２０．ビルマ養豚養鶏開発計画・討議々事録及び合同会議々事録要旨

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE IMPLEMENTATION SURVEY TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF THE UNION OF BURMA ON THE JAPANESE TECHNICAL COOPERATION PROJECT FOR THE PIG AND POULTRY DEVELOPMENT IN BURMA.

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Yoshihiro Yamashita visited Burma from April 6 to April 18, 1978 for the purpose of working out the details of the Technical Cooperation Project concerning the Pig and Poultry Development in Burma.

During its stay in Burma, the Team exchanged views and had a series of discussions with the Burmese authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Burmese authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Rangoon, April 12, 1978

Yoshihiro Yamashita

Mr. Yoshihiro Yamashita
Head of the Japanese
Implementation Survey Team
Japan International Cooperation
Agency

U Pyi Soe
Managing Director
Livestock Development and
Marketing Corporation

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Socialist Republic of the Union of Burma will cooperate with each other in implementing the Technical Cooperation Project for Pig and Poultry Development in Burma (hereinafter referred to as "the Project") for the purpose of transfer of technology for the improvement of production efficiency in pig and poultry development.

2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Japanese experts referred to in paragraph 1. above and their families will be granted in Burma the privileges, exemptions and benefits within the framework of the Colombo Plan Technical Cooperation Scheme.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex III, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The articles referred to in paragraph 1. above will become the property of the Government of the Socialist Republic of the Union of Burma upon being delivered c.i.f. to the Burmese authorities concerned at the ports and airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

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IV. TRAINING OF BURMESE PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Burmese personnel connected with the Project for technical training in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Socialist Republic of the Union of Burma will take necessary measures to ensure that the knowledge and experience acquired by the Burmese personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE SOCIALIST REPUBLIC OF THE UNION OF BURMA

1. In accordance with the laws and regulations in force in Burma, the Government of the Socialist Republic of the Union of Burma will take necessary measures to provide at its own expense:

(1) Services of the Burmese counterpart personnel and other personnel as listed in Annex IV;

(2) Land, buildings and facilities as listed in Annex V;

(3) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under clause III. above;

(4) Transportation facilities and travel allowance for the Japanese experts for the official travel within Burma;

(5) Suitably furnished accommodations for the Japanese experts and their families.

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2. In accordance with the laws and regulations in force in Burma, the Government of the Socialist Republic of the Union of Burma will take necessary measures to meet:

(1) Expenses necessary for the transportation within Burma of the articles referred to in clause III. above as well as for the installation, operation and maintenance thereof;

(2) Customs duties, internal taxes and other charges, if any, imposed in Burma on the articles referred to in clause III. above;

(3) All running expenses necessary for the implementation of the Project.

VI. ADMINISTRATION OF THE PROJECT

The Livestock Development and Marketing Corporation of the Government of the Socialist Republic of the Union of Burma (hereinafter referred to as "LDMC") will be responsible for the administrative matters for the implementation, and the Japanese experts will provide primarily technical guidance and advice for the Project.

There will be close consultation between the Japanese experts and the LDMC officials concerned for the successful and smooth implementation of the Project. For this purpose, a Joint Committee will be established as specified in Annex VI. The Joint Committee will meet at least once a year.

VII. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Socialist Republic of the Union of Burma undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occuring in the course of, or otherwise connected with the discharge of their official functions in Burma except for those arising from the wilful misconduct or gross negligence of the Japanese experts.

VIII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

IX.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be four years from the date of signature. Concerning the follow-up cooperation thereafter, there will be mutual consultations between the two Governments.

ANNEX I

Master Plan of the Project

A. Outline of the Project

1. Objective

The Project is directed primarily to the transfer of modern technology for the improvement of production efficiency in pig and poultry development, which would be the necessary infrastructure for the establishment of a future growth of livestock industry in Burma.

2. Organization

The LDMC is the executing agency for the achievement of the above mentioned objective under the supervision of the Project Policy Committee of the Ministry of Agriculture and Forests which has been established under the notification No. 3/75 dated 5th December, 1975.

3. Implementation

The Project will be undertaken by the LDMC under the guidance of the Joint Committee, the composition of which is mentioned in Annex VI. Scope of the project activities is mentioned in B.

B. Activities under the Project

I. Activities under the Project will be carried out at the LDMC Farm of 90.5 acres at the 10th mile, Prome Road, Rangoon, as mentioned herein below.

1. Project Management Unit

The Project Management Unit will be established to monitor and supervise the operation of the Project.

2. Pig Farm

The Pig Farm and incidental facilities will be established to conduct the following activities:

1) Production Management
2) Survey and Practical Research
3) On-the-Job Training for Pig Management
4) Extension Services of Improved Technology and Demonstration

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3. Poultry Farm

The Poultry Farm and incidental facilities will be established to conduct the following activities:

1) Production Management
2) Survey and Practical Research
3) On-the-Job Training for Poultry Management
4) Extension Services of Improved Technology and Demonstration

4. Technical Training Centre

The Technical Training Centre will be established to conduct training of modern and scientific pig and poultry management.

5. Feed Mill

The Feed Mill and incidental facilities will be established to conduct the following activities:

1) Production Management of Assorted Feed Needed for the Project.
2) Survey and Practical Research
3) On-the-Job training for Feed Mill Management
4) Extension Services of Improved Technology

II. The technical training of Burmese Personnel will be conducted in Japan, as a transfer of modern technology, to enhance their technical level.

ANNEX II

Japanese Experts

	Category	Field
1.	Team Leader	
2.	Experts	Pig Production and Breeding Poultry Production and Breeding Animal Nutrition and Feed Mill Animal Health
3.	Liaison Officer	

Notes: (1) Team Leader will be selected from among the Experts mentioned above

y.y (2) Short-term experts may be dispatched, when necessity arises.

ANNEX III

Articles to be provided by the Government of Japan

1. Machinery, Equipment and Materials for the Project Management Unit
2. Machinery, Equipment and Materials for the Pig Farm
3. Machinery, Equipment and Materials for the Poultry Farm
4. Machinery, Equipment and Materials for the Technical Training Centre
5. Machinery, Equipment and Materials for the Feed Mill
6. Spare Parts for Machinery and Equipment mentioned in 1 to 5 above
7. Other necessary Machinery, Equipment and Materials to be mutually agreed upon.

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ANNEX IV

Burmese Counterparts and Other Personnel

	Category	Field
1.	Project Manager	Administration and Management
2.	Managers	Management for Project Management Unit Management for Pig Farm Management for Poultry Farm Management for Technical Training Centre Management for Feed Mill
3.	Counterparts	Pig Production and Breeding Poultry Production and Breeding Animal Nutrition Animal Health (Pig) Animal Health (Poultry)
4.	Other Personnel	

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ANNEX V

Land and Buildings

1. Land — 90.5 acres
   (1) Land for the Project Management Unit
   (2) Land for the Pig Farm
   (3) Land for the Poultry Farm
   (4) Land for the Technical Training Centre
   (5) Land for the Feed Mill

2. Buildings
   (1) Project Management Unit
      1. Office
      2. Conference Room
      3. Stand-by Power Plant
      4. Other Incidental Facilities
   (2) Pig Farm
      1. Office
      2. Stock Accommodation
      3. Post-Mortem Facilities
      4. Dispensary
      5. Feed Store
      6. Machinery and Equipment Store
      7. Fuel Store
      8. Garage
      9. Other Incidental Facilities
   (3) Poultry Farm
      1. Office
      2. Stock Accommodation
      3. Hatchery and Egg Storage Room
      4. Post-Mortem Facilities
      5. Dispensary
      6. Feed Store
      7. Machinery and Equipment Store
      8. Fuel Store
      9. Garage
      10. Other Incidental Facilities

(4) Technical Training Centre

1. Office
2. Lecture Room
3. Laboratories
4. Machinery and Equipment Store
5. Accommodations
6. Fuel Store
7. Other Incidental Facilities

(5) Feed Mill

1. Office
2. Control Room
3. Feed Store
4. Milling and Mixing Facilities
5. Products Store
6. Laboratories
7. Fuel Store
8. Garage
9. Other Incidental Facilities

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ANNEX VI

Composition of the Joint Committee

Chairman: Managing Director of Livestock Development and Marketing Corporation

	Japanese Side		Burmese Side
1.	Team Leader	1.	Project Manager
2.	Experts	2.	Managers
3.	Liaison Officer	3.	Counterparts

Note: An official of the Embassy of Japan and a representative of the JICA as well as an official of the Ministry of Agriculture and Forests of the Socialist Republic of the Union of Burma, may attend the meeting of the Joint Committee as observers.

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討　議　議　事　録

ビルマ養豚・養鶏開発計画に関する技術協力のための
日本国実施協議チームとビルマ社会主義連邦共和国
政府関係者との討議議事録　　（仮訳）

国際協力事業団（以下「事業団」という）によって，編成された，山下喜弘氏を団長とする日本国実施協議チーム（以下「チーム」という）は「ビルマ養豚・養鶏開発計画」に関する技術協力計画を具体的に策定するため，１９７８年４月６日から４月１８日までビルマ国を訪問した。

同チームは，ビルマ国滞在中，上記のプロジェクトを成功裏に実施するため，両国政府により，とられるべき，望ましい措置について，ビルマ国政府関係者と意見を交換し，討議した。

討議の結果，チームおよびビルマ政府関係者は，以下の付属文書に示された事項を，各々の政府に対し勧告することについて合意した。

ラングーン，　１９７８年４月１２日

（署　名）	（署　名）
山下喜弘	U Pyi Soe
日本国実施協議チーム団長	畜産開発販売公社
国際協力事業団	総裁

付　属　文　書

Ⅰ　両国政府間の協力

1.　日本政府およびビルマ政府は養豚・養鶏開発にかかる生産性向上のための技術の移転をはかることを目的とした「ビルマ養豚・養鶏開発技術協力プロジェクト」（以下「プロジェクト」という。）を相互に協力して実施する。

2.　プロジェクトは，付表Ⅰに示された基本計画に基づき実施される。

Ⅱ　日本人専門家の派遣

1.　日本政府は，日本において施行されている法令に従い，付表Ⅱに掲げる日本人専門家の役務を，コロンボ計画技術協力計画に基づく通常の手段により，自己の負担において，提供するため，国際協力事業団を通じて必要な措置をとる。

2.　前項(1)に示された日本人専門家およびその家族は，コロンボ計画技術協力計画の枠内で特権，免除および便宜をビルマ国内において与えられる。

Ⅲ　機　材　供　与

1.　日本政府は，日本において施行されている法令に従い，プロジェクトの実施に必要な付表Ⅲに掲げる機械器具およびその他の資材をコロンボ計画技術協力計画に基づく，通常の手続により，自己の負担において，供与するため，国際協力事業団を通じて，必要な措着をとる。

2.　前項(1)に示された機材は陸揚げ港および空港においてＣＩＦ建てでビルマ政府関係者に引渡された時にビルマ政府の財産となり，また付表Ⅱに掲げる日本人専門家と協議のもとに，プロジェクトの実施のためにのみ使用される。

Ⅳ　日本におけるビルマ人職員の研修（研修員受入）

1.　日本政府は，日本において施行されている法令に従い，プロジェクトに関連した，ビルマ人職員を日本に受入れ，技術研修させるため，自己の負担において，国際協力事業団を通じて必要な措置をとる。

2.　ビルマ政府は，ビルマ人職員が日本における技術研修により得た知識および経験を，プロジェクトの実施に効果的に活用されることを確保するため，

必要な措置をとる。

V　ビルマ政府により，とられる措置

1. ビルマ政府は，ビルマにおいて施行されている法令に従い，自己の負担において，次のことを準備するために必要な措置をとる。

(1) 付表Ⅳに掲げるビルマ人カウンターパートおよびその他の職員の役務

(2) 付表Ⅴに掲げる土地，建物，施設

(3) 第Ⅱに示された，国際協力事業団を通じて供与される機材以外の，プロジェクトの実施に必要な機械，器具，車輌，工具，スペアパーツ等の調達または代替交換

(4) 日本人専門家のビルマ国内における公務旅行に必要な交通手段および旅費

(5) 日本人専門家およびその家族のための家具付宿舎

2. ビルマ政府は，ビルマにおいて施行されている法令に従い，次のことを負担するため必要な措置をとる。

(1) 第Ⅱ項に示された機材のビルマ国内における輸送及び据付，操作，維持に必要な経費

(2) 第Ⅱ項に示された機材に対し，ビルマ国内において課せられる，関税，内国税およびその他の課徴金（もし，課せられる場合には）

(3) プロジェクトの実施に必要なすべての運営費

Ⅵ　プロジェクト運営

ビルマ政府畜産開発販売公社（以下「畜産公社」という）は，プロジェクト実施のための運営に関し責任を有し，日本人専門家は第一義的にはプロジェクト実施にかかる技術指導及びアドバイスを行なう。

プロジェクトを成功裏に，かつ円滑に実施するため，日本人専門家と畜産公社関係者は密接に協議する。

また，このため，付表Ⅵに掲げる合同委員会を設置する。合同委員会は少なくとも年一回開催する。

Ⅶ　ビルマ政府は，プロジェクトに携わる日本人専門家に対し，ビルマにおける

職務の遂行に起因し，またはその遂行中に発生した，請求が生じた場合には，その請求に関する責任を負う。ただし，日本人専門家の故意または重大な過失から生ずる責任については，この限りではない。

