DARD certificate from the provincial office in November.

3) Acquisition and Following Standard of Viet GAHP

Six (6) pilot farmers were supported by the model project of Provincial Department of Agriculture Extension and acquired Viet GAHP certificate (Vietnamese Good Animal Husbandry Practices) in March 2018. The PP instructed farmers that the important point is continuous compliance with its standard and advanced improvement after obtaining it. Therefore, all farmer have started to take measures such as utilization of filtered water for chicken, disinfection of sheds at the time of chicken replacement, installment of farm gate for biosafety and placing disinfecting mat at the entrance of poultry shed. In addition, the record keeping about egg production and shipment has been continued on a daily basis. However, it is not easy to lead to trading with higher price even they are the only layer farmers in Vinh city with Viet GAHP and DARD certificate. The PP has conducted activities to promote these food safety certificates to demanders so that these products can be sold with favorable price.

4) Marketing and Negotiation for Contract Trading to Expand Sales Channel

The PP has implemented marketing activities to connect acquisition of safety certificates to advantageous sales. The retailers such as BiBi Green, Tam Nong, Cua Lo Shop, Bao Ngoc Sai Gon Bakery and Chan Nuoi Mien Trung showed interests in contract trading with pilot farmers. Among them, BiBi Green and one pilot farmer agreed to the conditions of trading and concluded a contract in July 2018.

Table 25 Profitability of Egg Trading by Pilot Farms

	Production cost (VND/egg)	Unit price (VND/egg)	Profit (VND/egg)	Profit rate (%)	(Ref.) Increase in income from contract sales <i>Production: 3,000 eggs/ day</i> <i>Contracted: 50 eggs/ day</i>
Sales for local market	1,300	1,600	300	18.8	VND 1.8 million/year
Sales by contract	1,300	1,700	400	23.5	



Technical method is still different depends on the farm



Market survey with pilot farmers at retail stores in Vinh city



All the pilot farmers have acquired DARD certificate and VietGAHP

(3) Lessons Learned

1) The importance of Providing Market Information to Farmers Group

Although, several international companies supply farmers with feed, medicine, livestock seeds and other materials in Nghe An province. They provide farmers the technical instruction on how to use

their products. As a result, farmers who use such materials are relatively high in production techniques. But as there are few advice and support on the sales and marketing of the livestock, most of the farmers just wait for buyers and cannot decide the price and timing of the sales by themselves. The farmer group of this PP also has a certain technical level, and there is a large market in the city area nearby. But they cannot obtain the market information and they have no choice but to sell the eggs with extremely low price (about 1,400 VND/piece) in the local market. Staff of AMPF and extension officers need to recognize the importance of providing market information to farmers group/cooperative and buyers/distributors who have relatively high trading capacity to strengthen the FVC in Nghe An.

2) Support for Capable Farmers to Satisfy the Local Demand for Agricultural and Livestock Products

There is a demand of 30 to 40 thousand chicken eggs from supermarkets, retail stores and schools in Vinh city every day. But most of these eggs are purchased from the companies located in Hanoi or Ha Tinh province. This is because there are no producers satisfying the quality and safety standards required by demanders within Nghe An province. For this reason, the egg farmers in the province have no choice but to sell to the local market at low prices through traders even if their production capacity and motivation to improve techniques are high. In order to promote trading between such good farmers and modern markets, the government needs to develop conditions for contract farming such as supporting acquisition of DARD certificate and business license for farmers groups or agricultural cooperatives. In addition, it is necessary to develop the matching system of good farmers and demanders in Nghe An province.

3) Support for Advantageous Sales with Safety Certificates

Despite the consumers' high demand for safe agricultural and livestock products, acquisition of DARD certificate and VietGAHP has not connected to improvement of farmers' incomes. One reason is that consumers are not as fully aware of these certificates as these products can be sold with favorable price. Currently, consumers who are highly aware of safety do not necessarily concern the certificates themselves, but are tend to purchase high value-added products by trusting retail shops which assure food safety. The government should consider promoting safety certificates to consumers and promoting local consumption of safe agriculture and livestock products of Nghe An.

4) Business Support for Future Branding

Considering development of their product as a local brand in the future, it is necessary to unify the production method of farmers and sell their products at higher price by following the standard of DARD certificate. Although safety standard has been complied by farmers, the detailed production method is different depends on the farm even in the same group. In the future, they should consider selling the products with group brand, and it is necessary for them to unify production, distribution and sales methods. AMPF is also required to advise to such farmers' business strategies from the viewpoint of brand marketing.

2.2.34 AMPF3: Improvement of Quality of Quang Tien Pomelo to Satisfy Market Needs

Actor	Production	Processing	Sale	Stage
Thai Hoa FG	Production of Pomelo	Collecting and Packaging		Terminated in Contract and Undertaking Stage
Thien Phuc Safe Food Store, Hotel in Vinh			Sales to general consumer	

(1) Objective of PP

The pomelo variety called Quang Tien pomelo produced in Thai Hoa town is cultivated only Nghe An province. The characteristics are 1) higher Brix than other pomelo variety, 2) un-uniformed tassel, 3) many seeds, and 4) difficult to peel. The Thai Hoa town has promoted Quang Tien pomelo in the last three years. Currently, the planted area of Quang Tien pomelo is 100 ha approximately, and 20 ha of them have produced the commercial pomelo. The local producers of Quang Tien pomelo sell their

products to the local market through the middleman. The retailing price of Quang Tien pomelo is 40,000 - 50,000 VND/kg while the branded pomelo produced in Ha Tinh province is sold with the price of 80,000 - 120,000 VND/kg in Hanoi market. Thus, the objective of this PP is to increase the profit of local farmers by producing the value added Quang Tien pomelo through the provision of technical support.

(2) Activities and Results

1st Trial

According to the local retailer named Thien Phuc Safe Food Store, the water content and brix of Quang Tien Pomelo is varied depending on the timing of harvest or individual specificity, which indicates the importance of producing uniformed products. Besides, the skin color of fruit should be green while the fruit weight should be within the range of 1.5 to 2.0 kg per fruit. In addition, the local extension staff reported that approximately 30% of the harvested pomelo was deteriorated due to the damage from mites. Based on these facts, this PP applies the following techniques for the improvement of pomelo production.

- Introduction of thinning activity to limit the number of fruit per tree for harvesting uniformly sized products as well as reducing the individual specificity especially regarding the water content and brix of pomelo.
- Introduction of fruit bag to reduce the damage from mites and to improve the quality of products appearance.

This PP has started with the 10 local producers of pomelo in Nghia Tien commune and Quang Tien commune. The 20 pomelo trees which were more than 5 tree age was selected from each producer and applied for the experiment on the thinning activity and fruit bag introduction. AMPF conducts the technical support including thinning activity under the support of the JICA Project Team while the local extension staff conducts the monitoring of PP activities. Besides, the economic division of Thai Hoa town supplies technical and monetary support for getting the safety certificate of pomelo production area.

The harvesting of pomelo has stated since the middle of August 2017. Besides, the PP starts the sales support of pomelo for the local farmers to sell products to Thien Phuc Safe Food Store and several hotels in Vinh city under the supervision of AMPF member.



Technical training of pomelo production



Experiment on the pomelo production

After the end of the harvesting season, the JICA Project Team and Thai Hoa town has conducted the seminar to share the results of PP. According to the cooperative leader of pomelo production stated that 5 % of the total production could be sold by the contract in this season. Since the farmer can sell their products with higher unit price than selling other traders, the cooperative showed their will to increase the contract-based production for next season. The JICA Project Team has explained the result of quality analysis of Quang Tien pomelo harvested in 2017. As shown in the table below, the quality of the pomelo is still not unified. Besides, the brix rate of some pomelo samples is less than

11 % which is not satisfied with the buyer's demand. Thus, the JICA Project Team pointed out that the farmers have to improve those items as soon as possible to prevent brand impairment.

Table 26 Results of Quality Analysis of Pomelo

Sample No.	Fruit weight (gram)	Edible portion (gram)	Edible portion (%)	Juice volume (ml)	Juice ratio (ml/kg)	Peel thickness (cm)	Brix (%)	Total acidity (%)	Vitamin C (mg/l)
1	1823	1180	64.7	751	411	1.52	11.07	0.505	526.91
2	1538	877	57.0	652	423	2.17	11.03	0.470	489.43
3	1432	930	64.9	540	376	1.47	10.80	0.511	506.50
4	1231	663	53.8	320	259	1.97	9.27	0.536	554.82
5	1350	832	61.6	469	347	1.67	9.23	0.435	578.98
6	1315	812	61.7	510	387	1.80	10.97	0.435	518.58
7	1369	811	59.2	420	307	1.72	12.43	0.423	445.27
8	1454	927	63.7	570	392	1.65	10.80	0.466	431.11
9	1920	1203	62.6	795	414	1.90	9.20	0.394	407.79
10	1319	842	63.8	560	424	1.57	11.00	0.468	531.08

Source: JICA Project Team

The JICA Project Team has also explained the comparison of quality between Quang Tien Pomelo and other pomelo varieties produced in other province. As shown in the table below, the weakness of the Quang Tien pomelo is the peel thickness; the peel of Quang Tien Pomelo is thicker than other varieties meaning that Quang Tien Pomelo has less edible portion and difficulty to peel out. Therefore, JICA Project team also pointed out to improve this weak point by adequate fertilizer management.

Table 27 Comparison of Quality on Quang Tien Pomelo and Other Pomelo Varieties

	Quang Tien Pomelo	Phuc Trach Pomelo	Da Xanh Pomelo
Fruit Weight (kg/fruit)	1.5±0.2	1.4±0.4	1.4±0.3
Peel Thickness (cm)	1.7±0.2	1.4±0.2	1.4±0.2
Edible Portion (%)	61.3±3.4	70±4.3	71±3.7
Brix (%)	10.6±0.9	10.7±0.8	11.0±0.4
Total Acidity (%)	0.46±0.04	0.5±0.1	0.4±0.04
Brix / Acidity	22.9±3.1	21.4±3.2	27.5±2.0
Vitamin C (mg/l)	499±52	505±65	448±58

Source: JICA Project Team



JICA presentation at the seminar



Presentation conducted by the participants at the seminar

The table below shows the evaluation of the farmer's profit between "with Project" and "without Project". It was found that the farmer's profit of "with Project" is higher than "without Project" which indicates that the support scheme applied by AMPF and JICA Project team can contribute the development of the production area of Quang Tien Pomelo.

Table 28 Comparison of Profit per Tree between "with Project" and "without Project"

	Average No. of Fruit per Tree	Average Weight of Fruit	Farmgate Price	Net Revenue per Tree	Cost of Fruit Bag	Cost of Pesticide	Total Profit per Tree
With Project	60	1.5 kg	25,000 VND / kg	2,250,000 VND / Tree	84,000 VND / Tree	1,500 VND / Tree	2,164,500 VND / Tree
Without Project	90	1.5 kg	15,000 VND / Fruit	1,350,000 VND / Tree	NA	6,000 VND / Tree	1,344,000 VND / Tree

Source: JICA Project Team

2nd Trial

To expand the scale of the model, AMPF planned to conduct the 2nd trial of contract agriculture regarding Quang Tien pomelo. Difference between 1st and 2nd trial are as follows.

- Increase the number of participants (pomelo producers) from 10 farmers to 14 farmers. Therefore, total pomelo cultivation area supported by pilot project increases from 7.9 ha to 15.6 ha.
- Find new customers not only in Nghe An province but also in large cities such as Hanoi.
- Collaboration with DOST and Thai Hoa town government for the further development of Quang Tien pomelo producing area.

The table below shows the activities conducted in the 2nd trial of the pilot project until the end of October 2018.

Table 29 Activities Conducted in Pilot Project of Quang Tien Pomelo

Date	Activity	Organization in Charge
6 March 2018	Kick off meeting for 2 nd trial	Thai Hoa town
12 April 2018	Establish/Register Quang Tien pomelo brand and new label	DOST
2 May 2018	On-site training for the application of fertilizer and pesticide	AMPF
12 May 2018	On-site training on the application of fruit bags for pomelo fruit	Agricultural Extension
15 June 2018	Organization a meeting with farmer cooperative to discuss about pomelo brand and new label	Agricultural Extension
20 July 2018	Training on pomelo grading	AMPF
3 August 2018	Support 10 farmers to install drip irrigation system with total 250,000,000 VND	Thai Hoa town
22 August 2018	Checking fruit quality of pomelo such as color, peel thickness and brix level	Extension
24 August 2018	Pomelo fruits are selling in Thien Phuc food shop (Thai Hoa town)	AMPF
8 September 2018	Bring pomelo fruits to the buyer in Hanoi	AMPF
10 September 2018	Analyzing fruit quality of pomelo	AMPF
15 September 2018	Discussing and signing a contract with a buyer in Hanoi	AMPF
October 2018	Wrap up meeting	AMPF

Source: JICA Project Team

As a result of these activities, 1) Change of pomelo quality and 2) Results of marketing activities are pointed as follows.

Quality of pomelo

The table below compares the quality of pomelo harvested by PP participating farmers and non-participating farmers. According to this, it is clear that the quality of the pomelo cultivated by PP participating farmers was improved in terms of the peel thickness, the ratio of the edible portion, the

amount of fruit juice and the sugar content. In the second phase, the PP increased PP participating farmers, but by applying cultivation techniques instructed by AMPF, it is now possible to produce quality pomelo that meets market needs.

Table 30 Comparison of Pomelo Quality

	with project (n=14)	without project(n=10)	Increase
Fruit weight (kg/fruit)	1.67 ± 0.25	1.57 ± 0.2	1.0
Peel thickness (cm)	1.94 ± 0.20	2.5 ± 0.7	- 0.56
Edible portion (%)	59.8 ± 3.1	52.7 ± 9.2	7.1
Juice ratio (ml/kg)	38.6 ± 4.5	34.8 ± 8.0	3.8
Brix (%)	10.6 ± 0.5	9.6 ± 0.8	1.0
Total acidity (%)	0.49 ± 0.07	0.46 ± 0.04	0.03
Brix/ acidity	22.2 ± 3.1	21.3 ± 3.0	0.9

Source: JICA Project Team

Marketing Activities

In order to acquire new customers, PP supported the marketing activities of the pomelo producer's cooperative to which the target farmers of PP belong. In this activity, sales promotion, such as providing product brochures and samples to nine candidate customers including supermarket of Nghe An province and retail stores of Hanoi city was carried out. As a result of these activities, the cooperative could conclude the sales contract with 3 retail shops in Hanoi and supermarket in Vinh city.



Sales promotion conducted by cooperative

Brochure

(3) Lessons Learned

- The strong leadership of Thai Hoa town is the key point of the success in this PP; it is strongly recommended to involve local government authorities when we commence a new project.
- Identifying sales target at beginning encourage farmers to improve their cultivation manners; it is confirmed that the role of AMPF which supports farmers to find out market needs is valuable and effective to develop FVC.
- Although Quang Tien Pomelo is the specific variety originated from Nghe An province, its competitiveness is not really distinct regarding its sweetness, peel thickness and other characteristics. Branding can improve name recognition of the products. However it should be noticed that the market position of Quang Tien Pomelo should not be in the market for the high-income class, but in the middle-income class: the range of retailing price is 40,000-50,000 VND.

2.2.35 AMPF4: Sales Promotion of Nhut

Actor	Production	Processing	Sale	Stage
Thanh Chuong FG	Production and Procurement of raw material to produce Nhut	Production of Nhut		Terminated in Contract and Undertaking Stage
Local Restaurant, Hotel and Retail shop			Sales to the general consumer	
Contract	Thanh Chuong FG—Local Restaurant, Hotel and Retail shop			

(1) Objective of PP

Nhut is the preservative food which is made from jackfruit, bamboo shoot, ginger, banana flower, star fruit, maize powder and salt. It is famous specialty of Thanh Chuong district although its sales channel is only in the local market. The reason for its limited sales channel is the sanitation problem in its processing stage. Thus, this PP tries to increase the sales channel of Nhut by the improvement of the production process and securement of food safety. Besides, the AMPF adds extra value of Nhut by improving its quality based on the market needs survey.

(2) Activities and Results

The target Nhut producer has obtained the safety certificate regarding food processing on June 9, 2017. Thus, the PP conducts the sales trial of Nhut to a potential customer. The target of sales trial is Tham Nong company, Bibi Green, Giao Te hotel and Kim Lien hotel. In general, the Nhut sold in the Vinh city is made of only single ingredient (jackfruit). Reflecting this fact, the retail price of Thanh Chuong Nhut of this PP is rather high than general Nhut which makes it be a poor seller. However, some potential customer has already requested to continue the transactions of Thanh Chuong Nhut, which can be assumed that the requirement of those customers regarding Nhut, are almost satisfied except for the price.

Based on the sales trial on Nhut to the potential buyer, Bibi Green requested the Nhut producer to make a sales contract. The brief contents of the contract are shown in the table below. From December 2017, the producer started to supply Nhut to Bibi Green as contracted.



Table 31 Contract Condition between Nhut Producer and Bibi Green

	Condition
Duration of the Contract	December 2017 to December 2018
Products Condition	Small Box Nhut (1kg) : 45 boxes per month, Price 30,000 VND / box Big Box Nhut (1.5 kg): 10 boxes per month, Price 45,000 VND / box
Transportation	The producer has to bring the contracted amount of Nhut to Bibigreen
Remarks	The producer should record the Nhut producing record

Source: JICA Project Team

(3) Lessons Learned

The sales channel of Thanh Chuong Nhut is expanding by obtaining a safety certificate. It is necessary to propose supporting policy to obtain those certificates for the local producers in the M/P.

2.2.36 AMPF5: Improvement of Production and Competitive Power of Silk Products

Actor	Production	Pre-processing	Sale	Stage
FG in Dien Chau	Raw silk	Raw silk thread and mat		Terminated in Trial and Verification Stage
Silk Traders from Hanoi and Laos			Sell products to other traders and processors	
Contract	Small silkworm farmer, Big silkworm farmer, Silk traders and processors			

(1) Objective of PP

The community named Dien Kim commune is certified as handicraft village on sericulture. However, the production is still low and quality is also not very good because farmers use traditional way with poor raising technique and using traditional reeling tools. The PP aims at increasing income and profit for the local producers through increasing production yield, improving product quality and promoting contract farming for the targeted products of silk. Therefore, the JICA Project Team promotes to produce the silk products meeting the market need (domestic and export) in terms of quality and cost. Key intervention activities of the PP include: Introduce improved silkworm raising technique, conditions; Introduce of improved silk reeling machine of fine silk yarn; Explore the potential development of new silk products and markets; and Facilitate production contracts between silk producers, processors, and traders. The PP is implemented by the JICA Project team in collaboration with Nghe An Cooperative Alliance, Dien Chau Extension Station, Dien Kim commune authority, with support from AMPF.

(2) Activities and Results

1) 1st Training, Lecture and 1st MOU between Small Silkworm Raisers and Big Silkworm Raisers in 2017

In August 2017, sericulture consultant from National Vietnam Sericulture Research Center (VietSeri) in Hanoi had training for silkworm farmers in Dien Chau district. The purpose of the training is to increase productivity and improve the silk quality. Also, the aim is to establish a good relationship between small silkworm raisers and big silkworm raisers. In total 26 farmers participated in the training for one month. The contents of the training were to cultivate mulberry trees and to grow small silkworm and big silkworm and silk reeling, etc. A review meeting was held on September 28, 2017 and 20 households, Vice-Chairman of Dien Kim commune, Extension officers, Local sericulture consultant and JICA Expert and the JICA Project Team participated in the meeting. The farmers mentioned that they improved the productivity and quality of silk by introducing the new tools and chemicals. Therefore, farmers had an MOU regarding the silkworm production and silk yarn production. After the training, JICA Expert procured an improved reeling machine and installed it with local sericulture consultant in order to improve the quality of fine silk yarn.



Technical training and lecture of sericulture by consultant from VietSeri (September 2017)



Chemical application and appropriate management on silkworm raising

2) 2nd Training, Lecture and 2nd MOU between Small Silkworm Raisers and Big Silkworm Raisers in 2018

In May 2018, the project supported 2nd technical training for the community farmers. The objective of this training is to establish another group of specialized small silkworm raising, consolidate the current group set up last year. Participants of this training included 15 members of the group set up last year, 33 farmers who wanted to join a new group, and other farmers who are interested in gaining new sericulture technique. The consultant from VietSeri provided the knowledge and practical instruction on mulberry planting technique, silkworm raising technique and specialized small silkworm raising for one month. Thus, two specialized sericulture groups have been established. The 1st group includes 1

small silkworm farmer providing big silkworms for 14 farmers, and the 2nd group includes 1 small silkworm farmer providing big silkworms for 9 farmers. In each group, the members work under production agreements between small silkworm farmer and big silkworm farmers. So far, it is evaluated by the farmers and commune that the production model of specialized small silkworm raising has shown positive results such as: specialization in small silkworm (1st to 3rd instars) raising and big silkworm (4th to 5th instars) raising creates convenience in applying improved technique e.g. doing sterilization management with chemicals, using relevant tools, and save labor in the raising process: application of improved technique helps to reduce dead rate improved 5-10% of silkworm, increase quality of silkworm providing higher productivity of cocoon and silk yarn.



Technical training and lecture of sericulture by consultant from VietSeri (May 2018)



Harvested yellow cocoon (July 2018)

3) Establishment of Dien Kim Sericulture and Agriculture Services Cooperative

The PP has supported the establishment of Dien Kim Sericulture and Agriculture Services Cooperative. In cooperation with Mr. Quan one of the PMU members from provincial Cooperative Alliance, People’s committee of the district, Dien Kim commune prepared the cooperative regulations, business plan, member list, etc., and elected the management board in the general meeting held in August 2018. 103 farmers attended the meeting, therefore Dien Chau district officially authorized the cooperative in September 2018. As a result of the establishment of cooperative, the cooperative can apply for loan, training of cooperative management, consultancy services, etc. with Cooperative Alliance.

(3) Lessons Learned

- Profitability of improved silkworm raising

Cultivation of improved silkworm raising is evaluated by the farmers and commune to be more profitable than their traditional way. The productivity and profitability of silkworm raising to in the table below in order to compare the improved raising and traditional raising.

Table 32 Profitability of Big Silkworm Raising

Product	Cocoon Productivity (kg/round)	Selling price (VND/kg)	Gross Income (VND/round)	Production Cost (VND/round)	Profit (VND/round)
Cocoon by Improved big silkworm raising (White cocoon)	14	120,000	1,680,000	243,000	1437,000
Cocoon by Improved big silkworm raising (Yellow cocoon)	13	80,000	1,040,000	243,000	797,000
Cocoon by Traditional big silkworm raising (Yellow cocoon)	11	80,000	880,000	123,000	757,000

Source: JICA Project Team

Table 33 Profitability of Reeling Silk Yarn

Product	Yarn Productivity (kg-12 rounds)	Selling price (VND/kg)	Gross Income (VND/12 rounds)	Production Cost (VND/12 rounds)	Profit (VND/12 rounds)
Reeling yarn (White cocoon)-improved	22	1,200,000	26,400,000	18,720,000	7,680,000
Reeling yarn (Yellow cocoon)-improved	22	800,000	17,600,000	12,540,000	5,060,000
Reeling yarn (Yellow cocoon)-traditional	18	800,000	14,400,000	10,560,000	3.840,000

Source: JICA Project Team

Labor cost is not included in production cost above the table. It was verified that the profitability of improved cultivation method and improved reeling yarn is high, especially white cocoon variety. Therefore, traditional raising takes many days comparing with improved raising. As a result of the introduction of improved reeling machine, silk yarn quality was improved well. According to the farmers, the profit was increased compared to before the pilot project.



Yellow silk yarn produced by the traditional machine (May 2017)



White silk yarn produced by the improved machine (May 2018)

- Initiating establishment of Dien Kim Sericulture Service Cooperative based on the production groups built by the pilot project

Through operation of the specialized small and big silkworm raising group set up by the project, several active farmers in the commune realized that for promoting the development of the community sericulture production, it is necessary to establish a cooperative of sericulture based on these two groups. The idea of establishing the cooperative named “Dien Kim Commune Sericulture Service Cooperative” was agreed by the commune authority, and the active farmers have prepared the cooperative regulation and started with several steps such as calling voluntary members, preparing documents works for the establishing process. The project team worked with Nghe An Cooperative Alliance to find cooperation support for establishing the sericulture cooperative in Dien Kim. There will be several types of support from Nghe An Cooperative Alliance for the establishment of sericulture cooperative in Dien Kim including: Nghe An Cooperative Alliance staff can help in drafting the cooperative regulation, preparing the cooperative business plan, providing management training for the cooperative managers, etc.

2.2.37 AMPF6: Improvement of Herbal Trees Production and Marketing

Actor	Production	Pre-processing	Sale	Stage
Con Cuong FG	Herbal trees			Terminated in Contract/ Undertaking Stage
Pu Mat Joint Stock Company	Herbal trees	Drying raw materials, Tea processing and packing		
Retailers, Pharmacy, Clinic			Sell products to consumers	
Contract	Con Cuong FG – Pu Mat Joint Stock Company			

(1) Objective of PP

Con Cuong district has fertile soil and suitable climate for herbal trees such as Solanium Procumbeus, Gymnema Sylvestre, etc. Pu Mat Joint Stock Company in Con Cuong district cultivates herbal trees before. However, they do not have enough knowledge and skills in processing and marketing to sell their products. On the other hand, the demand for herbal tree products is high in Nghe An province. The objective of this PP is to support farmers in Con Cuong district and Pu Mat Joint Stock Company to produce herbal products and establish FVC by the diversification of customers such as pharmacy, clinic, and retailers. The JICA Project Team implements this PP in collaboration with AMPF and DOST.

(2) Activities and Results

1) Training for Cultivation and Processing of Herbal Products

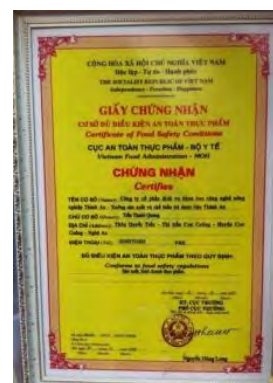
In December 2017, the project and AMPF supported technical training for farmers in Con Cuong district and the company. The objective of this training is to improve the productivity of herbal trees, processing tea products, and required standards of government certificate and Viet GAP. In total 20 farmers and 12 staffs of the company participated in the training on lectures and practical training. Therefore, the company procured the processing facilities for washing, drying raw material, and packaging in cooperation with DOST. The capacity for washing is 50 kg leaves per hour, drying is 10 kg leaves per hour, and packaging is 10 kg tea leaves per hour. Currently, the company produces herbal tea from Ca Gai Leo and Day Thia Canh, Dinh Lan, and Gynostemma Pentaphyllum.

2) Certificate of Food Safety from the Health Sector

In December 2017, the company acquired the certificate of food safety from the Provincial Department of Health and Ministry of Health in order to sell the medical products to the clinic, pharmacy, retailers, etc. Currently, they start selling herbal tea products in the pharmacy store in Nam Dan district, etc.



Technical training and lecture on medical trees by a lecturer from an agricultural institution in Hanoi



The certificate of food safety from the Ministry of Health in Hanoi

3) Marketing Activities and Sales Result

The PP has supported marketing activities to connect acquisition of food safety certificate to sales channel. Also, AMPF has introduced clinics in Nghe An who would like to purchase the herbal tea products and started the transaction. Thus, Pu Mat company attended several trade fairs, matching events, themselves. In fact, several traders and retailers have interest in trading with Pu Mat company. So far, the company has processed and sold over 16,560 boxes of herbal tea products to traders, clinics, and retailers. The detail of prices is shown in the table below. When the clinics and retailers sell the products and get 30 - 35 % of the price and the company gets about 65 - 70 % of the price.

Table 34 Price List of Herbal Tea Products

Herb Tea Products	Retail Price (VND/Box)
Ca Gai Leo	52,000
Day Thia Canh	58,000
Ding Lang	60,000
Gynostemma Pentaphyllum	60,000

Source: Pu Mat JSC, JICA Project Team



Herbal tea products (Ca Gai Leo) produced by Thanh An Agriculture Technology and Science



Leaflet designed by the company

4) Contract Farming

The PP supported making contract between Pu Mat company and farmers in Con Cuong. They have agreed the general conditions, duties and responsibility of both sides, etc., The issue was that several parts of road from the farmland to the company is not good. Therefore, they had to clarify the place where the farmers ship and load herbal materials in the contract.

(3) Lessons Learned

- Branding based on acquisition of food safety certificates and marketing activities

There is a demand for herbal tea products from pharmacy, retail stores in Vinh city, Hanoi, Ho Chi Minh City. However, most of these products are procured from Hanoi and Ho Chi Minh City. This is because there are no producers satisfying the quality and safety certificates acquired by demanders in Nghe An province before. Currently, the company acquired the safety certificates from Provincial Department of Health and Ministry of Health. Then, they can sell their products to pharmacy and retail shops. Acquisition of safety certificate is necessary to produce and sell the herbal products that connected to commercial transaction. When expanding the sales channels, supporting the marketing activities such as collecting and sharing the market information, matching event, trade fair, etc., by the government are important.

- Road conditions in mountainous area

In mountainous area, several parts of the road is not paved or not good condition. For instance, at the PP, a farmer who has contracted with Pu Mat company has to deliver the raw materials to the main road because the vehicle from Pu Mat company could not enter to his area due to the poor road. It is important to develop the infrastructure in order to distribute agricultural products. Therefore, mountainous area will be developed districts as the specialty products producing center.

