JOINT TERMINAL EVALUATION REPORT ON THE PROJECT FOR SOCIAL INCLUSION THROUGH THE INCENTIVE TO PRODUCE OLEAGINOUS PLANTS FOR THE GENERATION OF BIO-DIESEL IN THE STATE OF RIO GRANDE DO NORTE

Natal
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1. Overview of the Terminal Evaluation

1.1. Objectives of the Terminal Evaluation

Objectives of the Terminal Evaluation were as follows:

(1) To review the performance and achievements of the Project comparing to its plan and to discuss on necessary actions to be taken in the remaining period and after the Project is over with Federative Republic of Brazil (hereinafter referred to as "Brazil") authorities concerned. To make necessary comments and advice to the authorities concerned of both of Brazil and Japan based on the result of the review and discussion.

(2) To formulate a Joint Evaluation Report with the Brazilian authorities concerned based on the result of the items above, and participate in the Joint Coordinating Committee in order to present and discuss the result of evaluation and to exchange the Minutes of Meeting.

1.2. Members of the Joint Evaluation Team

The members of the Joint Evaluation Team were as follows.

Table 1-1: Brazilian Evaluation Team Member

1	Mr. Flávio Augusto Martins Fernandes	Consultant of EPAGRI

Table 1-2: JICA Evaluation Team Members

1	Mr. Makoto Nakao	Leader	Deputy Director General, Rural Development Department, JICA
2	Mr. Akira Matsumoto	Evaluation and Analyses	President, A&M Consultant Co., Ltd, Japan
3	Mr. Yoshiyuki Sagara	Project Planning	Assistant Director of Field Crop Based Farming Area Division I, Rural Development Department, JICA

1.3. Schedule of the Terminal Evaluation

The schedule of the Terminal Evaluation is attached as Annex 1.

1.4. Methodology of the Terminal Evaluation

(1) Procedure (Joint Evaluation)

The Project was evaluated by the Brazilian and Japanese Evaluation Teams (hereinafter referred to as "the Team"). The Team was composed of three members from the Japanese side

and one member from the Brazilian side.

The degree of project achievement including Inputs (both from Brazilian and Japanese sides), Activities, Outputs, Project Purpose and Overall Goal was assessed with reference to Objectively Verifiable Indicators (OVI) stated in PDM and PO (refer to Annex 2) and other relevant information collected before and during the visit of the Evaluation Teams.

The evaluation was conducted based on the following five criteria described in Table 1-3, which are the major points of consideration when assessing the value of development projects.

Table 1-3: Five Evaluation Criteria for the Terminal Evaluation

Five Evaluation Criteria		Definitions as per JICA Evaluation Guideline
1.	Relevance	Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Government of Brazil as well as the needs of beneficiaries.
2.	Effectiveness	Effectiveness refers to the extent to which the expected benefits of the Project have been achieved as planned. It also examines whether these benefits have been brought about as a result of the Project.
3.	Efficiency	Efficiency refers to the productivity of the implementation process, examining if the input of the Project have been efficiently converted into the outputs in terms of timing, quality, and quantity.
4.	Impact	Impact refers to direct and indirect, positive and negative impacts caused by the implementation of the Project, including the extent to which the Overall Goal has been attained.
5.	Sustainability	Sustainability of the Project was forecasted in technical, institutional, and financial aspects by examining the extent to which the achievement of the Project would be sustained and/or expanded after the completion of the Project.

Before commencing the field study in Brazil, the Team collected and analysed existing documents related to the Project. The Team then prepared an Evaluation Grid which summarized evaluation questions for the evaluation.

(2) Data Collection Method and Analysis

The following sources of information were used in this evaluation study:

a) Documents agreed by both sides prior to and/or during the course of the Project implementation including Record of Discussions (R/D), Minutes of Meeting (M/M), PDM and others (including Project Report);

b) Records of inputs from both sides and activities of the Project;

c) Data and statistics which indicate the degree of achievement of the outputs, which are the results of the Project, and the Project Purpose; and

d) Interview with and questionnaire to the Project's counterpart personnel (hereinafter referred

to as "C/P"), the JICA experts, Brazilian experts, other related farmers in the areas and Petrobras Biocombustível.