Ⅷ 相 互 協 議

この「討議議事録」に関し重大な問題が生じた場合，両国政府間で相互に協議する。

Ⅸ 協 力 期 間

この「討議議事録」に基づく，プロジェクトの技術協力の期間は，署名の日より4カ年とする。

その後の協力については，両国政府間の協議によるものとする。

1） 本プロジェクトに必要な配合飼料の生産管理

2） 調査・試験

3） 飼料生産にかかる実務研修

4） 改良技術の普及

Ⅱ. ビルマ人職員の技術水準をより向上させるため，改良技術の移転を目的として，ビルマ人職員を日本において研修する。

付 表 Ⅱ

日 本 人 専 門 家

専門家の職種	分 野
1. チームリーダー	
2. 専 門 家	飼 養 管 理 (豚)
	飼 養 管 理 (鶏)
	家畜栄養及び飼料生産
	家 畜 衛 生
3. 業 務 調 整 員	

(注) 1. チームリーダーは上記の専門家より選ばれる。

2. 必要に応じ，短期専門家を派遣することができる。

付　　表　　I

プロジェクトの基本計画

A．プロジェクトの概要

1．目　　的

本プロジェクトは，将来ビルマにおける畜産振興の基盤となる，養豚・養鶏開発にかかる生産性向上のための改良技術の移転をはかることを第一義的な目的とする。

2．組　　織

１９７５年１２月５日付布告３／７５号により，農林省に設置された「プロジェクト政策委員会」の監理のもとに，畜産公社は，実施機関として，上記，本プロジェクトの目的を遂行する。

3．実　　施

本プロジェクトは付表Ⅵに示された合同委員会の指導のもとに，畜産公社により実施される。

プロジェクトの事業概要はＢ項に掲げる。

B．プロジェクトの事業概要

I．本プロジェクトはラングーン市プロムロード１０マイルの畜産公社農場（９０.５エーカー）において実施される。

1．運　営　部

運営部を設置し，本プロジェクト運営について監理する。

2．養　豚　場

養豚場及び関連施設を設置し，以下のことを行なう。

１）飼養管理

２）調査・試験

３）養豚の実務研修

４）改良技術の普及及び展示

3. 養　鶏　場

養鶏場及び関連施設を設置し，以下のことを行なう。

1）　飼養管理

2）　調査・試験

3）　養鶏の実務研修

4）　改良技術の普及及び展示

4. 技術訓練所

技術訓練所を設置し，養豚・養鶏の改良技術にかかる研修を行なう。

5. 飼料生産施設

飼料生産施設及び関連施設を設置し，以下のことを行なう。

付　　表　　Ⅲ

供　　与　　機　　材

1. 運営部に必要な資機材
2. 養豚場に必要な資機材
3. 養鶏場に必要な資機材
4. 技術訓練所に必要な資機材
5. 飼料工場に必要な資機材
6. 上記１～５に掲げる資機材のスペアーパーツ
7. その他必要な資機材

付　　表　　Ⅳ

ビルマ人専門家及びその他の職員

職員の種別	分　　野
1. プロジェクト・マネージャー	
2. マネージャー	運営部，養豚場，養鶏場，研修所，飼料工場，各部門の運営
3. カウンターパート技術者	飼　養　管　理（豚）
	飼　養　管　理（鶏）
	家　畜　栄　養
	家　畜　衛　生（豚）
	家　畜　衛　生（鶏）
4. その他の職員	

付　　表　　V

土　地　お　よ　び　建　物

1. 土　　地　　９０.５エーカー

(1) 運営部用地

(2) 養豚場用地

(3) 養鶏場用地

(4) 技術訓練所用地

(5) 飼料工場用地

2. 建　　物

(1) 運　営　部

1. 事　務　室
2. 会　議　室
3. 自家発電室
4. その他の関連施設

(2) 養　豚　場

1. 事　務　室
2. 豚　　舎
3. 簡易解体施設
4. 衛　生　室
5. 飼　料　庫
6. 農機具庫及び資材庫
7. 燃　料　庫
8. 車　　庫
9. その他の関連施設

(3) 養　鶏　場

1. 事　務　室
2. 鶏　　舎

3. ふ卵舎及び鶏卵貯蔵庫

4. 簡易解体施設

5. 衛　生　室

6. 飼　料　庫

7. 資　材　庫

8. 燃　料　庫

9. 車　　庫

10. その他の関連施設

(4) 技術訓練所

1. 事　務　室

2. 講　義　室

3. 実　験　室

4. 資　材　庫

5. 研修生宿舎

6. 燃　料　庫

7. その他の関連施設

(5) 飼料生産施設

1. 事　務　室

2. 生産管理室

3. 原料貯蔵庫

4. 配 合 施 設

5. 製品貯蔵庫

6. 資料分析室

7. 燃　料　庫

8. 車　　庫

9. その他の関連施設

付　　表　　Ⅵ

合同委員会の構成

委員長　：　畜産公社総裁

日本側	ビルマ側
1. チームリーダー	1. プロジェクトマネージャー
2. 専　門　家	2. マネージャー
3. 業務調整員	3. カウンターパート

(注)　日本大使館及び国際協力事業団の代表者及びビルマ政府農林省の関係者は，必要に応じて合同委員会にオブザーバーとして出席できるものとする。

5—(2) ビルマ養豚，養鶏開発計画合同会議議事録要旨

Minutes of the Joint Meeting on the Technical Cooperation Project for the Pig and Poultry Development in Burma between Japan and the Socialist Republic of the Union of Burma.

List of Participants.

Livestock Development and Marketing Corporation.

(1) U Pyi Soe, Managing Director
(2) U Pe Tin , Deputy General Manager, Lower Burma.
(3) U Than Htay, Deputy General Manager, (Planning)

Planning and Statistics Department, Ministry of Agriculture and Forests.

(1) U Khin Maung Latt, Director General
(2) U Hla Moe Director
(3) U Kyaing Deputy Director

Foreign Economic Relations Department, Ministry of Planning and Finance.

(1) U Khin Maung Director.

Japanese Consultation Team

(1) Dr Hirofumi KEITOKU, Team Leader Deputy Director, Livestock Production Division, Livestock Industry Bureau, MAFF.
(2) Dr Kunio KOMORI, (Animal Husbandry) Assistant Counsellor, Livestock Policy Division, Livestock Industry Bureau, MAFF
(3) Mr Kazuo SUDO, (Coordinator) Livestock Development Division, Agricultural Development Cooperation Department, JICA.

Embassy of Japan.

(1) Mr Jiro OKITSU Extra Chancellor.

Japanese Experts Team.

(1) Dr Reiji SUZUKI, Team Leader.
(2) Mr Keizo EGAWA, Liaison Officer.

In pursuance of activities under the Record of Discussions signed on April 12, 1978, the Japanese team (hereinafter referred to as"the Team") organized by the Japan International Cooperation Agency (JICA) and headed by Dr Hirofumi Keitoku visited Burma from Jan 26 to Feb 5, 1979 for the purpose of reviewing the progress of the technical cooperation project for the pig and poultry development in Burma (hereinafter referred to as ("the Project) and conferring on the future plans for the Project with the Burmese officials concerned.

During its stay in Burma, the Team observed the present activities of the Project, discussed problems involved and exchanged views on the future plans with the Burmese officials concerned including the Japanese experts for the successful implementation of the Project. The following is the summary of discussions

1. Progress of the Project.

1) The Government of Burma made request for "Transfer of Modern Technology in the Pig and Poultry development to the Government of Japan on the basis of the investigation report made by the Livestock development project finding (identification) team headed by Dr Eguchi who visited Burma from Nov 30 to Dec 10, 1976 . Through discussions with the Burmese officials concerned and surveys conducted by both the Japanese preliminary survey team headed by Dr Keitoku and the Japanese implementation survey team led by Mr Yamashita, who visited here from Jan 19 to Feb 2, 1978 and from April 6 to May 3, 1978 respectively, the Record of Discussions in connection with the Project was signed on April 12, 1978 and the Project originated with cooperation period of four years.

2) Assignment of Japanese Experts

On the basis of the dispatch plan of JICA, Dr Reiji Seki (team leader) and Mr Keizo Egawa (liaison Officer) were dispatched to the Project on Sept 28 and arrived in Burma on 30 Sept 1978.

Dr Katsuyuki Nagata(pig production and breeding) and Mr Noboru Kano (animal nutrition and feed mill) left Japan on Dec 20 and arrived in Burma on Dec 22, 1978.

Besides them short-term experts assigned were Mr Hidetaka Suganuma (cage assembly, from Nov 27 to Dec 18, 1978) Mr Toshio Yusa (chick sexing, from Jan 17 to Feb 15, 1979) and Mr Takeshi Koyama(incubator installation, from Jan 25 to Feb 8, 1979).

3) Provision of Equipment and Materials

On request of the provision of equipment and materials by the Government of Burma, JICA will provide equipment and materials worth of CIF Rangoon 86,332,793 Yen (approximately 431,663.97 U.S. dollars) within the fiscal year 1978/1979.

65 breeding pigs were successfully transported by air on request by the Burmese side.

Equipment and materials provided should be utilized depending upon management and use plan on the basis of the consultation between Japanese experts and the Burmese officials concerned for the efficient operation of the Project.

4) Production and Technical Guidance.

(1) Poultry Sector

The breeding chicks of Norin Line introduced from Japan totalled 2,700 birds (1,400 birds on Nov 30 and 1,300 birds on Dec 21, 1978 respectively).

The breeding started on arrival of the breeder chicks.

Mr Suganuma contributed not only to cage assembly but also to the guidance of basic expertise of poultry raising at the introduction of the chicks.

Mr Yusa has been training selected trainees on chick sexing technique and achieving considerably good result.

Mr Kayama has been devoted to installing incubators and fulfilled his duty with success.

(2) Pig Sector

65 breeding pigs which were composed of 29 heads of Landrace, 20 heads of Duroc and 16 heads of Berkshire, were imported from Japan by chartered plane on Jan 22, 1979. Unloading of the pigs at Rangoon Airport was successfully carried out in full cooperation with Burmese authorities concerned.

II. Present Situation and Problems

1. Construction of the Facilities

Construction of the facilities began in June, 1978 and would complete by the end of 1979, but the progress of construction is lagging far behind the schedule on account of the shortage of cement's supply and so forth. The buildings which have been completed at present are a hatchery and egg storage room, two of cage poultry houses(grower,layer) and two of dry sow houses.

The chickens are fed in temporary houses because of incompletion of the facilities. It is much disadvantageous to the productivity in the view of management and animal hygiene.

Three more grower houses, two breeder houses and cold storage should be completed within this fiscal year in addition, then feed milling and mixing facilities and post-morten houses (diagnostic laboratory) will be finished as soon as possible. After the completion of such facilities as animal houses, feed mill, offices and a laboratory etc, shortage of electricity is expected. Accordingly, the Burmese side will have to rearrange the existing transmission facility to meet the increasing electricity demand of the Project.

Hence, in parallel with management of alternative facilities, the construction of the animal houses should be hastened prior to the laboratory. If the construction of facilities were delayed much behind the schedule, the production scheme should be modified.

2. Management Practices.

The following points mentioned below must be considered in daily management activities

(1) Establishment of Water Supply System.

Present water supply system of the 10th Mile Farm is old and not very efficient.

If sufficient water supply will not be possible for the livestock in the future the stocks will be endangered by possible outbreak of diseases owing to the contaminated water.

Accordingly, the establishment of efficient water supply system with clean water will be urgently necessary.

(2) Stable supply of feed.

As the growth of poultry and pigs advances and the number of them increases, feed requirement will be growing rapidly. Then it is necessary to ask for the cooperation with agencies concerned in order to ensure stable supply of good-quality feed stuffs. Selection of personnel in charge of feed should be made at once and it is important to manage feed concerning such matters as procurement, storage, formulation and assortment in consultation with the Japanese experts.

(3) Establishment of preventive system against diseases

When we see disease contamination level in the 10th Mile Farm, we need to loyally pursue the programs for vaccination and medication under guidance by the Japanese experts and also to take counter measures for isolation so as to check the spread of disease agents.

Accordingly, the entrance of strangers to the animal sheds must be strictly restricted, in addition, Housing construction for LDMC officials must be promoted. Residential site and livestock accomodation site must be separated and also, spread of disease through animals kept by the local people must be prevented.

Under this circumstance, it must be remebered that the success of the project depends mainly upon the disease prevention.

3. Transfer of Technology

On the context of introduction of Japanese technology it is necessary that we should modify it to adapt to social, cultural and economic situations in Burma.

As the improvements of raising environment such as weeding, cleansing of floors and so on are fundenental factors in order to ensure productivity, the knowledge of hygiene must be necessarily learnt by personnel in-charge.

Experimentally introduced was the rearing method by means of cage as a new technique and the effectiveness should be appropriatelyfigured out.

The experimental and research facilities ought to be completed at the next step so as to support the production system along with transfer of diagnostic technology.

III. Future Plan.

(operational working plan in 1979)

1. Future plan will be drawn up in consultation with Japanese experts led by Dr Seki and sent to the JICA headquarters before the end of the fiscal year 1978/1979.

2. Assignment of Experts.
(attached sheet)

3. Training and Observation of Counterparts in Japan.

The necessary prodedure will be taken so that senior counterparts of LDMC may visit Japan to observe the Japanese Livestock industry by May or June 1979.