2.2.38 E1: Production and Sales of Matcha

Actor	Production	Processing	Sale	Stage
Farmer (Mr. Quy)	Covered tea leaves	First processing (leaves to “Tencha”)		Terminated in Trial and Verification Stage
Econuti / Ecofarm		Second processing (“Tencha” to “Matcha”)	Sell to markets in Ho Chi Minh city, etc.	
Quantum Leaps Corporation	Technical and financial support	Technical and financial support		
Contract	Farmer (Mr. Quy) – Quantum Leaps Corporation, Econuti / Ecofarm – Quantum Leaps Corporation			

(1) Objective of PP

Vietnam is the ninth largest exporter of tea in the world. The tea is mainly exported to the Middle East, Germany, Taiwan, etc. at a low price for processing use. In Nghe An province, Tea is one of the main agricultural products which is produced approximately 100,000 ton/year (2015). The demand of “Matcha” including as processing materials for matcha flavored drinks, cakes, etc. in world markets has been increased. Therefore matcha is a good target for creation of new Food Value Chain (FVC) in Nghe An province.

With reasons above, Quantum Leaps Corporation (QLC), Japan has been implementing “PP of production and sales of matcha” in Anh Son district, Nghe An province by the cooperation with local companies. And also this PP had been supported by the JICA BOP (Base of Pyramid) feasibility study of the JICA scheme in order to develop new FVC from April 2016 to September 2017.

(2) Activities and Results

In June 2016, QLC selected Mr. Quy’s tea farm in Anh Son district as a PP site, and signed MOU with DARD, Anh Son District People’s Committee, Eco-farm, and Mr. Quy. In August 2016 facilities were set up, so far eleven (11) trials of producing tencha/matcha have been implemented in September, December 2016, February, April, June, September, November 2017 and January, April, June, August 2018. In the 6th trial of September 2017, several processing lines of facilities such as blower machine, sorting machine, equipment for drying tea leaves, etc. were newly set up by the partial financial support by the Project for improving the efficiency of processing and quality of tencha/matcha production. As a result, the efficiency and quality of tencha/matcha production were significantly improved in order to meet the required quality in the market according to matcha experts from Japan. In addition, local company of Econuti has developed new matcha products such as matcha jelly, matcha latte, etc. other than matcha as powdered green tea.



Processing line for steaming



Processing line for drying



Processing line for sorting



Processing line for sieving Tencha

As a result of the past trials including improvement of tencha processing line at Mr. Quy’s tea farm, QLC together with Econuti and Ecofarm decided to concentrate on seeking the new markets for the matcha at the price of 35 – 40 USD/kg as processing use and the matcha products in Ho Chi Minh City and other cities in Vietnam. They have been promoting the matcha and negotiating the contract with Mini Stop, Masion Marou and other confectionery companies and coffee chain shops, etc. in Vietnam since March 2018. However, they have been facing the difficulty to develop the new markets. On the

other hand, the 11th trial for Tencha/Matcha processing was carried out in August 2018 and the quality of tencha/matcha has been improved and reached commercial standard for processing use. Moreover, for developing the markets of the matcha, QLC together with Econuti/Ecofarm plan to find a partner company for exporting matcha to Europe in the future.



The 7th harvesting of tea leaves at Mr. Quy's tea farm in November 2017



Evaluation of the quality of Tencha & Matcha by Japanese Expert at the 11th trial in August 2018

(3) Lessons Learned

1) Collaboration between Foreign Company and Vietnamese Company

This PP has been being carried out under the collaboration with a Japanese company and Vietnamese companies. Through the Pilot Project, the Japanese company has been inputting the initial investment as well as transferring the appropriate techniques such as pruning and covering with cheesecloth for fresh tea leaf production, fertilizer application and processing methods of tencha/matcha effectively. Vietnamese companies have been playing an important role to procure the necessary equipment and try on the development of matcha product markets by using their networks in Vietnam.

2) Collaboration with Public-Private Partnerships

In this PP, both of the Japanese company and Vietnamese company together with DARD and Anh Son District People's Committee signed MOU in June 2016. Due to this, the mechanism to carry out the activities of the PP has been established firmly.

3) Development of Markets for New Favorite Item of Agricultural Products

This PP has been trying to develop the new sales markets to confectionery companies, coffee chain shops and Japanese restaurant in Ho Chi Minh City as well as develop the matcha based products such as matcha jelly, matcha latte, etc. However, the PP has not signed the sales contract yet. One of the major reasons of the difficulty for developing the markets is caused by the cheaper price of matcha and matcha based products which imported from China and Taiwan as well as produced by the other regions in Vietnam, even though the quality of matcha which was produced by the PP is higher than those matcha and the matcha products. Therefore, in the establishment of FVC in agricultural products such as matcha belongs to the favorite item of agricultural products, the more details survey for identifying the target of markets is necessary to be conducted carefully. In addition, it is necessary to pay close attention to the business strategy because a considerable price fluctuation of matcha is caused by the differences in the quality of matcha.

2.2.39 E2: Sales of Rice for Brewing of Shochu

Actor	Production	Processing	Sale	Stage
Seedling Center, DARD	Cultivation of rice for Syochu including technical support to farmers	Milling rice		Terminated in Contract/ Undertaking Stage
Khai Sang Co. (Distributor)			Sell the milled rice to HFC	
Hue Foods Company		Brewing Shochu	Sell to ordinary customers mostly in Nghe An province	
Contract	Seedling Center – Khai Sang Co. – Hue Foods Company			

(1) Objective of PP

Rice is one of the main agricultural products in Nghe An province, however only 60% of produced rice is consumed. Thus, the remaining rice should be sold to consumers in other provinces or used for other consumption purposes.

Hue Foods Company (HFC) is the brewery of Japanese sake and shochu in Hue city. In those days this company has procured rice as processing materials for liquor from South Vietnam, and faces two problems; 1) unstable in quality and 2) lack of traceability.

With reasons above, the Project has supported this PP to develop new FVC of rice between Nghe An province and HFC for brewing of Shochu.

(2) Activities and Results

In the beginning, in May 2016 the JICA Expert invited HFC to several paddy fields in Nghe An province and introduced some rice varieties to HFC with soil data of the paddy fields. Even though HFC has once decided to move forward to test-brewing of Japanese sake with rice variety of NA6, the price provided by AGRIMEX, rice cultivating and selling company in Nghe An province, did not meet the price required by HFC.

According to the reason, the Project has changed its policy from providing rice for Japanese sake to for shochu after discussing with HFC. So far, rice variety of SL9 was selected by HFC after checking several sample varieties of rice. Thereafter HFC visited Nghe An province and observed the paddy fields of SL9 and discussed method of milled rice and content of contract with Seedling Center (SC) on 14th August 2017.



Visit of HFC to SL9 paddy field



Discussion on the method of milled rice and content of contract

As a result, 20 tons of the milled rice in total were purchased by HFC at price of 13,000VND/kg including the transportation cost at the beginning of September and 3 times of the test-brewing were implemented from September to October 2017. As a result, SL9 was an appropriate variety especially in the yield of alcohol for brewing shochu. After the test-brewing, HFC visited Nghe An province from December 5 to 6, 2017 to discuss a future plan with DARD and SC for brewing shochu including verification of other varieties of rice which are lower price than SL9 for next brewing. In this

connection, SC provided 2 varieties of rice of N24 and N34 to HFC in January 2018 as a consideration of verifying the suitable variety for brewing shochu. HFC started to sell this shochu which was named ‘Teioh’ in Japanese in Nghe An province as a Nghe An brand from December 2017. In addition Nghe An PPC and government sectors have been providing the shochu at the banquets for promoting this Nghe An brand shochu.



Shochu made of rice variety of SL9



Label for Nghe An brand shochu

In 2018, HFC purchased 40 tons of the milled rice of SL9 in total. Each 20 tons of the milled rice were purchased at price of 13,000VND/kg including the transportation cost in June and July respectively. After purchasing 3 times of SL9 since September 2017, HFC has evaluated that SL9 was superior to other variety of rice which procured from South Vietnam in the quality of high water absorption, shortening time for steaming rice and high yield of alcohol. In addition, HFC has ordered another 40 tons of the milled rice of SL9 harvested in September and purchased them by November 2018. Furthermore HFC plans to design a new bottle and brand label for Nghe An brand shochu in the next year.

(3) Lessons Learned

1) Importance of the Traceability and Stable Supply of Safe Rice for Brewing of Shochu

This PP has established the traceability for brewing Shochu from the paddy production to the distribution of the milled rice with the stable supply of the rice as well as obtaining the safe certificate issued by DARD. This process is one of a remarkable achievement in the establishment of Food Value Chain. Furthermore, what should be noted is that SC has been playing an important role in maintaining the stable supply and quality control of the safe rice for the brewing of Nghe An brand Shochu.

2) Creating Nghe An Brand Shochu by Using Rice Produced Only in Nghe An

This PP has adopted an approach for the branding of the Shochu with using the high-quality rice (SL9 variety) which was produced only in Nghe An province. Moreover, the designing new bottle and brand label will be carried out. In other words, what should be noted is that ‘Only One Approach’ has been attempted for differentiating the other alcoholic beverages.

2.2.40 E3: Branding of Rice Noodles as a Tourism Resource

Actor	Production	Processing	Sale	Stage
Quy Chinh rice noodle cooperative, Van Dien commune,	Rice production	Rice noodle (Mien) processing and packaging	Sell to Tourism Information Center, Supermarkets in Vinh city, etc.	Terminated in Contract/ Undertaking Stage
Nam Dan DPC		Technical and financial support		
Department of Tourism			Promotion of rice noodle product	
Contract	Quy Chinh rice noodle cooperative–Tourism Information Center at Kim Lien, Supermarkets in Vinh city, etc.			

(1) Objective of PP

Nam Dan DPC has been strengthening the promotion of tourism since 2016 in cooperation with JICA Tourism Project and developing some commodities such as kudzu powder, peanut butter and soya bean source as tourism resources. In order to make progress of this activity, the DPC is focusing on rice noodles such as pho and mien produced for a long time in Quy Chinh village of Van Dien commune, Nam Dan district.

Responding this idea launched by the DPC, the Project supported Nam Dan district economically in 2016 together with JICA Tourism Project because development of new brand products such as kudzu powder, peanut butter and soya bean source was closely related to establish FVC. Furthermore, the Project has supported in branding the product of rice noodles in Nam Dan district to establish FVC since May 2017 with utilizing the precious experience of the development of new brand products in 2016.

(2) Activities and Results

In the beginning, the Project carried out a survey on the present situation of productivity, quality and environment for rice noodle production in order to create FVC from the middle of May to the middle of June 2017. As a result of the survey, the Project identified and shared key issues with the related stakeholders such as Nam Dan DPC, Van Dien CPC and Quy Chinh rice noodle producers, and recommended countermeasures for the solution. The countermeasures were as follows.

- 1) To organize and strengthen the cooperative for rice noodle production in Quy Chinh village of Van Dien commune.
- 2) To improve environment and hygiene regarding the rice noodle production at each household.
- 3) To promote on branding through designing package and other necessary improvement.
- 4) To improve the rice noodle productivity with installing appropriate equipment.

The activities mentioned above were implemented from June to October 2017. Under the assistance of the Project, Quy Chinh rice noodle cooperative has been organized and strengthened through the member's meeting and compiling regulation of the rice noodle production by the cooperative members. Also, the environment and hygiene regarding the rice noodle production at households of the cooperative member were improved through a series of training and monitoring activities in June 2017. The certification of food hygiene from Nam Dan DPC, and the logo and barcode of rice noodle produced by the cooperative were approved by the Ministry of Science and Technology in August 2017. And the newly designed packages of rice noodle were printed out in the middle of September 2017. With regards to the installation of machines/equipment such as rice noodle spreaders, plastic bag sealers, date stamp machines, etc. were completed in September 2017. Quy Chinh rice noodle cooperative has been developing new markets since October 2017. Through this activity, the rice noodle cooperative has contracted with several supermarkets such as Tam Nguyen, Tam Nong cooperative, Nghe An-Ha Thin Typical Products Mini Shop and a retail shop at Phong Toan Local Market in Vinh city under the cooperation of the Project. The rice noodle cooperative has been providing about 100 - 200 packages of 300g rice noodle (Mien) in one month on the average. The wholesale price was 9,500VND per one package of 300g rice noodle on the average. The prices were more than twice of the local market in Nam Dan district.



Installation of a rice noodle spreader machine



Product of rice noodle with package



Installation of a rice noodle spreader machine



Product of rice noodle with package

However, the sales contracts except from Tam Nguyen have not been continued since April 2018. On the other hand, Quy Chinh rice noodle cooperative has contracted the sale of the rice noodle with Tourism Information Center, Kim Lien and Bibi Green retail shops in Vinh city since June 2018 even though there were very few amounts of the rice noodle (Mien). In addition, Quy Chinh rice noodle cooperative plans to expand new contract with supermarkets in Vinh city and also Ha Tinh province and Thanh Hoa province.

(3) Lessons Learned

1) Importance of Adding Value through Obtaining the Safe Certificate and Branding of the Product.

This PP has been trying to promote the branding of the rice noodle (Mien) which has been sold only at the local markets in Nam Dan district through obtaining the safety certificate and developing a logo mark and packages for adding value. As a result, sales transactions with a retail shop in Vinh city and Tourism Information Center, Kim Lien have been taken even though there were very few amounts of the rice noodle. For this reason, obtaining a safety certificate and developing a logo mark as well as packaging are considered to be very effective in branding for agriculture products.

2) Importance of Effective Input for Improving the Productivity

In this PP, the work force and working hour which spent by the manual work until now have been reduced by introducing the machine which loosens the rice noodles. By means of this, the productivity of rice noodle production has been improved remarkably.

2.2.41 E4: Production of Garlic Seed

Actor	Production	Processing	Sale	Stage
Huong Son Cooperative, Ky Son district	Garlic production for seed use	Drying	Sell to Farmer's Co-op	Terminated in Trial and Verification Stage
Youth Volunteer Team No. 10, Youth Union of Nghe An province	Technical support	Technical support.		
Farmer's Co-op in Japan	Technical support	Export	Sell to Japan Agricultural Co-operatives as garlic seed use	
Contract	Huong Son Cooperative – Farmer's Co-op (contracted agriculture) Farmer's Co-op – Japan Agricultural Co-operatives (Sales contract)			

(1) Objective of PP

Nghe An province is diverse geographically and climatically, having coastal line, plain, hill, mountain, etc., elevation ranges above sea level up to 2,700 m, thus it has relatively low-temperature area in winter even though Nghe An province is located at relatively low latitude. The mountainous area in Nghe An province faces poverty, therefore economic development in these areas is one of the important issues in Nghe An province, and creation of new FVCs involving mountainous area is

expected by the government of Nghe An province.

One of the actors of this PP, Farmer’s Co-op (FC) is the company in Japan, had a plan to produce garlic seed overseas safely with low cost and provide stably to Japanese farmers. With this reason, the Project suggested FC to implement “PP of production of garlic seed” in Ky Son district, which is located in the mountainous area and climatically suitable for garlic cultivation when FC joined the workshop to introduce agro-products and agro-enterprises in Nghe An province in July 2016.

(2) Activities and Results

Since the Project introduced two sites for garlic seed production located at approximately 1,000 m above sea level in Ky Son district, FC visited Ky Son district twice in October 2016 and January 2017. The Project arranged meeting with DARD, Ky Son District People’s Committee, Huong Son Cooperative (HSC) in Ky Son district, and Youth Volunteer Team No. 10 under Youth Union of Nghe An province for FC. FC also invited representative of HSC and one staff member of Youth Volunteer Team No. 10 under Youth Union of Nghe An province to the prefecture in Japan to introduce techniques of garlic seed production in December 2016. Thereafter FC visited Ky Son in April 2017 to monitor the growth of garlic at Pre-test cultivation and discuss the work plan of PP. On the other hand, FC applied the PP to Feasibility study (F/S) program of JICA scheme in March 2017. The plan was adopted by JICA as an F/S program of JICA scheme in June 2017. After the adoption, the F/S team consists of members of FC, the Japan Agricultural Co-operatives and consultants visited Nghe An province to discuss the PP with Nghe An PPC, DARD and stakeholder concerned in Ky Son district and carry out survey for garlic seed production in September, November 2017 and January, March 2018. Especially at the 3rd survey in January, the F/S team visited several garlic production areas such as Quang Ngai province, Hai Duong province and Thai Binh province to identify the garlic production and marketing. During the survey, the F/S team also gave the technical guidance related to the garlic cultivation to Huong Son Cooperative and Youth Volunteer Team No. 10. The test cultivation has been carried out since the end of October 2017 in Ky Son District. During the 5th survey in May 2018, the F/S team gave the technical guidance on harvesting and storage methods of the garlic to Huong Son Cooperative and Youth Volunteer Team No. 10. Furthermore the F/S team confirmed that the harvested garlic tubes were enough quality for the both of seed use and edible use.



Garlic production site in Ky Son district



2nd survey for garlic seed production in Ky Son district in November 2017



IQF spinach produced by Doveco Co. This product has been exporting to Japan already



4th survey for garlic seed production in Ky Son district in March 2018



5th survey for garlic seed production in Ky Son district in May 2018 (Left & Right: Suitable size for edible use, Center: Suitable size for seed use)



Storage of the harvested garlic in Ky Son district in June 2018

At the 4th survey in March and 5th survey in May 2018, the F/S team had series of discussion with

Nghe An PPC, DARD and Youth Union on the draft of future implementation plan in Nghe An province which would be proposed to the JICA scheme in October 2018. This proposal aims to promote garlic production in Ky Son district through the establishment of new Food Value Chain including garlic seed production for exporting to the Japan Agricultural Co-operatives. Then FC proposed the implementation plan for garlic production in Nghe An province to the JICA scheme in October 2018. In addition to this, FC has been carrying out continuous activities on the garlic production in Ky Son district by themselves since August 2018. The members of FC and the Japan Agricultural Co-operatives visited Nghe An province in September and December 2018 to give the technical guidance especially in an experiment of garlic cultivation at terraced paddy fields in the highland of Ky Son district. In this connection, the members of FC and Japan Agricultural Co-operatives plan to visit Nghe An province in January, March and May 2019 for giving the further technical guidance on the garlic production in Ky Son district.



Planting garlic seeds at terraced paddy field in October 2018



Utilizing terraced paddy fields for the garlic seed production

(3) Lessons Learned

1) Feasibility of Garlic Production for Edible Use (Fresh Garlic and Processing) and Garlic Seed Use

This PP has verified the possibility of garlic production in Ky Son district for edible use in Vietnam as well as exporting garlic as seed use to Japan by the test cultivation from October 2017 to May 2018. On the other hand, the securing of garlic production area in highland and the establishment of the sustainable production system become the crucial issues. For countermeasure of the issues, the garlic production that utilized terraced paddy fields in highland as a rice field interim crop is effective and, an experiment of garlic cultivation at the terraced paddy fields has been carrying out since October 2018. Therefore, the improvement of the living standard especially for minority people (Hmong people) in Ky Son district is highly expected by income increase through the garlic production with utilizing the terraced paddy fields in the future.

2) The Importance of Sustainable Development through Strengthening Capacity of Agriculture Cooperative

In the next implementation plan, Farmer's Co-op (FC) in cooperation with the Japan Agricultural Co-operatives plans to strengthen the capacity of agriculture cooperative in Ky Son district through transferring knowledge and technologies regarding the garlic production, processing as well as marketing in both of Vietnam and Japan. Therefore, it is expected that the capacity of management as an agriculture cooperative will be strengthened for sustainable development of garlic production and other agricultural activities for the near future in Ky Son district.

3) Establishment of the Model Food Value Chain Utilizing the Geographical Conditions of Highland

The establishment of model Food Value Chain is greatly expected through vegetables and fruits production such as garlic, strawberry, kiwi fruit, persimmon, chestnut, etc. with utilizing the geographical conditions of highland in Ky Son district.

2.2.42 E5: Production of Endemic Tomato as a Special Local Product

Actor	Production	Processing	Sale	Stage
Farmer group, Thach Giam commune	Tomato production		Sell to Supermarkets in Vinh city, etc.	Terminated in Contract/ Undertaking Stage
Agriculture Extension Station Tuong Duong district	Technical support			
Tuong Duong DPC	Technical and financial support		Promotion for selling	
Contract	Farmer group, Thach Giam commune –Supermarkets in Vinh city, etc.			

(1) Objective of PP

An endemic tomato has been cultivated for a long time in Tuong Duong district. Farmers have been cultivating the tomato from September and harvesting from December to April, and selling the tomato at the local markets and customers who ordered to the farmers directly at price of 20,000-30,000 VND/kg which is relatively higher than common tomato price in Tuong Duong district. However, the endemic tomato hasn't been familiar to other areas. In addition the farmers don't have an organization or cooperative for producing and selling the endemic tomato. Therefore, the endemic tomato production and sales have been carried out individually in a conventional way. Consequently, the sales amount of the endemic tomato hasn't been expanded until now.

With reasons above, the Project has supported this PP in order to create FVC of the endemic tomato as a special local product in Tuong Duong district.

(2) Activities and Results

DPC, Agriculture Extension Station and JICA Expert Team considered the promotion of endemic tomato through creating FVC as a special local product in Tuong Duong district. In this connection, a basic survey was carried out from August 3 to 30, 2017 by the Project. Based on the result of survey, DPC, Agriculture Extension Station and the Project discussed and made pilot project activities as follows.

- 1) To support on the establishment of one farmer's group as a pilot in Thach Giam commune.
- 2) To support on the implementation of training for obtaining certificate of safe product.
- 3) To support on branding through designing the package and other necessary improvement.

The activities were carried out from October 2017. Farmer's group which consists of 14 members was organized and strengthened as a model for both producing and selling endemic tomato in cooperation with Thach Giam CPC. The related training on tomato cultivation and obtaining certificate of safe product were also carried out from the end of October 2017 in cooperation with Tuong Duong DPC. The certificate of safe product was issued by DARD to the farmer's group on 23rd January 2018. In addition the technical support for branding of endemic tomato through designing logo mark and paper box was carried out by the Project to create FVC as a special local product in Tuong Duong district. The Project supported in developing new markets outside of Tuong Duong district. As a result of the activity, the endemic tomatoes were shipped to Tam Nong cooperative and Typical Product Store in Vinh city respectively at wholesale price of 21,000 VND/kg and amount of 70kg/week on the average from February to the end of March 2018. The harvesting of tomato was over at the beginning of April 2018. Through the activities of the PP from October 2017 to April 2018, the farmer's group in Thach Giam commune realized the importance of management on the shipment of tomato to the retail shops for developing the new markets in Vinh city. On the other hand, the shipment of tomato to the retail shops was not managed well especially in the size and shape of tomato fruit for establishing the brand as a special local product. At present the farmer's group in Thach Giam commune has been cultivating the tomato since September 2018. In this season, the Project has been supporting in the improvement of cultivation techniques through demonstration of utilizing vinyl film to protect tomato plants from rain and frost and applying organic fertilizer. In addition to this, the Project plans to carry out technical training on the crop management and support in the quality control and promotion of branding for development of the markets of the endemic tomato as a special local product.



Soil sampling by staff of DARD to obtain the certificate at tomato cultivation area in October 2017



Development of Logo mark for branding in November 2017



IQF spinach produced by Doveco Co. This product has been exporting to Japan already



4th survey for garlic seed production in Ky Son district in March 2018



5th survey for garlic seed production in Ky Son district in May 2018 (Left & Right: Suitable size for edible use, Center: Suitable size for seed use)



Storage of the harvested garlic in Ky Son district in June 2018

(3) Lessons Learned

1) Importance of Adding Value through Obtaining the Safe Certificate and Branding of the Product.

This PP has been trying to promote the branding of endemic tomato which has been sold only at the local markets in Tuong Duong district through obtaining the safe certificate and developing a logo mark and carton box for adding value. As a result, sales transactions with retail shops in Vinh city have been taken even though there were very few amounts of tomatoes. For this reason, obtaining a safe certificate and developing a logo mark as well as packaging (carton box) are considered to be very effective in branding for agriculture products.

2) Importance of the Quality Control by Famer Group /Cooperative

It is significantly important to control the quality in branding agriculture products. In this PP, the sorting of tomato fruits is required thoroughly for shipping the tomato to the retail shops and supermarkets, etc. Moreover, it is important that the quality control such as sorting fruits should be carried out by farmer group /cooperative instead of doing by an individual farmer.

2.2.43 E6: Development of Silk Products

Actor	Production	Processing	Sale	Stage
Sericulture groups, Dien Kim commune, Dien Chau district	Cocoons	Silk yarn	Sell to Traders, Textile processors, Textile cooperatives, etc.	Terminated in Trial and Verification Stage
Textile cooperatives, Quy Chau district		Silk products	Sell to hotel, Souvenir shops in Nghe An province, Hanoi, etc.	
Extension station, Dien Chau district, Dien Kim CPC	Technical support			
Contract	Sericulture group, Dien Kim commune – Traders in Dien Kim commune Textile processors in Hanoi, Textile cooperatives in Quy Chau, etc. Textile cooperatives, Quy Chau district – Hotel, souvenir shops in Nghe An province, Hanoi, etc.			

(1) Objective of PP

In Nghe An province, Dien Kim commune, Dien Chau district called “handicraft village” has been producing silk yarn. Their products are being sold to the markets in Nghe An province and other provinces, even to the foreign markets in Laos, etc. through traders. Quality of silk yarn, however is not good enough to sell at higher price, in addition productivity is not high, either. With this reason, Agriculture Marketing Platform (AMPF) proposed an improvement of quality and productivity of silk yarn in order to strengthen the existing value chains with it.

Responding to the AMPF’s proposal, the JICA Project team (the JICA Expert Team and the JICA Project Team) has decided to support sericulture in Dien Kim commune. Concrete aims are 1) improvement of production system of silk yarn; i.e. introduction of modernized method of sericulture and 2) development of new silk products to expand sales channels; i.e. through creation of attractive designed handicraft with silk yarn produced in Dien Kim commune. In this connection, the Project has started supporting in the development of new silk products since August 2017 for creating the value chain from the sericulture to the development of silk products in Nghe An province.

(2) Activities and Results

As the first activity, a survey on current status of textile production groups and cooperatives in some districts such as Que Phong, Quy Chau, Ky Son and Con Cuong districts in Nghe An province was carried out with local consultants in August 2017. As a result of this survey, textile cooperatives in Quy Chau district and Que Phong district were found to be superior in their techniques of weaving to others. Based on the result of survey, the Project selected three textile cooperatives in Quy Chau district and one textile cooperative in Que Phong district respectively as a model for developing new silk products in October 2017. In this connection, the Project provided nine new designs of silk products to the cooperatives in Quy Chau district and three new designs of silk products to the cooperative in Que Phong district respectively in December 2017. Then twelve samples of newly designed silk products such as scarf, mat, small pouch, cushion, etc. were developed in March 2018. After the study with developing silk-based products, the Project has selected Hoa Tien Textile Cooperative in Quy Chau district because the cooperative was superior to other cooperatives in the weaving skills and focused on silk scarves production for establishing a model of Value Chain on sericulture. Since then the Project has been supporting in making leaflet, paper bag, paper box and tag cloth for promoting the silk scarves which were produced by Hoa Tien Textile Cooperative. For promoting the silk scarves, the Project in cooperation with PPC has been trying to promote the silk scarves as a special gift to visitors from the inside and outside of the country. As a part of promotion, PPC ordered 200 pieces of scarves to Hoa Tien Textile Cooperative and those scarves were presented during an official visit of Nghe An provincial government to Japan in September 2018.



A design provided by the Project in December 2017



Examples of newly developed silk products by the cooperatives in March 2018



Samples of the silk scarves by handwoven and dyed with using natural materials



Development of Logo mark and paper box for promoting the silk scarves

(3) Lessons Learned

1) Development of New Designs and Packages for Promotion of the Silk Products

In this PP, It is a remarkable point that the Project has been promoting silk products through developing the new design of silk products such as silk scarves against the traditional products of Thai ethnic people and developing paper bag, paper box as well as cloth tag to promote the silk scarves for the new markets.

2) Importance of Backup from the Provincial Government

In this PP, Nghe An PPC positively supported promotion of the silk products produced in the PP with delivering them when the delegation from the Nghe An province was dispatched to Japan. Active support from the provincial government to private sectors could be important to make up FVCs.

2.2.44 E7: Production of Endemic Mango as a Special Local Product

Actor	Production	Processing	Sale	Stage
Mango Production & Trade Cooperative	Mango production		Supermarkets in Vinh city, etc.	Terminated in Trial and Verification Stage
Agriculture Extension Station,	Technical support			
Tuong Duong DPC,	Technical and financial support		Promotion for selling	
Contract	Farmer group –Supermarkets in Vinh city, etc.			

(1) Objective of PP

An endemic mango has been cultivated for a long time as well as endemic tomato in Tuong Duong

district. However, this mango has been sold in Tuong Duong district only and unfamiliar in other areas such as Vinh city. In recent years, many varieties of mango have been sold as Tuong Duong endemic mango. It has brought the drop of the brand as Tuong Duong endemic mango. In addition the farmers don't have an organization or cooperative for producing and selling the endemic mango. Therefore, the endemic mango production and sales have been carried out individually in a conventional way.



Tuong Duong endemic mango



Selling mangoes along the main road

With the reasons above, the JICA Expert Team has started to support this PP through promoting the brand of the endemic mango as a special local product in Tuong Duong district.