2. Outline of the Project

2.1. Background of the Project

Demand for biofuels has been increasing by the high prices of fuels and the recent trend of increased concern for the environment. The government of Brazil established the "National Program for Production and Use of Biodiesel Fuel (hereinafter referred to as "BDF")" in order to promote further introduction of BDF. In addition to the program, Brazil initiated the program for "Social Fuel Stamp" to promote the acquisition of oil produced by small-scale farmers in view of reducing poverty. Under this program, small-scale farmers were expected to benefit from the proper use of uncultivated areas, crop diversification, and ensuring stable income alternatives.

The state of Rio Grande do Norte (hereinafter referred to as "RN") is located in semi-arid region of North-eastern Brazil, predominantly covered by caatinga. Although the average amount of rainfall is estimated about 800 mm per year, the rainfall is focused on only three months of the rainy season, and the cropping season for the farmers without irrigation system can only are quite limited.

In this region in the past, these farmers got income through the cultivation of cotton. However, due to the decline of the cotton industry, caused by the falling prices in the world market and damage from a pest, now these farmers grow mainly maize, beans and other food crops for their own consumption.

In this situation, the Government of RN, with a view to improving and stabilizing the living conditions of small-scale family farmers established the "Social Inclusion Program of the Western Region of the State of RN through Oilseeds Production Incentive to Produce Biofuels ", and has distributed the seeds of oilseed crops. However, due to problems such as lack of appropriate training of cultivation technology and acquiring market route for the products made by post-harvest oilseed crops, improvement of living for the small-scale farmers were not achieved. Therefore, cooperation for building sustainable BDF production chain for the small-scale farmers was requested to the Government of Japan.

2.2. Summary of the Project

Project Title

Social Inclusion through the Incentive to Produce Oleaginous Plants for the Generation of Bio-diesel in the State of Rio Grande do Norte

Responsible Organization

Secretaria de Agricultura, Pecuária e Pesca (SAPE)
Instituto de Assistência Técnica e Extensão Rural do Rio Grande do Norte (EMATER)
Empresa de Pesquisa Agropecuária do Rio Grande do Norte (EMPARN)

Project Duration
April 2009 – April 2013 (4 years)

Target Areas
Western region of Rio Grande do Norte (Jurisdiction area of regional office of Pau dos Ferros and Umarizal of EMATER)

Beneficiaries
Small-scale family farmers in the target areas

Overall Goal
Bio-diesel-fuel (BDF) production chain and processed products of oilseed crops for small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops

Project Purpose
The model of BDF production chain and processing of oilseed crops for small-scale family farmers by cooperatives is established in the target area

Outputs
Output 1: The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated
Output 2: Diversified farming system including oilseed crops for small-scale family farmers is established in the model area
Output 3: Distribution channels to facilitate market access of oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established
Output 4: Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses
Output 5: A manual is prepared for cooperatives mainly constituted of small-scale farmers to promote processed products of oilseed crops and BDF production chain

3. Project Performance and Implementation Process

3.1. Accomplishment of the Project

Accomplishment of the Project was measured in terms of inputs, activities, outputs and Project Purpose, all of which are based on the R/D, PDM and PO.

According to the results of interview, study and observation, most of the inputs have been appropriate in terms of quality and quantity made by Japanese side. The inputs of the Project were as follows (as of November 2012).

Lists of Inputs are attached in Annex (see Annex 3 to Annex 6).

3.2. Measures taken after Mid-term Review

In the Mid-Term Review, through the active implementation by experts, C/Ps and the relevant stakeholders, the Project produced its outcomes at a certain level. Small-scale farmers who had been cultivated only for their subsistence were willing to challenge the commercial cultivation, and also there was some tendency for the improving of living through the cooperatives. These were evaluated as a big step.