The final decision on acceptance of counterparts for the fiscal year of 1979 (April 1, 1979 to March 31, 1980) will be made by around April, 1979. JICA is now conferring with the organizations concerned to realize individual trainings of poultry (2 participants) and pig(2 participants) raising concentrating on practical training.

The consultations with Japanese experts should be done in advance to select eligible participants.

(U Pyi Soe)
Managing Director
Livestock Development
and
Marketing Corporation.

(Dr Hirofumi KEITOKU)
Team Leader
Japanese Consultative Team
for Pig and Poultry Project.

Dated the 3rd February 1979.

Assignment of Experts

-1978-

1. Long Term Experts

NAME	FIELD	PERIOD.
Reiji SEKI	Team Leader.	Two Years ('78.9.28-80-9-27)
Keizo EGAWA	Liaison Officer.	Two Years ('78.9.28-80.9.27)
Katsuyuki NAGATA	Pig Production and Breeding.	15 months ('78.12.20-80.3.31
Noboru KANO	Animal Nutrition and Feed Mill.	15 months ('78.12.20-80.3.31

2. Short Term Experts

Hidetaka SUGANUMA	Cage Assembly	22 days ('78.11.27-'78-12-
Toshio YUSA	Chick Sexing	30 days ('79-1-17-'79.2.15
Takeshi KAYANA	Incubator installation	15 days ('79.1.2 -'79.2.8)

-1979-

1) Long Term expert	*Animal Health	Two years
2) Short Term Experts	Machinery Maintenance	3 months
	Poultry Management	"
	Chick Sexing	"
	Machinery Installation	15 days

* Short- term expert(s) may replace Animal Health expert (long-term) if considered necessary by both sides.

討　議　議　事　録

ビルマ養豚・養鶏開発計画に関する技術協力のための
日本国実施協議チームとビルマ社会主義連邦共和国
政府関係者との討議議事録　　（仮訳）

国際協力事業団（以下「事業団」という）によって，編成された，山下喜弘氏を団長とする日本国実施協議チーム（以下「チーム」という）は「ビルマ養豚・養鶏開発計画」に関する技術協力計画を具体的に策定するため，１９７８年４月６日から４月１８日までビルマ国を訪問した。

同チームは，ビルマ国滞在中，上記のプロジェクトを成功裏に実施するため，両国政府により，とられるべき，望ましい措置について，ビルマ国政府関係者と意見を交換し，討議した。

討議の結果，チームおよびビルマ政府関係者は，以下の付属文書に示された事項を，各々の政府に対し勧告することについて合意した。

ラングーン，　１９７８年４月１２日

（署　名）	（署　名）
山　下　喜　弘	U　Pyi　Soe
日本国実施協議チーム団長	畜産開発販売公社
国際協力事業団	総裁

付　属　文　書

Ⅰ　両国政府間の協力

1. 日本政府およびビルマ政府は養豚・養鶏開発にかかる生産性向上のための技術の移転をはかることを目的とした「ビルマ養豚・養鶏開発技術協力プロジェクト」（以下「プロジェクト」という。）を相互に協力して実施する。

2. プロジェクトは，付表Ⅰに示された基本計画に基づき実施される。

Ⅱ　日本人専門家の派遣

1. 日本政府は，日本において施行されている法令に従い，付表Ⅱに掲げる日本人専門家の役務を，コロンボ計画技術協力計画に基づく通常の手段により，自己の負担において，提供するため，国際協力事業団を通じて必要な措置をとる。

2. 前項(1)に示された日本人専門家およびその家族は，コロンボ計画技術協力計画の枠内で特権，免除および便宜をビルマ国内において与えられる。

Ⅲ　機　材　供　与

1. 日本政府は，日本において施行されている法令に従い，プロジェクトの実施に必要な付表Ⅲに掲げる機械器具およびその他の資材をコロンボ計画技術協力計画に基づく，通常の手続により，自己の負担において，供与するため，国際協力事業団を通じて，必要な措着をとる。

2. 前項(1)に示された機材は陸揚げ港および空港においてＣＩＦ建てでビルマ政府関係者に引渡された時にビルマ政府の財産となり，また付表Ⅱに掲げる日本人専門家と協議のもとに，プロジェクトの実施のためにのみ使用される。

Ⅳ　日本におけるビルマ人職員の研修（研修員受入）

1. 日本政府は，日本において施行されている法令に従い，プロジェクトに関連した，ビルマ人職員を日本に受入れ，技術研修させるため，自己の負担において，国際協力事業団を通じて必要な措置をとる。

2. ビルマ政府は，ビルマ人職員が日本における技術研修により得た知識および経験を，プロジェクトの実施に効果的に活用されることを確保するため，

必要な措置をとる。

V　ビルマ政府により，とられる措置

1. ビルマ政府は，ビルマにおいて施行されている法令に従い，自己の負担において，次のことを準備するために必要な措置をとる。

(1) 付表Ⅳに掲げるビルマ人カウンターパートおよびその他の職員の役務

(2) 付表Ⅴに掲げる土地，建物，施設

(3) 第Ⅱに示された，国際協力事業団を通じて供与される機材以外の，プロジェクトの実施に必要な機械，器具，車輌，工具，スペアパーツ等の調達または代替交換

(4) 日本人専門家のビルマ国内における公務旅行に必要な交通手段および旅費

(5) 日本人専門家およびその家族のための家具付宿舎

2. ビルマ政府は，ビルマにおいて施行されている法令に従い，次のことを負担するため必要な措置をとる。

(1) 第Ⅱ項に示された機材のビルマ国内における輸送及び据付，操作，維持に必要な経費

(2) 第Ⅱ項に示された機材に対し，ビルマ国内において課せられる，関税，内国税およびその他の課徴金（もし，課せられる場合には）

(3) プロジェクトの実施に必要なすべての運営費

Ⅵ　プロジェクト運営

ビルマ政府畜産開発販売公社（以下「畜産公社」という）は，プロジェクト実施のための運営に関し責任を有し，日本人専門家は第一義的にはプロジェクト実施にかかる技術指導及びアドバイスを行なう。

プロジェクトを成功裏に，かつ円滑に実施するため，日本人専門家と畜産公社関係者は密接に協議する。

また，このため，付表Ⅵに掲げる合同委員会を設置する。合同委員会は少なくとも年一回開催する。

Ⅶ　ビルマ政府は，プロジェクトに携わる日本人専門家に対し，ビルマにおける

職務の遂行に起因し，またはその遂行中に発生した，請求が生じた場合には，その請求に関する責任を負う。ただし，日本人専門家の故意または重大な過失から生ずる責任については，この限りではない。

Ⅷ 相 互 協 議

この「討議議事録」に関し重大な問題が生じた場合，両国政府間で相互に協議する。

Ⅸ 協 力 期 間

この「討議議事録」に基づく，プロジェクトの技術協力の期間は，署名の日より4カ年とする。

その後の協力については，両国政府間の協議によるものとする。

1） 本プロジェクトに必要な配合飼料の生産管理

2） 調査・試験

3） 飼料生産にかかる実務研修

4） 改良技術の普及

Ⅱ. ビルマ人職員の技術水準をより向上させるため，改良技術の移転を目的として，ビルマ人職員を日本において研修する。

付　　表　　Ⅱ

日 本 人 専 門 家

専門家の職種	分　　野
1. チームリーダー	
2. 専　門　家	飼 養 管 理 (豚)
	飼 養 管 理 (鶏)
	家畜栄養及び飼料生産
	家 畜 衛 生
3. 業務調整員	

(注) 1. チームリーダーは上記の専門家より選ばれる。

2. 必要に応じ，短期専門家を派遣することができる。

付　　表　　I

プロジェクトの基本計画

A．プロジェクトの概要

1．目　　的

本プロジェクトは，将来ビルマにおける畜産振興の基盤となる，養豚・養鶏開発にかかる生産性向上のための改良技術の移転をはかることを第一義的な目的とする。

2．組　　織

１９７５年１２月５日付布告３／７５号により，農林省に設置された「プロジェクト政策委員会」の監理のもとに，畜産公社は，実施機関として，上記，本プロジェクトの目的を遂行する。

3．実　　施

本プロジェクトは付表Ⅵに示された合同委員会の指導のもとに，畜産公社により実施される。

プロジェクトの事業概要はＢ項に掲げる。

B．プロジェクトの事業概要

I．本プロジェクトはラングーン市プロムロード１０マイルの畜産公社農場（９０.５エーカー）において実施される。

1．運　営　部

運営部を設置し，本プロジェクト運営について監理する。

2．養　豚　場

養豚場及び関連施設を設置し，以下のことを行なう。

１）飼養管理

２）調査・試験

３）養豚の実務研修

４）改良技術の普及及び展示

3. 養　鶏　場

養鶏場及び関連施設を設置し，以下のことを行なう。

1）　飼養管理

2）　調査・試験

3）　養鶏の実務研修

4）　改良技術の普及及び展示

4. 技術訓練所

技術訓練所を設置し，養豚・養鶏の改良技術にかかる研修を行なう。

5. 飼料生産施設

飼料生産施設及び関連施設を設置し，以下のことを行なう。

付　　表　　Ⅲ

供　　与　　機　　材

1. 運営部に必要な資機材
2. 養豚場に必要な資機材
3. 養鶏場に必要な資機材
4. 技術訓練所に必要な資機材
5. 飼料工場に必要な資機材
6. 上記１～５に掲げる資機材のスペアーパーツ
7. その他必要な資機材

付　　表　　Ⅳ

ビルマ人専門家及びその他の職員

職員の種別	分　　野
1. プロジェクト・マネージャー	
2. マネージャー	運営部，養豚場，養鶏場，研修所，飼料工場，各部門の運営
3. カウンターパート技術者	飼　養　管　理(豚) 飼　養　管　理(鶏) 家　畜　栄　養 家　畜　衛　生(豚) 家　畜　衛　生(鶏)
4. その他の職員	

付　　表　　V

土　地　お　よ　び　建　物

1. 土　　地　　９０.５エーカー

(1) 運営部用地

(2) 養豚場用地

(3) 養鶏場用地

(4) 技術訓練所用地

(5) 飼料工場用地

2. 建　　物

(1) 運　営　部

1. 事　務　室

2. 会　議　室

3. 自家発電室

4. その他の関連施設

(2) 養　豚　場

1. 事　務　室

2. 豚　　舎

3. 簡易解体施設

4. 衛　生　室

5. 飼　料　庫

6. 農機具庫及び資材庫

7. 燃　料　庫

8. 車　　庫

9. その他の関連施設

(3) 養　鶏　場

1. 事　務　室

2. 鶏　　舎

3. ふ卵舎及び種卵貯蔵庫
4. 放牧衛生施設
5. 衛　生　室
6. 飼　料　庫
7. 資　材　庫
8. 燃　料　庫
9. 車　　庫
10. その他の関連施設

(4) 技術訓練所

1. 事　務　室
2. 講　義　室
3. 実　験　室
4. 資　材　庫
5. 研修生宿舎
6. 燃　料　庫
7. その他の関連施設

(5) 飼料生産施設

1. 事　務　室
2. 生産管理室
3. 原料貯蔵庫
4. 配合施設
5. 製品貯蔵庫
6. 資料分析室
7. 燃　料　庫
8. 車　　庫
9. その他の関連施設

付　　表　　Ⅵ

合同委員会の構成

委員長　：　畜産公社総裁

日本側	ビルマ側
1. チームリーダー	1. プロジェクトマネージャー
2. 専　門　家	2. マネージャー
3. 業務調整員	3. カウンターパート

(注)　日本大使館及び国際協力事業団の代表者及びビルマ政府農林省の関係者は，必要に応じて合同委員会にオブザーバーとして出席できるものとする。

２１．ウルグアイ野菜研究計画・討議々事録及び運営計画

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE IMPLEMENTATION SURVEY TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE ORIENTAL REPUBLIC OF URUGUAY FOR THE JAPAN-URUGUAY VEGETABLE RESEARCH COOPERATION PROJECT

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) visited the Oriental Republic of Uruguay from February to March for the purpose of working out details of the technical cooperation program concerning the Japan-Uruguay Vegetable Research Cooperation Project in Uruguay.

During its stay in Uruguay, the Team exchanged views and had a series of discussions with the Uruguayan authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned project.

After the Team returned to Japan, several discussions and exchange of views took place between the Japanese and Uruguayan authorities concerned through the Embassy of Japan in Montevideo to finalized the Record of Discussions for the Project.

As a result of the above discussions and exchange of views, JICA and the Uruguayan authorities concerned agreed to recommend to their respective Governments the matter referred to in the document attached hereto.

Montevideo, 19/7 , 1978

For the Japan International Cooperation Agency

Shoji Kanatsu
Director,
Agricultural Development
Cooperation Department, JICA

For the Ministry of Agriculture and Fishery of Uruguay

Cnel. Juan C. Fernández Bértoli
DIRECTOR GENERAL
DE SECRETARIA DE ESTADO

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Oriental Republic of Uruguay will cooperate with each other in implementing the Japan-Uruguay Vegetable Research Cooperation Project (hereinafter referred to as "the Project") for the purpose of improving the vegetable production techniques including potatoes through the research activities at mainly Las Brujas Experiment Station.

2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The Japanese experts referred to in 1. above and their families will be granted in the Oriental Republic of Uruguay the privileges, exemptions and benefits as listed in Annex III no less favourable than those granted to experts of third countries or international organizations performing similar missions.