(2) Activities and Results

Tuong Duong DPC and the Project have started the PP of endemic mango through promoting the brand of the endemic mango as a special local product in Tuong Duong district since April 2018. The main activities have been carried out as follows.

- 1) To support on the establishment of one cooperative as a pilot.
- 2) To support on the implementation of training for obtaining certificate of safe product and improving the cultivation techniques.
- 3) To support on branding through designing the package and other necessary improvement.

One cooperative which was named Tuong Duong Mango Production and Trade Cooperative was established and strengthened as a model for both of producing and selling endemic mango in cooperation with Tuong Duong DPC in July 2018. The related training on mango cultivation and obtaining certificate of safe product were also carried out in cooperation with Tuong Duong DPC. Thereafter, the certificate of safe product was issued by DARD to the cooperative on 25th July 2018. In addition, the support for branding of endemic mango through designing logo mark and paper box was carried out by the Project to create FVC as a special local product in Tuong Duong district. However developing new markets such as retail shops and supermarkets was not able to carry out due to remarkable low yield of the mango caused by unseasonable weather such as heavy rain and storm in this season. Recently Tuong Duong DPC and Agriculture Extension Station have been making a detailed plan on promoting the endemic mango for the following season.

(3) Lessons Learned

1) Importance of Adding Value through Obtaining the Safe Certificate and Branding the Product

This PP has tried to promote the endemic mango which has been sold only at the local markets in Tuong Duong district through obtaining the safety certificate and developing a logo mark and carton box to add value for sales of the mango to the retail shops and supermarkets, etc. However, the development of new markets has not realized due to the remarkable low yield of the mango caused by unseasonable weather such as heavy rain and storm in 2018.

2) Necessity of Technical Support on Endemic Mango Production

Regarding to the endemic mango in Tuong Duong district, the further selection of good variety and support of extension to farmers should be carried out continuously. Therefore it is significantly

important to conduct the research and extension activity mentioned above in cooperation with related organizations in the central government.

Annex 3 Guideline for the Introduction of Contract Farming

Guideline for the Introduction of Contract Farming

December 2018

Agricultural Marketing Platform in Department of Agriculture
and Rural Development in Nghe An Province

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Chapter 1 Introduction

1.1 Purpose of the Guideline

1.1.1 Background and Purpose of the Guideline

In recent years, the demand for raw material procured by food service and food processing industry has increased in Viet Nam. However, since many agricultural producers have supplied their products to mainly wholesale markets through the middleman, it is hard for them to meet the demands from those industries that require a stable supply of agricultural products. Because unlike the shipment of agricultural products to the middleman, each demand from those industries are different and the producers can't satisfy those needs easily. For this reason, it has become an important issue to introduce contract transactions with demanders related to food business in domestic production areas as an administrative policy.

For the countermeasure of the issue mentioned above, this guideline outlines the promotion policies and points to be noted in the introduction of contract farming. Besides, this guideline is prepared for the agricultural extension workers and staffs of each city, district, and town who are supposed to support contract transactions.

Some farmers may feel nervous to be bargained the price of products when they sell their products to the enterprise. There are some examples in Nghe An province, such as an enterprise broke the farming contract before and thus, the producers decided not to conduct contract farming anymore. The other case is a farmer did not follow the contract condition, and the enterprise canceled the farming contract. Even though the producers recognize the vigorous demand for raw material from food industries, they tend to concern about "How to proceed with contract farming under such circumstances?".

However, JICA-supported project named "Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An" promotes contract farming between the farmers and local food business enterprises acting in and out of the province from 2016, and several contract farming supported by this project are sustainably conducted until 2019. In this guideline, the author shows how to continue contract farming based on the case study conducted during the project.

Even though some agricultural cooperatives want to imitate success case of contract farming, it is difficult for them to do it since the activities conducted in success case are usually managed by the agricultural enterprise or cooperative with excellent management sense. Even if you conduct a field visit of the model area of contract farming, you may find it difficult to imitate that model. However, the case introduced in this guideline is a case of a small cooperative, which has never considered any group activity such as the joint shipping of the agricultural products before. Even for such a small cooperative, the contract farming can be started and continued sustainably. Based on this point, the author would like the reader to recommend to read this guideline first.

1.1.2 The scope of the Guideline

This guideline is supposed to be utilized by the personnel in a position to act as a promoter of contract farming. It hardly happens that the farmers or agricultural cooperatives search candidate business partners by themselves. Therefore, this guideline is for the people who mediate and instruct contract farming to the cooperatives and individual farmers. Besides, this guideline assumes the target agricultural producers as follows: 1) agricultural cooperative with no experience of contract farming or the one experienced failure of contract farming and 2) agricultural cooperatives that are not familiar with planned and systematic production/shipment of agricultural products.

1.1.3 Reference Case

The examples in this guideline are the efforts of the farmer's group who worked on contract farming as part of the pilot project of "Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An". At the beginning of the project, there was no systematic agricultural production and sales

plan and record of implementing the contract farming in those farmer’s group. This guideline explains the points and remarks for proceeding contract farming, while it also refers to the case examples of these efforts in the pilot project.

Table 1-1. Reference Cases

Name of Farmers Group and Address	Specific Efforts
Vinh city, A Commune Farmer’s Group	This farmer’s group conducted a contract farming with food retailing company only handling safety vegetables in Vinh city. Therefore, the project facilitated the formation of agricultural cooperative and that cooperative conducts a stable contract farming based on the production and shipment plan.
Quynh Luu District B Commune Farmer’s Group	This farmer’s group engaged in contract farming of fresh spinach with retail shops, restaurants and supermarkets in big cities such as Vinh city, Hanoi and Danan. They are also working on the production and shipment of spinach for food processing company.
Thanh Chuong District, C Commune Farmer’s Group	This farmer’s group is working on free-range chicken production. At the beginning of the project, the method of feeding was different among individual farmers, but now they are trying to unify the feeding method in the production area. The produced chickens are sold to local supermarkets, hotels and restaurants, etc. of other provinces.
Hoang Mai Town D Commune Farmer’s Group	This farmer’s group had traditionally cultivated potatoes of various varieties in their farmlands. Currently, they are working on potato cultivation for the sales to the processing companies that produce potato chips.



Vinh city A Commune Safety vegetable production



Quynh Luu district B Commune Spinach production



Hoang Mai town C Commune Potato production



Thanh Chuong district D Commune Local poultry production

Chapter 2 Production Strategy

2.1 Differences between Strategy and Tactics

The importance of working on contract farming was pointed out in the previous chapter, but there are farming contracts that are better for the producers to refuse. What kind of farming contract is right for the producers depends highly on the producer’s characteristics, and how you distinguish it depends on the marketing strategy of the producers. The strategy is a comprehensive and long-term plan to get sufficient share in the specific market by winning the competition. In short, it is expressed as "how you can get sufficient market share". On the other hand, many people are apt to misunderstand how to become attractive producer and think only about tactics. The tactics is a concrete/practical methodology and technology while the strategy has more wide and long-term vision. Whether it is a domestic or international market, every producer wants to win to dominate sufficient share in the agricultural market. The strategy is to identify how to win. Many people tend to place emphasis on tactics such as arranging excellent engineers and marketing staff and adopting the latest technology and think only about attracting themselves.

"How to get sufficient share in the specific market" is a long-term based vision. However, the way to deal with tactics is based on a short-term viewpoint, so it shows only options such as which wholesale markets you are going to select and sell crops. Also, from a tactical point of view, the producers tend to think of ways to get price competitiveness in the market by the investing for the improvement of production facilities with the utilization of government subsidies, but if every farmer does the same in any locality, it will not only improve the market competitiveness of specific producer. In such a way, it is difficult for producers to secure an advantageous position in the market. When considering a strategy, the producers must consider not only their ability as a producer but also a broad perspective including the competitor’s ability.

Agricultural farmers and cooperative tend to introduce advanced technologies and introduce new varieties when their market position is affected by other competitors. However, even if new varieties are introduced or even if facilities are modernized with government support, it is only strengthening the aspect of tactics, and they don’t think why they can win the competition by introducing those technologies. The points of the strategy are as follows.

- The strategy is formulated based on a long-term perspective
- Even if it is advantageous in terms of tactics, it is difficult to secure an advantageous position in the market without a strategy.
- Formulating a strategy does not mean that you introduce high technology which increases agricultural productivity.
- The strategy is also formulated taking into consideration the relationship with the competitor.

<u>Strategy</u>	<u>Tactics</u>
<ul style="list-style-type: none"> ■ Comprehensive approach Overall plan including production, distribution, investment, marketing ■ Long-term perspective Considering the farming vision from the initial stage to the business operation stage ■ Logical mean Draw the plan to get superior market position by considering strong and weak points 	<ul style="list-style-type: none"> ■ Partial approach Considering partial means such as cultivation technique and sales approach ■ Short-term perspective Considering only the current cultivation period ■ Practical mean Countermeasure, techniques and knowledge for the cultivation

Figure 2-1. Differences between Strategy and Tactics

2.2 Market Channel Responded to Many and Unspecified Needs

The decision to continue the conventional farming and sales should be selected if it is appropriate for the producers. But before making such decision, the producers need to check whether their market share in the general domestic market is dominant apparently. It is unclear where and who buys the agricultural products in the general market. The most of consumers do not need to know the origin of agricultural products since they think the agricultural product that they just buy is all the same products which are distributed throughout of the country. The consumer who thinks such way usually chooses the one with the lowest price on an economic principle. Therefore, it becomes difficult for the producers to sell their products to the consumer only if the price of their product is cheaper than the one produced in other production area. The producers who sell their products in general market tend to expand their farming scale since more quantity they produce, they get much higher market competitiveness in the market. Besides, if they can produce large quantity of agricultural products, they also can have agricultural transaction with the demanders who requires large quantity of agricultural products. As for demanders, they also prefer to procure agricultural products from the agricultural producers that produces large quantity of products since they can reduce transport cost compared to collect products from many suppliers. Besides, the procurement of agricultural products from single supplier can make it easy to unify the quality of agricultural product.

If every producer expands the scale of cultivation to get further share in the market, the market price will decrease due to the increase of supply. While the producers who can supply agricultural products cheaply by mass production and mass distribution could gain sufficient profit by taking such strategy, the producers who cultivate crops in limited farmland area could not continue the agriculture under such circumstance. Whether the producer can win the market competition depends highly on the farming capacity of the competitor. Thus, even if the producer has succeeded to improve his production capacity, it would be difficult to get advantageous position in the market as long as his production capacity overcomes that of his competitors. Besides, if there are many producers who can supply large volume of agricultural products, it would be difficult to strengthen bargaining power since the buyer can easily find alternative suppliers. In short, the important matter is whether you get advantageous position in the market or not. If yes, it would be better to take a strategy to continue the conventional farming practice. If no, however, it is necessary to consider another strategy such as conducting contract farming. The followings are the conditions of the producers who can continue the conventional farming and sales practice.

1. The buyer finds difficulty in procuring target products if the producer who occupies high market share does not sell his products in the market.
2. The producer who can supply products with lowest sales price by mass production and distribution
3. The producer who can take more advantageous position in the market than competitor by expanding farming scale.

2.3 Contract Farming for Satisfying the Individual Needs of Buyers

Although it is a matter of tactics if only choosing wholesale markets for selling products, choosing target demander as a strategic viewpoint requires careful consideration. Because if the demander requires high-quality product, the producer has to follow that need and change production style to take advantageous position in that market. If the needs of demander are the tomato for using hamburger, then the producer have to compete in some standard range of tomato market.

The figure below shows the typical tomato applications and how it is procured by demanders. As this figure shows, the tomato distributed in the general market is mainly for eating in the raw while tomato for processing requires specific characteristics such as taste, color and size. In this case, the demander has to select whether they produce such tomato by themselves or conduct contract farming to procure the ideal tomato for them. In short, the needs of such demander are more specific than the one requested from the general market. Although the range of specialty depends on the demander's needs, the producer has to change the production style to satisfy the needs anyway. In other word, the demanders who are willing to conduct contract farming has their crucial reason that they can not

procure ideal products from the general market.

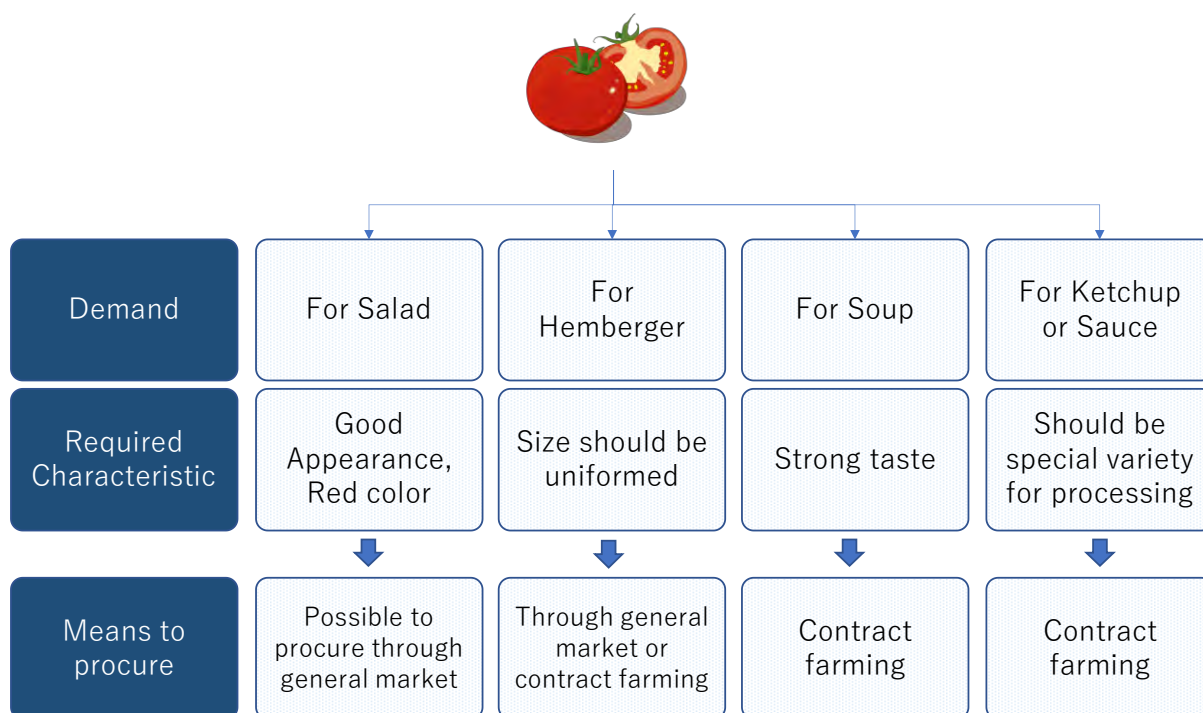


Figure 2-2. Presence of Demand that Cannot be Supported by Market Distribution

Case1: Potato Production in C Commune, Hoang Mai Town

JICA Project Team conducted pilot projects regarding potato cultivation at C commune in Hoang Mai town.

A many of potato varieties are cultivated in the Nghe An province, and it is potato of the Atlantic variety that buyers of this pilot project demanded it. Why is it useless if it is not Atlantic variety?

The use of potatoes produced in this pilot project was for the manufacture of potato chips. In the production of potato chips, there is a process of frying the sliced potato, it becomes easy to burn when the starch content of potatoes is high. Therefore, the processor of potato chips needs to procure a potato having a small quantity of starch content. Atlantic varieties are specified because of low starch content. For the above reasons, it is impossible for potato chips processors to procure potatoes in general market where the various varieties of potato are mixed in one place and sold.



Potato of Atlantic Variety Produced in C commune

2.4 Points to Check the Possibility of Contract Farming

Considering the strategy first before starting contract farming is critical matter because the scale of market in contract farming is more limited than general market. If there is already strong competitor in such market, then choosing that market by conducting contract farming is quite risky and it may make your economic situation worse. Thus, it is important to choose the demand adequate for your farming capacity. Since the demanders are not willing to spend unnecessary cost for the product procurement, they usually don't propose such a high price that attracts producers. Thus, in selecting demand, the producers should choose the one that they could get advantageous position in supplying the products. The points to start contract farming are as follows.

1. To choose the demand that the producers can satisfy with their current capacity regarding technical level and cost performance.
2. To avoid the demand that has many competitors or to choose the one that there is an advantage for them in supplying products.

3. The contract farming that can't be abandoned easily for both producer and demander.

1. Even if the demander's request is the procurement of tomato, it doesn't mean that any kind of tomato can be accepted by them. It usually does not need to consider the detailed specifications of the product if the producers ship their products to wholesale market. However, in contract farming, the demanders require specific specification regarding the size, color and ingredient, etc. of the product. Thus, it is necessary to consider whether the producer can produce such product which satisfies the requirement of demanders.

2. Avoiding the competition with other highly competitive producers is indispensable especially for the smallholder agricultural producers. The selection of the demand that you approach should be conducted carefully to avoid the competition.

3. It means the situation where the demander would be in difficult situation such as the decline of sales volume if the producer stops contract farming.

If it is difficult for you to know whether there are adequate demand for the producer or not, it is recommended to participate in the matching event which is organized by AMPF in DARD and discuss with the demanders directly to know their demand and requirement.

Case2: Spinach Production in B Commune, Quynh Luu District

The B commune in the Quynh Luu district is making a big profit by tackling the production and sales of fresh spinach which has not been cultivated so far. In the background of spinach cultivation as a pilot project, there is a demand from retail chain stores in Vinh City which specializes in the sales of safe vegetable. The stores procure various types of safe vegetable from all over the Vietnam including Lam Dong province. In particular, the spinach has constant demand from high health-conscious consumers since it has high nutritional value especially for the high contents of Iron. On the other hand, since the spinach grows in a cool climate, it is hardly produced in Nghe An province, and the stores relied exclusively on the spinach produced in Dalat which requires high transportation cost. Consequently, the retail price of fresh spinach procured from Dalat was very expensive as 40,000 to 50,000 VND/kg. Therefore, the stores asked JICA Project Team whether the producers in Nghe An province can produce spinach in their farmland or not. This was the starting point of this pilot project. In this Box, by following the three points to be considered for conducting contract farming described above, the activities conducted in this PP are explained.



Fresh Spinach Produced in B Commune

■ **To choose the demand that the producers can satisfy with their current capacity regarding technical level and cost performance.**

As mentioned above, spinach grows in a cool climate. Because the climate cannot be controlled, the cultivation of spinach was tackled by the ingenuity of the cultivated varieties which has heat resistant characteristic. It seems there are no other issues in the aspect of cultivation technique by following reasons.

- 1) The cultivation technique that is required for the spinach is the similar with the one that the participant farmers in this PP grow other leafy vegetable regularly.
- 2) Although the production cost was increased due to the procurement of certified spinach seed, the unit sales price was expected to increase more than the cost to be paid.

Thus, JICA Project Team judged that this spinach demand is adequate for the participants of this PP.

■ **To avoid the demand that has many competitors or to choose the one that there is an advantage for them in supplying products.**

In this PP, the competitor for the PP participants is the producers who cultivate spinach in Dalat. Besides, the competing target is the spinach demand from the retailing stores in Vinh city. Although the cultivation environment for spinach is apparently better in Dalat, PP participants have also several advantages such as the close distance from the producing area to the stores. Considering the food loss caused in the transportation process, JICA Project Team judged that PP participants have also chance to get advantageous position in the target market.

■ **The contract farming that can't be abandoned easily for both producer and demander.**

As a result of PP activities, the participants in B commune could establish system to supply spinach stably. The spinach producers in Nghe An province is only B commune so far and it is necessary for the stores to continue the transaction with B commune since it is also more profitable for them compared to the procurement of spinach from Dalat. On the contrary, PP participants also can't stop the contract farming as long as they cultivate spinach since there is not so much spinach demand in general market.

Chapter 3 Tips to Continue the Contract Farming

3.1 Partner Selection

In contract farming, it is important to address the individual needs of demander. As mentioned in the previous chapter, the only way to judge the adequacy of the contract farming for the producers is to consider the three required conditions of the demand aforementioned in the previous chapter. In this section, the third condition "The contract farming that can't be abandoned easily for both producer and demander" is described in detail. Because this condition is determined by the relationship with demanders, it is difficult to judge without example while it is a very important part to conduct contract farming continuously. Regarding "How much is actually possible to satisfy the individual needs of the demanders", there are many points that do not know unless you actually try. But once the producers could develop the farming system to supply the target products to demanders stably, then this makes both sides continue the contract farming sustainably. It can happen anything that is not expected once the producer started the trial production. For example, the productivity of the target products which satisfy the standard set by demander is lower than expected, product taste was deteriorated once produced in accordance with the requirements of demanders, etc. In some cases, the producers got economic loss due to the failure of production. In other industries other than agriculture, they can research sufficiently whether consumers will be satisfied or not with their newly developed product.

The preparation stage that considers what kind of product is produced to satisfy the needs of the consumers is called the stage of "product development". In supplying agricultural product to the general market, the producers only think about techniques and inputs used for cultivation. Thus if the producer starts contract farming in such way of practice, the contract farming will not be continued since the product development is not well conducted. However, it is also true that there is no end when thinking about handlings because there are a lot of risks in agricultural sector including the weather conditions such as the typhoon. Conversely, it is very risky to start a contract farming suddenly despite the everything is uncertain and unclear. The process of "product development" is necessary to experiment by considering the method to make sure to avoid the trouble. Many people think that transactions will abort if they keep doing it and that contract deals cannot be introduced forever. However, if you are not able to deal with the terms and conditions, you can cause worse results. In the case of large-scale agricultural corporations that are accustomed to deal with contracts, there are experiences and know-how that have already accumulated product development, and may be able to respond immediately after hearing the terms of the contract. Of course, there is no such thing in a general production area. But demanders are willing to pay the same money and offer the same stuff and services. On the other hand, the products of other industries are not to be understood unless we explain that it takes time to prepare to sell to products that have already been developed. In contract farming, you do not know what needs to be addressed until the partner is determined. Therefore, it is necessary to develop the product separately demander who became the contract partner. From the experience so far, it is only possible to deal with contract farming that requires the certain period of the product development until you can deal with the combination of your know-how.

3.2 Product Development Will Support to Increase the Competitiveness of Demanders

The following three points are the desirable conditions to select a partner.

1. Avoid demanders that are not motivated to communicate directly with the producers. In agriculture, it is necessary to make one cultivation experiment once a time, and it is often only once a year. The cooperating demander needs to be a person who can understand this. Because it is likely to fail if you do not take necessary period for product development. It is better not to conduct contract farming from the beginning with demander that does not acknowledge the need to advance product development together.
2. Avoid demanders that are not interested in the point where they procure products from, or whether the agricultural producer can produce the products as requested reliably. This is a sign of an attitude that "there is so much in place of the production area", and it will not admit the advantage to proceed the product development for their profit.

3. As the raw materials supplied from contract farming, choose the one that seems to become an exploitation material if appealing to the consumer. For those who are competing in other industries, the speed of agriculture is slow and it is a big burden to wait for product development. Therefore, it is necessary for the demanders to have the value worth waiting for. It is not able to lead to the promotion of the production area if it is not possible to boast to the consumer that the demanders are purchasing your agricultural products.

The point to be noted is that the way of thinking about improving agricultural products is different from conventional practice of agriculture. If it becomes a contract farming aiming at processing demand, it will be different from the general market distribution. The product development focuses not only just about quality, but also in terms of price and shipping method. In the contract farming, the person who buys it is a demander, and the satisfaction of the demander is the satisfaction of the consumer who is the final consumer, and the sales get increased by it. Product development of contract farming leads to the support for the demanders to win the competition, and for that, it is necessary to advance the product development according to the needs of each enterprise regardless of "high quality" and "good products" assuming in the production area. It is necessary to re-consider the idea of "good product", and to put the habit of thinking about "What kind of commodity is demanded" in the standpoint of the demanders.

Case3: Contract Farming of Safety Vegetable in A Commune, Vinh City

The agricultural cooperative of the A commune of Vinh city is engaged in contract farming with the retailer of safety vegetables in Vinh city through the pilot project of JICA. Currently, based on the request of the retailer, a system is established to ship required products at the necessary time, but it took about one year of trial and error to establish this system. Here, JICA Project Team outline what kind of safety vegetable production and shipping system needs to be improved in response to the request of this retailer.

■ Proof of being a Safe Vegetable

Since the retail company originally engaged in the sale of children's toys, the main customer for them is a mother having children. Especially, the safety vegetable sold in the shop should be paid attention especially because it is a customer with a high awareness of the food environment for their child. Therefore, even if it is a long distance, the company procured from the highly safe vegetable producing area in Vietnam and sold it at the store. So, the safety certificate for the proofing product safety was important to consider the procurement of safety vegetables in the vicinity of the store. However, in particular, the company requested producers: 1. Acquisition of safety certificates issued by public institutions and 2. Submission of Production record. With regard to the former, it was possible to acquire it by analyzing water and soil of farmland and receiving a training course for producers through a request to the agricultural rural development department (DARD) of Nghe An province. On the other hand, the latter is a matter that all producers engaged in contract farming should always carry out, which took a considerable amount of time. Even in the seminars held for obtaining safety certification, it was pointed out the need to record the production record in the process of crop production. However, it turns out that a corresponding preparatory period is necessary for obliging the producers to record the production process.

■ Cultivation Standardization

For items of safe vegetables sold by retail companies, if farmers engaged in contract farming by using different crop varieties or input, the quality including product appearance will not be standardized. In addition, some farmers are using the input (fertilizers and pesticides) that are illegally distributed, and there was also a concern about safety. For this reason, the cooperative changed the system to collectively procure agricultural input from reliable suppliers and distribute them to farmers, and also conducted training for each farmer on the appropriate usage of each material from the supplier.

■ Multiple Item · Regular / Stable Shipment · Small Lot

Retail companies have developed a large number of small stores, and each store needs to procure a small amount of items. In order to respond to this demand, it was necessary for producers to cultivate multiple items, to ensure the length and stability of necessary shipping period by shifting the cultivation period, etc. For this reason, the procurement managers of retail company formulated cultivation and shipping plans, and each producer changed the system to cultivate target items based on this plan. In particular, there were many producers who were reluctant to cultivate the multi-item cultivation, but the project team and the extension workers explained to the producers many times, and eventually the cultivation plan was formulated in a way that convinced everyone.

For cooperatives and producers who have been selling agricultural products through general market such as wholesale market via middleman as described above, the contract farming tends to be avoided with much labor and items to be noted. On the other hand, the cooperative of this PP case was able to sell the products to the retailer with a more favorable selling price by contract farming, and the farmer's profit was improved as a result. At present, the cooperative regulations and rules on contract farming (such as forbidding the side-selling of contracted products) are tightened, and the developed rules included the one giving penalties if the producer break it. This clear regulation and rule also contributed the development

of reliability between the retail company and cooperatives. While various problems occur at the beginning of contract farming and appropriate countermeasures are required each time, it is necessary to strongly recognize that this work itself is part of "product development".

**Improvement of Farming System based on the Buyer's Needs
~In case of cooperative in A commune~**



Discussion between agricultural cooperative and local retailing company regarding the planning of contract farming

Obligation to submit farming record to local retailing company

Obligation to use same agricultural input procured through reliable supplier



Obligation to cultivate planned crops as requested by retailing company



3.3 Customizing Product by Understanding the Needs of Demanders

"Product development" is not only the development of new products, but also the content of the products to be satisfied by the customer, including the establishment of a system that can be produced and supplied. The condition that the demander is satisfied is not a decision to think about the production area without permission. Because the contract farming is fixed by the demander, it is necessary to confirm the demand from the demander through direct discussion. The demand of the demander becomes special, and the production area becomes difficult to sell to other, and the demander comes not to procure products from other producing area. Even if some producers are dealing with contract farming, there are the cases that the producers are working on contract farming, but they conducted cultivation by conventional practice. In this case, it is easy for producers to deal with cultivation since it is conventional practice. On the other hand, it means that the demanders can substitute for supply from other production area at any time, and if there is a production area that can supply target products at a lower price, it is possible for demanders to easily switch the suppliers. If you customize the production and shipping method for the demanders, they are going to purchase as customized products as possible, as there are advantages to be used by those. In addition, "customizing products" is not only the aspect of varieties and cultivation techniques. Even if it is not a new variety, there is also a method to specialize it by strengthening service at the logistics side (shipping form, shipping frequency, etc.). If demanders can benefit from supply from your production area, the production area is competitive as a supplier and more likely to be chosen by the demanders.