However, without the detailed preliminary survey such as the climate data collection (trend of rainfall), study for adequacy of oilseed crops through implementing F/S, and research for possibility of sunflower cultivation under rain-fed condition, sunflower which had not recognized its drought resistance was implemented. Moreover, drought hit the Project areas unfortunately. Then, sunflower cultivation under rain-fed condition could not be implemented.

Therefore, in the Mid-Term Review, production and diversified usage of oilseed crops were recommended, not as only BDF production chain, but the multiple model chain for products and oil made from oilseed crops. The target crop was enhanced to include to sesame, and demonstration of farming models not only under rain-fed but also by irrigation was preceded. PDM was also revised, and in July 2012, new PDM (version. 5) was agreed.

3.3. Inputs (as of November 2012)

3.3.1. Japanese side

(1) Dispatch of experts

Four (4) JICA Experts were assigned in total (approximately 126M/M).

Within the assignment of experts, the long-term experts were assigned for the following fields as planned.

- Chief Advisor/ Policy support of small-scale family farmers
- Project Coordinator/ Distribution

Two short-term national experts (locally-contracted) were dispatched on the subjects of i) Farming system/ Interpreter and ii) Farmer organization.

Details are shown in Annex 3.

(2) Acceptance of C/Ps for Training in Japan

Eight (8) counterpart personnel (two in 2009, four in 2010 and two in 2011) have been trained in Japan in the fields of i) "Agriculture extension" and ii) "Cultivation technique". Details are

shown in Annex 4.

(3) Provision and Procurement of Equipment

Provision and procurement of equipment allocated by JICA is approximately 1,472 thousand BRL (equivalent 57 million JPY). Equipment and materials used for BDF production and processing of oilseed crops, such as oil extractors and drip irrigation equipment have been provided. Details are shown in Annex 5.

(4) Local Expenses

Local cost allocated by JICA for the implementation of the Project activities is 656 thousands BRL (equivalent 25,59 million Yen) *. Details are shown in below table.

Japanese Fiscal Year (JFY)	2009	2010	2011	2012	Total Amount
Expenses(BRL)	77737.59	128,266.62	230,286.81	219,964.23	656,255.25

*Note: Calculated by 1BRL=39 Japanese Yen

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3.3.2. Brazilian Side

(1) Assignment of Counterpart Personnel

Fifteen (15) counterpart personnel have been assigned. Details are shown in Annex 6.

(2) Spaces and Facilities

Provision of office space and expert room has provided at Natal.

In additions, space and necessary facilities for oil extraction plant has provided in Lucrécia by Brazilian side.

(3) Local Cost

Local expenses have been provided to support the Project. Details are shown in below table.

(Not clear of actual disbursement in detail by each organization: SAPE/EMATER)

Physical Year (Jan - Dec)	Expenses (BRL)
2009	230,000
2010	50,000
2011	50,000
2012*	270,000
2013**	200,000

* Within the total expense in 2012, construction of oil extraction plant was occupied as 150,000 R $.

** The figure is planning stage.

3.4. Achievement of Outputs

The Team conducted the terminal evaluation referring to the current version PDM which was set forth as a result of discussions and an agreement between Brazilian and Japanese counterparts in June 2012.

Achievement level of each output is described below.

(1) Output 1: *The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated.*

Verifiable Indicators	Results (as of November 2012)
1) Strategy to establish oilseed crops production chain and diversified use of their processed products is formulated by the related organizations and modified when necessary	A strategy statement ("Strategy to Establish BDF Production chain for small-scale family farmers") was prepared and provisionally approved in October 2009. Regarding the oilseed crop production, the Project began to examine the possibility of switching the priority crops from sunflower to sesame crop in May 2011, and on the occasion of the Mid-term Review, it was all agreed on the approach in July of the same year. Since then, it has repeated the verification process on the communal farmland, and in July 2011, the strategy statement was partially revised because of the focus on "diversified use of processed oilseed crop products".