III. *PROVISION OF MACHINERY AND EQUIPMENT*

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex IV, through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The article referred to in 1. above will become the property of the Government of the Oriental Republic of Uruguay upon being delivered c.i.f. to the Uruguayan authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

IV. TRAINING OF URUGUAYAN PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to recieve at its own expense the Uruguayan personnel connected with the Project for technical training or observation tour in Japan through the normal procedures under the Technical Cooperation Scheme of Japan.

2. The Government of the Oriental Republic of Uruguay will take necessary measures through the Ministry of Agriculture and Fishery to ensure that the knowledge and experience acquired by the Uruguayan personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE ORIENTAL REPUBLIC OF URUGUAY

1. In accordance with the laws and regulations in force in the Oriental Republic of Uruguay, the Government of the Oriental Republic of Uruguay will take necessary measures to provide at its own expense through the Ministry of Agriculture and Fishery:

   a. Services of the Uruguayan experts and other personnel as listed in Annex V;

   b. Land, buildings and facilities as listed in Annex VI;

   c. Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project (except for those provided by the Government of Japan through JICA under III above);

   d. Transportation facilities including fuel fees for the Japanese experts for the official travel within the Oriental Republic of Uruguay;

   e. Suitably furnished accommodations for the Japanese experts and their families, taking into account local conditions and finacial possibilities of Uruguayan authorities concerned.

2. In accordance with the laws and regulations in force in the Oriental Republic of Uruguay, The Government of the Oriental Republic of Uruguay will take necessary measures through the Ministry of Agriculture and Fishery to meet the following expenses:

a. Expenses necessary for construction or improvement of experiment fields and their incidental facilities for the implementation of the Project;

b. Expenses necessary for the transportation within the Oriental Republic of Uruguay of the articles referred to in III. above as well as for the installation, operation and maintenance thereof;

c. Customs duties, internal taxes and any other charges imposed in the Oriental Republic of Uruguay on the articles referred to in III. above;

d. All running expenses necessary for the implementation of the Project.

VI. ADMINISTRATION OF THE PROJECT

1. Alberto Boerger Agricultural Investigation Center of the Government of the Oriental Republic of Uruguay will be responsible for the administration and implementation of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

2. For the successful implementation of the Project, a Joint-Committee will be established as specified in Annex VII and will meet regularly. The Committee will formulate the details of the Master Plan referred to in Annex I and the annual operational work plan of the Project. The details of the Master Plan and the annual operational work plan will be submitted to the authorities concerned of the two Governments for their approval.

3. The Project will be implemented with close cooperation extended by the agricultural agencies and institutions concerned of the Oriental Republic of Uruguay.

VII. CLAIMS AGAINST JAPANESE EXPERTS

In accordance with the laws and regulations in force in the Oriental Republic of Uruguay, The Government of the Oriental Republic of Uruguay undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occuring in the course of, or otherwise connected with the discharge of their official functions in the Oriental Republic of Uruguay except for those arising from the willful misconduct or gross negligence of the Japanese experts.

VIII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any issues arising from, or in connection with this Attached Document.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be three years from July 19 of 1978 , and the authorities concerned of the two Governments will hold mutual consultation concerning the technical cooperation thereafter if necessity arises.

Annex I. Master Plan of the Project

1. The Project will be implemented for improving the vegetable production techniques including potatoes through the research activities, aiming at increase in production, improvement in quality and year-round production of vegetables in Uruguay.

2. The Project will be implemented through the following research activities:

   a. Research works on the following subjects;

      (1) Breeding technique of vegetables

      (2) Cultivation method of vegetables including protected cultivation

      (3) Breeding technique of potatoes

      (4) Cultivation method of potatoes

      (5) Disease and insect control on vegetables

      (6) Disease and insect control on potatoes

   b. Exchange of information, samples, materials and research reports for the Project.

   c. Development of research capability of the Uruguayan researchers on the subjects mentioned in 2-a.

   d. Other activities agreed by the authorities concerned of the two Governments.

3. Activities mentioned in 2. will be conducted in Las Brujas Experiment Station. The Station will conduct such activities in cooperation with other stations listed 4. below.

4. Other stations and their cooperation activities

name of station	cooperation activities
Del Norte Experiment Station	Implementation of applied research on potato varieties and their production methods
Litoral Norte Experiment Station	Implementation of applied research on vegetable varieties and their production methods

Annex II. List of Japanese experts

1. Researchers
   a. Vegetable breeding
   b. Vegetable cultivation
   c. Potato
   d. Plant pathology
   e. Entomology
2. Liaison Officer

Notes:

1) Team Leader will be assigned among the researchers specified in Annex II-1 above.
2) The experts will reside at Las Brujas Experiment Station, and will make their rounds of the other stations mentioned in Annex I-4 to provide technical guidance when necessity arises.
3) Some additional short-term experts in the fields mentioned above as well as others may also be dispached when necessity arises.

Annex III. Privileges, exemption and benefits

1. Exemption from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad.
2. Exemptions from import duties and any other charge in respect of personal and household effects, including one motor vehicle per family, which may be brought into the Oriental Republic of Uruguay from abroad.
3. In the case of accident or emergency, the Center referred in VI-1 above, will help by all its available means to obtain the necessary help and medical assistance to the Japanese experts and their families.

Annex IV. List of the articles to be provided by the Government of Japan

1. Equipment, machinery, implements and tools for laboratory work, and their spare parts;
2. Equipment, machinery, implements and tools for field work, and their spare parts;
3. Vehicles;
4. Fertilizer, agricultural chemicals and materials for chemical control;
5. Books and other necessary printed matters;
6. Audio-Visual aids;
7. Other necessary small-scale equipment and materials.

Annex V. The Uruguayan experts and other personnel

1. Experts

   a. Director

   b. Counterpart researchers for the Japanese researchers

2. Other personnel

   a. Laboratory assistants

   b. A private secretary for the leader of the Japanese experts

   c. Clerical personnel including a typist

   d. Drivers and other service personnel

   e. Field workers

Note:

At least one expert in charge of the Project will be posted at Litoral Norte Experiment Station and Del Norte Experiment Station respectively.

Annex VI. List of land, buildings and other facilities

1. Offices for Japanese Team Leader and experts
2. Laboratories and their incidental facilities
3. Meeting room
4. Glass-house and net-house
5. Facilities for seeds storage
6. Garage
7. Store-houses for machinery and other materials
8. Experiment fields and their incidental facilities

Las Brujas Experiment Station	about 3 ha
Del Norte Experiment Station	about 1 ha
Litoral Norte Experiment Station	about 1 ha

9. Other necessary land and buildings

Annex VII. The compostion of the Joint-Committee

Chairman	Director of Alberto Boerger Agricultural Investigation Center

Japanese side:	Uruguayan side:
Team Leader	Director, Las Brujas Experiment Station
Researchers	Uruguayan counterparts to the Japanese experts
Liaison Officer	

Note:

An official of the Embassy of Japan may attend the meeting of the Joint-Committee as an observer.

ウルガイ野菜研究計画・運営計画

Details of the Master Plan and the Annual Work Plan on the Japan-Uruguay Vegetable Research Cooperation Project

May, 1979

Montevideo, Uruguay

This Plan is to show the details of the Master Plan and the Annual Operational Work Plan in accordance with the Record of Discussions VI-2 exchanged on July 19, 1978 between the Oriental Republic of Uruguay and Japan concerning the Japan-Uruguay Vegetable Research Cooperation Project.

This Plan is a result of a series of consultations held between the Japanese Team (headed by Kiyoyuki Niiuchi) and also the Japanese Implementation Survey Team (headed by Kenji Umeya) on one side and the Uruguayan officials in charge of agricultural technology on the other.

May 15, 1979

In Montevideo, Uruguay

Joaquín Carbonell

Director of Las Brujas Agricultural Experimental Station

Kiyoyuki Niiuchi

Leader of Japanese Experts Team

Juan A. Curotto

General Director of Alberto Boerger Agricultural Investigation Center

Kenji Umeya

Leader of Japanese Implementation Survey Team

I. THE DETAILS OF MASTER PLAN

1. Purpose of cooperation.

The purpose of the proposed cooperation in research is to provide basic techniques for the development and improvement of potatoes and vegetables production and also guiding principles for future. The Japanese Project Team is to cooperate in the following tasks:

With regard to vegetables, it is necessary to ascertain problems and their solutions in breeding and cultivation to meet the domestic demand and to promote export. With a limited number of personnel, it will be conductive to efficiency to give priority to the elucidation of the problems of major varieties and the ascertainment of the aproach to future research. To achieve the above purpose, the Japanese Team is to cooperate in respect to four varieties: onion, garlic, tomato and sweet pepper.

As for potatoes, techniques of selecting an appropiate variety and cultivating disease-free seed potatoes are to be established to ensure stable supply of seed potatoes in Uruguay.

With regard to control of disease and insect damage, the Japanese cooperation is to cover the detailed elucidation of disease symptoms, improvement of the techniques of inspection and identification, and research on temporary control measures against major insects and pests in respect to each one of onion, garlic, tomato and sweet pepper mentioned above. Further, the Japanese side wishes to cooperate in research on technical methods

of reducing as much as possible the amount of pesticides to be used and directing for use of pesticide with safety from the viewpoint of environmental conservation of the future.

However, the Japanese Project Team is limited both in staff and in dutation to achieve the above purposes; in fact it is difficult to complete research in most cases by the Team alone. Accordingly, the Japanese side wishes to cooperate mainly transfering techniques and methods and also in the form of joint work with Japanese Researchers on a pilot farm so that the Uruguayan Specialists will be able to solve the problems ultimately on their own.

II. CONTENTS OF COOPERATION

1. Cooperation in research on breeding and cultivation of vegetables.

(1) Research on ~~the~~ breeding and cultivation method of onions.

Since research on varieties has been more or less completed, the present research is to place mainly its emphasis on the method of raising seedling (described later), fertilization, conducting experiments using principally phosphorus supplementary nitrogen and potassium for fertilization, serving at the same time as a display.

(2) Research on the selection of a good line of garlic.

Good lines of garlic (rebrotado) resistancy of virus poor and an even size and quality are to be selected from those for exporting mainly to the Brazilian market (red type) and the French market (white type).

(3) Research on the cropping type, the variety and the cultivation method of tomatoes.

Experiment to compare the cropping seasons of varieties for eating and processing is to be conducted, serving at the same time as a display, for the extension of the method of selection of suitable varieties and cultivation techniques.

It seems that the problems in cultivation, apart from the damage by disease and pests are fertilizer, irrigation and physiological disorders.

Pertinent research is, therefore, to be carried out (fertilizer is to be mentioned later).

Physiological disorders, particularly blossom end rot, which are found in various places, seem to be due to high soil temperature, drying and excess of nitrogen. Prevention tests by straw mulch, irrigation and correct fertilization are, therefore, to be conducted.

(4) Research concerning the countermeasure of virus diseases and sun scald of sweet pepper.

Virus diseases and sun scald seem to be the major problems in the cultivation of sweet peppers. Selection of a disease resistant variety is to be mainly considered for the former (see 1-(2), 3-(5)-a), and for the latter, prevention of damage through the improvement of the cultivation method is to be researched.

(5) Experiments concerning the raising seedlings.

Research on the method of raising seedlings for vegetables seems to be necessary, conducting experiments for those which are important. Correct amounts of farmyard manure, nitrogen, phosphorus and potassium are especially to be tested, serving also as displays. Considerable achievements are expected with the introduction of Japanese techniques to suit the present soil property.

(6) Research on soil improvement.

Physical and chemical properties of vegetable fields seem to be in a poor condition due to an insufficiency of organic matter. Accordingly,

application of organic matter and deep ploughing are to be tested. As for the effects of organic matter, apart from crop residue, urban garbage and green manure in summer are to be researched.

(7) Research on simple cultivation facilities.

Research is to be conducted on simple cultivation facilities in an inexpensive pipe house using plastic films to study the possibility of extending the crop season of fruit vegetables for stable production and improvement of quality.

(8) Research on chemical weed control.

In respect of mainly vegetable crops above mentioned, a methodology to evaluate herbicide efectiveness is to be conducted.

2. Cooperation in research on the potato.

(1) Techniques of producing good seed variety.

a. Selection of an appropiate variety.

After examining the adaptability of those varieties already introduce into Uruguay and those introduced from Japan, based on the overall evaluation of yield, quality, disease resistance, cultivation period and dormancy, a good variety is to be selected. Further, the selection technique is to be improved.

b. Rapid multiplication technique for the adaptable variety.

Rapid multiplication technique is to be developed and put into practice to multiply the promising variety selected under a. (above) for an experiment on a larger scale.

c. Establishment of a standard for the control of field husbandry.

To ensure the stable production of seed potatoes, overall control techniques of field husbandry suitable for the phases of growth are to be found and the standar established for the control techniques of field husbandry with a view to future mechanization.

(2) Techniques of inspecting diseases of seed potatoes.

Improvement of techniques of inspecting virus diseases and fungi diseases, method of early detection of diseases and improvement of the multiplication system are to be researched quality of seed potatoes. For the necessary methods, a part from visual inspection, scientific inspection method such as serodiagnosis, inoculation method with an indicator plant are to be introduced in the research.

(3) Seed potato multiplication system.