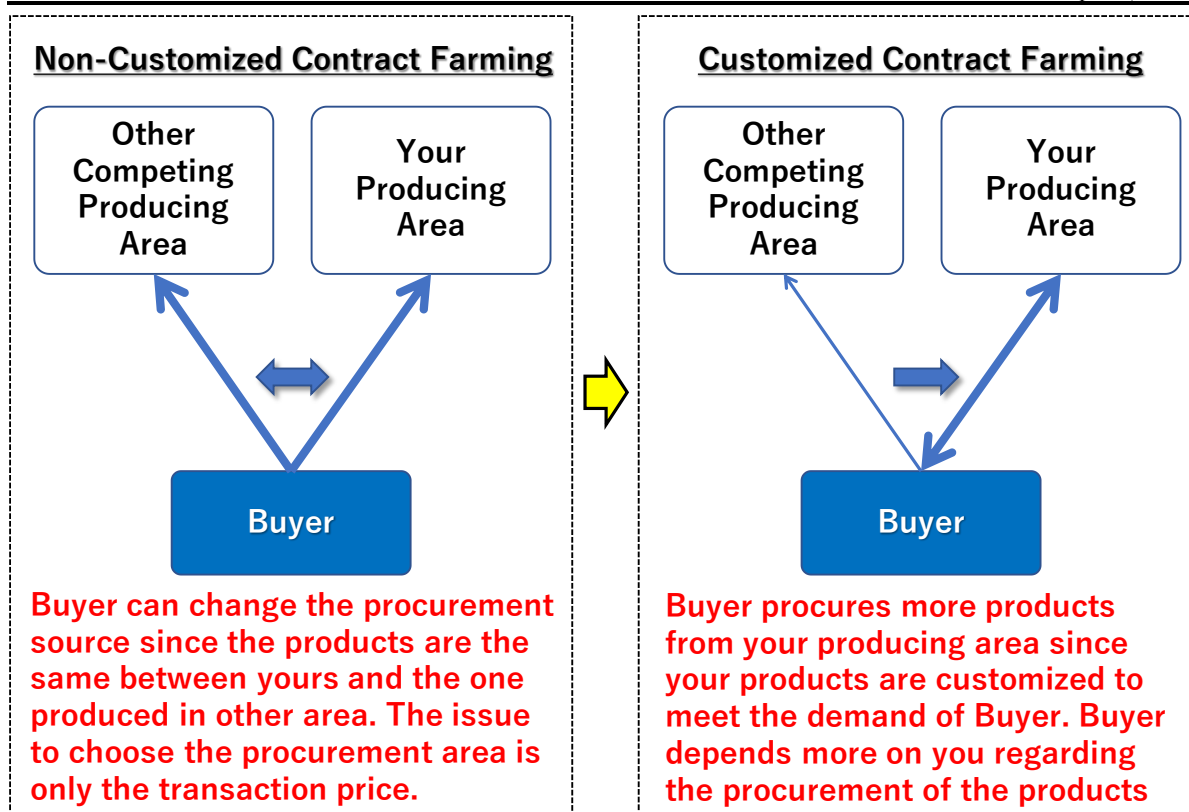


Figure 3-1. Necessity to Customize the Products

Chapter 4 Remarks in Introducing of Contract Farming to Farmer

4.1 Reason why Contract Farming Fails

In chapter 2, this guideline describes the importance of strategy because it is necessary to carry out transaction in a well-organized way in the production area in implementing the contract farming. Since organizational activity is required in the entire production area, it is necessary for producers to understand a strategy of the production area. However, agricultural cooperatives that have been not used to ship agricultural products tend to grow crops only for the sake of their convenience. The primary cause for making it difficult to continue contract farming is the lack of mutual understanding between farmers and the other industries such as middleman, retailers, companies, etc. In fact, there is a big difference in way of thinking between the farmers and demanders. In order to continue contract farming, farmers need to understand demander's view. In other words, it is essential for whole production area to recognize the needs that demanders require for contract farming.

4.2 Satisfying Demander's Needs and Ensuring Sales Volume

In contract farming, it is necessary to interview with demanders positively rather than waiting for their opinion and ideas. In fact, the producers are aware of it because producers think 'Demanders complain despite they don't know agriculture at all'. Demanders make contract farming to secure the stable supply of agricultural products. However, it is risky to negotiate with producers without understanding the specific risks in agriculture. It will occur troubles frequently if ignore the risks in agriculture. Demanders cannot predict how certainly raw materials are secured in contract farming, and how far they can be expected. Company does not know agriculture well; they think that it is natural that raw material is shipped as contracted. Even if raw materials cannot be harvested and shipped because of the typhoons or unusual weather, demanders might take it for granted that producers can anticipate these risks and make countermeasure it. On the other hand, producers lose their trust if not shipping raw materials to the contracted demanders when the market price is high. In fact, for other industries, you lose the trading partner by that action immediately. It is impossible for the people in other industries not to sell the products to the contracted demanders without notice, justification, apologize, etc. Conversely, you can receive more and better ideas from stakeholders, if you listen carefully to the needs of the demanders.

It is necessary for producers to understand what purpose demander's request. Otherwise, it will cause trouble. For example, demanders say that they want bigger sizes of agricultural products. But it does not mean that the products quality can be got worse instead of producing bigger size of products. If a contract farmer produces larger agricultural products without considering other quality, it might be not good quality for the demander. From the viewpoint of demanders, it is regarded as a selfish behavior that drops the quality than before. That is why it is important to have a good understanding of the meaning of the conditions required by the demanders. If you do not correctly explain agricultural risks, the seller (producers) should take responsibility in commercial transaction. Conversely, both sides can trade with confidence, if the demanders understand the agricultural risks. Stable trading is equal to securing the needs. Producers should satisfy the needs of demanders if producers make contract farming in order to keep and develop the production area. Readers who are in the position of teaching need to be aware of this important point.

4.3 Prospect of Producer's Profit in Contract Farming

In order to promote contract farming, it is necessary to discuss with producers how to deal with contract farming from the viewpoint of agriculture business. Discussion with only price is meaningless in contract farming. We cannot avoid trouble, if we do not get the understanding of demanders. In other word, we shall show policies that obtain both demander's satisfaction and producer's profit. For this purpose, it is necessary to clarify the needs of demanders and improvement methods on production and distribution. In particular, it is necessary to explain clearly to farmers such as sharing estimated profit based on calculation of market price and unit price of producers, etc. With precise explanation to producers, they can challenge for new business. Promoters of contract farming should pay particular attention to this point.

Case 4: Contract Farming of Local Chicken in Thanh Chuong District D Commune

Farmers in Thanh Chuong district produced local chicken (Ri variety) which are well known in Vietnam, however, in recent years, the number of broilers has increased from the viewpoint of efficiency and management. For this reason, the number of Ri pure variety decreased due to natural mating, and it was difficult to meet demander’s needs requesting real local chicken. The objective of the PP in JICA project is to promote local chicken brand and improve its value chain by promoting Ri variety and stop the breeding broiler breeds. Broiler varieties can be sold in about 4-5 months, whereas it takes about 6 months to grow and sell Ri variety. It means that sales frequency of raising broiler is higher than Ri pure variety. That is to say, when specializing in raising Ri pure variety, farmer’s income will decrease if the unit price does not increase. Therefore, in starting activities of the PP, the Project interviewed demanders who would like to purchase local chicken (Ri variety) and confirmed the price. In addition, the Project had survey regarding the current farm-gate price and production cost per chicken, and consider how to reduce the cost.



As the result of the PP activities, it is verified 1) unit price of local chicken (Ri variety) is increased approximately 10% compared with broiler, 2) production cost can be reduced by utilization of cassava. Generally, cassava is not effectively used in the district. The Project have explained the above survey results to the target farmers, and implemented various activities based on the plan. The result of activities, farmer’s profit improved dramatically because the unit price of local chicken (Ri variety) increased, sales amount increased due to diversification of sales channel, cost reduction by utilization of cassava silage, and etc. This PP is good practice, and it is very suggestive for the people promoting contract farming. In conclusion, it is very important to suggest the consultation from the viewpoint of value chain to producers, not only consider unit price when promoting contract farming.

Table 4-1 The Impact of the PP in Thanh Chuong District

	Before Project	After Project
Number of pilot farms	66 farms	88 farms
Corn production for feed	1,950 kg/year	2,390 kg/year
Farms who have proper chicken shed	18%	81%
Farms who use cassava silage	35%	77%
Amount of chicken sold	720 kg/farm	952 kg/farm
Ave. farm-gate price of chicken	VND 93,182 /kg	VND 97,500 /kg
Total production cost per farm	VND 41.1 million	VND 56.6 million
Total sales amount per farm	VND 70.8 million	VND 110.2 million
Ave. income per farm	VND 29.6 million	VNC 53.6 million

Source: JICA Project Team

Chapter 5 Role and Responsibility as a Promoter of Contract Farming

5.1 Promoting Mutual Understanding Between Producers and Demanders

This guideline is prepared for the promoters of contract farming, and promoters should take on a role as the coordinator. Because the promoters should suggest to the demanders how beneficial for them to choose your production area. In addition, there is no other way to deal with market needs by communicating with demanders. In general, agricultural cooperatives/farmers who are used to sell their agricultural products in the general market such as wholesale market has no experience of communicating with demanders. For this reason, promoters need to take on the role as a coordinator at the same time. The role of the coordinator is mainly to ensure communication between the producers and demanders. However, it is important not only to provide the opportunity of discussion between the both sides, but also to encourage mutual understanding each other. When trouble occurs in contract farming, demanders insist, "agricultural producers do not understand the contract farming", and the agricultural producers insist, "Companies do not keep promises". In many cases, it happens because the common sense that each side has in each business environment is different. The coordinator needs to promote mutual understanding between the parties in a neutral position so as not to solve the above issues. The table below shows minimum items to be discussed for contract farming. In actual contract farming, it is common that the other items that are not mentioned in the table are also required. Thus, it needs careful consideration when to conduct contract farming.

Table 5-1. Items to be Discussed for Contract Farming

No.	Item	Contents/ Details
1	Time of Shipping	Discuss and decide the time of shipping products to demanders.
2	Variety	Discuss and decide the variety required by demanders.
3	Cropping System	Discuss and decide the standards of certification such as Viet GAP, DARD safety certificate, etc. In some cases, demanders share cultivation manual.
4	Quantity	Discuss and decide the quantity of products required by demanders and its shipping frequency.
5	Standards	Discuss and decide the product standards required by demanders. In some cases, the demanders request multiple standards with same product.
6	Selecting criteria	Discuss and decide the selecting criteria. If possible, it is better to specify quantitatively.
7	Container/Package and Content	Discuss and decide the container/package and packaging method for product shipment.
8	Inspection	Discuss and decide when, where, how the demanders inspect.
9	Collection and Distribution	Discuss and decide the roles for collection and distribution between farmers and demanders, respectively.
10	Price	Discuss and decide unit price. Should be careful to decide the price in case there are multiple standards, to link with market price, etc.
11	Payment	Discuss and decide the payment timing, payment frequency, payment methods, etc.
12	Exemption from obligation	Discuss and decide how to deal with the occurrence of natural disasters and impossible to ship. Regardless of occurrence of force majeure, in most cases, producers have the responsibility to share information on growing conditions.
13	Compensation for damages	Discuss and decide cost of disposal of defective products and compensation for damages if producers cannot sell the quantity of products contracted.
14	Other matters to be discussed	In addition to the above, discuss and decide how to deal with unexpected situations.

Source: JICA Project Team

Promoters are often required to work from the standpoint of agricultural producers, and tend to take actions that prioritize the profit of farmers rather than continuing contract farming. For instance, promoters request the demanders to increase the purchase price. However, these speech and behavior have adverse effect on continuous contract farming. Therefore, the important role of the coordinator is to propose solutions and improve the conditions of contract farming for both sides. The purpose of the promoter is to improve the relationship between demanders and producers. Hence, promoter should drop the ideas of increasing the burden to the demanders. Of course, it is difficult to make these countermeasures only by promoters. Thus, it is important to make a good relationship with all the stakeholders.

5.2 Collaboration with Local Government

Collaboration with local government is important in promoting contract farming. Local government in Nghe An province corresponds to city, town, districts, commune, etc. In general, local government institutionalize support system for agriculture and livestock products such as subsidy, training and workshop, consultation, etc. Utilizing these support systems make it possible to allocate budget for "product development". The sustainability and reliability of contract farming is improved if local government's staffs become witness as third party. For this reason, promoters should always propose contract farming in corporation with local government in mind.

5.3 Utilization of Contract Farming Format

Next section shows the template of the contract form used in the PP in "Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An in the Socialist Republic of Vietnam". There are three types of contract form as follows.

- Contract form (for crop production)
- Contract form (for livestock products)
- Contract form (for transportation)

We kept in mind that the contract form for crop production and livestock products could be as generic and simple as possible. As for contract form for transportation, many transportation companies have already made contract form. We recommend that the contract form for transportation of this guideline be used as a checklist when transportation companies proposed their form. Promoters of contract farming should make efforts to promote mutual understanding between producers and demanders by utilizing these contract forms.

Socialist Republic of Vietnam
Independence – Freedom - Happiness



Contract for Crop Production and Supply

No. []

This contract (the “**Contract**”) is made and entered into on [] by and between the two parties below.

1. [Farmer/Farmers’ Group/Cooperative] (hereinafter referred to as the [“**Seller**”])

Name/Representative:

Position:

Address:

Tel. No.:

[Bank Account:]

[*The members of the Farmers’ Group/Cooperative participating in this Contract are listed in **Appendix 1**. The Representative is authorized by the members of the Farmers’ Group/Cooperative participating in this Contract to represent such members under the Power of Attorney attached to this Contract in **Appendix 2**.]

2. [] (hereinafter referred to as the [“**Buyer**”])

Representative:

Position:

Address:

Tel. No.:

(Each party is hereinafter individually referred to as a “**Party**”, and collectively, as the “**Parties**”).

[WHEREAS

1. The Seller is issued with a certification by the [Department of Agriculture and Rural Development (the “**DARD**”)]/issuing authority] of [insert area or location] as “Satisfaction of Food Safety Conditions”, pursuant to Circular No. 45/2014/TT-BNNPTNT dated 03 December 2014 by the Ministry of Agriculture and Rural Development of Vietnam for crop production;
2. The Buyer desires to purchase from the Seller the crops that meet the requirements and quality standards of the Buyer; and

3. The Seller hereby agrees to supply the Buyer the crops in accordance with the terms set forth in this Contract:

NOW, THEREFORE, [Please remove the portions in brackets starting with “WHEREAS” clause above if the Farmers is not required to have the DARD certificate.] the Parties hereby agree as follows:

1. Duties and Responsibilities of the Farmer/Farmers’ Group/Cooperative

The Seller agrees to and accepts the following duties and responsibilities:

- 1.1 To perform the work and services necessary to produce and supply the crops specified in [Appendix 3] (“Crops”), in accordance with this Contract, using the parcels of land over which [members of] the Seller of this Contract have legitimate right to cultivate;
- 1.2 To use only seeds, seedlings fertilizers, chemicals and any additive inputs: (a) the origin and supplier(s) of which are clearly specified, and (b) which are [] approved by the Buyer [] specified in [Appendix 3]; [Please choose the applicable term.]
- 1.3 To strictly follow the advice from the Buyer on cultivation techniques, quality standards and other relevant technical requirements that the Buyer may provide from time to time, and record all farming practice information specified in [Appendix 4] and such other information which may be required by the competent authorities (collectively, the “Farming Practice Information”); and the Seller hereby agrees and acknowledges that the Crops for which any of the Farming Practice Information has not been recorded or recorded incorrectly shall not be purchased by the Buyer;
- 1.4 To inform the Buyer at least [seven (07) days] prior to the estimated harvest time of the Crops to enable the Buyer to check its condition; ([] This clause is applicable; [] This clause is not applicable.)
- 1.5 To allow the representatives of the Buyer, or persons authorized by the Buyer, to inspect or monitor the production sites and packing procedures, whenever the Buyer so requires;
- 1.6 To sell at least the minimum quantity of the Crops (the “Minimum Quantity”) at the price set out in Item 3 of [Appendix 3] of this Contract (“Selling Price”).
 - 1.6.1 The Selling Price may be modified and adjusted based upon the agreement between the Parties in writing in the form specified in [Appendix 5] in case of [] where either Party requests for modification and adjustment within forty eight (48) hours after []

large price fluctuation in located in (“ Wholesaler Market”). For avoidance of doubt, a change within a period of of at least in the price of the equivalent crops in Wholesaler Market shall be considered as large price fluctuation. (This clause is applicable; This clause is not applicable.)

- 1.7 To have the right to offer the remaining quantity of the Crops not purchased by the Buyer (the “**Extra Quantity**”) to any other buyers at the purchase price solely decided by the Seller.
- 1.8 To bear all responsibility and liability for the shipping and the transport of the Crops purchased by the Buyer from its (or its members’) sites to the Buyer’s warehouse/designated delivery site(s). The Buyer does NOT take any responsibility or liability for such shipping and transport; (This clause is applicable if Article 2.7 is not applicable; This clause is not applicable if Article 2.7 is applicable.) **Please choose Article 1.8 or Article 2.7.**
- 1.9 To harvest, package and label the Crops in accordance with the Buyer’s Instructions; (This clause is applicable; This clause is not applicable.)

2. Duties and Responsibilities of the Buyer

The Buyer agrees to and accepts the following duties and responsibilities:

- 2.1 To indicate to the Seller the details of the package and label required at least prior to purchasing the Minimum Quantity; and the Buyer Warrants that any content or detail of the package and label provided to the Seller under this Contract does not violate the following: (a) any right, title, or interest of any party, and (b) any applicable laws or regulations, whether in Vietnam or elsewhere;
- 2.2 To purchase all the Minimum Quantity according to of this Contract;
- 2.3 In case of failure to purchase all the Minimum Quantity pursuant to the preceding paragraph, to pay the Seller an amount equivalent to % of the Selling Price applicable to the unpurchased portion of the Minimum Quantity (“**Additional Payment**”);(This clause is applicable; This clause is not applicable.)
- 2.4 To pay the Seller (through) the Selling Price and any Additional Payment/reimbursements):
- by cash
 - by bank transfer
 - for each shipment

- every [15th and 30th (or the last day) of each month] [Please choose the applicable payment method and payment time.]
- 2.5 To inform each shipment quantity to the Seller at least one (1) day before delivery.
- 2.6 If any of the Crops does not meet the requirements specified in [Appendix 3], to return such Crops and exclude it from computation of the Selling Price; (This clause is applicable; This clause is not applicable.)
- 2.7 [To bear all responsibility and liability for the shipping and the transport of the Crops purchased by the Buyer from Seller's (or Seller's members') sites to the Buyer's warehouse/designated delivery site(s). The Seller does NOT take any responsibility or liability for such shipping and transport]; (This clause is applicable if Article 1.8 is not applicable; This clause is not applicable if Article 1.8 is applicable.); [Please choose Article 1.8 or Article 2.7.] and
- 2.8 To provide, by itself or its authorized representative, technical advice and assistance to the Seller.

3. General Conditions

3.1 Compliance with laws

- (a) Each Party shall comply with all applicable laws and regulations of Vietnam in fulfilling their respective obligations under this Contract.
- (b) The Seller represents and warrants that it currently has in effect all the necessary licenses, permits and authorizations from the competent authorities to implement its obligations hereunder, and the Seller agrees to maintain such licenses, permits and authorizations in effect during the term of this Contract.

3.2 Notification

Each Party shall immediately notify the other Party in writing as soon as it becomes aware of any event, circumstance or condition that affects or may affect their fulfillment of its obligations under this Contract. Both Parties shall endeavor to agree upon any necessary actions to remedy such change, if capable of remedy.

3.3 Breach

The Parties hereby agree that in case of breach of this Contract, the affected Party shall be entitled to the following:

- (a) Compensation and remedies according to the laws of Vietnam; and

- (b) Remedies provided in this Contract, including:
 - (i) For the breaching Party to immediately cease or refrain from any action which constitutes breach of this Contract; and/or
 - (ii) Termination in accordance with Article 3.4.

For the avoidance of doubt, the affected Party's right to seek any remedy under this Article 3.3 shall not be exclusive of any other rights or remedies available to such Party, and nothing contained herein shall prevent such Party from pursuing any other remedies available to it.

3.4 Termination

- (a) This Contract may be terminated under any of the following conditions:
 - (i) Upon expiry of the effective term of this Contract in Article 4.4;
 - (ii) Where the Parties unanimously agree in writing to terminate this Contract; or
 - (iii) At the discretion of the affected Party, if the other Party has failed to perform or meet any material terms or conditions of this Contract, and in case of being capable of remedy, has failed to remedy the same within [seven (07)] days after receipt of notice of such failure from the affected Party.
- (b) The termination of this Contract shall not relieve a Party of any liability to the other Party on account of any breach under this Contract which occurred prior to its termination.
- (c) Any amount owed by a Party to the other Party shall immediately be payable [within five (05) working days] from the termination of this Contract.

4. Miscellaneous

4.1 Governing law and dispute resolution

- (a) This Contract shall be governed by, and construed in accordance with, the laws of Vietnam.
- (b) For any dispute during the implementation of this Contract, the two Parties shall mutually discuss and resolve any dispute. In case the dispute cannot be resolved and [insert competent people's committee] is a witness of this Contract, any Party may submit such dispute to [insert competent people's committee] for negotiation and conciliation.
- (c) In case the dispute cannot be resolved and there is no witness of this Contract, or in case where such negotiation and conciliation cannot be accomplished within thirty (30) days from the date when the dispute is referred to [insert competent people's committee], this dispute shall be brought to the competent court in [insert jurisdiction] for legal resolution.

4.2 Force Majeure

In the case of occurrence of an event of force majeure, such as an outbreak of pests and disease, flood, drought, abrupt climate change, any other natural disasters, and any circumstance not in a Party's reasonable control (“**Force Majeure**”);

each Party shall timely inform the other Party to discuss solutions and urgently avoid and overcome its consequences. When a Force Majeure arises, the two Parties shall comply with legal regulations regarding taking minutes recording the losses of each Party, with the confirmation of *insert competent people's committee* to determine each Party's responsibility upon contract termination.

neither Party shall be in breach of this Contract nor liable for delay in performing, or failure to perform, any of its obligations under this Contract if such delay or failure result from Force Majeure. Each Party shall timely inform the other Party of the occurrence of the Force Majeure and use all reasonable endeavors to mitigate the effect of the Force Majeure on the performance of its obligations.

For the avoidance of doubt, no Party shall be excused, for any reason whatsoever, including but not limited to Force Majeure events, from any obligation to make any payment in accordance with the terms of this Contract.

4.3 Entire Agreement and Variations

- (a) All appendices attached hereto shall constitute an integral part of this Contract.
- (b) The two Parties agree that this Contract may be amended or varied at any time by written agreement of the Parties.

4.4 Effective term

This Contract will take effect from its signing date until , and shall continue thereafter from year to year, unless terminated in accordance with this Contract .

4.5 Language and counterparts

This Contract is made in two (02) original copies with the same validity, in both English and Vietnamese languages. Each Party shall keep one (01) original copy. In the event of any conflict or inconsistency between the Vietnamese version and the English version, the Vietnamese English version shall prevail.

[REMAINDER OF THE PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, each of the Parties, through their duly authorized agents, has duly executed this Agreement as of the day and year first written above.

SELLER

[FARMER/FARMERS'
GROUP/COOPERATIVE]

BUYER

[]

By: _____

By: _____

Name/Representative Name: []

Name: []

Title: []

Title: []

[(Power of Attorney from the members of
[FARMERS' GROUP/COOPERATIVE] to
[] to represent the members is attached to
this Contract in Appendix 2.)]

[WITNESS]

On behalf of

[insert competent authority]

By: _____

Name: []

Title: []

APPENDIX 1

[FARMER/MEMBERS OF FARMERS' GROUP/COOPERATIVE

Name	Land Lot Size	Address	Crops	[Other classifications]

APPENDIX 2
POWER OF ATTORNEY

We, the undersigned persons, with our personal information specified below, as the principals, hereby authorize the authorized representative below (“**Authorized Representative**”) in relation to the establishment and implementation of the Contract for Crop Production and Supply (“**Contract**”) between us and [] (the “**Buyer**”).

1. The Authorized Representative

Full name : []
Date of birth : []
ID Card : No [] issued by [] on [.....]

Permanent residence address : []
Position : []
Phone No. : []

2. Scope of authorization

Within the scope of authorization herein, the Authorized Representative shall be entitled to have full power for and on our behalf:

- a. To sign the Contract;
- b. To perform our rights and obligations as the seller as stipulated in the Contract, including (i) receiving any payments from the Buyer payable under the Contract, before distributing such amounts to each of us proportionally and (ii) receiving, signing and sending any notices from or to the Buyer under the Contract.
- c. To perform other work required for the purposes of executing and performing the Contract.

3. Term of authorization

The term of authorization will commence as from the signing date hereof to the date on which the Contract is terminated as a whole and all rights and obligations under the Contract have been fully exercised and performed.

This Power of Attorney is made on_____.

The Principals:

Template Contract Form for Crop Production

<i>No.</i>	<i>Member</i>	<i>ID Card No.</i>	<i>Permanent Residence Address</i>	<i>Signature</i>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

The Authorized Representative:

[*Name of the Authorized Representative*]

APPENDIX 3
BUYER'S INSTRUCTIONS

1. Crops for production

[]

2. Minimum Quantity of Crops to be supplied

(a) Quality: [details]

(b) Quantity/Total No. []

3. Selling Price

[]

4. [Reimbursement

Items to be reimbursed: [] [Please confirm if applicable.]

5. Terms of payment

- Full payment of Fees [within [three (03)] working days after the Buyer takes possession of the Crops to be deposited to the bank account of the Seller.
- [Thirty (30)] per cent of the Fees as deposit upon [execution of this Contract/delivery of seeds to Seller's facilities/land], and full payment of the balance of the Fees and reimbursement of full costs within [three (03)] working days after the Buyer takes possession of the Crops, to be deposited to the bank account of the Seller.
- Bank charges shall be the sole responsibility of the Buyer.

6. Place and Date of [Delivery by the Seller OR Pick-up/Loading by the Buyer]

(a) Address: []

(b) Date and time: []

7. Buyer's Instructions

(a) Facility/Land Requirements

[physical structure requirements, placement of seeds, water storage, others]

(b) Application of pesticides/fertilizers

[]

(c) Seeds, seedlings fertilizers, chemicals and any additive inputs

[]

(d) [] [Please add cultivation techniques, quality standards and other relevant technical requirements (if any).]

Template Contract Form for Crop Production

- (e) Other instructions as may be provided by the Buyer or its authorized representative from time to time.

APPENDIX 4
FARMING PRACTICE INFORMATION

TABLE 1. PRODUCTION PRACTICES RECORD

Field name (No):..... acreage(m²/sao)

Name of crop:..... Variety.....

Date of cultivation:..... tentative first harvest.....Last harvest.....

Labor protection : Yes() ; No (). Waste disposal at permitted place: Yes() ; No ().

Date	Activities	Name of product	Name of disease	Quantity (kg, g, lit, ml,)	Follow instruction (mark x)	Warning sign (x)	Detection hazard	Implementer

Note: Table 1 used to record daily production in the field since sowing / planting to harvesting; Each crop (vegetables and fruits) is recorded separately in different table for easy tracking.

TABLE 2. INPUT PURCHASING RECORD

Storage.....

Date	Name	Quantity (Kg, g, l, ml, package)	Price	Supplied by Cooperative / self-supply (x)	Other store		Buyer (name and signature)
					Name	Address	

Note: agricultural supplies store of the Cooperative having business license and under the control of the specialized agencies.

TABLE 3. HARVEST AND SALE RECORD

Pre-processing and reservation place.....

Name of local market (retail).....

Date	Harvest		Sale				Detected hazard / handled (x)	Implementer	
	Crop	Name/ field no.	Isolation period (day)	Quantity (kg, tree)	Price	Methods /Buyer			
						Retail (x)			Whole-sale/ for who

Note : Table 3 is shared for the types of products (vegetables) are harvested from different fields; Isolation period: count the days since last pesticide spraying until harvest; At the retail column and detected hazard ... if yes, just mark (x).

APPENDIX 5
AGREEMENT ON SELLING PRICE

Today, on this ___ day of _____, _____, we, the undersigned parties to the Contract for Crop Production and Supply No. [], dated [] (“**Contract**”)::

Hereby agree that the Selling Price (as defined in the Contract) has been changed to:

This agreement comes into effect from the date first stated above and replaces all of our previous agreements on the Selling Price. This agreement is an integral part of the aforesaid Contract; and other provisions of such Contract remain unchanged.

SELLER

[]

BUYER

[]

By: _____

By: _____

Name/Representative Name: []

Name: []

Title: []

Title: []

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Contract for [Livestock] Breeding and Supply

No. []

This contract (the “**Contract**”) is made and entered into on [] by and between the two parties below.

1. [Farmer/Farmers’ Group/Cooperative] (hereinafter referred to as the (the “**Seller**”)[])

Name/Representative:

Position:

Address:

Tel. No.:

[Bank Account:]

[*The members of the Farmers’ Group/Cooperative participating in this Contract are listed in **Appendix 1**. The Representative is authorized by the members of the Farmers’ Group/Cooperative participating in this Contract to represent such members under the Power of Attorney attached to this Contract in **Appendix 2**.]

2. [] (hereinafter referred to as the [“**Buyer**”])

Representative:

Position:

Address:

Tel. No.:

(Each party is hereinafter individually referred to as a “**Party**”, and collectively, as the “**Parties**”.)