(Additional Information) In 2012, within the Project areas, there were hit by a severe drought during the rainy season, and also the next sowing season will fall on near the end of the Project. In addition, regarding the establishment of a model for the practical use of processed products, there are still unable to secure sustainable supply of ingredients in the Project areas and the installation of oil expellers and the completion of oil plants have been delayed at this moment. With such situation, it involves risks to depend only on rain-fed cultivation, due to the continuing unfavorable weather, and it is thus necessary to incorporate irrigation in crop production in the Project areas continuously. Therefore, the strategy statement are planned to revise further, before the end of this Project, in which is added to the strategies for establishing an irrigation model, and a model for diversified uses of oleaginous crops not only for BDF, but cooking oil, processed products, etc., considering the strategies for deployment model of an irrigation system and distribution.

(2) Output 2: *Diversified farming system including oilseed crops for small-scale family farmers is established in the model area.*

(Background) The rain-fed cultivation has not so far progressed as planned due to the fact that this Project started at the end of the rainy season in 2009 as well as to the unfavourable weather such as droughts, and lack of technical supports since 2010. Thus, the Project is still in the phase of crop cultivation in the demonstrative experiment.

Verifiable Indicators	Results (as of November 2012)
1) Oilseed crops are cultivated in addition to subsistence crops	Due to the unfavorable weather (droughts), the cultivation of oilseed crops in the Project and their surrounding areas has been unsuccessful for the past three years. In addition, the insufficient government assistance for small-scale family farmers was another impeding factor for the first half of the Project, and thus what could be done by majority of small-scale family farmers was only securing crops for

	individual family consumption, leaving the farmers little energy to be engaged in oleaginous crop cultivation.
2) Sub products of oilseed crops are used effectively	Since installation of oil expellers and construction of oil plants were significantly delayed, there have not so far reached the phase of sufficient use of residues and oil cake.

(3) Output 3: *Distribution channels to facilitate market access of oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established.*

Verifiable Indicators	Results (as of November 2012)
1) Various sales channels of oilseed crops and their processed products are proposed according to the market situations	Processing demonstration using the Project facilities and ingredients is still at the experimental phase, and thus commercial production and actual sales have not been realized yet. Therefore, no specific distribution channels have been established yet at this moment. In sum, the Project is currently at the phase of developing trial products. (The prospect for construction of the two oil expelling/processing facilities became clearer in April 2012, and since then, trial production of processed sesame, training sessions and brand promotion have been implemented. However, the actual distribution plan is still under consideration although various market access activities in relation to distribution and sales have been deployed, including the participation in various exhibitions in last June.)

(4) Output 4: *Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses.*

Verifiable Indicators	Results (as of November 2012)
1) The competent public organization authorizes the establishment of the model cooperatives	The model cooperatives supported by the Project have already been approved by the Commercial Register.
2) Understanding of the establishment and management of cooperatives among small-scale family farmers are consolidated	It is concluded that the fundamental concept of establishing and running cooperatives is gradually penetrated by small-scale family farmers, considering the fact that the cooperatives have actually been founded and run as a consequence of successful gain of farmers' understanding regarding the idea and benefits of the cooperatives.
3) Management capacity improves through workshops, training courses and study tours	It is concluded that the know-how for cooperative management and their capacity have increasingly been enhanced through training courses and study tours to other regions. However, the managerial process needs to be further reinforced, because the cooperative management is still far from perfect and some members have stagnating their

	motivation due to the delay in machinery installation.
4) The members of the model cooperatives increase	Since the establishment of cooperatives, the number of the members has not changed. There are not in the phase of increasing the members since, as stated for the indicator 5) below, the priority is placed on smooth management of the cooperative operations and management.
5) The model cooperatives are managed effectively by their members	Thanks to the leadership of the cooperatives' presidents, the members have begun to embrace awareness of cooperation among them. However, it is not yet on the level that the cooperatives are smoothly run at this point.