Virus free seed potatoes are to be produced in a net house installed, and a possibility of systematic multiplication, consisting of a base field, a multiplication field and a distribution field are to be studied. Further, the techniques for a stable supply of suitable age seed potatoes are to be researched.

3. Cooperation in research on the control of disease and pests damage.

(1) Ascertainment of disease symptoms in major crops:

Disease symptoms in major crops such as onions, garlic, tomato, sweet pepper and potato are to be surveyed throughout the season. Some experiments have already been researched by the Uruguayan authorities

and the Japanese short-term experts and they are to be continued in cooperation to augment the data. Cooperation is also to be carried out in the acquisition and improvement of techniques of inspection and identification (see 2-(2)).

(2) Selection of key pests.

Key pests which may cause problems in the cultivation of the above five crops are to be selected for each crop and season. Since this research requires detailed observation throughout the season, the work has to be carried on by the Uruguayan party while the Japanese pest expert is not present. However, both parties are to have consultation regarding the technical matters including the determination of the extent of damage and etc. Further, with regard to entomophilous damage, efforts are also to be made to find the vector as much as possible.

(3) Survey of the development of pests and the crop season.

This survey is to take hold of variations in disease symptoms and the extent of damage in fields of different crop seasons. This research is intended to obtain data for the determination of the suitable pest control period and the suitability of agricultural pest control. The necessary survey is to be conducted jointly by the Japanese pest expert and the Uruguayan party during the former's stay in Uruguay and continued by only the latter in fut

(4) Pest control test with pesticide.

In Uruguay, those pesticides which are under restriction in Western countries and Japan are widely used. This may cause problems in future from the viewpoint of environment conservation and health control. Further, as the techniques of deciding the effects of insecticides in field are developed in Japan, Japanese side likes to cooperate experiments and displays concerning effective insecticides for each key pest and improved application of low toxic insecticides for the acquisition of the techniques in a short period.

(5) Countermeasures against individual key pests.

a. Onion, Garlic, Tomato and Sweet Pepper.

As for virus diseases, soil diseases and other major damages by insects and pests, prevention and control techniques are to be researched. Since virus diseases are to be identified, and disease-resisting varieties and prevention techniques are to be researched. Further, individual control methods for other key disease and pests such as thrips on onions, rust and southern blight on garlic, are to be researched.

b. Potatoes.

As for the prevention of virus diseases which is the major problem at present, apart from extraction by improved inspection techniques, control methods for aphides are to be researched. (See 2-(1),(2))
Methods of controlling other key pests are also to be researched.

(6) Others.

Cooperation is to be carried out on methods for forecasting the occurrence of problems, data processing, handling of equipment and materials and preparation of specimens as the need arises.

III. ANNUAL WORK PLAN

(1) Annual work plan by each field of cooperation.

Items	Sub-items	Year of implementation 1st year*	2nd year	3rd year
1. Research on breeding and cultivation of vegetables	(1) Research on ~~the~~ breeding and cultivation method of onions.	———		
	(2) Research on the selection of a good line of garlic.	———		
	(3) Research on the crop type, the variety and the cultivation method of tomatoes.		———	
	(4) Research on virus diseases and sun scald of sweet peppers.		———	
	(5) Experiment on raising seedlings.	———		
	(6) Research on soil improvement.	———		
	(7) Research on simple cultivation facilities.		———	
	(8) Research on chemical weed control.		———	
2. Research on potatoes.	(1) Seed potatoes production technique.	———		
	(2) Disease inspection technique for seed potatoes.	———		
	(3) Seed potato multiplication system.		———	
3. Research on the control of disease and pest damage.	(1) Ascertainment of disease symptoms in major crops.	———	———	———
	(2) Selection of key pests.	———	———	———

Items	Sub-items	Year of implementation 1st year*	2nd year	3rd year
	(3) Survey of the development of pests and crop season.		———	
	(4) Pest control tests with pesticides.			———
	(5) Countermeasures against individual key pests.		———	
	(6) Others.	———	———	———

* 1st year: July 19, 1978 - July 18, 1979.
2nd year: July 19, 1979 - July 18, 1980.
3rd year: July 19, 1980 - July 18, 1981.

(2) Experts dispatch plan and training plan.
(Duration of cooperation: July 19, 1978 - July 18, 1981. 3 years.)

Field of specialization (Dispatch of experts)	1978 (month) 3 6 9	1979 3 6 9	1980 3 6 9	1981 3 6
1. Leader		12 — Niiuchi — 7		
2. Breeding and cultivation of vegetables		12 — concurrent (Niiuchi) — 7		
		10 — 10 11 — 7		
		12 — 4		
		10 — 10 — 5 — 11 — 7		
3. Breeding and virus of potatoes		10 — 1		
		12 — 6 7 — 4	7 — 4	
4. Pathology		12 — 2 11 — 5	9 — 3	
5. Insects		12 — 2	11 — 2	
6. Liasion		10 — Katoh — 7		

Field of specialization	1978 (month) 3 6 9	1979 3 6 9	1980 3 6 9	1981 3 6
(Training)				
1. Breeding and cultivation of vegetables		9 — 6	9 — 2 men	6
2. Breeding and virus of potatoes			4 — 1 2	8
				6 8 / 3 men
3. Pathology		6 — 12	10 — 3	
4. Insects				6 8
(Study Tour)		6 7 / 10 11 / 2 men	11 12 / 2 men	6 7 / 2 men
(Japanese Survey Team)	2 3 / 5 men	5 6 / 5 men	2 3 / 5 men	2 3 / 5 men

REMARK: As the budget system of Japanese Government is the system of annual year budget, this plan is destination to be conducted within the budget of the year.

(3) PROVISION OF MACHINERY AND EQUIPMENT

Items	Quantity	Purpose					Year of implementation		
		Potato	Vege-table	Patho-logy	Insects	Other	1st year	2nd year	3rd year
(Farm Machineries and Material)									
1. Rotary harrow	1unit	.	.					1	
2. Pan breaker	1	.	.					1	
3. Tuber unit planter	2	.						2	
4. Potato digger	1	.	.					1	
Soil Sterilizing Injector	2	.	.		.			2	
6. Power duster	4	.	.	.	.		2	2	
7. Dust proof deodoring mask	32set	.	.	.	.		8	24	
8. Sprayer	5unit	.	.	.	.			5	
9. Hand sprayer	7	.		.	.		2	5	
10. Hand duster	2	.	.	.	.		2		
11. Four wheel tractor	1	.	.				1		
12. Power tiller	4	.	.				4		
13. Two-row onion transplanter	1		.				1		
14. Two-row potato transplanter	2	.					2		
(Machinery and Equipment)									
1 Thermostat	4	.	.	.	.	.		2	2
2. Microscope	1	.	.	.	.			1	
3. Stereo-microscope	2	.	.	.	.			1	1
4. Camera (with attachment)	6	.	.	.	.	.		3	3
5. Refrigerator (250ℓ)	6	.	.	.	.	.		3	3
6. Simplifier soil analyzer	1set	.	.					1	
7. Inoculation box	1unit			.		.		1	
8. Auto clave	1unit	.	.	.				1	
9. Ice cooler	6unit	.	.	.	.	.		6	
10. Dry heat sterilizer	1unit	.	.	.	.			1	
11. Clean bench	1	.	.	.				1	
12. Clean box	2	.	.	.				2	
13. Compressor	1	.		.	.			1	
14. Sun Thermostat	1	.		.	.			1	
15. Room Cooler	1			.				1	
16. Humidifier	1		.	.	.			1	
17. Spore trap rotary type	1			.				1	

Items	Quantity	Purpose: Potato	Vege-table	Patho-logy	Insects	Other	Year of Implementation: 1st year	2nd year	3rd year
18. Leaf wetness recorder	3			.				3	
19. Automatic pipett washer	1	.	.	.	.			1	
20. Specific gravity balance	1	.	.					1	
21. Constant temperature panel form	6	.	.					3	3
22. Light thermostat	1			.	.			1	
23. Low temperature incubator	1	.	.					1	
24. Constant water bath	1	.		.				1	
25. Low temperature water bath	1	.		.				1	
26. High presurre steam sterilizer	1	.	.	.	.			1	
27 Vacuum freezing drying apparatus	1	.		.				1	
28. Container	1			.				1	
29. Centrifuge box type	1	.	.	.	.			1	
30. Ultra centrifuge	1	.		.	.				1
31. Spectophotometer	1	.	.	.	.				1
32. Hygrometers	1	.	.	.				1	
33 Air conditioner	4	.	.	.	.	.		4	
34. Electrically heated with fan	4	.	.	.	.	.		4	
35. Laboratory air cleaner	1	.		.		.		1	
3 Pure water maker	1	.	.	.	.			1	
37. Centrifuge balance	1	.	.	.	.			1	
38. Colony counter	1			.				1	
39. Timer	5	.	.	.	.			5	
40. Lux meter	2	.	.					2	
41. Han refractometer	5set	.	.					5	
42. Hand auger	1	.	.					1	
43. Light trap automatic 7 days type	2unit				.			2	
44. Nematode separator	1			.	.			1	
45. Balance	6	.	.	.	.			6	
46. Hanging balance	3	.	.					3	
47. Table balance	5	.	.	.	.			5	
48. Platform balance	1	.		.	.			1	
49. Digital direct balance	1	.	.	.	.			1	
50. Electric conduct meter	2	.		.	.			2	
51. Five unit counter	10set	.			.			10	
52. Steel cabinet	4unit	.		.	.			4	

Items	Quantity	Purpose					Year of implementation		
		Potato	Vege-table	Pathology	Insects	Other	1st year	2nd year	3rd year
53. Self registering thermometer	1	.	.	.				1	
54. Insect collection set	1set				.			1	
55. Insect breeding set	1				.			1	
56. Pruning scissors	10		.	.				10	
57. Slide calipers	3	.	.	.	.			3	
58. PH meter	2	.	.	.	.		1	1	
59. Thermometer	10	.	.	.	.			10	
60. Measuring tape	5	.	.	.	.	.		5	
61. Laboratory implement and other glass equiment	60var.	.		.	.			60	
62. Chemical reagent	44var.	.		.	.			44	
63. Seed processing machine	1unit			.			1		
64. Fluorescent light	50set			.	.	.		50	
65. Dessicators	10	.	.	.	.			10	
66. Pipet box	1	.	.	.	.			1	
(Office Equipment and Supplies)									
1. Micro machine tools	1set	.	.	.	.	.		1	
2. Electric machine tools	1set	.	.	.	.	.		1	
3. Over head projector	1unit	.	.	.	.	.		1	
. Slide projector	1unit	.	.	.	.	.		1	
5. Electric typewriter	2unit	.	.	.	.	.		2	
6. Automatic mimeographing	1unit	.	.	.	.	.		1	
7. Transformer	4	.	.	.	.	.		4	
8. Calculator	2	.	.	.	.	.	2		
9. Copyer	1	.	.	.	.	.	1		
10. Typewriter	2	.	.	.	.	.	2		
(Facilities)									
1. Net house 100 m^2	4	.	.	.	.			2	2
2. Greenhouse	2	.							2
3. Prefab. pipe house 500 m^2	2		.					2	
4. Irrigation and sprinkling system	1set	.	.						1

Items	Quantity	Purpose					Year of implementation		
		Potato	Vegetable	Pathology	Insects	Other	1st year	2nd year	3rd year
5. Mist sprinkling set	1set	.	.					1	
6. Vehicle	6units	.	.	.	.	.	2	4	

REMARK: As the budget system of Japanese Government is the system of annual year budget, this plan is destination to be conducted within the budget of the year.

/abc

２２．インドネシア農業研究計画・討議々事録及び運営計画

THE RECORD OF DISCUSSIONS
BETWEEN THE JAPANESE PROJECT FORMULATION TEAM
AND THE AUTHORITIES CONCERNED OF THE REPUBLIC OF INDONESIA
ON THE TECHNICAL COOPERATION F^R THE STRENGTHENING OF LEGUMES
IN RELATION TO CROPPING SYSTEM RESEARCH PROJECT (ATA -- 218)

J a k a r t a
October 12, 1978

THE RECORD OF DISCUSSIONS
BETWEEN THE JAPANESE PROJECT FORMULATION TEAM
AND THE AUTHORITIES CONCERNED OF THE REPUBLIC OF INDONESIA
ON THE TECHNICAL COOPERATION FOR THE STRENGTHENING OF LEGUMES
IN RELATION TO CROPPING SYSTEM RESEARCH PROJECT (ATA - 218)

The Japanese Project Formulation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Shigeo KITANO visited the Republic of Indonesia from October 5 to October 12, 1978 for the purpose of working out the details of the technical cooperation program concerning the Strengthening of Legumes in Relation to Cropping System Research Project in the Republic of Indonesia.

During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned in respect of the desirable measures to be taken by both Governments for the succsessful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Indonesian authorities concerned considered that Japan-Indonesia Joint Food Crop Research Program under the Agreement between the Government of Japan and the Government of the Republic of Indonesia signed at Jakarta on October 23, 1970 has achieved its expected results and accordingly agreed to recommend to their respective Governments the matters referred to in the document attached hereto

Jakarta, October 12, 1978

S. Kitano

Shigeo KITANO
Leader
The Japanese Project
Formulation Team

Rusli Rakim
Director
Central Research Institute
for Agriculture

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN THE GOVERNMENT OF JAPAN AND THE GOVERNMENT OF THE REPUBLIC OF INDONESIA FOR THE STRENGTHENING OF LEGUMES IN RELATION TO CROPPING SYSTEM RESEARCH PROJECT.