[WHEREAS

1. The Seller is issued with a certification by the [Department of Agriculture and Rural Development (the “**DARD**”)]issuing authority] of [insert area or location] as “Satisfaction of Food Safety Conditions”, pursuant to Circular No. 45/2014/TT-BNNPTNT dated 03 December 2014 by the Ministry of Agriculture and Rural Development of Vietnam for livestock breeding;
2. The Buyer desires to purchase from the Seller livestock that meets the requirements and quality standards of the Buyer; and

3. The Seller hereby agrees to supply the Buyer livestock in accordance with the terms set forth in this Contract.

NOW, THEREFORE, **[Please remove the portions in brackets starting with “WHEREAS” clause above if the Farmers is not required to have the DARD certificate.]** the Parties hereby agree as follows:

1. Duties and Responsibilities of the Seller

The Seller agrees to and accepts the following duties and responsibilities:

- 1.1 To perform the work and services necessary to raise, breed and supply the livestock specified in **[Appendix 3]** (“**Livestock**”), in accordance with this Contract, applicable laws and the instructions and specifications of the Buyer as indicated in **[Appendix 3]** (the “**Buyer’s Instructions**”);
- 1.2 To provide, at its own cost, proper, clean and secured facilities/land and equipment, including utilities such as electricity and water, in accordance with the standard practice for raising and breeding the livestock, applicable laws and the Buyer’s Instructions;
- 1.3 To record all farming practice information specified in **[Appendix 4]** and such other information which may be required by the competent authorities (collectively, the “**Farming Practice Information**”); **[and the Seller hereby agrees and acknowledges that the Livestock for which any of the Farming Practice Information has not been recorded or recorded incorrectly shall not be purchased by the Buyer];** **[Please consider adding the terms inside the brackets.]**
- 1.4 **[To be responsible, at its own cost, for the registration of the Livestock with the competent authorities, if so required;]** (This clause is applicable; This clause is not applicable.)
- 1.5 **[To only breed and raise livestock** **approved by the Buyer** **specified in** **[Appendix 3]** **(** **This clause is applicable;** **This clause is not applicable.)** **[Please choose the term inside the brackets if the intention is to have these items provided by the Buyer.]**
- 1.6 To only use on or around the livestock feeds, medicine, vaccinations, other supplies and materials, and veterinary services **authorized** **provided** by the Buyer; **[Please choose the applicable term inside the brackets.]**
- 1.7 **[If so requested by the Buyer at any time, to provide at its own cost, appropriate certification from a veterinarian agreed upon by both Parties];** **[In case veterinary services will not be**

provided by the Buyer, this is a pro-Buyer alternative clause to ensure the good health of the Livestock.] (This clause is applicable; This clause is not applicable.)

- 1.8 [To inform the Buyer at least [seven (07) days] prior to the estimated supply/loading of the Livestock to enable the Buyer to check its condition;] (This clause is applicable; This clause is not applicable.)
- 1.9 To allow the representatives of the Buyer, or persons authorized by the Buyer, to inspect or monitor the breeding sites/livestock-raising farms, whenever the Buyer so requires;
- 1.10 To sell at least the minimum quantity of the Livestock (the “**Minimum Quantity**”) at the price set out in Item 3 of [Appendix 3] of this Contract (the selected price is hereinafter referred to as the “**Selling Price**”);
- 1.10.1 The Selling Price may be modified and adjusted based upon the agreement between the Parties in writing in the form specified in **Appendix 5** in case of [where either Party requests for modification and adjustment within forty eight (48) hours after] large price fluctuation in [insert applicable market] located in [location/area] (“[insert name] **Wholesaler Market**”). For avoidance of doubt, a change within a period of [three (03) consecutive days] of at least [+/- 10%] in the price of the equivalent livestock in [insert name] Wholesaler Market shall be considered as large price fluctuation; (This clause is applicable; This clause is not applicable.)
- 1.11 To have the right to offer the remaining quantity of the Livestock not purchased by the Buyer (the “**Extra Quantity**”) to any other buyers at the purchase price solely decided by the Seller;
- 1.12 [To mark or label the Livestock in accordance with the Buyer’s Instructions;] and (This clause is applicable; This clause is not applicable.)
- 1.13 [To bear all responsibility and liability for the shipping and the transport of the Livestock purchased by the Buyer from the Seller’s (or its members’) sites to the Buyer’s warehouse. The Buyer does NOT take any responsibility or liability for such shipping and transport;] (This clause is applicable if Article 2.7 is not applicable; This clause is not applicable if Article 2.7 is applicable.)]

2. Duties and Responsibilities of the Buyer

The Buyer agrees to and accepts the following duties and responsibilities:

- 2.1 To purchase all the Minimum Quantity according to **[Appendix 3]** of this Contract;
- 2.2 **[In case of failure to purchase all the Minimum Quantity pursuant to the preceding paragraph, to pay the Seller an amount equivalent to 80% of the Selling Price applicable to the unpurchased portion of the Minimum Quantity (“Additional Payment”)]**; (This clause is applicable; This clause is not applicable.)
- 2.3 To pay the Seller (through **[insert name of the representative and name of the bank (if necessary)]**) the Selling Price [and any Additional Payment/reimbursements]:
- by cash
 - by bank transfer
 - for each shipment **[insert time frame for payment, e.g. at the delivery of the next shipment]**
 - every **[15th and 30th (or the last day) of each month]**;
- [Please choose the applicable payment method and payment time.]**
- 2.4 The Selling Price and any Additional Payment is inclusive of value-added tax and any and all applicable taxes (if any) imposed by the relevant authorities in Vietnam for such payments;
- 2.5 To inform each shipment quantity to the Seller at least **[one (1)]** day before delivery.
- 2.6 **[If any of the Livestock does not meet the requirements specified in **[Appendix 3]**, to return such Livestock and exclude it from computation of the Selling Price]**;
- 2.7 **[To bear all responsibility and liability for the shipping and the transport of the Crops purchased by the Buyer from Seller’s (or Seller’s members’) sites to the Buyer’s warehouse/designated delivery site(s). The Seller does NOT take any responsibility or liability for such shipping and transport]**; (This clause is applicable if Article 1.13 is not applicable; This clause is not applicable if Article 1.13 is applicable.)
- 2.8 To provide, at its own cost, feeds, medicine, vaccinations, other supplies and materials, and veterinary services; (This clause is applicable; This clause is not applicable.)
- 2.9 To reimburse the Seller, upon presentation of the original receipts, the costs of sufficient feed, medicine, vaccination, supplies and materials, equipment, and veterinary services necessary to raise and breed the Livestock; and (This clause is applicable; This clause is not applicable.)
- 2.10 To provide, by itself or its authorized representative, technical advice and assistance to the Seller.

3. General Conditions

3.1 Compliance with laws

- (a) Each Party shall comply with all applicable laws and regulations of Vietnam in fulfilling their respective obligations under this Contract.
- (b) The Seller represents and warrants that it currently has in effect all the necessary licenses, permits and authorizations from the competent authorities to implement its obligations hereunder, and the Seller agrees to maintain such licenses, permits and authorizations in effect during the term of this Contract.

3.2 Notification

Each Party shall immediately notify the other Party in writing as soon as it becomes aware of any event, circumstance or condition that affects or may affect their fulfillment of its obligations under this Contract. Both Parties shall endeavor to agree upon any necessary actions to remedy such change, if capable of remedy.

3.3 Breach

The Parties hereby agree that in case of breach of this Contract, the affected Party shall be entitled to the following:

- (a) Compensation and remedies according to the laws of Vietnam; and
- (b) Remedies provided in this Contract, including:
 - (i) For the breaching Party to immediately cease or refrain from any action which constitutes breach of this Contract; and/or
 - (ii) Termination in accordance with Article 3.4.

For the avoidance of doubt, the affected Party's right to seek any remedy under this Article 3.3 shall not be exclusive of any other rights or remedies available to such Party, and nothing contained herein shall prevent such Party from pursuing any other remedies available to it.

3.4 Termination

- (a) This Contract may be terminated under any of the following conditions:
 - (i) Upon expiry of the effective term of this Contract in Article 4.4;
 - (ii) Where the Parties unanimously agree in writing to terminate this Contract; or
 - (iii) At the discretion of the affected Party, if the other Party has failed to perform or meet any material terms or conditions of this Contract, and in case of being capable of remedy, has failed to remedy the same within **seven (07)** days after receipt of notice of such failure from the affected Party.
- (b) The termination of this Contract shall not relieve a Party of any liability to the other Party on account of any breach under this Contract which occurred prior to its termination.

- (c) Any amount owed by a Party to the other Party shall immediately be payable within five [(05) working days] from the termination of this Contract.

4. Miscellaneous

4.1 Governing law and dispute resolution

- (a) This Contract shall be governed by, and construed in accordance with, the laws of Vietnam.
- (b) For any dispute during the implementation of this Contract, the two Parties shall mutually discuss and resolve any dispute. In case the dispute cannot be resolved and [insert competent people's committee] is a witness of this Contract, any Party may submit such dispute to [insert competent people's committee] for negotiation and conciliation.
- (c) In case the dispute cannot be resolved and there is no witness of this Contract, or in case where such negotiation and conciliation cannot be accomplished within thirty (30) days from the date when the dispute is referred to [insert competent people's committee], this dispute shall be brought to the competent court in [insert jurisdiction] for legal resolution.

4.2 Force Majeure

In the case of occurrence of an event of force majeure, such as an outbreak of pests and disease, flood, drought, abrupt climate change, any other natural disasters, and any circumstance not in a Party's reasonable control ("Force Majeure"),

each Party shall timely inform the other Party to discuss solutions and urgently avoid and overcome its consequences. When a Force Majeure arises, the two Parties shall comply with legal regulations regarding taking minutes recording the losses of each Party, with the confirmation of [insert competent people's committee] to determine each Party's responsibility upon contract termination.

neither Party shall be in breach of this Contract nor liable for delay in performing, or failure to perform, any of its obligations under this Contract if such delay or failure result from Force Majeure. Each Party shall timely inform the other Party of the occurrence of the Force Majeure and use all reasonable endeavors to mitigate the effect of the Force Majeure on the performance of its obligations.

For the avoidance of doubt, no Party shall be excused, for any reason whatsoever, including but not limited to Force Majeure events, from any obligation to make any payment in accordance with the terms of this Contract.

4.3 Entire Agreement and Variations

- (a) All appendices attached hereto shall constitute an integral part of this Contract.

(b) The two Parties agree that this Contract may be amended or varied at any time by written agreement of the Parties.

4.4 Effective term

This Contract will take effect from its signing date until , and shall continue thereafter from year to year, unless terminated in accordance with this Contract.

4.5 Language and counterparts

This Contract is made in two (02) original copies with the same validity, in both English and Vietnamese languages. Each Party shall keep one (01) original copy. In the event of any conflict or inconsistency between the Vietnamese version and the English version, the Vietnamese English version shall prevail.

[REMAINDER OF THE PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, each of the Parties, through their duly authorized agents, has duly executed this Agreement as of the day and year first written above.

SELLER

BUYER

**[FARMER/FARMERS'
GROUP/COOPERATIVE]**

[]

[]

By: _____

By: _____

Name/Representative Name: **[]**

Name: **[]**

Title: **[]**

Title: **[]**

**[(Power of Attorney from the members of
[FARMERS' GROUP/COOPERATIVE] to
[] to represent the members is attached to
this Contract in Appendix 2.)][In the case of
farmers' group or cooperative, it is advisable
to add a POA to this contract.]**

[WITNESS]

On behalf of

[insert competent authority]

By: _____

Name: **[]**

Title: **[]**

APPENDIX 1

[FARMER/MEMBERS OF FARMERS' GROUP/COOPERATIVE

Name	Land Lot Size	Address	Livestock	[Other classifications]

APPENDIX 2
BUYER'S INSTRUCTIONS

POWER OF ATTORNEY

We, the undersigned persons, with our personal information specified below, as the principals, hereby authorize the authorized representative below (“**Authorized Representative**”) in relation to the establishment and implementation of the Contract for [Livestock] Breeding and Supply (“**Contract**”) between us and [] (the “**Buyer**”).

1. The Authorized Representative

Full name : []
Date of birth : []
ID Card : No [] issued by [] on [.....]

Permanent residence address : []
Position : []
Phone No. : []

2. Scope of authorization

Within the scope of authorization herein, the Authorized Representative shall be entitled to have full power for and on our behalf:

- a. To sign the Contract;
- b. To perform our rights and obligations as the seller as stipulated in the Contract, including (i) receiving any payments from the Buyer payable under the Contract, before distributing such amounts to each of us proportionally and (ii) receiving, signing and sending any notices from or to the Buyer under the Contract.
- c. To perform other work required for the purposes of executing and performing the Contract.

3. Term of authorization

The term of authorization will commence as from the signing date hereof to the date on which the Contract is terminated as a whole and all rights and obligations under the Contract have been fully exercised and performed.

Template Contract Form for Livestock Production

This Power of Attorney is made on_____.

The Principals:

<i>No.</i>	<i>Member</i>	<i>ID Card No.</i>	<i>Permanent Residence Address</i>	<i>Signature</i>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

The Authorized Representative:

[Name of the Authorized Representative]

APPENDIX 3

BUYER'S INSTRUCTIONS

1. Livestock for raising and breeding

- (a) [type or breed of chicken/hogs/goats/cows/other details]
- (b) Total No.: []

2. Minimum Quantity of Livestock to be supplied

- (a) Quality: [weight/age/others details]
- (b) Total No. []
- (c) Size or measurement: []

3. Selling Price

[]

4. [Reimbursement

Items to be reimbursed: [] [N&A: Please confirm if applicable.]

5. Terms of payment

- (a) Full payment of Fees [within [three (03)] working days after the Buyer takes possession of the Livestock] to be deposited to the bank account of the Seller **OR** [Thirty (30)] per cent the Fees as deposit upon [execution of this Contract/delivery of Livestock to be raised and bred to the Seller's facilities], and full payment of the balance of the Fees and reimbursement of full costs [within [three (03)] working days after the Buyer takes possession of the Livestock,] to be deposited to the bank account of the Seller.
- (b) Bank charges shall be the sole responsibility of the Buyer.

6. Place and Date of [Delivery by the Seller **OR Pick-up/Loading by the Buyer]**

- (a) Address: []
- (b) Date and time: []

6. Buyer's Instructions

- (a) Facility/Land Requirements
[physical structure requirements, placement percentages, water storage, others]
- (b) Feeding Requirements
[]
- (c) [] [Please add raising and breeding techniques, quality standards and other relevant technical requirements (if any).]
- (d) Other instructions as may be provided by the Buyer or its authorized representative from time to time

APPENDIX 4
FARMING PRACTICE INFORMATION

TABLE 1. PRODUCTION PRACTICES RECORD

Field name (No):.....
 Name of livestock:..... Variety.....
 Labor protection : Yes() ; No (). Waste disposal at permitted place: Yes() ; No ().

Date	Activities	Name of livestock	Name of disease	Quantity (kg, g, lit, ml,)	Follow instruction (mark x)	Warning sign (x)	Detection hazard	Implementer

Note: Table 1 used to record daily practice; Each livestock is recorded separately in different table for easy tracking.

TABLE 2. INPUT PURCHASING RECORD

Storage.....

Date	Name	Quantity (Kg, g, l, ml, package)	Price	Supplied by Cooperative / self-supply (x)	Other store		Buyer (name and signature)
					Name	Address	

Note: agricultural supplies store of the Cooperative having business license and under the control of the specialized agencies.

TABLE 3. SALE RECORD

Date	Sale				Detected hazard / handled (x)	Implementer
	Quantity (kg)	Price	Methods /Buyer			
			Retail (x)	Whole-sale/ for who		

Note : Table 3 is shared for the sales record of the livestock.

APPENDIX 5
AGREEMENT ON SELLING PRICE

Today, on this [] day of [], we, the undersigned parties to the Contract for [Livestock] Breeding and Supply No. [], dated [] (“Contract”):

Hereby agree that the Selling Price (as defined in the Contract) has been changed to:

This agreement comes into effect from the date first stated above and replaces all of our previous agreements on the Selling Price. This agreement is an integral part of the aforesaid Contract; and other provisions of such Contract remain unchanged.

SELLER []

BUYER

[]

By: _____

By: _____

Name/Representative Name: []

Name: []

Title: []

Title: []

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Contract for Domestic Road Transportation Service

No. []

This contract (the “**Contract**”) is made and entered into on [] by and between the two parties below.

1. [] (hereinafter referred to as the “**Transporter**”)

Representative:

Position:

Address:

Tel. No.:

Bank Account:

2. [] (hereinafter referred to as the “**Shipper**”)

Representative:

Position:

Address:

Tel. No.:

(Each party is hereinafter individually referred to as a “**Party**”, and collectively, as the “**Parties**”.)

The Parties hereby agree as follows:

1. Duties and Responsibilities of the Transporter

The Transporter agrees to and accepts the following duties and responsibilities:

- 1.1 In accordance with the instructions and specifications of the Shipper set out in an appendix to this Contract which may be separately agreed upon by the Parties from time to time and shall become an integral part of this Contract (the form of such appendix is stipulated in the annex to this Contract), to transport the items (the “**Goods**”) described in such appendix to the designated location(s) specified therein;
- 1.2 To provide appropriate, roadworthy and well-maintained vehicles specified in the appendix to this Contract, which is in very good condition for the transportation of the Goods;

Template Contract Form for Transportation

- 1.3 To provide qualified and licensed driver(s) and adequate personnel to transport the Goods , including its loading and unloading excluding its loading and unloading];
- 1.4 To be responsible, at its own cost and expense, for fuel, oil, tires and other parts, supplies and equipment, toll fees, maintenance and repair fees, administrative violation fine (if any) and other costs necessary for the performance of its duties and obligations under this Contract;
- 1.5 To be responsible for any and all losses and/or damages to the Goods during transportation, from point of loading to unloading at the designated destination(s),
- and Transporter hereby agrees that its liability under this Article shall not be subject to any limitation.
 - provided that the maximum level of compensation shall be [amount] except in the case of the Transporter's gross negligence or willful misconduct.
 - (None of the options above is applicable. For the avoidance of doubt, in accordance with Vietnamese laws, the liability of the Transporter is limited to the value of the Goods specified in an appendix to this Contract, except in the case of the Transporter's gross negligence or willful misconduct.)
- 1.6 To complete the transportation of the Goods without transferring such to another vehicle, regardless of whether such another vehicle satisfies the type and capacity specified in the appendix to this Contract, unless with prior written consent of the Shipper; and (This clause is applicable; This clause is not applicable.)
- 1.7 If delivery of Goods has been delayed after [forty eight (48) hours]:
- at the request of the Shipper, to pay the penalty for the delay, which shall be the amount of VND [] (in words: []) [per ton] per day for each day delivery has been delayed;
 - to hand over the Goods at its cost and expense to another transporter designated by the Shipper in writing to transport the Goods in place of the Transporter.

[Please choose and insert the relevant amount if the Shipper wishes to have a penalty clause in case of delay. Please note that the penalty is subject to the limitation (8%) under the Law on Commercial.]

2. Duties and Responsibilities of the Shipper

- 2.1 To pay the Transporter the fees specified in the appendix of this Contract (the "Fees") in accordance with the following terms:

- Full payment [upon acceptance of delivery by the Shipper/within [three (03)] working days after acceptance or delivery] to be deposited to the bank account of the Transporter.
- [Thirty (30)] per cent of Fees as deposit upon [execution of this Contract/loading of the Goods], and full payment of the balance [upon acceptance of delivery by the Shipper/within [three (03)] working days after acceptance or delivery] to be deposited to the bank account of the Transporter.
- Within [three (03)] working days after the end of a calendar month, the Parties shall reconcile the specific amount of Fees payable by the Shipper to the Transporter for the immediate preceding month, and the Shipper shall pay such amount to the Transporter within [three (03)] working days after the reconciliation result is accepted by the Parties and the Transporter issues proper VAT invoice(s) to the Shipper.

Bank charges shall be the responsibility of the Shipper.

- 2.2 To issue and provide the Shipper's instructions to the Transporter and provide necessary documents to the Transporter for the Transporter to execute the services contemplated under this Contract;
- 2.3 To pack [and code] the Goods. [Please confirm that the Shipper will assign a code (in form of letter, number or symbol) to the Goods for purposes of classification or identification.]
- 2.4 Subject to its discretion, to have the right to deduct from the Fees any losses or damages sustained by the Goods during its transportation, including its loading and unloading; and [In case the loss/damages is not covered by the insurance (or even if covered), please confirm if the Shipper wishes to have the option to deduct from the Fees such loss/damage (instead of the insurance).]
- 2.5 To obtain and maintain insurance for the value of the Goods.

3. General Conditions

3.1 Compliance with laws

- (a) Each Party shall comply with all applicable laws and regulations of Vietnam in fulfilling their respective obligations under this Contract.
- (b) The Transporter represents and warrants that it currently has in effect all the necessary licenses, permits and authorizations from the competent authorities to furnish the services hereunder, and the Transporter agrees to maintain such licenses, permits and authorizations in effect during the term of this Contract.

3.2 Notification

Each Party shall immediately notify the other Party in writing as soon as it becomes aware of any event, circumstance or condition that affects or may affect their fulfillment of its obligations under this Contract. Both Parties shall endeavor to agree upon any necessary actions to remedy such change, if capable of remedy.

3.3 Breach

The Parties hereby agree that in case of breach of this Contract, the affected Party shall be entitled to the following:

- (a) Compensation and remedies according to the laws of Vietnam; and
- (b) Remedies provided in this Contract, including:
 - (i) For the breaching Party to immediately cease or refrain from any action which constitutes breach of this Contract; and/or
 - (ii) Termination in accordance with Article 3.4.

For the avoidance of doubt, the affected Party's right to seek any remedy under this Article 3.3 shall not be exclusive of any other rights or remedies available to such Party, and nothing contained herein shall prevent such Party from pursuing any other remedies available to it.

3.4 Termination

- (a) This Contract may be terminated under any of the following conditions:
 - (i) Upon expiry of the effective term of this Contract in Article 4.4;
 - (ii) By the Shipper for any reason, provided that [ten (10)] days prior written notice is given to the Transporter; [Please confirm if the Shipper wishes to have this right.]
 - (iii) Where the Parties unanimously agree in writing to terminate this Contract; or
 - (iv) At the discretion of the affected Party, if the other Party has failed to perform or meet any material terms or conditions of this Contract, and in case of being capable of remedy, has failed to remedy the same within [seven (07)] days after receipt of notice of such failure from the affected Party.
- (b) The termination of this Contract shall not relieve a Party of any liability to the other Party on account of any breach under this Contract which occurred prior to its termination.
- (c) Any amount owed by a Party to the other Party shall immediately be payable within five (05) working days from the termination of this Contract.

4. Miscellaneous

4.1 Governing law and dispute resolution

- (a) This Contract shall be governed by, and construed in accordance with, the laws of Vietnam.

- (b) For any dispute during the implementation of this Contract, the two Parties shall mutually discuss and resolve any dispute. In case the dispute cannot be resolved, any Party may submit such dispute to the competent court in for legal resolution.

4.2 Force Majeure

In the case of occurrence of an event of force majeure, such as an outbreak of pests and disease, flood, drought, abrupt climate change, any other natural disasters, and any circumstance not in a Party's reasonable control ("**Force Majeure**"):

- each Party shall timely inform the other Party to discuss solutions and urgently avoid and overcome its consequences. When a Force Majeure arises, the two Parties shall comply with legal regulations regarding taking minutes recording the losses of each Party, with the confirmation of to determine each Party's responsibility upon contract termination.
- neither Party shall be in breach of this Contract nor liable for delay in performing, or failure to perform, any of its obligations under this Contract if such delay or failure result from Force Majeure. Each Party shall timely inform the other Party of the occurrence of the Force Majeure and use all reasonable endeavors to mitigate the effect of the Force Majeure on the performance of its obligations.

For the avoidance of doubt, no Party shall be excused, for any reason whatsoever, including but not limited to Force Majeure events, from any obligation to make any payment in accordance with the terms of this Contract.

4.3 Entire Agreement and Variations

- (a) All appendices attached hereto shall constitute an integral part of this Contract.
- (b) The two Parties agree that this Contract may be amended or varied at any time by written agreement of the Parties.

4.4 Effective term

This Contract will take effect from its signing date until , and shall continue thereafter from year to year, unless terminated in accordance with this Contract .

4.5 Language and counterparts

This Contract is made in two (02) original copies with the same validity, in both English and Vietnamese languages. Each Party shall keep one (01) original copy. In the event of any conflict or inconsistency between the Vietnamese version and the English version, the Vietnamese English version shall prevail.

[REMAINDER OF THE PAGE LEFT INTENTIONALLY BLANK]

IN WITNESS WHEREOF, each of the Parties, through their duly authorized agents, has duly executed this Agreement as of the day and year first written above.

TRANSPORTER

[]

SHIPPER

[]

By: _____

By: _____

Name: []

Name: []

Title: []

Title: []

[CONFIRMATION OF [insert competent authority]

On behalf of

[insert competent authority]

By: _____

Name: _____

Title: _____]

ANNEX
Form of Separate Appendix

APPENDIX No. [____]
to Contract for Domestic Road Transportation Service
No. [____] dated [____]

1. Goods

- (a) Type: []
- (b) Quantity: []
- (c) Weight/Volume: []
- (d) Value: []

2. Vehicle(s)

- (a) Type: [e.g., refrigerated trucks, open-air vehicle, enclosed vehicle, with side-rails, cube van, cargo van]
- (b) Capacity: [e.g., 2,000lbs, 4,000lbs]

3. Fees: [], inclusive of any and all taxes.

4. Shipper's Instructions

- (a) Place and Date of Loading
Address: []
Date and time: []
- (b) Date of Delivery to Designated Destination(s)
Address: []
Date [and Time]: []
- (c) Itinerary: []
- (d) Loading and unloading instructions: []
- (e) Instructions during transportation: []
- (f) Other instructions as may be provided by the Buyer or its authorized representative from time to time.

Template Contract Form for Transportation

TRANSPORTER

[]

By: _____

Name: **[]**

Title: **[]**

SHIPPER

[]

By: _____

Name: **[]**

Title: **[]**

Annex 4 : Report of Training in Japan

4.1 Objectives

This project will conduct On the Job Training by a consultant team through the activities and provide different types of training to local government officers, private companies and agricultural producers. Training program will be strengthen planning and management abilities for local officers and business planning, as well as management abilities and production techniques for private companies/producers through Japanese experiences and knowledge.

The title of the training course is “Capacity Development of Local officers, Private companies and Producers for Establishment of Food Value Chain in Nghe An Province”

1. Training objectives and Achievement goals

The objective of this training is to overcome challenges and improve the policy, regulation and technical development of agricultural products and marketing in Japan through lectures and field visits. All participants will be expected to proactively participate in the project activities and make an action plan (for AMPF) in order to continue their work after project completion.

Training Goals	<ul style="list-style-type: none"> (1) To understand outline of food value chain (2) To formulate and revise the policy/work plan and regulations by understanding challenges and strengthening about food value chain (3) To be accelerated the project implementation by improvement of personal and organization abilities of AMPF and private sectors
Achievement Goals	<ul style="list-style-type: none"> (1) To understand the approach by national and local governments regarding the food value chain (agricultural production and marketing) <ul style="list-style-type: none"> ➤ To learn development of production technology, outline of extension work, 2) support system and outline of marketing and private sectors, 3) challenges and creations related to 1) and 2) (2) To understand the role and work of Agricultural cooperatives <ul style="list-style-type: none"> ➤ To learn 1) organization, system, 2) roles of organization, 3) major activities (joint marketing, joint procurement, other business), challenges, and creations related to 1) and 2) (3) To understand the approach of agricultural producers <ul style="list-style-type: none"> ➤ To learn the outline of organization, challenges, creations and activities related to production techniques and marketing development (including contract agriculture and market needs survey/analysis, etc) (4) To understand the approach of private sectors (producers, processors, distributor) <ul style="list-style-type: none"> ➤ To learn outline of business, challenge, creations and activities related to production techniques and marketing development (including contract agriculture and market needs survey/analysis, etc) (5) To prepare an action plan (for AMPF) in order to accelerate the project activities when returning to their country <ul style="list-style-type: none"> ➤ To discuss and organize the capacity development needs of personal and organization with reviewing the training from (1) to (4) ➤ To discuss and organize the challenges which may arise for all actors, needs, approach which is possible introduction in Nghe An ➤ To prepare the action plan by all participants

4.2 Year of 2016

4.2.1 Training Period

The Training period is from 29th August to 10th September in 2016.

4.2.2 Trainees

Trainees selected from PMU or C/P organizations and executive members of agricultural companies. Number of participants and their category show the following.

- Department of Agriculture and Rural Development :DARD (1)
- Department of Industry and Trade :DOIT (3)
- Department of Planning and Investment: DPI (1)
- Department of Science and Technology :DOST (1)
- Department of Natural Resource and Environment :DONRE (1)
- Private companies (Tea, Vegetable, Rice) (3)

4.2.3 Training Program/Schedule

Training program was shown the following table.