(5) Output 5: *A manual is prepared for cooperatives mainly constituted of small-scale farmers to promote processed products of oilseed crops and BDF production chain.*

Verifiable Indicators	Results (as of November 2012)
1) Small-scale family farmers make use of the manual of the practices of oilseed crops production and diversified utilization of their processed products	At this moment, the manual has not been elaborated, and at this point, it is only possible to make one from the results of demonstrative experiment, joint research with EMPARN and analysis on the desk, but a manual for oilseed crops production which is shown the suitable crop cultivation in RN state is planned to be elaborated by the end of the Project.
2) The manual of the practices of oilseed crops production and diversified utilization of their processed products is approved in the State of Rio Grande do Norte	There are planned to produce several materials and manuals especially for small-scale family farmers produced by the Project such as Crop cultivation brochure (including sunflower and sesame), Silages making, and Pest control.

3.5. Achievement of Project Purpose

Project Purpose: *The model of BDF production chain and processing of oilseed crops for small-scale family farmers by cooperatives is established in the target area.*

There are many issues to be solved to achieve project purpose and, in particular, the activities 3, 4 and 5 are delayed, due to various external factors, including the unfavorable weather, that have affected to the Project. Thus, it is concluded that it may be difficult to achieve the Project purpose so far at this stage.

The following is the description of the current state of the indicators related to the achievement of project purpose.

Verifiable Indicators	Results (as of November 2012)
1) Diversified farming models are introduced at model farmers	Sesame seeds were distributed to introduce a diversified farming model, which adds oilseed crops to the traditional rain-fed cultivation for private consumption, and farming

	guidance was provided for about 120 small-scale family farmers (about 140 ha in total) located in 23 municipalities. However, practical farming models have not been implemented at this point since it was unable to execute the cultivation due to the droughts that hit the areas in the past three years consecutively.
2) Proposals of effective utilization of the sub-products of oilseed crops are introduced by the model farmers	For demonstrative oil expression, some raw materials for oil expression were procured from outside sources since the crops cultivated in the Project areas were not sufficiently produced due to the droughts. However, for effective utilization of their sub-products of oilseed crops, including sales of residues, the plan is still under consideration, due to the little amount of residues and the cost efficiency, and thus it has not been implemented at this point.
3) Oilseed crops of the model farmers and processed products of the model cooperatives are sold on the experimental basis to related companies and individuals	The Project procured raw materials from outside sources and executed oil expression, processing and brand building (Brand name: SAGÊ). Some of the trial products were test marketed at agriculture trade exhibitions and other events.
4) Oilseed crops suitable for Rio Grande do Norte are proposed	Starting in 2012, the Project has been implementing two-year test cultivation in two sites in collaboration with the EMPARN. In Lucrécia, one of the two sites of the test cultivation, the farmland has been closed since the use of agricultural water were banned by the government, so only the test run of the irrigated farmland has been executed in the EMPARN's experimental farm. In spite of the delay of installing the machinery and equipment as well as influence of the droughts, the progress has partially been reported, and the outcomes in relation to the cultivation productivity of drought-tolerant crops and the mixed cropping should be revealed later in the Project. Both the Federal and the State Government have long been trying to find suitable crops in this semi-arid region, but the experimental test is scheduled to be continued in 2013 and the results will be published by the EMPARN later. In sum, at this point, it has not been able to present a final suggestion regarding oilseed crops suitable in the state of RN, especially in the Project sites.
5) Oilseed crops are produced by cooperatives mainly consisting of small-scale	It was impossible to grow oilseed crops with rain-fed water because of the droughts. However, a joint experimental production of oilseed crops using

family farmers.	small-scale irrigation was carried out by the Project and the model cooperatives, and it was a certain success with cultivation of sesame, sunflower and peanut, although the yields were limited.
6) Diversified utilization model of oilseed crops and their processed products are proposed.	The test marketing of processed products made from the ingredients procured from outside sources was partially carried out. On the other hands, an experimental demonstration was impossible for diversified uses of oilseed crops because it was not possible to grow oilseed crops at the Project areas. In addition, the Project activities regarding diversified uses of processed products were limited to test marketing, so the commercial distribution did not advance any further than information collection only. Consequently, no model plan has been proposed so far.