1. The Government of Japan and the Government of the Republic of Indonesia will cooperate with each other in implementing the Strengthening of Legumes in Relation to Cropping System Research Project (hereinafter referred to as "the Project) for the purpose of strengthening research activities on legumes and other food crops (rice, corn, tuber crops) as components in cropping system.

2. The Project will be implemented with the Master Plan which is given in Annex I.

3. The Project will be managed by the Joint Committee referred to in VI-2, in accordance with the annual work plan to be formulated in line with the Master Plan referred to in 2. above.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Japanese experts referred to in 1. above and their families will be granted in the Republic of Indonesia the privileges, exemptions and benefits no less favourable than those accorded to experts of third countries working in the Republic of Indonesia under the Colombo Plan Technical Cooperation Scheme, and will include the following:

(1) Exemption from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad;

(2) Exemption from import and export duties and any other charges imposed in respect of personal and household effects which may be brought into from abroad or taken out of the Republic of Indonesia;

(3) Exemption from import tax, import sales tax, sales tax, and other taxes and charges of any kind imposed on or in connection with the purchase in the Republic of Indonesia by the Japanese Experts of one motor vehicle per each expert; and

(4) Free local medical services and facilities to the Japanese Experts and their families.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex III, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The articles referred to in 1. above will become the property of the Government of the Republic of Indonesia upon being delivered c.i.f. to the Indonesian authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese Team Leader referred to in Annex "I.

IV. TRAINING OF THE INDONESIAN PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive its own expense the Indonesian personnel connected with the Project for technical training or observation tour in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the Indonesian personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF INDONESIA

1. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to provide at its own expense:

   (1) Services of the Indonesian counterpart personnel and administrative personnel as listed in Annex IV;

   (2) Land, buildings and facilities as well as incidental facilities thereto for the Project as listed in Annex V;

   (3) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III above;

   (4) Transportation facilities and travel allowance for the Japanese experts for the official travel within the Republic of Indonesia;

   (5) Existing suitably furnished accommodations for the Japanese experts and their families.

In addition, all equipment and machinery available at the Central Research Institute for Agriculture as well as those provided through JICA may be used for implementing the Project.

2. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to meet:

   (1) Expenses necessary for the transportation within the Republic of Indonesia of the articles referred to in III above as well as for the installation, operation and maintenance thereof;

   (2) Customs duties, internal taxes and any other charges imposed in the Republic of Indonesia on the articles referred to in III above;

   (3) All running expenses necessary for the implementation of the Project.

VI. ADMINISTRATION OF THE PROJECT

(1) The Director of the Central Research Institute for Agriculture of the Agency for Agricultural Research and Development will be responsible for the administration and implementation of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

(2) For the effective implementation of the Project, a Joint Committee consisting of the members as listed in Annex VI, will be established and meet at least once a year. The Committee will formulate the details of the Master Plan referred to in paragraph I and the annual operation work plan of the Project. The details of the Master Plan and of the annual operation work plan will be submitted to the authorities concerned of the two Governments for the approval.

(3) The Project will be implemented with close cooperation extended by the related agencies and institutions concerned of the Republic of Indonesia.

VII. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of Indonesia undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occuring in the course of, or otherwise connected with the discharge of their official functions in the Republic of Indonesia except for those claims arising from the willful misconduct or gross negligence of the Japanese experts.

VIII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be five (5) years from October 23, 1978.

ANNEX I MASTER PLAN

1. With a view to developing package of technology on food crops production suitable for agro-climatic condition in the Republic of Indonesia, the Project will be carried out for strengthening research activities on legumes and other food crops (rice, corn, tuber crops) as components in cropping system at the Central Research Institute for Agriculture, Bogor (hereinafter referred to as "CRIA").

2. The Project will consist of the following activities ;

   (1) Research work on the component technology of cropping system through interdisciplinary approach on the following themes :

      (a) Breeding Technique on Legumes and Other Secondary Crops
      (b) Cultivation Practice on Legumes and Other Secondary Crops
      (c) Water Management
      (d) Application Methods of Fertilizer, Conservation and Improvement of Soil Productivity
      (e) Weed Control
      (f) Plant Physiology
      (g) Plant Protection

   (2) Exchange of information, samples, materials and research reports

   (3) Development of research capabilities of the Indonesian researchers in the field as mentioned (1) above

   (4) Other activities to be agreed upon between the authorities concerned of the two Governments

3. The activities mentioned in 2. above will also be conducted at appropriate experimental stations of CRIA and farmers' field.

ANNEX II JAPANESE EXPERTS

1. Leader

2. Researchers covering the following fields ;

(1) Upland/Secondary Crops Cultivation

(2) Rice Agronomy/Cultivation

(3) Plant Physiology

(4) Plant Pathology

(5) Entomology

3. Coordinator/Liaison Officer

NOTE :

Some additional short-term experts in the fields noted in 2. above and other fields when necessities arise.

ANNEX III LIST OF THE ARTICLES TO BE PROVIDED BY THE GOVERNMENT OF JAPAN

1. Equipment, machinery, instruments, tools, spare parts and other materials for laboratory work
2. Equipment, machinery, instruments, tools, spare parts and other materials for field work
3. Fertilizers, pesticides and materials for chemical control
4. Audio-visual aids and articles
5. Vehicles
6. Books and other necessary printed matters
7. Other necessary minor equipment and materials.

ANNEX IV LIST OF INDONESIAN STAFF

1. Project Leader
2. Counterpart researchers to the Japanese researchers
3. Laboratory assistants
4. Field workers
5. Clerical and service personnel including typists, clerks, drivers, etc.

ANNEX V LIST OF LAND, BUILDINGS AND OTHER INCIDENTAL FACILITIES

1. Plant protection research building
2. Offices for Japanese experts
3. Laboratories
4. Glass houses and green houses
5. Experimental farm land
6. Garages
7. Facilities for storing equipment, machinery and other materials for the implementation of the Project.

ANNEX VI COMPOSITION OF THE JOINT COMMITEE

1. Chairman : Director of the Central Research Institute for Agriculture of the Agency for Agricultural Research and Development

2. Indonesian Side :

   (1) Project Leader
   (2) Head of Divisions of CRIA related to the Project
   (3) Other personnel appointed by the Chairman

3. Japanese Side :

   (1) Team Leader
   (2) Experts designated by Team Leader
   (3) Coordinator/Liaison Officer
   (4) Representatives of Japan International Cooperation Agency

NOTE :

Officials of the Embassy of Japan may attend the Joint Committee as observers.

This Plan is to present the details of the Master Plan and the Annual Operation Work Plan in accordance with the Record of Discussions for the Strengthening of Legumes in Relation to Cropping System Research Project (ATA-218) VI-2, exhanged on October 12, 1978 between Japan and The Republic of Indonesia.

This plan is a result of a series of consultations held between the Japanese Guidance Team (headed by Setsuro TODA) and also the Japanese Team (headed by Kanenori NAKAYAMA) on one side and the Indonesian Technical Officials in Central Research Institute for Agriculture (headed by Rusli HAKIM) on the other.

Bogor, December 13, 1979

Rusli Hakim
Director
Central Research Institute
for Agriculture
Agency for Agricultural
Research and Development.

K. Nakayama

Kanenori Nakayama
Sub-Leader of Japanese
Experts Team
Japan International
Cooperation Agency.

Setsuro Toda

Setsuro Toda
Leader of Japanese
Guidance Team
Japan International
Cooperation Agency.

I. Purpose of Cooperation

With a view to developing technology on food crop production suitable for agro-climate condition in Indonesia, the project will be carried out for strengthening research activities on legumes and other food crops (rice, corn, tuber crops) as components in cropping system under the provision of the Record of Discussions ANNEX I Master Plan signed on October 12, 1978.

Japanese Project Team is limited both in staff and duration to achieve the purpose, because the purpose of cooperation is wide and profound in fact,therefore it is difficult to complete research in most cases by the team alone. Accordingly, the Japanese side wishes to cooperate mainly on the transfer techniques and studies on the basic research which is useful to promote crop production in the form of joint work with Indonesia Researchers.

To achieve the purpose during the cooperation, researchers covering the following field, i.e. secondary crops cultivation, rice cultivation, plant physiology, plant pathology and entomology will be dispatched, and some short-term experts in the field will be added when necessities arise. Machinery,

インドネシア農業研究計画・運営計画

Details of the Master Plan and the Annual Operation Work Plan for the Strengthening of Legumes in Relation to Cropping System Research Project

(ATA - 218)

Bogor

December 13, 1979

equipment and other materials will be provided, and the Indonesian Researchers will be given technical training and observation tour in Japan.

II Content of Cooperation

1. Breeding technique on legumes and other secondary crops

Cooperation research activity on the selection technique will be mainly carried out in Japan for training of Indonesian Researchers. Because, Japanese Project Team is limited in staff and duration, on the other hand, research on cropping improvement needs a long time study. One of the most important crop is soybean, so the training of breeding technique of soybean in Japan will be effective by considering research priority in Indonesia.

Furthermore, basic research to collect data for breeding will be conducted through cultivation.

2. Cultivation practice on legumes and other secondary crops

(1) Soybean

Research concerning legumes concentrates on soybean as an objective crop. Method of soybean cultivation is usually cultivated after harvesting of paddy rice and during the dry season. For that reason, early meaturing variety is selected to

reduce drought injury, and high population planting is usually practiced to obtain high yield. Furthermore, in this country soybean is generally broadcast over the field without tillage, because seeding of soybean is necessary as soon as possible after harvesting of paddy rice, under the influence of harvest method (ani-ani) of previous paddy rice.

Thus low yield is caused by many missing plants due to low viability of the seeds which is typical for tropical region, minim~~u~~m care by the farmers and weed competition.

Research on cultivation system by plowing and stripe seeding is conducted to improve method of untillage and broadcast seeding. But so far research on growth analysis has not been conducted. Therefore, after investigating and pigeonholing the actual conditions of soybean planting, the following research will be conducted based on these actual conditions.

1. Method of soil tillage in relation to method of seeding on the growth performance and yield of soybean
2. Improvement of seed viability
3. Growth analysis of soybean in relation to cultivation system.

(2) Other secondary crops

Most of corn is planted at the beginning of the rainy season by using early maturing varieties (less than 100 days) to suit the excisting cropping pattern. The study of growth analysis is necessary to increase corn production (in relation to plant density, fertilizer and other factors).

Study on the varietal characteristics of sorghum is necessary.

Cassava is cultivated widely as an upland crop, but the varieties are native. Considering the mass-production in the future, its breeding is important, therefore it is necessary to study the ecological analysis in order to get the basic data. Furthermore, research on breeding and multiplication method are necessary.

Above mentioned research is conducted when necessity arises, because Japanese team is limited in staff, and whises mainly to give to advices.

3. Water managemtnt

The result of the past two and a half years study on water management on paddy field indicated that (1) there is interaction between water requirement and variety (2) drought injury is related to growth stages and (3) good water management ensure high

yield of rice.

Therefore, research concerning water management in paddy field in relation to following crops (soybean and others) such as suitable planting time of rice related to cropping system, time of surface drainage after heading, and the efficient use of water requirement of soybean will be conducted under this Project.

4. Application method of fertilizer, conservation and improvement of soil productivity on lowland rice. Studies on the method of fertilizer application will be conducted on lowland rice cultivation after harvesting the legumenous and other upland crops.

5. Weed control

Methods of weed control on main weed in upland field will be studied.

6. Plant physiology (Plant nutrition)

(1) Increase of protein yield of soybean

Studies on (1) how to get high yield of soybean and (2) how to raise protein content of soybean seed will be conducted.

Concerning (1), studies on the varietal difference in the patterns of nutrient element absorption and dry matter production will be

carried out.

Concerning (2), studies on the influence of amount, time and kind of fertilizer application on protein, fat and inorganic contents of soybean will be carried out.

Also, the effects of fertilizer application on farmer's fields and studies on germination will be conducted.

(2) Physiological disorder of upland crops

Studies on the physiological disorder of upland crops have not been emphasized enough, and taking into account that quite a lot on paddy has already been done, the studies of physiological disorder on upland crops emphasizing on micro nutrients and balance of nutrient absorption will be carried out.

7. Plant pathology (Disease control)

(1) Survey on the occurrence of secondary crop diseases

Although there are many information about the occurrence of rice diseases, survey on the occurrence of secondary crop diseases is not so much as rice diseases. It will be necessary to examine the occurrence of secondary crop like soybean, peanut and mungbean diseases

in Indonesia.

(2) Studies on the disease of soybean

Main research purpose of soybean rust is to control through resistant variety. Moreover, it is necessary to examine the possibility of ecological control through various seeding time.

Studies on chemical control of seed-borne fungal and bacterial diseases will also be conducted.

(3) Rhizoctonia disease of various crops

Identification and grouping of the isolates depending on anastomosis in Rhizoctonia sp. isolated from various crops will be conducted. Fundamental data will be used to control Rhizoctonia sp. of various crops in combination with chemicals.

(4) Studies on the fungal, bacterial disease and nematodes of legumes and other secondary crops.

As the bacterial disease and nematode are not enough researched, it is necessary to research in the field. But the bacteriologist is not included as a long term expert in Japanese team. So we suppose that the study will be conducted by some short term experts and by some staff

of CRIA who will receive further training in Japan.