Table 1 Program of Japan Training in 2016

Date	Time	Type	Contents	Training Location	Lodgement Location
Sep.25(Sun)		Move	Arrive at Tokyo (Narita/Haneda)		
Sep.26(Mon)	9:45 ~ 12:20	Lecture	Briefing	JICA Tsukuba	JICA Tsukuba
	13:30 ~ 16:00	Lecture	Training Orientation	JICA Tsukuba	
Sep.27(Tue)	9:30 ~ 12:00	Lecture	Lecture1: Japanese Farmers Association/group	JICA Tsukuba	JICA Tsukuba
	13:30 ~ 16:00	Lecture	Lecture2: Agricultural marketing in Japan		
Sep.28(Wed)	9:30 ~ 11:00	Lecture	Lecture3: Agricultural activity of Ibaraki Pref. Sales promotion of agricultural production.	Mito(Ibaraki)	JICA Tsukuba
	11:00 ~ 12:00	Lecture	Lecture4: Outline of JA's activity	Mito(Ibaraki)	
	13:30 ~ 14:30	Lecture	Lecture5: Outline of JA Zennoh Ibaraki's business	Higashiibaraki (Ibaraki)	
	14:30 ~ 15:30	Lecture	Visit to Groundnuts processing company	Higashiibaraki (Ibaraki)	
Sep.29(Thu)	9:30 ~ 10:30	Site Visit	Visit to Vegetable processing company (outline of business, quality control, etc)	Mito(Ibaraki)	JICA Tokyo
	11:00 ~ 12:00	Site Visit	Visit to Rice milling facility at JA Zennoh Ibaraki	Higashiibaraki (Ibaraki)	
	13:00 ~ 13:30	Site Visit	Visit to Farmer's market (JA zennoh Ibaraki facility)	Higashiibaraki (Ibaraki)	
	14:30 ~ 15:30	Site Visit	Visit to JA Zennoh's facility (Ibaraki central Vegetable and fruits station)	Higashiibaraki (Ibaraki)	
Sep.30(Fri)	9:00 ~ 10:30	Site Visit	Visit to Centr Whole sale market in Tokyo	Ota Market	JICA Tokyo
	10:30 ~ 11:30	Lecture	Visit to Ibaraki agricultural market promotion Tokyo office	Ota Market	
	13:30 ~ 15:00	Lecture	Visit to Food sales and marketing company (outline of business, etc.)	Tokyo	
	13:30 ~ 17:00	Lecture	Visit to fruits processing company (outline of business, etc)	Tokyo	
Oct.1(Sat)	10:00 ~ 16:00	Site Visit	Visit of Tokyo:Edo Tokyo museum and tour in Ueno or Akihabara	Tokyo	JICA Tokyo
Oct.2(Sun)		Move	Transfer (JICA Tsukuba→Tokyo→Shizuoka)	Shizuoka	Shizuoka
Oct.3(Mon)	9:30 ~ 12:00	Lecture	Sizuoka prefecture courtesy call, Lecture6: Outline of Agricultura in Shizuoka, Outline of Agricultural development plan for Fruits and Tea	Shizuoka	Shizuoka
	13:00 ~ 14:30	Lecture	Site Visit of Sizuoka prefectural Researche Institute of Agriculture and Forestry		
	15:00 ~ 16:30	Site Visit	Visit to vegetable processing ccompany (outline of business, etc.)		

Oct.4(Tue)	9:30 ~ 11:30	Site Visit	Visit to Tea processing company	Shizuoka	JICA Tokyo
	13:00 ~ 15:00	Lecture	Visit to Shizuoka prefectural Research Institute of Agriculture and Forestry (for Tea)	Shizuoka	
	15:00 ~	Site Visit	Transfer (Shizuoka→JICA Tsukuba)	JICA Tokyo	
Oct.5(Wed)	9:30 ~ 12:00	Site Visit	Visit to vegetable and fruits distributor (outline of business, etc)	Yokohama (Kanagawa)	JICA Tokyo
	13:30 ~ 17:00	Site Visit	Visit to rice husk charcoal plant (outline of business, etc)	Kawagoe (Saitama)	
Oct.6(Thu)	9:30 ~ 12:00	Lecture	Reflection of the training Reporting and Discussion (Preparation of action plan)	JICA Tokyo	JICA Tokyo
	13:30 ~ 17:00	Presentation/ Evaluation	Reporting / Discussion (Preparation of action plan)		
Oct.7(Fri)	9:30 ~ 12:00	Presentation/ Evaluation	Reporting / Discussion (Preparation of action plan)	JICA Tokyo	JICA Tokyo
	13:30 ~ 16:30	Presentation/ Evaluation	Presentation / Evaluation / Certification delivering		
Oct.8(Sat)		Move	Return to VietNam (JICA Tsukuba→Narita/Haneda)		

4.2.4 Results of the Training

The program was that the lecture on agricultural distributor and producer associations were provided in early part of the training, after that, the program was about lecture on policy and project of local government, and visit of research organization and private companies at Ibaraki and Shizuoka prefecture, and also was conducted visit of private companies around Tokyo. Trainees were prepared action plans based on their outcome.

In the results of the training provided the detailed of the lecture, appearance of the trainees, awareness of the trainees, and theme of the action plan.

(1) Approach by Local Government

The major topics of lectures at Ibaraki prefecture were the outline of agriculture, movement of agricultural policy, case study on sixth industry, and case study on new variety development for productivity improvement program. The trainees were interested in, the branding, meaning of the sixth industry, management system of new variety development, and jurisdictional division of new variety development. Regarding the policy of sales promotion, more interest topics were the target marketing, specific support program, etc. The trainees visited at sales promotion division in Tokyo office of Ibaraki prefecture that is a model of AMPF, and they could understand the role and purpose of AMPF, and procedure of business matching, and specific support for producers by local government through discussion and exchanging opinion with civil officers.

Lecture at Shizuoka prefecture, the topics were the policy on major agricultural products, fruits (citrus fruits) and tea development plan. The contents of Fruits development plan was about agricultural land improvement and consolidation. Moreover, the contents of tea development plan was about sales promotion strategy (value added, extension, sales promotion cooperated with the other division/research organizations, quality improvement). Regarding agricultural land improvement and consolidation, there was not any cases in Nghe An, therefore, the trainees had active discussion about support program by local government.

(2) Approach by Japanese Agricultural Cooperative

Regarding system of JA and JA Zennho, the major topics were role of JA, structure, outline of business. The trainees were interested in the trust business, such as interest rate, and target persons and also joint marketing such as procedure of decision of crop varieties and production items, and the contents of instruction by JA staff. The trainees visited the collecting and shipping station of rice and vegetable operated by JA. They were amazed by their scale, excellent facilities, feature, and strict quality control up to shipping of products.

(3) Approach by Agricultural Producers

The field visits were conducted at Ibaraki and Shizuoka. The trainees visited farmer's market operated

by JA. The trainees understood how to keep the quality of products by producers through having lunch at restaurant prepared by local products and observing their products at the shop.

(4) Approach by Private Company

The trainees visited 7 different business type of companies, which were vegetable processing, middle trading/processing, and specialized trading company, etc. The major topics were the outline of business, method of quality control, and difficulty of procurement of materials, and establishment of trust relationship between companies to consumers. The trainees understood the above topics through the exchange opinions with each company members.

(5) Awareness and Outcomes through the Training

- Regarding scale, structure, system of Japanese agricultural cooperative, and some issues facing the JA
- Systematic distribution system for agricultural products from producers to consumers
- Integrated agricultural land use methodology and potential of its development
- Management of land resources, specially, important of land use plan
- Consistent system from production management system to delivery of consumer
- Method of establishment of a trust relationship among stakeholders (farmer, company, consumer, etc.), and also difficulty of its operation in Viet Nam

(6) Preparation of Action Plan

The trainees were divided 3 groups and prepared 3 action plans in this year.

- (i) Establishment of Food value chain for groundnuts (Value added of groundnuts)
- (ii) Development of productivity and consumption of safety agricultural products
- (iii) Establishment of Passion fruits nursery center

Comment from participants are the following,

- Whether implementation of action plan will contribute increasing of company's benefit
- Whether farmers and companies establish relationship for contract agriculture
- Whether Multi-sector or private sector had implemented project with cooperation

4.3 Year of 2017

4.3.1 Training Period

The Training period is from 23rd July to 5th August in 2017.

4.3.2 Trainees

Trainees selected from PMU or C/P organizations and executive members of agricultural companies. Number of participants and their category show the following.

- Nghe An Provincial People's Committee: PPC (1)
- Department of Agriculture and Rural Development :DARD (3)
- Department of Finance :DOF (3)
- Nghe An Provincial Cooperative Alliance : (1)
- Department of Health :DOH (1)
- Private companies (Tea, Vegetable, Rice) (1)

4.3.3 Training Program /Schedule

Training program was shown the following table.

Table 2 Program of Japan Training in 2017

Date	Time	Type	Contents	Training Location	Lodgment location
Sep.23(Sun)	~	Move	Arrival at Tokyo (Narita/Haneda) to JICA Tsukuba		JICA Tsukuba
Sep.24(Mon)	9:00 ~ 12:00	Move	Briefing	JICA Tsukuba	JICA Tsukuba
	13:30 ~ 16:00	Lecture	Training Orientation	JICA Tsukuba	
Sep.25(Tue)	9:00 ~ 12:00	Lecture	Lecture 1 : Japanese Farmers Association/group,	JICA Tsukuba	JICA Tsukuba
	13:00 ~ 17:00	Lecture	Agricultural marketing in Japan	JICA Tsukuba	
Sep.26(Wed)	9:30 ~ 10:30	Lecture	Lecture 2 : Agricultural promotion activities/policy in	Mito(Ibaraki)	JICA Tsukuba
	10:30 ~ 12:00	Lecture	Lecture 3: Outline of JA's activity		
	13:40 ~ 14:40	Site visit	Visit to JA Zennoh's facility (Ibaraki central Vegetable and fruits station)	Higashi Ibaraki (Ibaraki)	
	15:30 ~ 16:30	Site visit	Farmer's lotus field at Tsuchiura	Tsuchiura (Ibaraki)	
Sep.27(Thu)	9:00 ~ 12:00	Site visit	Visit to Vegtable processing company (outline of business, quality control, etc)	Mito(Ibaraki)	Tokyo
	13:00 ~ 16:00	Site visit	Visit to Farmer's market	Namegata (Ibaraki)	
Sep.278(Fri)	9:00 ~ 12:00	Site visit	Visit to Central Whole sale Market in Tokyo	Tokyo	Tokyo
	13:00 ~ 17:00	Lecture	Visit to Ibaraki agricultural market promotion Tokyo Office	Tokyo	
Sep.29(Sat)	~		(Self learning)	JICA Tokyo	Tokyo
Sep.30(Sun)	~	Move	Transfer (JICA Tokyo to Shizuoka)	Shizuoka	Shizuoka
Sep.31.(Mon)	9:00 ~ 10:00	Lecture	Lecture 4 : Agriculture and marketing promotion Policy in Shizuoka Pref.	Shizuoka	Shizuoka
	10:00 ~ 11:00	Lecture	Lecture 5: Policy on Tea production and sales promotion in Shizuoka		
	11:00 ~ 12:00	Lecture	Lecture 6: Plan of agricultural land use development (for fruits farm)		
	13:30 ~ 14:45	Site visit	Visit to Shizuoka prefectural Research ed Institute of Agriculture and Forestry Fruits Tree Research Center		
	15:15 ~ 16:45	Site visit	Visit to Agricultural processing company (beverage processing)		
Aug.1(Tue)	10:00 ~ 11:30	Site visit	Visit to Agricultural processing company	Hamamatsu (Shizuoka)	JICA Tsukuba
	13:30 ~ 14:45	Site visit	Visit to Shizuoka prefectural Research ed institute of Agriculture and Forestry	Iwata (Shizuoka)	
	15:00 ~ 17:00	Move	Move (Shizuoka to JICA Tsukuba)	JICA Tokyo	
Aug.2(Wed)	9:00 ~ 12:00	Lecture	Lecture 7: Outline of Japanese G.A.P. and trend of Japanese consumers	Tokyo	JICA Tsukuba
	14:00 ~ 17:00	Presentation/Evaluation	Reporting/Discussion (Preparation of action plan)	Tokyo	
Aug.3(Thu)	7:30 ~ 10:00	Lecture	Outline of company and quality control for agricultural products, etc.	Kanagawa	JICA Tsukuba
	10:00 ~ 12:00	Site visit	Visit to laboratory room	Kanagawa	
	13:00 ~ 17:00	Site visit	Visit to processing and distribution facility	Saitama	
Aug.4(Fri)	10:00 ~ 12:00	Presentation/Evaluation	Reporting/Discussion (Preparation of action plan)	JICA Ibaraki	JICA Tsukuba
		Presentation	Presentation		
	14:00 ~ 16:00	Evaluation	Evaluation and Certification delivering	JICA Ibaraki	
Aug.5(Sat)	~	Move	Return to VietNam (JICA Tsukuba →Narita/Haneda)		

4.3.4 The Results of the Training

The program component was same as in 2016 and lecture on agricultural distributor and producer associations were provided in early training, after that in later training was lecture on policy and project of local government, and visit of research organization and private companies at Ibaraki and Shizuoka prefecture, and also was conducted visit of private companies around Tokyo. Trainees were prepared action plans based on their outcome.

In the results of the training provided the detailed of the lecture, appearance of the trainees, awareness of the trainees, and theme of the action plan.

(1) Approach by Local Government

Lectures provided in Ibaraki Prefecture were the following contents; outline of Agriculture, movement

of agricultural policy, sales promotion of agricultural and livestock products, case study on sixth industry. Specially, sales promotion division in Ibaraki is the model of AMPF that was established by the project. The trainees could understand about roles of AMPF to receive lecture and to exchange opinions with civil officers. The topics that the trainees were more interested were support system and approach by local government; such as 1) establishment of local brand and its advertisement, approach to action of sales and distribution promotion for matching to producers and buyers, 2) control system and administrative division of variety development for agricultural products, 3) sales strategy of target agricultural products.

Lectures provided in Shizuoka prefecture were the following contents; policy on tea and fruits production (included in value added, extension program, sales promotion cooperated with multi sector and research centers, quality improvement). The trainees gave a presentation about the outline of Agriculture in Nghe An to civil officers.

The trainees visited research institute to receive the following explanations; 1) development of cultivation technology for purpose of variety development and improving productivity, 2) policies on determination methodology of research issues that incorporate some opinions of producers and certain organizations, 3) extension methodology. The topics that the trainees were interested were that how research institute incorporate market needs to approach research issues, and Japanese system such as systematic research included in from production to sales. These systems are different from Vietnam, therefore, if Vietnamese adopt it, it will be helpful to improve research system.

(2) Approach by Agricultural Cooperatives

The topics of Agricultural Cooperatives were about outline of business and role of agricultural cooperatives, and some business cases. The trainees visited collecting and shipping facility and received explanation of outline and roles of facility. There were some questions about detailed business regarding target for credit service and interest rate, and roles by different structure level of organization and selection of board members, and staff recruit. In addition, it seems that it was very helpful for the trainees to know issues facing Japanese agricultural cooperatives.

(3) Approach by Agricultural Producers

The topic of approach by agricultural producers was outline and extension system of G.A.P., and tips of extension and good practices were provided. It seemed that the C/Ps understood merit of introducing G.A.P. to producers. Visit of farmer's market impressed to the trainees about sales method. The concept of farmer's market is not only a place for farmers to sell but also it would introduce the attractive agricultural products to consumers by combination with diversity of facilities, for example, experimental farm, restaurant and museum, etc.

(4) Approach by Private Sector (Processing, Sales, Distribution)

The trainees visited 5 companies, which were a processing vegetable and sales company, farmer's market based on the private company (theme park), a beverage maker, a prepared food company, and a middle trader of vegetable and fruits (include in processed vegetable sales and physical and chemical analysis). It seemed that the trainees impressed companies' effort to maintain and improve safety and liability of products. Some trainees got the idea of business through the field visit.

(5) Awareness and Outcome through the Training

- Policy making to establish agricultural and livestock distribution system from producer to consumer and appropriate support by (local) government
- Strengthen of ability of agricultural cooperative
- Strengthen of ability of agricultural extension officers with G.A.P. instruction
- Support of export by government
- Promotion of agricultural processing and branding by the province
- Promotion of contract agriculture

- Planning and implementation of systematic agricultural research plan

(6) Preparation of Action Plan

Divided 2 groups of trainees and prepared 3 action plans in this year.

- (i) Food value chain for tea in Nghe An
- (ii) Improvement of value of agricultural and livestock products in Nghe An (Establishment of tea, Orange, Rice, Ground nuts, Vegetable value chain)

Comment from participants are the following.

- Necessity of budget securement for implementation of action plan
- Reflect on Japanese' experience to Instruction of Viet GAP

4.4 Year of 2018

4.4.1 Training Period

The training period is from 1st August to 11th August in 2018.

4.4.2 Trainees

Trainees selected only from PMU or C/P organizations. Number of participants and their category show the following.

- Department of Agriculture and Rural Development :DARD (3)
- Department of Transport :DOT (1)
- Department of Industry and Trade :DOIT (1)

4.4.3 Training Program/Schedule

Training program was shown the following table.

Table 3 Program of Japan Training in 2018

Date	Time	Type	Contents	Training Location	Lodgment location
Jul.24 (Tue)	16:00 ~ 17:00	Lecture	Training Orientation	Nghe An	Nghe An
Aug.1(Wed)		Move	Arrival at Tokyo (Narita/Haneda) to Ibaraki Prefecture		
	10:45 ~ 11:45	Lecture	Lecture1: Agricultural promotion activities/policy in Ibaraki Pref. and JA's activities	Mito(Ibaraki)	JICA Tsukuba
	11:45 ~ 12:30	Lecture	Lecture2: Outline of JA's activity	Higashiibaraki (Ibaraki)	
	13:45 ~ 15:00	Site visit	Visit to JA Zennoh's facility (Ibaraki central Vegetable and fruits station)	JICA Tsukuba	
16:15 ~ 16:45	Lecture	Brefing			
Aug.2(Thu)	9:15 ~ 10:30	Site visit	Visit to Vegtable procesing company (outline of busines s, aqriculture and marketing promotion Policy in Shizuoka Pref.	Mito(Ibaraki)	JICA Tsukuba
	10:45 ~ 11:30	Site visit	Visit to vegetable producers (field visit, outline of busines s, etc.)	Mito(Ibaraki)	
	12:50 ~ 15:30	Site visit	Visit to Farmer's market	Namegata (Ibaraki)	
Aug.3(Fri)	9:00 ~ 11:30	Site visit	Visit to Central Whole sale Market in Tokyo and Ibaraki agricultural market promotion Tokyo Office	Tokyo	JICA Tokyo
	14:00 ~ 16:00	Lecture	Lecture 3: Visit to distribution company (outline of busines s and sales promotion, etc.)	Kanagawa	
Aug.4(Sat)	9:00 ~ 12:00	Lecture	Lecture4: Japanese Farmers As sociation/group	JICA Tokyo	JICA Tokyo
	13:00 ~ 17:00	Lecture	Lecture5: Agricultural marketing in Japan		
Aug.5(Sun)		Move	Transfer (JICA Tokyo to Shizuoka)	Shizuoka	Shizuoka
Aug.6(Mon)	9:00 ~ 10:00	Lecture	Lecture6: Agriculture and marketing promotion Policy in Shizuoka Pref.	Shizuoka	Shizuoka
	10:00 ~ 11:00	Lecture	Lecture7: Policy on Tea production and sales promotion in Shizuoka		
	11:00 ~ 12:00	Lecture	Lecture8: Plan of agricultural land use development (for fruits farm)		
	13:30 ~ 14:45	Site visit	Visit to Shizuoka prefectural Researched Institute of Agriculture and Forestry Fruits Tree Research Center		
	15:15 ~ 16:45	Site visit	Visit to Farmer's market oeprated by JA	Shizuoka	
Aug.7(Tue)	10:00 ~ 11:45	Site visit	Visit to Agricultural processing company	Hamamatsu (Shizuoka)	JICA Tsukuba
	14:20 ~ 15:50	Site visit	Visit to road side station	Fujikawa (Shizuoka)	
	16:00 ~	Move	Transfer (Shizuoka to JICA Tsukuba)	JICA Tsukuba	
Aug.8(Wed)	10:00 ~ 15:00	Site visit	Visit to sixth industrialized company (outline of busines s, etc.)	Katori (Chiba)	JICA Tsukuba
Aug.9(Thu)	9:00 ~ 12:00	Site visit	Visit to Farmer's Market operated by private sector and farmer's vegetable field	Tsukuba (Ibaraki)	JICA Tsukuba
	13:00 ~ 17:00	Reporting/Discussion	Reporting/Dis cus sion (Preparation of action plan)	JICA Tsukuba	
Aug.10(Fri)	10:00 ~ 12:00	Reporting/Discussion	Reporting/Dis cus sion (Preparation of action plan)	JICA Tsukuba	JICA Tsukuba
	14:00 ~ 16:50	Pres entation Evaluation	Pres entation of Action plan Evaluation and Certification delivering		
Aug.11(Sat)		Move	Return to VietNam (JICA Tsukuba →Narita/Haneda)		

4.4.4 Results of the Training

The trainees were only local official in this year. The component of the training program was same as last year, to learn about policy and program of local government and approach of private companies. However, a part of the schedule was changed due to the delay of the arrival. In early training, lecture and visit at Ibaraki, then lecture on agricultural distributor and producer associations were conducted comparing to Viet Nam. In later training, lecture and visit at Shizuoka to learn policy on fruits production and sixth industrialization, and visit of private companies around Tokyo. Trainees were prepared action plans based on their outcome.

The results of the training provided the detailed of the lecture, appearance of the trainees, awareness of the trainees, and theme of the action plan.

(1) Approach by Local Government

The program was almost same as in 2017 about agricultural policy in Ibaraki. The trainees were interested in approach of administrative system and support program for promotion activities of agricultural and livestock products. The lecture at Tokyo office was about roles of wholesale market,

organization, and history of wholesale market. And lecture explained roles of Tokyo office, organization, and outline of business. The trainees were more concerned about authority of Tokyo office, inspection of products in the marketplace, selection of sample, and planning method of production and sales to market needs.

Lectures provided in Shizuoka were mainly citrus production, and contents are the followings: outline of agriculture, strategy on sales promotion as for the citrus promotion. The trainees took more interest the reason of consumption declining of citrus, quality inspection of citrus that are sold as functional food, and how to apply for citrus products as functional foods. The research institute provided explanation on new variety and cultivation technology development, storability improvement, and fruits processing technology. Then the trainees observed experimental farm and research facilities. As for the organizational structure of research institute in Japan, the trainees took an interest research institute improved by each prefecture same as they visited in Shizuoka.

(2) Approach by Agricultural Cooperatives

Lecture on Agricultural Cooperative was organizational structure, outline of business, specific programs. The trainees had interest in involvement of local government, scale of organization, and roles of each organization, etc. Visiting JA's facility, the trainees received explanation about collecting and shipping of agricultural products, one of the business of JA. The trainees were more concerned how to decide price and the grade of products, and dealing method. The trainees visited Farmer's market operated by JA at Shizuoka, and they got explanation about outline of business, procurement of commodities, marketing method. Then they tasted processed fruits. The trainees seemed that they deeply understood Japanese Agricultural Cooperatives through the lectures and observations.

(3) Approach by Agricultural Producers

The trainees visited Vegetable producer at Ibaraki and Citrus producer at Shizuoka instead of small-scale farmers. The trainees observed hydroponic culture and nursery house, and got explanation about situation of contract agriculture between processing company. They were surprised at farmer's comment that he told that I do not so much competing with other large-scale producers but create network between them, and to defeat imported agricultural products. The trainees received explanation about cropping patten for citrus in year-round shipping by greenhouse, and they impressed the scale of fruits farm and its effect of development of the fruits, which was explained by the research institute.

(4) Approach by Private Companies

Field visit was conducted at 6 companies, which were different type of business at Ibaraki, Shizuoka, Kanagawa, Chiba. Visited places are the followings:1) Vegetable processing and sales company, 2) Farmer's market with restaurant, museum, etc. based on the private company, 3) Middle trader of vegetable and fruits, physical and chemical analysis, 4) Roadside station operated by private sector which transferred from semi-public sector, 5) As 2 good practices of sixth industrialization, one is the tea processing company from production to sales, the other is operating some business related to agriculture, such as agricultural products processing, recycling farm (compost making), theme park, etc. The trainees understood how these companies explore customer's needs, and how they approach products development and business development. In the theme park, including farmer's market, the trainees impressed that not only the supply of high-quality agricultural products that could obtain consumer trust, but also various innovations, such as providing experiential services and accommodation. Visiting of companies gave a good example of business in Viet Nam in the future to the trainees.

(5) Awareness of the Trainees

Outcomes and awareness of the trainees through the training show the follows. They largely achieved their goals.

- Local government promotes policy to secure sales destination, such as delivering market needs to farmers

- Production and sales of crops that meets market needs
- Strengthen of capacity development of Agricultural Cooperatives
- Promoting of contract agriculture
- Promoting of sixth industrialization of agriculture
- Construction, management, operation of Roadside station
- PR activities and branding promotion of agricultural and livestock products in Nghe An

(6) Theme of the Action Plan

One group formed for preparation of action plan and made a presentation. The theme is management and operation of AMPF after completion of the project. After presentation, participants gave some comment.

Theme : Planning of Agricultural Marketing Development

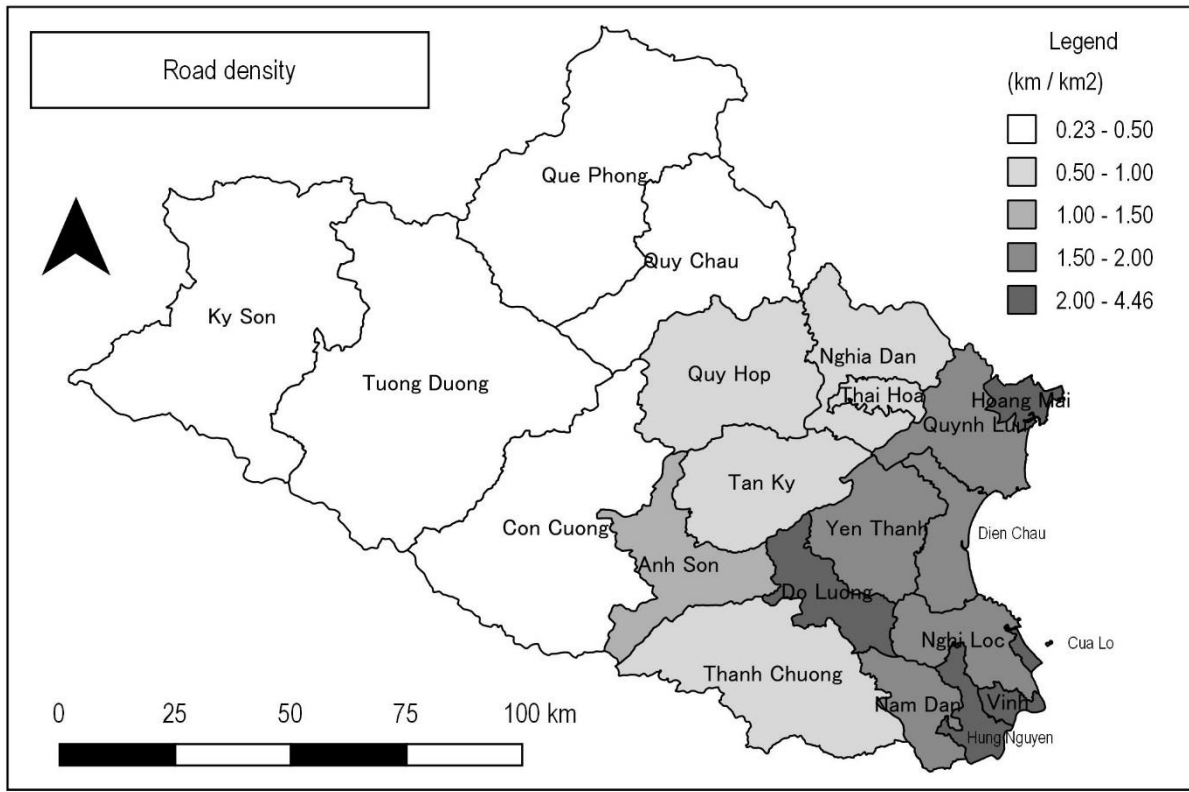
The comments and suggestion are the following.

- To use the results of questionnaire of matching event and follow-up survey, when extension workers prepare proposal
- To understand buyer' feeling and view point to develop market in the future
- Since the growth of the Viet Nam has been remarkable, the results of the training in Japan for the past three years should be prepared business ahead of other provinces.