3.6. Achievement of the Overall Goal

Overall Goal: *Bio-diesel-fuel (BDF) production chain and processed products of oilseed crops for small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops.*

Overall goal is the target expected to be achieved in at least 3 to 5 years after the completion of the Project, and is the indicator to measure to what degree a project is contributing to the ultimate targets. At this moment, the prospect for the achievement of the Overall Goal of the Project is summarized as below:

Verifiable Indicators	Results (as of November 2012)
1) Small-scale family farmers' incomes increase by introducing oilseed crops and making diversified use of their processed products	Regarding oilseed crops cultivation using irrigation and diversified uses of oilseed crops, its demonstrative experiment was carried out by the Project, but it was not carried out by small-scale family farmers and the model cooperatives, because of the droughts that hit the areas in the past three years consecutively. Thus, small-scale family farmers' income has not increased at this point. In addition, no baseline data exists in relation to their income.
2) The number of means for small-scale family farmers to gain income increases by introducing oilseed crops and making diversified use of their processed products	The means for small-scale family farmers to gain income have not increased compared to the time prior to the Project, because back then, there was no small-scale farmers who cultivated oilseed crops as cash crops before and, as stated above, there have been unable to cultivate and harvest oilseed crops. Meanwhile, the demonstrative experiments in relation to production of various kinds of oilseed crops using irrigation and diversified uses of processed products were executed under the

	management of the Project. And as a future prospect, through these experiments and research, it is possible for small-scale family farmers to enhance the means to gain income if their cultivation of diversified crops and the products have become available by means of crop selection that enable stable production suitable to the target areas, including drought-tolerant crops.

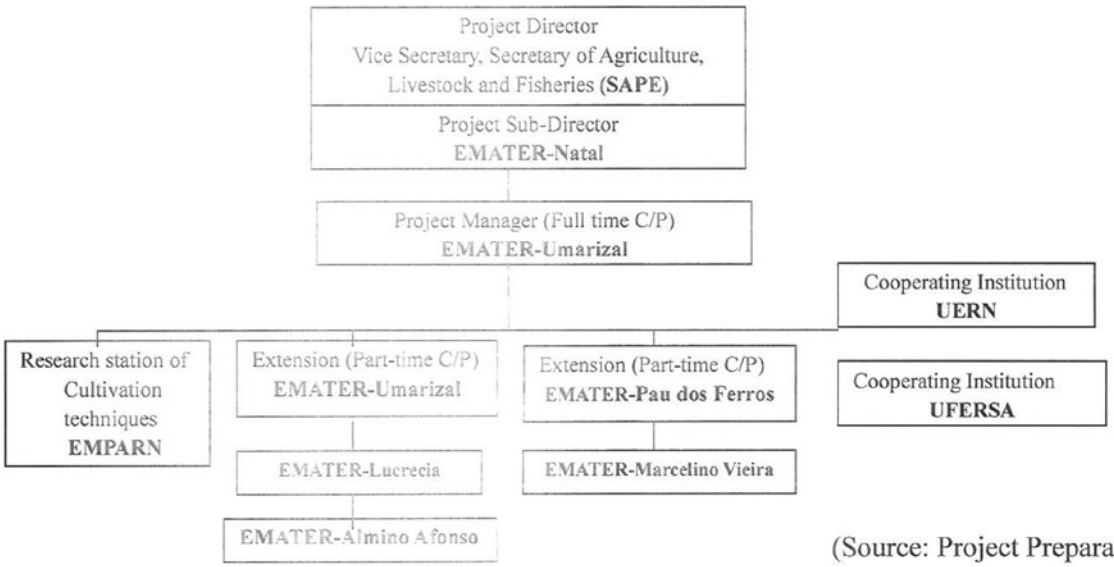
3.7. Implementation Process

3.7.1. Implementation of project activities

The Project activities have been rather delayed in general. Although the activities have been carried out while, at the time on Mid-term review, revising the PDM reflecting to the situations surrounding the Project and other external factors, no practical BDF production model has been established through demonstrative experiments, since it was impossible for farmers to execute oilseed crop cultivation as well as to carry out oil expelling experiments using local produced oilseed crops due to the droughts that hit the areas in the past three years consecutively since 2010.