8. Entomology (Insect control)

(1) Ascertainment of insect pest and selection of key pests

Insect pests on soybean and corn will be surveyed throughout the year. Variation of insect pest and differences in the extent of damage in the field of different crops will be made clear by this survey, and at the same time, key pests on crops will be decided.

Soybean and corn are mainly cultivated in Central and East Java. Insect pests and key pests on these crops may be different by districts. On this point, data will be augmented by routine survey in other districts.

(2) Seasonal prevalence of key pests

The major insect pests, which are recognized at the above survey (1) will be surveyed quantitatively for ascertainment of seasonal prevalance. This research is intended to obtain data for determination of time of insecticide application.

(3) Identification of stem borers, pod borers and seed pests

There are frequent troubles in identification of stem borers and pod borers. The classification will be studied.

(4) Chemical control of key pests

After survey of insect pests and seasonal prevalence of key pests are done, research on insecticidal control on key pests will be carried out.

(5) Research on the development of artificial diet and mass rearing of insect pests

In the studies on bionomics and control of insect pests, insect pests for experiments should be always ensured in abundance. In the mass successive rearing of leaf-feeding insect pest, a great deal of work and many hours are required for ensuring host plant and exchange food. Therefore, studies on the development of simple artificial diet and mass successive rearing methods are indispensable. These studies will contribute to curtailment of research expense, reduction of research term and magnification of research scale.

(6) Research on utilization of micro-organism to control some lepidopterous pests

Insect pest control by chemical insecticide

may cause problems in the future from the viewpoint of environment conservation, health control and disturbance of fauna. Then, study of future pest control should intend to integrated control. Japanese side likes to cooperate transmission of technique for studies on insect pathogenic micro-organism and its utilization to Indonesian authorities.

III Annual Work Plan

1. Tentative Annual Work Plan by each field of cooperation

Items	Sub - items	Year of implementation * 1st year	2nd year	3rd year	4th year	5th year
1. Breeding technique on legumes and other secondary crops	(1) Selection technique of soybean			-	-	
2. Cultivation practice of legumes and other secondary crops	(1) Cultivation practice of soybean					
	(2) Cultivation practice of other secondary crops					
3. Water management	(1) Efficient use of water					
4. Application methods of fertilizer, conservation and improvement of soil productivity	(1) Application methods of fertilizer on lowland rice followed by upland crops					
5. Weed control	(1) Weed control on upland field					
6. Plant physiology	(1) Increase of protein yield of soybean					
	(2) Physiological disorder of upland crops					

Items	Sub - items	Year of implementation 1st year	2nd year	3rd year	4th year	5th year
7. Plant pathology	(1) Survey on occurrence of secondary crop diseases	———	———	———	———	———
	(2) Studies on disease of soybean	———	———	———	———	———
	(3) Rhizoctonia diseases of various crops	———	———			
	(4) Studies on the fungal, bacterial, diseases, and nematodes of legumes and other secondary crops	———	———	———	———	———
8. Entomology	(1) Ascertainment of insect pest and selection of key pests	———				
	(2) Seasonal prevalence of key pests		———	———	———	———
	(3) Identification of stem borers, pod borers and seed pests	———	———	———		
	(4) Chemical control of key pests		———	———	———	———
	(5) Research on the development of artificial diet and mass rearing for insect pests	———	———	———	———	———
	(6) Research on utilization micro-organism to control some lepidopterous pests.		———	———	———	———

Note 1 * 1st year : April 1979 - March 1980

2nd year : April 1980 - March 1981

- - - - - - - - - -

5th year : April 1983 - October 1983

2 - - - - means that it will be studied when necessity arises.

2. Tentative experts dispatch plan and training plan

(Duration of cooperation : October 23, 1978 - October 22, 1983)

	Field of specialization	1979 (month) 3 6 9	1980 3 6 9	1981 3 6 9	1982 3 6 9	1983 3 6 10
	(Dispatch of experts)					
1.	Leader	2 Matsumi				10
2.	Breeding and cultivation of upland crops	2 Nakayama	2			10
			6 11		6 11	6 10
3.	Cultivation of rice	2 Ishikura	2			10
			6 8	12 2	12 2	
4.	Plant physiology	3 Fujimoto	3			10
			6 11		6 11	6 10
5.	Plant pathology	2 Yamaguchi	2			10
			2 5	6 11		8 10
6.	Entomology	3 Okada	3			10
			4 6	6 11	6 11	6 10
7.	Liaison	5 Habu	5			10

Note: Due to the single year budget system of Japan this is an estimate subject to necessary budget appropriation throughout the period of cooperation as well as on the assumption that the Indonesian side takes every necessary measures for the execution of the Project.

Field of specialization	(budget year) 1979	1980	1981	1982	1983
	(month) 4 3/4	3/4	3/4	3/4	10
(Training)					
1. Breeding and cultivation of upland crops	3 9 3——9 5 10	5 10 6 9	5 10 5 10	5 10 5 10	
2. Cultivation of rice	5 10	5 10	5 10	5 10	
3. Plant physiology	5 12 3 9 5——10	5 10	5 10	5 10	
4. Plant pathology	5 10 3 9 5 11	8 4 4 10		5 10	
5. Entomology	5 10 5 10	2 7 9 5	6 11	5 10	
(study tour)	2 6	7 8	7 8	7 8	7 8
	2 person	2 person 2 person	2 person	2 person	2 person
(Japanese survey team)	12	11	11	11	11
	5 person	5 person	5 person	5 person	2 person

Note: Due to the single year budget system of Japan this is an estimate subject to necessary budget appropriation throughout the period of cooperation as well as on the assumption that the Indonesian side takes every necessary measures for the execution of the Project.

3. Tentative provision of machinery and equipment

Main list

Items	Quantity	Year of implementation				
		1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
(Farm machineries and materials)						
1. Small tractor & power tiller	9	4	2	-	3	-
2. Weeding tiller	8	5	2	-	1	-
3. Sprayer	32	3	10	6	8	5
4. Thresher for upland crops	6	2	2	1	1	-
5. Rice thresher	6	4	1	-	1	-
6. Dryer for grain	2	1	-	1	-	-
7. Jet cutting for weed	8	1	3	2	1	1
8. Bird net	19	2	5	5	4	3
9. Test huller for rice	1	-	1	-	-	-
10. Soil mixer	1	-	-	1	-	-
(Machinery and equipment)						
1. Analytical balance	4	-	2	1	-	1
2. Refrigerator	9	2	2	2	2	1
3. Air Conditioner	7	3	2	2	-	-
4. Camera	6	2	2	-	-	2
5. Enlarger	1	-	1	-	-	-
6. Stereoscopic Microscope	8	3	2	1	1	1

Items	Quantity	Year of implementation				
		1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
7. Microscope	4	1	1	2	-	-
8. Atomic absorption spectrophotometer	2	1	-	-	-	1
9. Autoclave	3	-	1	-	1	1
10. Illuminance meter	3	1	2	-	-	-
11. Clean banch	3	-	2	-	1	-
12. Incubator	11	-	6	3	1	1
13. Shaker	2	-	1	1	-	-
14. Spectrophotometer	1	-	1	-	-	-
15. pH meter	2	-	1	-	-	1
16. Electric conductivity meter	1	-	1	-	-	-
17. Drying oven	3	1	-	1	-	1
18. Drying oven (mechanical convection)	2	-	-	1	-	1
19. Plant growth cabinet	1	-	-	1	-	-
20. Centrifuge	4	1	2	-	-	1
21. Water permeability test apparatus	1	-	1	-	-	-
22. Leaf area meter	2	-	1	-	-	1
23. Crusher	3	1	1	-	-	1
24. Voltage regulator	24	5	6	6	4	3
25. Overhead projector	3	-	2	1	-	-
26. Water bath	2	1	-	-	-	1

Items	Quantity	Year of implementation				
		1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
27. Rotary evaporator	3	2	-	1	-	-
28. Gas purifier	2	1	-	-	1	-
29. Automatic micro-syringe	6	1	2	1	1	1
30. Pipette dryer	2	-	1	-	-	1
31. Generator	2	1	-	1	-	-
32. Mantle heater	10	8	-	-	-	2
33. Supports	4	2	-	-	2	-
34. Homogenizer	3	2	-	-	1	-
35. Hot air steri-lizer	3	-	1	-	1	1
36. Freezer	1	-	-	-	-	1
37. Test tube washer	2	-	2	-	-	-
38. Electrophoresis apparatus	1	-	-	1	-	-
39. Ionccater	1	-	1	-	-	-
40. Water bath for soil temperature	1	-	-	-	1	-
41. Diamond knife	2	2	-	-	-	-
42. Experimental desk	2	2	-	-	-	-
43. Grain moisture meter	5	1	2	2	-	-
44. Soil PF meter	1	-	-	-	1	-
45. Oxygen diffusion rate meter	1	-	-	-	1	-
46. Infrared moisture meter	1	-	-	1	-	-
47. Rotor for ultra centrifuge	2	-	-	-	1	-
48. Thermo-hygro-stats	1	-	-	-	1	-

Items	Quantity	Year of implementation				
		1st yr.	2nd yr.	3rd yr.	th yr.	5th yr.
(Green house)						
1. Green house	3	-	1	1	1	-
2. Stainless wire cloth	30	-	8	8	8	6
(Workshop)						
Machinery and equipment for the workshop						
(Irrigation facility)						
Machinery and equipment for irrigation						
(Vehicles)						
1. Micro-bus	5	3	1	1	-	-
2. Jeep	5	-	1	2	1	1
3. Small truck	2	-	-	-	1	1
4. Motorcycle	16	-	6	5	4	1
(Official supplies)						
1. Copyer	4	1	1	1	1	-
2. Typewriter	10	1	3	3	2	1
3. Calculator	8	-	3	2	1	2
4. Printer	3	-	2	1	-	-

Note: 1. 1st year shows from April 1979 to March 1980. After 1st years, each year shows from April to March in the Year.

2. Due to the single year budget system of Japan this is an estimate subject to necessary budget appropriation throughout the period of cooperation as well as on the assumption that the Indonesian side takes every necessary measures for the execution of the Project.

２３．アフガニスタン稲作開発センター計画・討議々事録及び合同評価了解事項

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE IMPLEMENTATION SURVEY TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE DEMOCRATIC REPUBLIC OF AFGHANISTAN ON THE JAPANESE TECHNICAL COOPERATION FOR THE RICE DEVELOPMENT CENTER PROJECT

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Shoji KANATSU, Director of Agricultural Development Cooperation Department, Japan International Cooperation Agency, visited the Democratic Republic of Afghanistan from March 4 to April 3, 1979 for the purpose of working out the details of the technical cooperation program concerning the Rice Development Center Project in the Democratic Republic of Afghanistan.

During its stay in the Democratic Republic of Afghanistan, the Team exchanged views and had a series of discussions with the Afghan authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the above-mentioned Project.

As a result of the discussions, the Team and the Afghan authorities concerned agreed to recommend to their respective Governments the matters referred to in the document attached hereto.

Kabul, March 14, 1979

Mr. Shoji KANATSU
Head of the Japanese Implementation Survey Team
Japan International Cooperation Agency

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THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Democratic Republic of Afghanistan will cooperate with each other in implementing the Rice Development Center Project (hereinafter referred to as "the Project") for the purpose of promoting agricultural development based on the policy of the Government of the Democratic Republic of Afghanistan to reach self-sufficiency in food production henceforth laying the firm foundation for improved rural living standards through high farm household income.

2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Japanese experts referred to in 1 above and their families will be granted in the Democratic Republic of Afghanistan the privileges, exemptions and benefits no less favourable than those accorded to experts of third countries working in the Democratic Republic of Afghanistan under the Colombo Plan Technical Cooperation Scheme.

III. PROVISION OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense such machinery, equipment and other materials necessary for the implementation of the Project as listed in Annex III, through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The articles referred to in 1 above will become the property of the Government of the Democratic Republic of Afghanistan upon being delivered c.i.f. to the Afghan authorities concerned at Kabul, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to Annex II.

IV. TRAINING OF AFGHAN PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the Afghan personnel connected with the Project for technical training in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Democratic Republic of Afghanistan will take necessary measures to ensure that the knowledge and experience acquired by the Afghan personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

V. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE DEMOCRATIC REPUBLIC OF AFGHANISTAN

1. In accordance with the laws and regulations in force in the Democratic Republic of Afghanistan, the Government of the Democratic Republic of Afghanistan will take necessary measures to provide at its own expense:

(1) Services of the Afghan counterpart personnel and administrative personnel as listed in Annex IV;

(2) Land, buildings and facilities as listed in Annex V;

(3) Electricity supply for the activities of the Rice Development Center and irrigation water supply for the paddy field of the Center;

(4) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided through JICA under III above;

(5) Transportation facilities and travel allowance for the Japanese experts for the official travel within the

Democratic Republic of Afghanistan;

(6) Suitably furnished accommodations for the Japanese experts and their families.

2. In accordance with the laws and regulations in force in the Democratic Republic of Afghanistan, the Government of the Democratic Republic of Afghanistan will take necessary measures to meet:

(1) Expenses necessary for the transportation within the Democratic Republic of Afghanistan of the articles referred to in III above as well as for the installation, operation and maintenance thereof;

(2) Customs duties, internal taxes and any other charges, imposed in the Democratic Republic of Afghanistan on the articles referred to in III above;

(3) All running expenses necessary for the implementation of the Project.