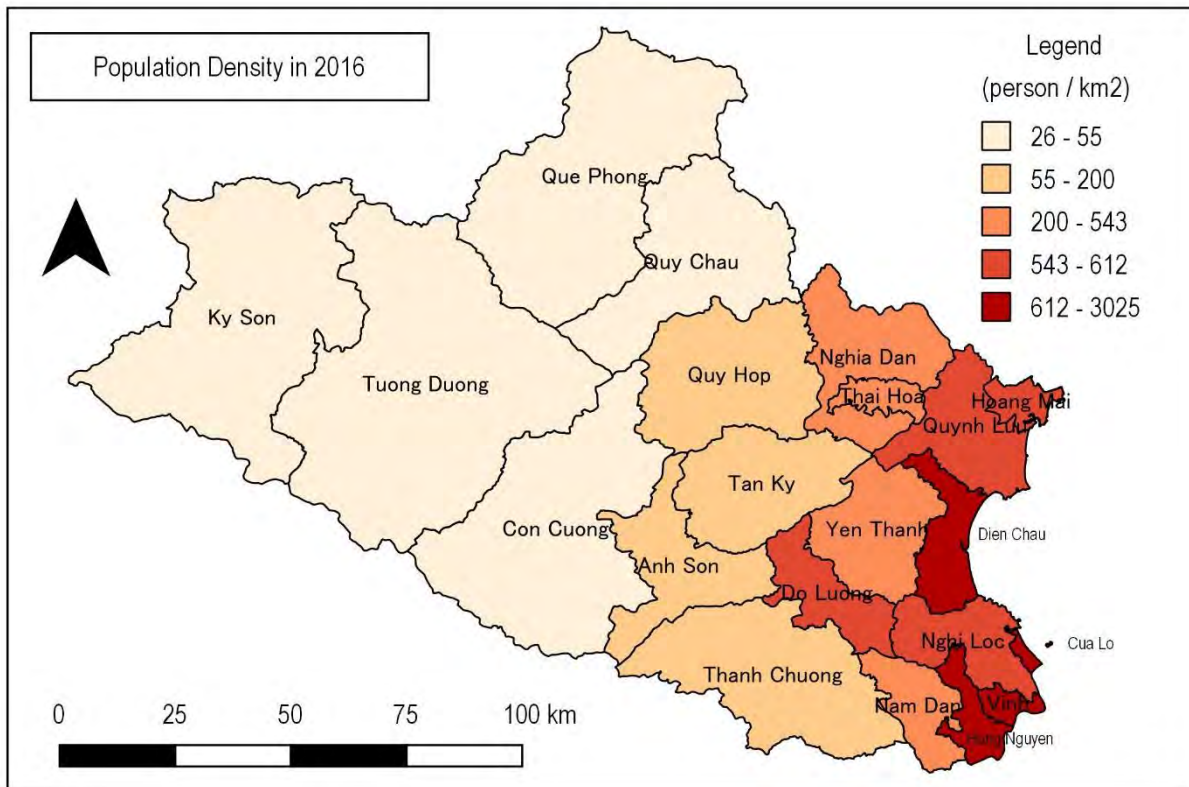
Annex 5 : Primary Data for Zoning

Socio-economic Aspects

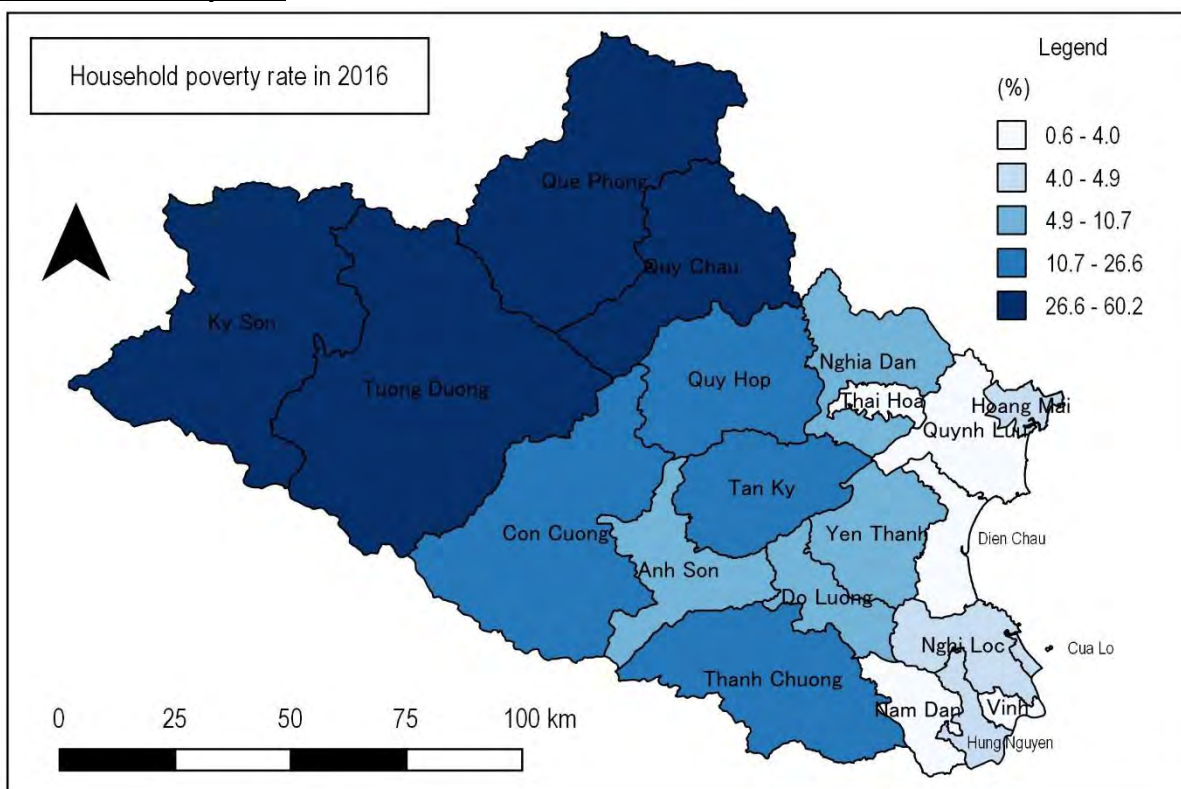
Road Density



Population Density

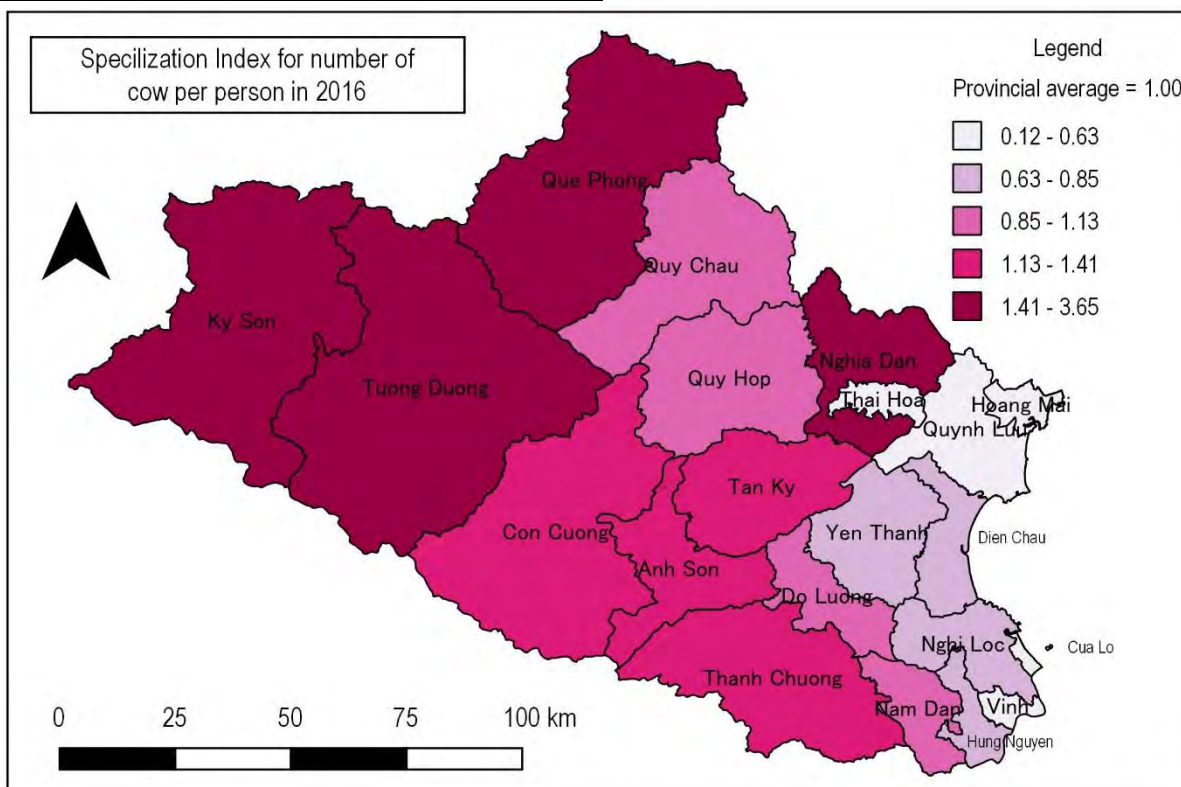


Household Poverty Rate

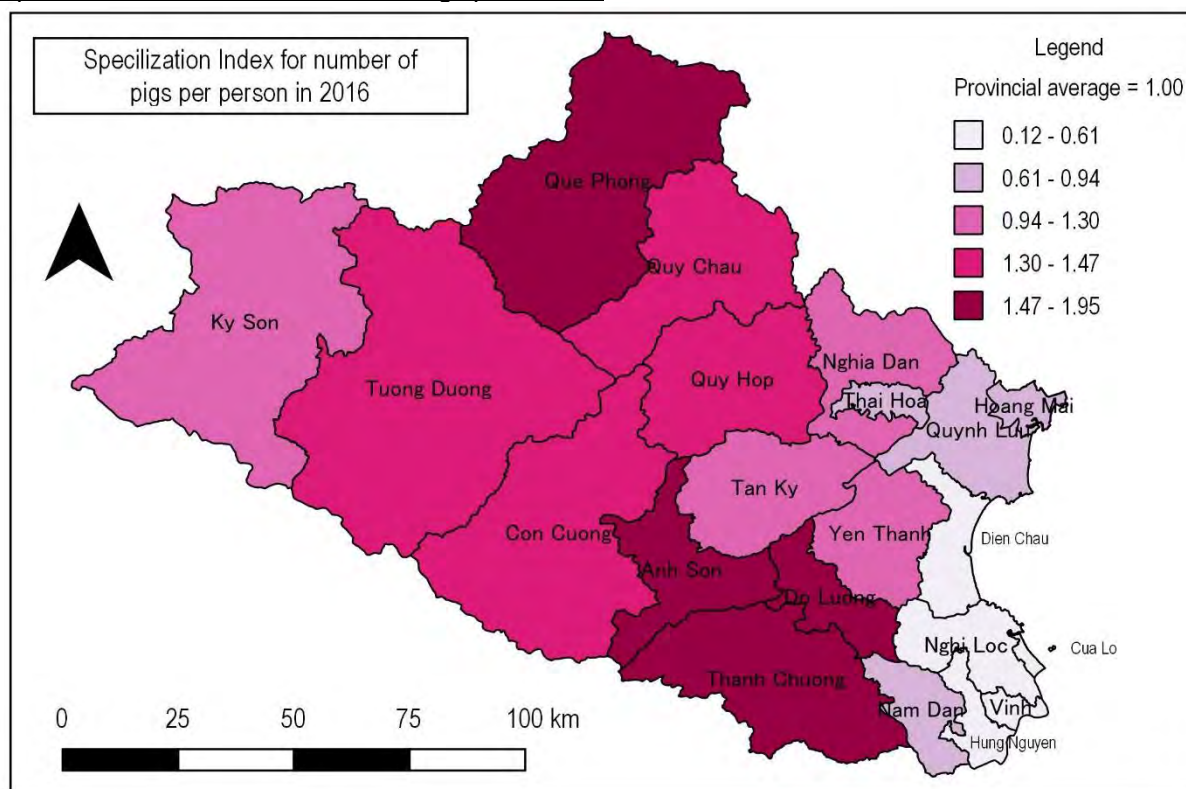


Livestock Aspect

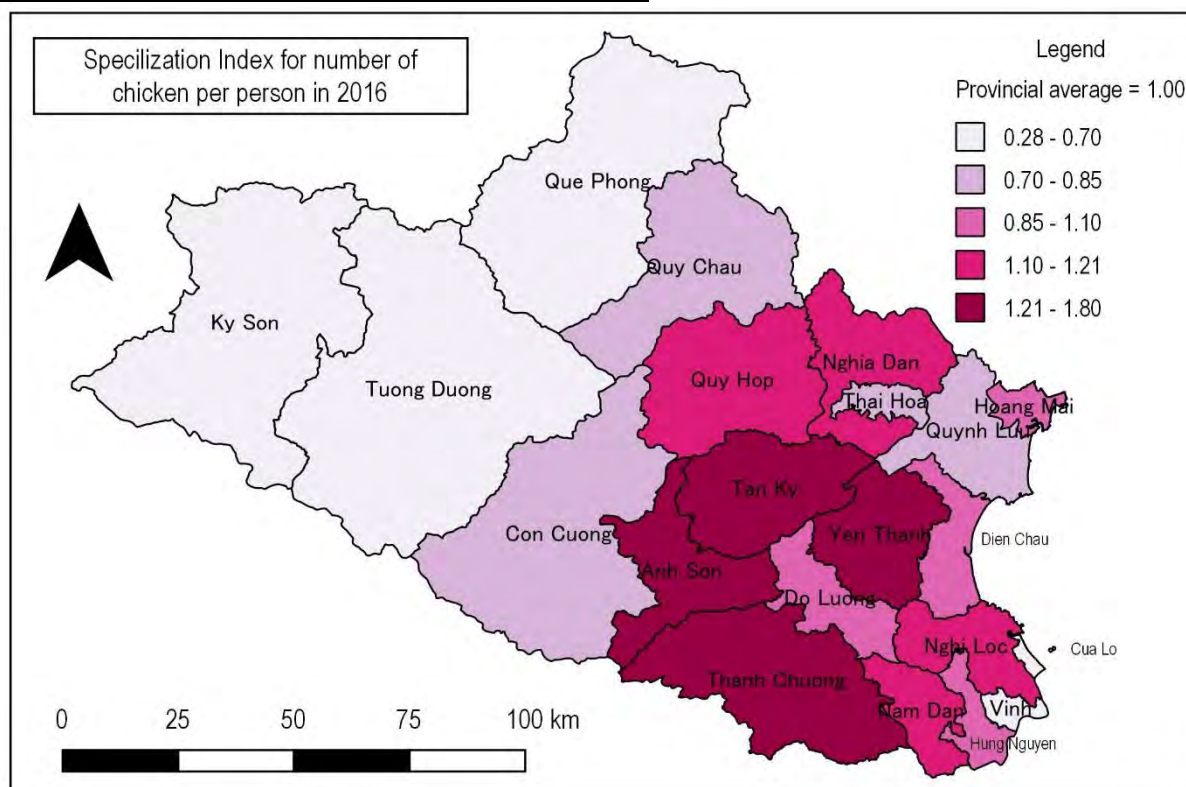
Specialization Index for Number of Cow per Person



Specialization Index for Number of Pigs per Person

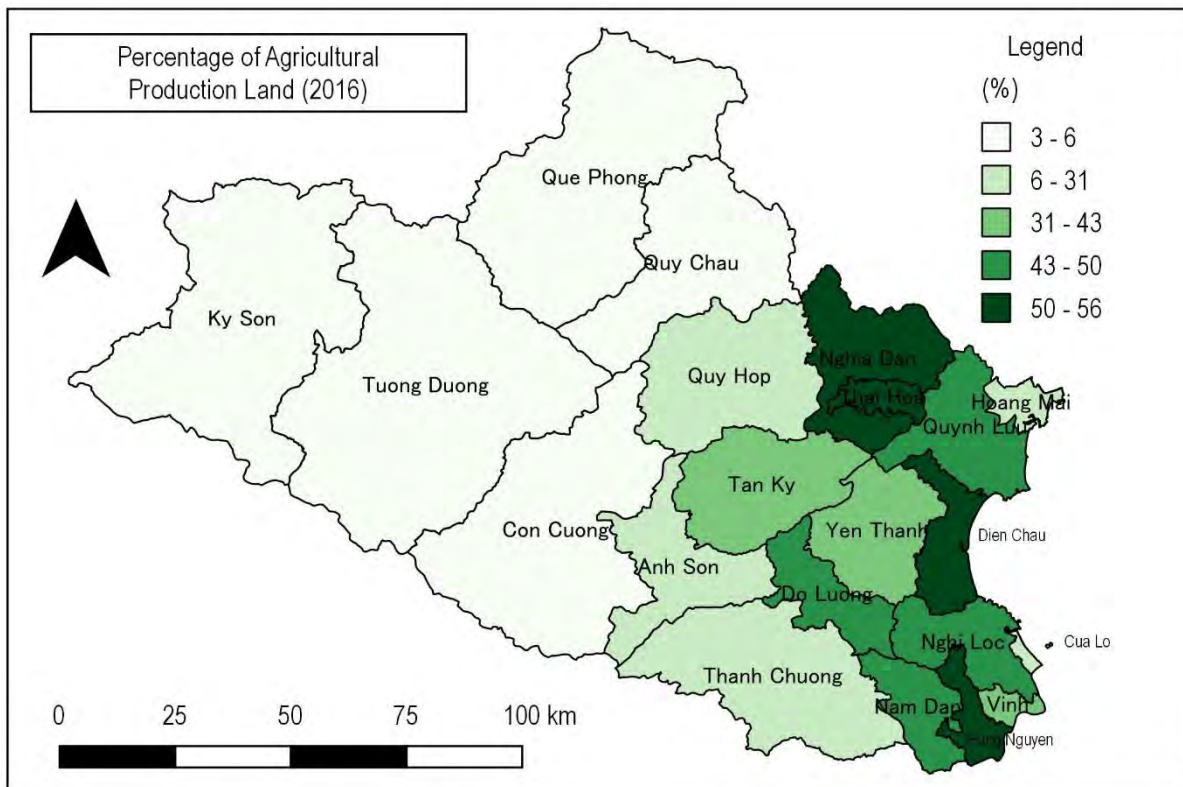


Specialization Index for Number of Chicken per Person

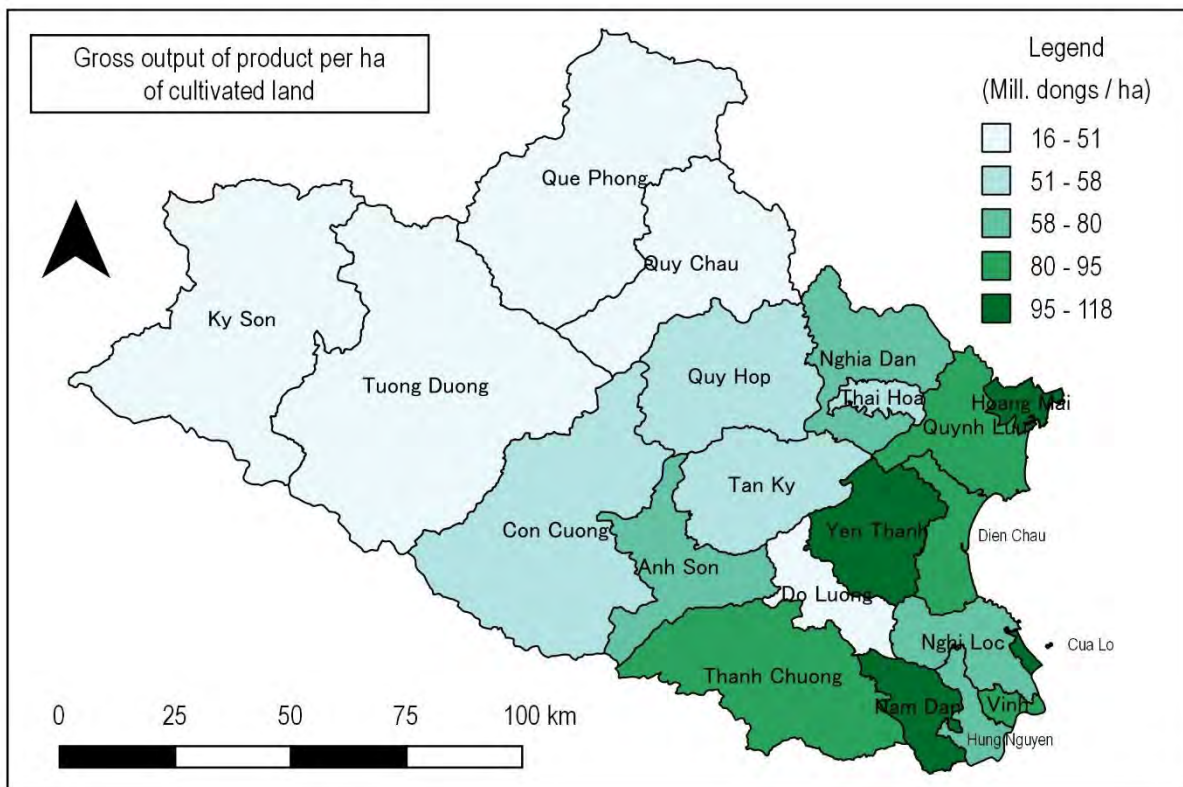


Crop Productin Aspect

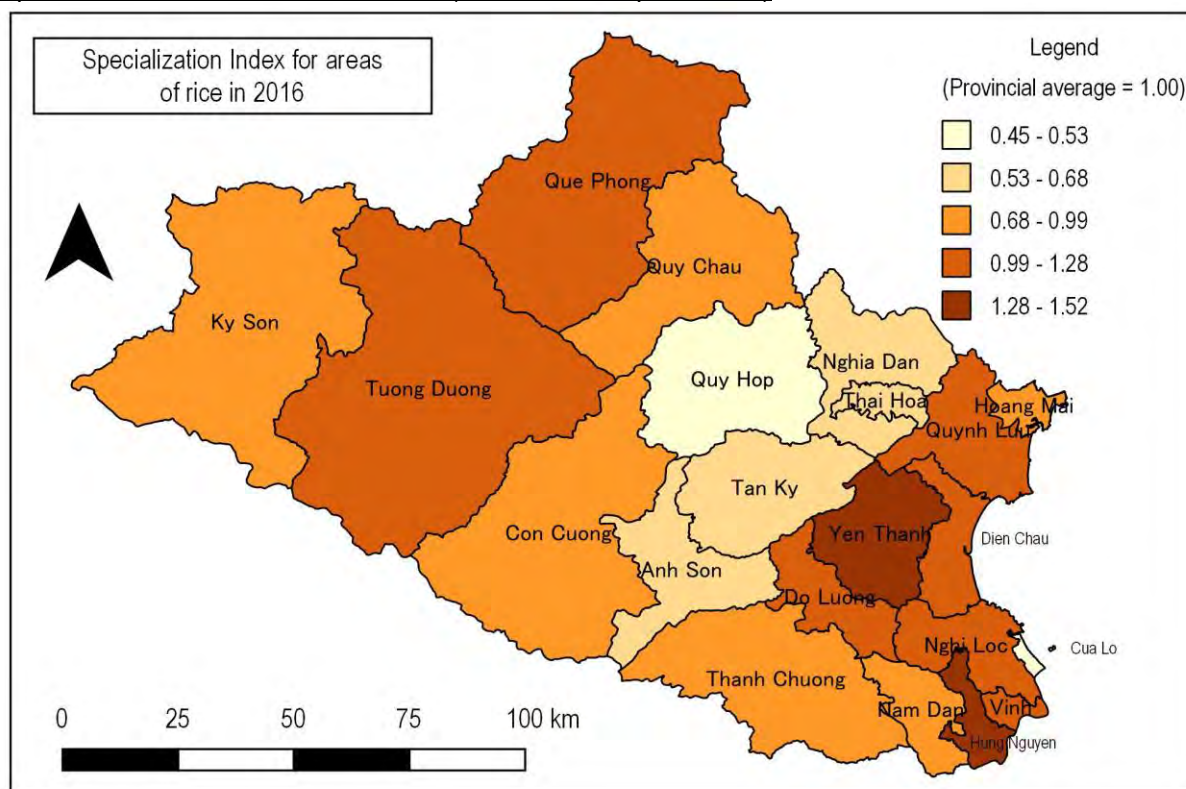
Percentage of Agricultural Production Land



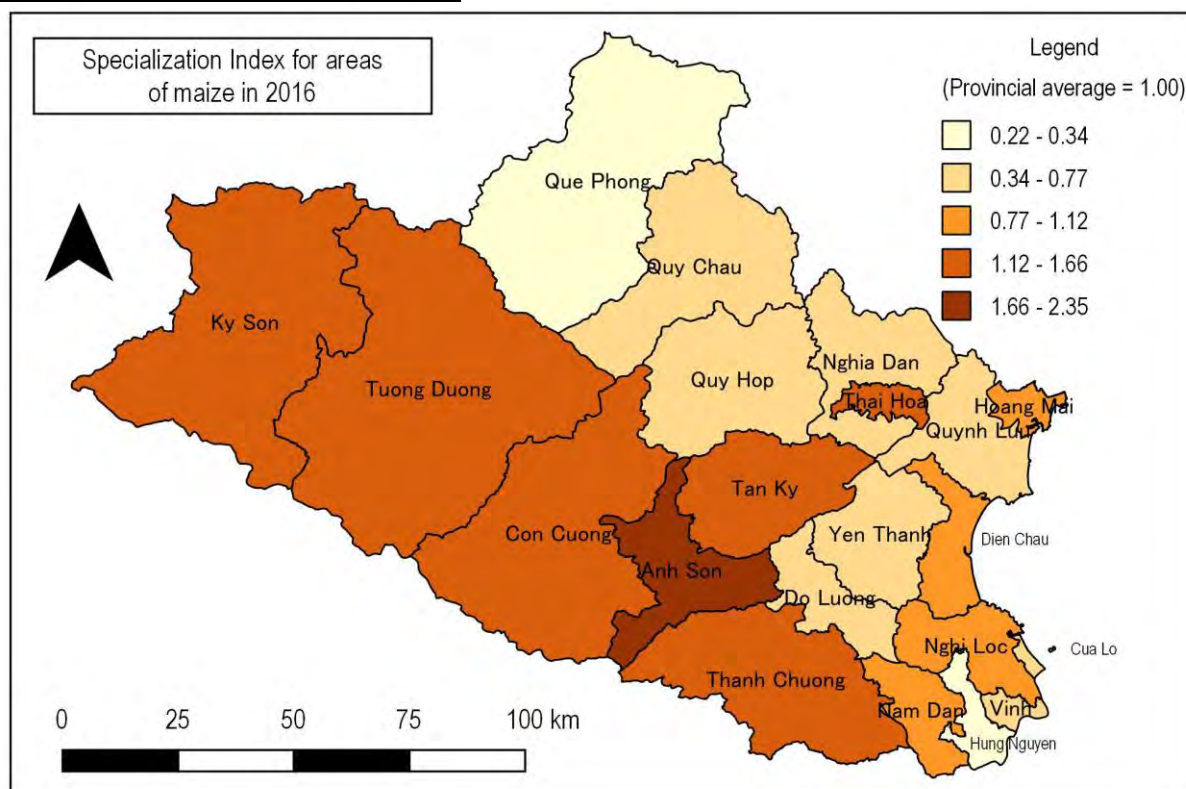
Gross Output of Product per ha of Cultivated Land



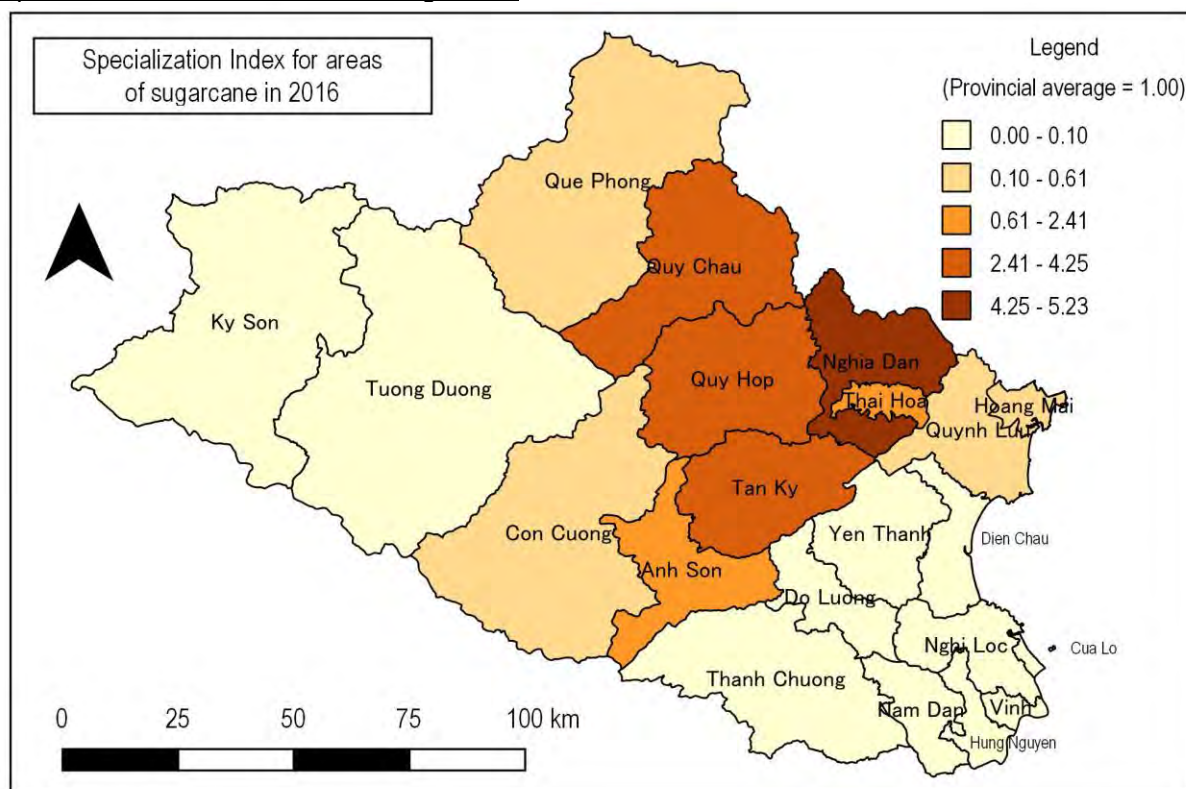
Specialization Index for Areas of Rice (Lowland and Upland Rice)