VI. ADMINISTRATION OF THE PROJECT

1. The Government of the Democratic Republic of Afghanistan will be responsible for the administration and implementation of the Project, and the Japanese experts will provide necessary technical guidance and advice for the implementation of the Project.

2. Kabul Liaison Office referred to in Annex V-3 for the Project will be provided within the Ministry of Agriculture and Land Reforms by the Government of the Democratic Republic of Afghanistan for Japanese experts and their counterparts in order to carry out the Project effectively under close cooperation with other activities of the Ministry of Agriculture and Land Reforms.

3. A Joint-Committee will be established for the successful implementation of the Project. The composition of the Joint-Committee is specified in Annex VI. The Joint-Committee will meet at least two times a year.

The activities of the Joint-Committee are as follows:

(1) to make an implementation and management program of the Project;

(2) to make an annual work plan of the Project. (including the utilization plan of the special fund referred to

in 5.)

(3) to clarify responsibility and duty of each expert and Afghan staff assigned to the Center.

(4) to decide important matters for the implementation of the Project.

4. A part of the articles referred to in III-1 may be rented at reasonable rates, in accordance with laws and regulations in force in the Democratic Republic of Afghanistan, and a part of consumable items such as fertilizer and agricultural chemicals, etc. may also be transferred at reasonable prices, to be determined likewise to the pilot farmers as may be decided by the Joint-Committee.

5. The proceeds from such rentals or transfers will constitute a special fund for the Project, which will be used exclusively for the implementation of the Project in accordance with laws and regulations in force in the Democratic Republic of Afghanistan.

VII. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Democratic Republic of Afghanistan undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occuring in course of, or otherwise connected with the discharge of their official functions in the Democratic Republic of Afghanistan except for those arising from the willful misconduct or gross negligence of the Japanese experts.

VIII. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be five (5) years from March 14, 1979.

ANNEX I MASTER PLAN

The objective of the Project is to contribute toward increasing rice production and promoting intensive and diversified agriculture in the Rice Belt region in the Democratic Republic of Afghanistan, through introduction of improved agricultural technology, improved rice varieties and multicropping patterns coupled with suitable rotation system.

The Master Plan of the Project consists of the following two (2) components.

1. Rice Development Center

The Center with about ten (10) hectare attached farm has been established at the Governmental farm in Jalalabad, Nangarhar Province as referred to the Exchange of Notes (E/N) between the two Governments dated August 28, 1978.

The activities of the Center are the following:

(1) to collect and analyze existing data on rice and other crops.

(2) to formulate adaptable improved technics suitable for extension and to test it at the Center.

(3) to verify and demonstrate the trial results on pilot farmers' fields.

(4) to train and educate Agricultural Extension Agents and selected candidates for Extension Agents.

(5) to multiply and distribute the qualified seeds to pilot farmers.

(6) to give necessary advice and training regularly to the pilot farmers (including the operation of the equipment and machinery).

2. Pilot Farmers Program

(1) The objective of the pilot farmers program is to disseminate improved agricultural technology to the farmers, through its demonstration especially that of farm management and farmer's income, at farmer's level.

(2) Pilot Farmers shall be selected out of ten (10) exten-

sion units within the Project area, (Nangarhar and Laghman Provinces). The total area of pilot farmers should not be extended more than forty (40) hectares.

(3) Pilot farmers programs are the following.

i. The pilot farmers shall adopt the improved technics under the guidance and advice by the Center.

ii. The extension supervisor and agents of each unit shall record and report of the pilot farmer's activities for further analysis.

iii. Any potential problems identified in the pilot farmer's field in the course of operations shall be fed back to the Center.

(4) According to progress of this program, the extension supervisor shall select the new pilot farmers in consultation with the Japanese Team Leader.

ANNEX II JAPANESE EXPERTS

CATEGORY	FIELD
1. Team Leader	
2. Experts (long-term assignment)	
	Agronomy
	Extension
	Agricultural Machinery
	Horticulture
3. Liaison Officer	

Note 1. As necessity arises, short-term experts in the fields mentioned above, and in the fields such as land consolidation, irrigation, plant protection, soil and fertilizer and etc., will be dispatched.

2. The number of long-term experts to be dispatched will not be more than 6 persons in total.

ANNEX III LIST OF THE ARTICLES PROVIDED BY THE GOVERNMENT OF JAPAN

1. Laboratory equipment, machinery, instruments, tools and their spare parts, and other materials for research.
2. Agricultural machinery, implements and their spare parts.
3. Fertilizer and other agricultural chemicals.
4. Vehicles.
5. Field facilities and implements.
6. Teaching materials including audio-visual aids.
7. Other necessary equipment and materials.

ANNEX IV LIST OF AFGHAN STAFF

CATEGORY	STAFF
1. The Rice Development Center	
(1) Head of the Rice Development Center	
(2) Staff of the Administration Dept.	Accountants
	Administrator
	Typists
	Drivers
	Other necessary staff
(3) Staff of the Test, Trial and Demonstration Dept.	Agronomy
	Extension
	Agricultural Machinery
	Horticulture
	Operators
	Farm Laborers
(4) Staff of the Supervision Dept.	Extension
	Farm Management
(5) Staff of the Training Dept.	Planner
	Information Officer
	Training Officer
2. The Kabul Liaison Office for the Project	
(1) Staff of the Kabul Liaison Office	Administrator
	Typists
	Drivers
	Other necessary staff

ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES

1. Land

(1) Land for the Rice Development Center (about ten (10) hectares)

(2) Land for pilot farmer program

2. Building for the Rice Development Center

(1) Office Building

(2) Training Building (Laboratory and classroom, etc.)

(3) Common Building and Connecting Corridor

(4) Dormitory for Students

(5) Dormitory for Specialists (2 houses)

(6) Farm Management House

(7) Rice Mill and Storage House

(8) Workshop and Garage

(9) Gate House

(10) Garage (1 and 2)

(11) Others

3. Kabul Liaison Office for the Project

(1) Office

(2) Other necessary facilities

ANNEX VI COMPOSITION OF THE JOINT-COMMITTEE

JAPANESE SIDE

1. Team Leader
2. Experts
   Agronomy
   Extension
   Agricultural Machinery
   Horticulture
3. Liaison Officer
4. Other Shor-Term Experts

AFGHAN SIDE

1. General President of Extension and Agricultural Production Ministry of Agriculture and Land Reforms (Chairman)
2. President of Extension, Ministry of Agriculture and Land Reforms
3. President of Research, Ministry of Agriculture and Land Reforms
4. President of Planning, Ministry of Agriculture and Land Reforms
5. Head of the Rice Development Center
6. Director of Agricultural Extension in Nangarhar and Laghman Provinces
7. Director General of Cereals (Kabul Liaison Officer)

Note: Officials of the Embassy of Japan and representatives of other Afghan authorities involved in the implementation of the Project may attend the Joint-Committee meeting as observer.

NOTE OF UNDERSTANDING OF THE JOINT EVALUATION
FOR THE RADP/ATA-140 PROJECT

C O N T E N T S

NOTE OF UNDERSTANDING

OF THE JOINT EVALUATION

1. Introduction

1.1. The RADP/ATA-140 project in South Sulawesi started since Desember 25, 1976 based on the Record of Discussions between the Japanese Agricultural Survey Team and Chief of the Bureau of Planning signed on May 4, 1976.

1.2. The project will be implemented for the period of 30 months starting from the srrival of the experts to Indonesia, and will be terminated by June 1979.

1.3. The objectives of this project, with a view of contributing to promotion of regional agriculture, is to make over-all review of the plans for the development of agriculture in the province of South Sulawesi, to give advisory guidances on them, to possibly improve methods and techniques of planning for the development of regional agriculture and thereby to improve the planning capabilities of the officials in charge.

1.4. The project had been divided into two phases, phase I for the period of 18 months starting from January 1977 up to June 1978, and phase II started from July 1978 up to June 1979.

1.5. Phase I according to the plan of operation cover the survey and analysis concerning agriculture in the province of South Sulawesi, review of the existing Regional Development Plan, and drawing-up of sector plans.
Phase II according to the plan of operation cover the drawing-up of the implementation plans including project preparation and feasibility study for agricultural development projects.

1.6. To have an idea concerning the impact of the RADP/ATA-140 project in South Sulawesi and its contribution to the development of South Sulawesi, an evaluation team consisting of experts from the government of Japan and the government of Indonesia was dispatched to evaluate the project.

2. Objectives of the Evaluation

2.1. To identify and to evaluate the implementation of the RADP/ATA-140 project in South Sulawesi and its contribution to the regional development.

2.2. To discuss the matters concerning the prolongation of the RADP/ ATA-140 project in South Sulawesi.

3. Methodology of evaluation

3.1. Report reading from phase I and phase II, and other information from the project.

3.2. Meetings and exchange of minds with the officials in central as well as in the provincial level.

3.3. Meetings and discussions with all Japanese experts working in the project.

3.4. Meetings and discussions with all Indonesian counterparts working in the project.

3.5. Preparing, analysing and evaluating questionnairs for the experts and counterparts.

3.6. Field trips to visit the areas of the proposed pilot test.

4. Project Activities

4.1. The project activities consists of the following four stages;

(1) survey and analysis concerning agriculture in the province of South Sulawesi.

(2) review of the regional development plan formulated by the BAPPEDA and of other existing projects, and recommendations thereon;

(3) drawing-up of sector plans in confirmity with the plan mentioned in paragraph (2);

(4) drawing-up of the implementation plans including project preparation and feasibility study for agricultural development projects in certain regencies in conformity with the said plans.

4.2. Training activity will be carried out throughout all the stages of the project.

5. Summary of the main findings

5.1. The RADP/ATA-140 team in South Sulawesi has carried out a good job in comprehensive data collection for the whole province with the assistance of short-term experts and their counterparts.

5.2. The data collected have been successfully processed and analised for the comprehensive agricultural situation in the province and used as the basic data to draw-up the Master Plan, though some data were left not to be processed due to the limited time during the phase I.

5.3. The RADP/ATA-140 team in South Sulawesi has reviewed the agricultural part of the REPELITA II and other existing projects such as BIMAS/INMAS program, livestock project by the World Bank, Luwu development project and the central South Sulawesi water resources development project by Japan, and so forth.

5.4. As the result of the activities in the phase I (18 months), the RADP/ATA-140 team in South Sulawesi has succeeded in making up the Master Plan, from Volume I to VI, and other numerous valuable materials.

5.5. Phase II, started from July 1978, had only 8 months in preparing detail study of feasibility study for 2 districts, Enrekang and Jeneponto.

The evaluation team is expecting that the rest of the term could be used for completing feasibility studies in both districts.

5.6. The RADP/ATA-140 team in South Sulawesi succeeded in giving recommendations to both governments in the form of pilot projects in both districts.

5.7. On-the-job training for the counterparts by means of transfer of knowledge had a good success. The counterparts will be ready to do the same job for regional planning in the future as expected by both governments.

5.8. Thirteen counterparts had opportunities of training in Japan, through the RADP/ATA-140 project in South Sulawesi.

The result of the training in Japan were very useful, however the Indonesian government has requested to get more chances to the counterparts to have the opportunities to study in Japan and/or in other third countries.

5.9. The communication between the Japanese experts and the Indonesian counterparts was good, and they had better understanding to each other.

5.10. The comparative study tour to other provinces for the experts, the counterparts, the officials of the province of South Sulawesi and of central level, had a good effect on better understanding and better preparation of the Master Plan in South Sulawesi.

5.11. Bloc III as suggested by the RADP/ATA-140 team in South Sulawesi for further study in the next activities had been supported by the Joint Committee.

5.12. The provincial and central government of Indonesia have requested the prolongation of the RADP/ATA-140 project in South Sulawesi for another more than two years to carry out the pilot tests. A new project proposal expected to be financed through grantinaid and technical cooperation by the government of Japan in the form of An Integrated Agricultural Development Planning, will be formulated and submitted to BAPPENAS (Central Planning Agency) for consideration, in order to utilize the result of the RADP/ATA-140 project.

6. Conclusion and Recommendations

6.1. The evaluation team regarded that the reports prepared by the Japanese experts and Indonesian counterparts are good for the basic planning preparation and for regional planning.

6.2. Pilot tests as parts of the feasibility study in the two districts, Enrekang and Jeneponto, should be implemented as the final stage of the RADP/ATA-140 project in South Sulawesi.

6.3. The period of prolongation is necessary for thirty months.

6.4. The number and specific fields of experts may be modified in a way that they could continue the feasibility study including the pilot test.

6.5. Six long-term experts including an advisor and a team leader with the composition as follows were recommended by the evaluation team for the next activities.

(1) Advisor.	Agro Economist
(2) Team Leader.	Regional Planning
(3) Long-term experts :	Aforestation.
(4) - ditto -	Grassland improvement.
(5) ditto	Agronomy (Citrus).
(6) ditto	Liaison officer.

Short-term experts may be dispatched on an adhoc beases.

6.6. It is desirable to make more opportunities for the counterparts and the Japanese experts to join the observation study and/or the comparative study.

6.7. Equipments and other facilities are also required for the prolongation stage.

Ujung Pandang, March 12, 1979.

THE JOINT EVALUATION TEAM,

HENDRO SOEWARNO DVM,
The Indonesian Team Leader

NOBUHARU SASANO.-
The Japanese Team Leader

DR. A.T. BIROWO
Approved by chairman of the Joint Committee