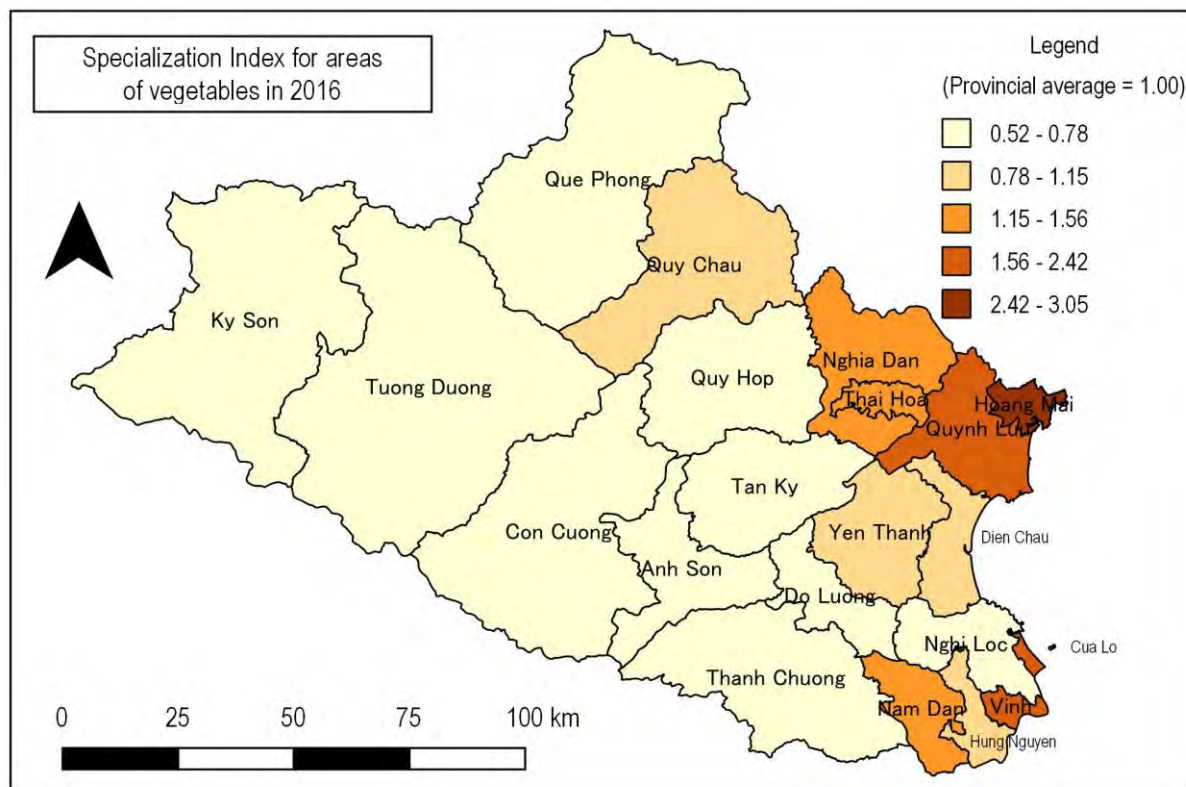
Specialization Index for Areas of Maize



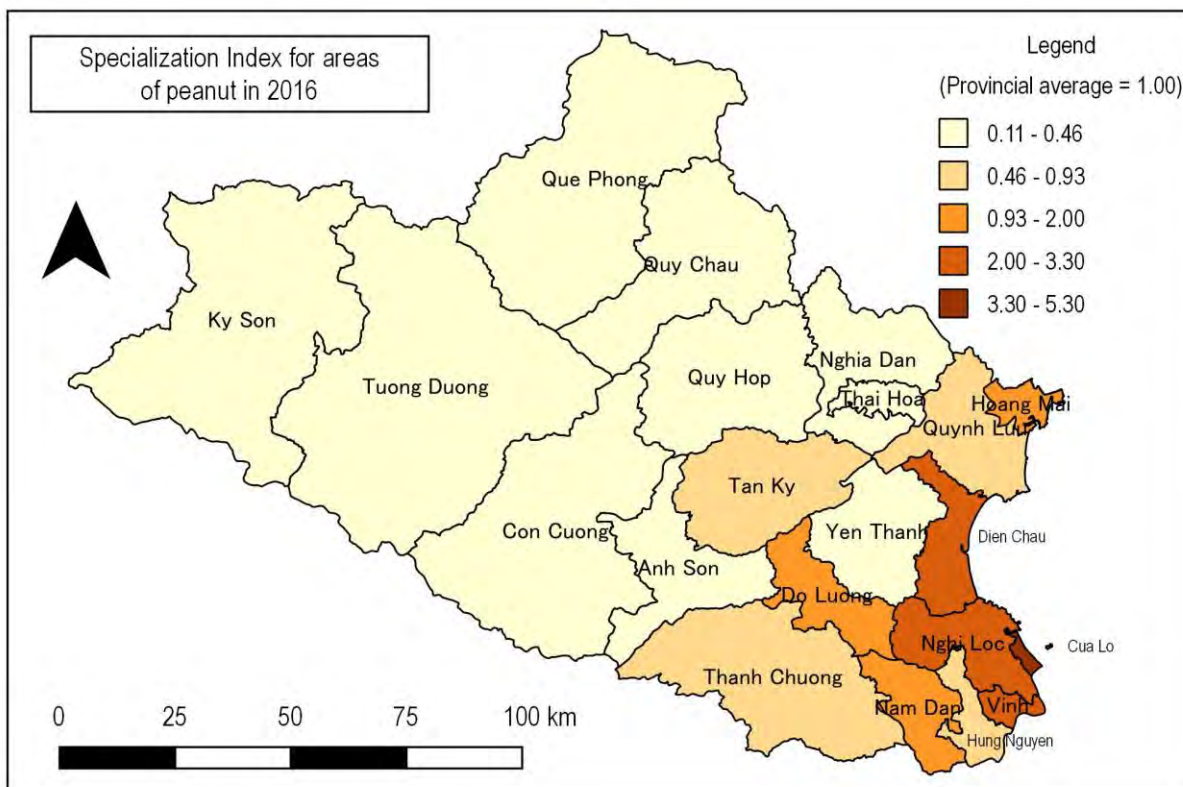
Specialization Index for Areas of Sugarcane



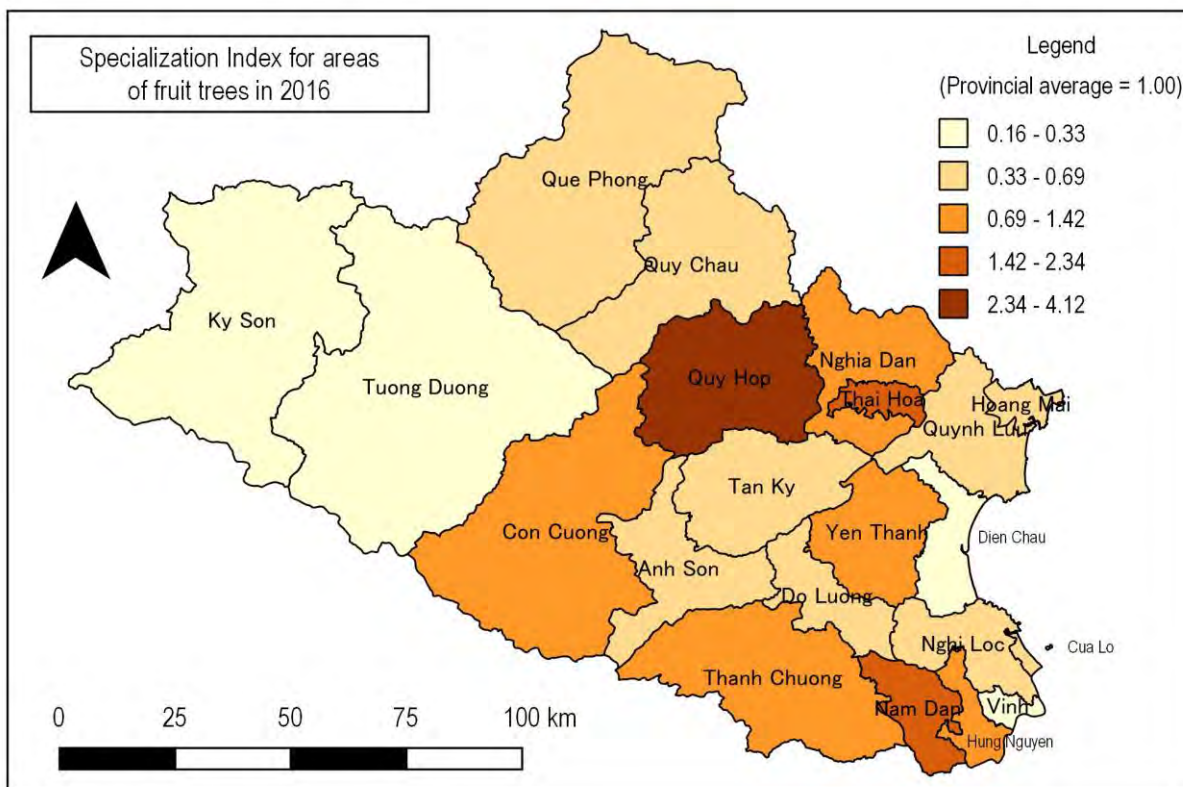
Specialization Index for Areas of Vegetables



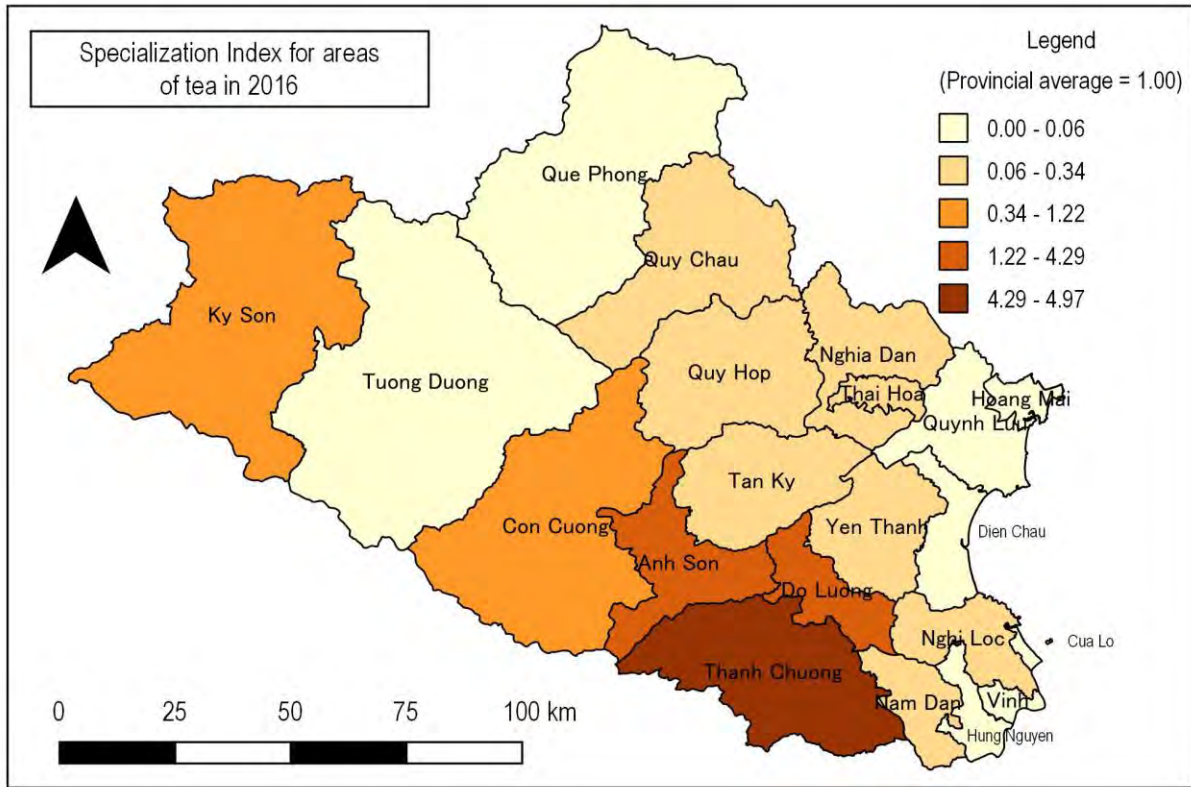
Specialization Index for Areas of Peanut



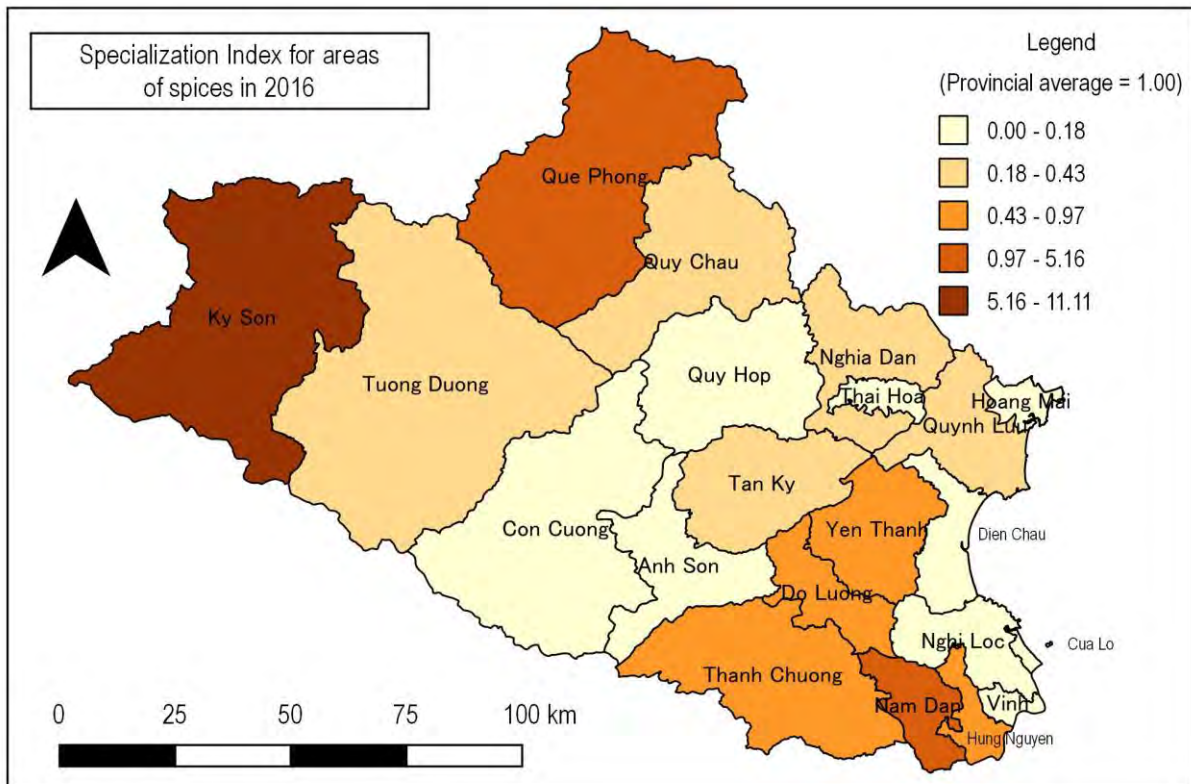
Specialization Index for Areas of Fruit Trees



Specialization Index for Areas of Tea



Specialization Index for Areas of Spices



Annex 6 : List of Collected Documents

List of Collected Documents

Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An in the Socialist Republic of Vietnam

No.	Name of Document	Language	Year	Issuing Authority	Category	Source
1	Law on Planning	E, V	2017	The National Assembly	Law	Nghe An PPC
2	Agricultural Investment Incentives in Nghe An 2015-2020	E, V	2015	Nghe An PPC	Decision	Nghe An PPC
3	Nghe An Economic Social Development Plan 2016-2020	E, V	2015	Nghe An PPC	Decision	Nghe An PPC
4	Plan to Enact the New Planning Law	E, V	2018	Government	Decree	Nghe An PPC
5	Draft of Decree Guiding the Implement of New Planning	E, V	2018	Government	Decree	Nghe An PPC
6	Investment Incentives in Nghe An 2015-2020	E	2016	Nghe An People's Council	Resolution	Nghe An PPC
7	Economic Social Development Plans COMPARISON	E				Nghe An PPC
8	North Central and Central Coastal Region Economic Social Development Plan by 2020	E	2017		Plan	Nghe An PPC
9	Providing Incentive Policy for Development of Linkages in Production and Consumption of Agricultural Products in Nghe An Province	E	2018	Government	Decree	Nghe An PPC
10	Incentive Policies for Enterprises Investing in Agriculture and Rural Development Sector in Nghe An Province	E	2018	Government	Decree	Nghe An PPC
11	Subsidy Policies for Agriculture and Rural Development in Nghe An Province	E	2017	Nghe An PPC	Decree	Nghe An PPC
12	Annual Crop 2010	E, V	2010	DARD	Statistics	DARD
13	Annual Crop 2011	E, V	2011	DARD	Statistics	DARD
14	Annual Crop 2012	E, V	2012	DARD	Statistics	DARD
15	Annual Crop 2013	E, V	2013	DARD	Statistics	DARD
16	Annual Crop 2014	E, V	2014	DARD	Statistics	DARD
17	Annual Crop 2015	E, V	2015	DARD	Statistics	DARD
18	Annual Crop 2010-2015	E, V	2010-2015	DARD	Statistics	DARD
19	Perennial Crop 2010	E, V	2010	DARD	Statistics	DARD
20	Perennial Crop 2011	E, V	2011	DARD	Statistics	DARD
21	Perennial Crop 2012	E, V	2012	DARD	Statistics	DARD
22	Perennial Crop 2013	E, V	2013	DARD	Statistics	DARD
23	Perennial Crop 2014	E, V	2014	DARD	Statistics	DARD
24	Perennial Crop 2015	E, V	2015	DARD	Statistics	DARD
25	Perennial Crop 2014-2015	E	2013-2015	DARD	Statistics	DARD
26	Husbandary Data Divided in District 2010	E	2010	DARD	Statistics	DARD
27	Husbandary Data 2010	E	2010	DARD	Statistics	DARD
28	Husbandary Data 2011	E	2011	DARD	Statistics	DARD
29	Husbandary Data 2012	E	2012	DARD	Statistics	DARD
30	Husbandary Data 2013	E	2013	DARD	Statistics	DARD
31	Husbandary Data Divided in District 2013	E	2013	DARD	Statistics	DARD
32	Husbandary Data 2014	E	2014	DARD	Statistics	DARD
33	Husbandary Data Divided in District 2014	E	2014	DARD	Statistics	DARD
34	Implementation Plan 2011-2015 & 5 Years Plan 2016-2020	E, V	2014	DARD	Report & Plan	DARD
35	DARD Master Plan 2016-2020	E, V	2016	DARD	Decision	DARD
36	Basic Indicator 2011-2015	E		DARD	Statistics	DARD
37	Viet GAP Procedure for Rice Production	E, V	2010	MARD	Decision	DARD
38	Basic GAP Guidance for Vegetable Producer	E, V	2014	MARD	Decision	DARD
39	Irrigation System and Land Use	V		DARD	Statistics	DARD
40	DARD Organization and Function	E, V	2015	Nghe An PPC	Decision	DARD
41	GAP for Fruit & Vegetables	V	2008	MARD	Decision	DARD
42	Safety Products Fishery, Forestry, Salt	E	2013	Nghe An PPC	Decision	DARD
43	Land Qualified for Safety Production	V	2013	MARD	Circular	DARD
44	Safety Livestock Products	E	2013	Nghe An PPC	Decision	DARD
45	Agriculture Production Development Master Plan by 2020 and Vision for 2030	E, V	2013	Planning Group	Plan	DARD
46	List of Planning Approved 2012-2017	E, V		Planning Group	Plan	DARD
47	Role and Organization	E, V			Decision	DARD
48	Major Crops & Livestock Development Scheme	E, V		Planning Group	Plan	DARD
49	Safe Vegetable Production Scheme 2015-2020	E, V	2015	Planning Group	Plan	DARD
50	Sugarcane Production Scheme by 2015 and Vision for 2020	E	2009	Planning Group	Plan	DARD
51	AMPF Database (Enterprise, Agricultural Cooperative, Transportation Company, Buyers, Local Producers and Buyers)	E, V	2018	AMPF	Database	AMPF
52	Pamphlet of Agricultural and Livestock Products in Nghe An	E, V	2018	AMPF	Pamphlet	AMPF
53	Leaflet of the Project (Technical Cooperation Project on Development Planning of Agriculture Sector in Nghe An in the Socialist Republic of Vietnam)	E, V	2018	AMPF	Leaflet	AMPF
54	Function & Roles of DOIT	E, V	2016	Nghe An PPC	Decision	DOIT
55	Function and Task of Divisions and sub-Department under DOIT	E, V	2016	Nghe An PPC	Decision	DOIT
56	Function & Roles of Industry Promotion Center and Trade Promotion Center under DOIT	E, V	2015	DOIT	Decision	DOIT
57	Agricultural Enterprise Association Picked up from Official Enterprise Association List	E, V	2015	DOIT		DOIT
58	National Trade Fair and Exhibition 2016	E, V	2016	DOIT		DOIT
59	Support Budget for Industry Promotion 1st Time in 2018	E, V	2018	Nghe An PPC	Plan	DOIT
60	Tentative Markets List until 2020	E, V	2013	Nghe An PPC	Decision	DOIT
61	Commodities Distribution System Master Plan by 2020, with Orientation by 2025	V	2013	Nghe An PPC	Plan	DOIT
62	Industrial Development Plan until 2025 and 2030	T			Decision	DOIT
63	Development Plan of DOIT 2016-2020	E, V	2014	Nghe An PPC	Report	DOIT
64	Export Development Plan 2016-2020	E, V	2016	Nghe An PPC	Decision	DOIT
65	Industrial and Trade Promotion Plan 2016-2020	E, V	2015	Nghe An PPC	Decision	DOIT
66	Social Economic Development Plan (SEDP) 2016-2020	E, V	2015	Nghe An PPC	Plan	DPI
67	Agricultural FDI Project List	V	2015	DPI	Statistics	DPI

68	Social Economic Annual Report 214 and Plan 2015	E	2015-2016	DPI	Report & Plan	DPI
69	Social Economic Annual Report 2015 & Plan 2016	V	2014-2015	DPI	Report & Plan	DPI
70	Law on Investment	E,V	2014	National Assembly	Law	DPI
71	Guidline of Investment Law	E,V	2014	Government	Decree	DPI
72	Guidline of Law on commerce	E,V	2016	Government	Decree	DPI
73	Introduction about Industrial Clusters in Nghe An/ Industrial Zoens in Nghe An	E,V	2015	DPI	Statistics	DPI
74	FDI Record	E,V	2015	DPI	Statistics	DPI
75	List of ODA Project 2016-2020	E	2016	DPI	Statistics	DPI
76	List of ODA and NGO Project 2006-2015	E	2016	DPI	Statistics	DPI
77	Functions and Role of DPI	E,V		Nghe An PPC	Decision	DPI
78	Functions and Role of DOST	E,V	2016	Nghe An PPC	Decision	DOST
79	DOST Development Plan 2016-2020	E,V	2015	Nghe An PPC	Decision	DOST
80	List of DOST Projects 2017 -2018	E,V	2017	Nghe An PPC	Decision	DOST
81	Provincial Dam List until 2014	V	2014	DONRE	Statistics	DONRE
82	Law on Water Resource	E,V	2012	National Assembly	Law	DONRE
83	Detailing the Implementation of Law on Water Resource	E,V	2013	Prime Minister	Decree	DONRE
84	Land Law 2013	E,V	2013	National Assembly	Law	DONRE
85	Law on Environment Protection	E,V	2014	National Assembly	Law	DONRE
86	Annual Report 2014 & Plan 2015	V	2014-2015	DONRE	Report & Plan	DONRE
87	Rrport of Land Use from 2011-2015 & Plan to 2020	E,V	2011-2020	DONRE	Report & Plan	DONRE
88	Action Plan of DONRE 2015-2020	E,V	2016	DONRE	Plan	DONRE
89	Additional Action Plan of DONRE 2015-2020	V	2016	DONRE	Plan	DONRE
90	Function and Role of DONRE	E,V	2015	Nghe An PPC	Decision	DONRE
91	Decree on Land Allocation to Household, Individual for Agriculture Production	E	1993	Government	Decree	DONRE
92	Annual Report 2015 & Plan 2016	V	2015-2016	DONRE	Report & Plan	DONRE
93	DT Report 2011-2015 & plan 2016-2020	E,V	2015	DT	Plan	DT (Tourism)
94	Functions and role of DT	E,V	2017	Nghe An PPC	Decision	DT (Tourism)
95	Tourism Data December 2015	E,V	2015	DT	Report	DT (Tourism)
96	Tourism Data November 2016	E,V	2016	DT	Report	DT (Tourism)
97	Tourism Report November 2016	E,V	2016	DT	Report	DT (Tourism)
98	Tourism Promotion Plan by 2020 (Programme List)	E,V	2016	Nghe An PPC	Decision	DT (Tourism)
99	List of Sourvenir Shops	E			Statistics	DT (Tourism)
100	Annual Report 2014 & Plan 2015	E,V	2014-2015	DOT	Report & Plan	DOT
101	Annual Report 2015 & Plan 2016	E,V	2015-2016	DOT	Report & Plan	DOT
102	Transport Infrastructure development Scheme 2016 - 2020	E,V	2015	DOT	Plan	DOT
103	Development Plan of DOT 2011 -2015	V	2011	DOT	Plan	DOT
104	Development Plan of DOT 2016 -2020	E,V	2014	DOT	Plan	DOT
105	DOT Mid-term State Investment Plan 2016 -2020	E	2014	DOT	Plan	DOT
106	Function and Role of DOT	E,V	2017	DOT	Decision	DOT
107	Road System in Nghe An	E		DOT	Report	DOT
108	Procedure for Budget Planning 2014	E,V	2014	DOF	National Standard	DOF
109	Functions and Structure of DOF	E,V	2016	Nghe An PPC	Decision	DOF
110	DOF Budget Allocated to Districts	V		DOF	Report	DOF
111	Functions and Structure of DOH	E,V	2016	DOH	Decision	DOH
112	Development Plan of DOH 2016-2020	E,V	2014	DOH	Plan	DOH
113	Law on Food Safety	E	2010	National Assembly	Plan	MOH
114	Maximum Chemical Pollution in Food	E	2007	MOH	Law	MOH
115	Quarantine Procedure	E,V	2014	MARD	Circular	Plant Quarantine Center
116	Quarantine Fee	E,V	2016	MOF	Circular	Plant Quarantine Center
117	Quarantine Law	E,V	2014	Government	Decree	Plant Quarantine Center
118	Role and Function of Plant Quarantine Center	E,V	2017	MARD	Decree	Plant Quarantine Center
119	Annual Report of Plant Quarantine Center	E,V	2018	Plant Quarantine Center	Report	Plant Quarantine Center
120	Result of Soil Analysis	E	2016		Report	Reaserch Institute
121	Results of Scientific Research and Technology Transfer by ASINCV 2010-2016	E	2016		Report	Reaserch Institute
122	Report on Xa Doai Orange	E,V	2017		Report	Reaserch Institute
123	Introduction of PQ1 Orange	V				Reaserch Institute
124	Characteristics of PQ1 Orange	V				Reaserch Institute
125	Cultivation Procedure of PQ1 Orange	V				Reaserch Institute
126	Annual Report 2014 & Plan 2015	V	2014	Cooperative Alliance	Report & Plan	Cooperative Alliance
127	Annual Report 2015 & Plan 2016	V	2015	Cooperative Alliance	Report & Plan	Cooperative Alliance
128	Role and Organization of Cooperative Alliance	E,V		Cooperative Alliance	Decision	Cooperative Alliance
129	Cooperative Development Scheme for 2014-2020	V	2014	Nghe An PPC	Plan	Cooperative Alliance
130	Collective Economic Development 2011-2015 and Development Plan 2016-2020	E,V	2015	Cooperative Alliance	Report & Plan	Cooperative Alliance
131	Cooperative Alliance Charter	E,V	2016	Nghe An PPC	Regulation	Cooperative Alliance
132	AES plan 2016-2020	E,V	2015	Nghe An PPC	Plan	AES
133	Agricultural Products Price 2015	E	2015	AES	Statistics	AES
134	Agricultural Products Price 2016	E	2016	AES	Statistics	AES
135	Agricultural Products Price 2017	E	2017	AES	Statistics	AES
136	Regulation on Expenditures for Agriculture Extension Activities	E	2010	MARD	Circular	AES
137	Agricultural Data of Anh Son District, DARD	V	2015	Anh Son District DARD	Statistics	District DARD
138	SEDP of Thai Hoa Town by 2020	V	2015	Nghe An PPC	Decision	District DARD
139	SEDP of Hoang Mai Town by 2020	V	2015	Nghe An PPC	Decision	District DARD
140	Amendment and Supplement of Nghi Loc District SEDP by 2020	V	2016	Nghi Loc DPC	Plan	District DARD
141	Supplement and Amenement of Nghia Dan District SEDP by 2020	V	2015	Nghia Dan DPC	Plan	District DARD
142	Crop Production Plan of Thanh Chuong District	E	2016	Thanh Chuong DPC	Plan	District DARD
143	SEDP of Quynh Luu District by 2020	E,V	2016	Quynh Luu DPC	Plan	District DARD
144	Agricultural Census 2011	(E, V)	2012	Statistics Bureau	Statistics	Statistics Bureau
145	Development of Vietnam Enterprises 2006-2011	(E, V)	2013	Statistics Bureau	Statistics	Statistics Bureau
146	Population and Housing Census 2009	E, V	2010	Statistics Bureau	Statistics	Statistics Bureau

147	Statistical Yearbook 2014	E, V	2014	Statistics Bureau	Statistics	Statistics Bureau
148	Vietnam Intercensal Population and Housing Survey 2014	E	2014	Statistics Bureau	Statistics	Statistics Bureau
149	Statistical Yearbook 2015	E, V	2016	Statistics Bureau	Statistics	Statistics Bureau
150	Statistical Yearbook 2016	E, V	2017	Statistics Bureau	Statistics	Statistics Bureau
151	Population Projection 2014-2049	E	2016	Statistics Bureau	Statistics	Statistics Bureau
152	Nghe An MAP	TRICT			MAP	Nghe An PPC