3.7.2. Project Implementation Structure

Counterpart staff from SAPE, EMATER and EMPARN, are basically part-time engagement and they are not assigned as indicated in the M/M. More specifically, three (3) full-time C/Ps in each were originally supposed to be assigned to fill the positions of "Farming," "Organization of Farmers" and "Operation of Oil Extraction Facility/Distribution" in both Umarizal and Pau dos Ferros areas, but so far, there have discovered that the five (5) extension officers (as Promoters) from EMATER assigned for the Project are specialized on "Farming", and there is no one assigned for "Operation of Oil Extraction Facility/Distribution." The following figure shows an implementation structure of the Project.



(Source: Project Preparation)

Figure 3-1 Implementation Structure of the Project

In the M/M, two (2) researchers from EMPARN experiment station in Apodi are supposed to be assigned as part-time C/Ps from EMPARN, but there is no EMPARN researchers working in the station and thus experts in other fields who belong to the main office are in charge of this Project. In addition, the Secretary of energy and international affairs under the state government, which was mentioned in the minutes as one of the cooperating institutions, does not currently exist due to the organizational reform in the state government.

3.7.3. Methodology of technical dissemination

Regarding the technology dissemination in the farming field, experimental cultivation in the demonstrative experiment and seminars were carried out while collecting wide range of farming information in the semi-arid areas, including productivity, weather conditions and soil analysis of the areas, and exchanging information with EMPARN and other research institutions. Currently, cultivation of sesame and other oilseed crops are carried out while re-examining the tentative model.

Additionally, before considering the methodology of technology dissemination, it is obliged first to determine areas to be prioritized, in which stable water resources can be secured, to establish a farming model in the semi-arid areas and to diffuse effectively an irrigated farming model, for instance. Thus, it is mainly discussing the possibility of setting communal farmlands, considering the unity and solidarity of local farmers, landownership, and other applicable factors specific to the areas, including the social and natural condition surrounding the local community.

Regarding organization of farmers and reinforcement of cooperatives, technology dissemination in relation to management and accounting, among other administrative issues, has been executed

through seminars and lectures, while informing about legal matters and other procedures indispensable for establishing a foundation of managing the cooperatives as a juridical person. As of the end of August 2012, seminars or lectures had been already held seven (7) times.

In the meantime, since the situation in which oil expression could not carried out had long continued, it first organized training on food processing, using sesame, for female members of the cooperatives, as part of which a new commercial brand "SAGÊ" was established after repeated trials of producing the model products. (Applications for naming rights and trademark registration have been submitted as an original product brand for oils and confectionary)

3.7.4. Monitoring

In this Project, Joint Coordinating Committee (JCC) meetings were held twice in December 2009 and in February 2011, in which aimed to review project activities and had discussions on the Activity plan with concerned organizations, based on the PDM and PO of the Project. The Project Management Committee meeting is held every month. It was so far held 31 times in total and discussed over project's progress, budget, human resources and other issues. The Project director and other core members regularly meet every Tuesday to discuss over the progress and problems, among other issues, and share information.

There is a physical distance between the Project sites (Lucrécia and Marcelino Vieira) and the Project office (Natal), so the Project experts visit the sites once a week or so to provide technical assistance and to monitor their activities.

3.7.5. Ownership

Some of the model farmers seem to have begun to be motivated about the Project activities. Business mind-set, motivation and sense of ownership have started to be fostered in their mind to sell their crops at the times when these can be sold at higher prices. In the model farmlands in Lucrécia, in particular, some farmers sell their agricultural products directly to consumers at such occasions as trade fairs and they are considering collaboration as a cooperative in purchasing the model farmland, which are the signs of their sense of ownership.

3.7.6. Communication

Not only the Japanese expert on "Project coordination and Distribution", but also the Brazilian interpreter/expert on "Farm management" has been playing an important role in contacting and coordinating people. In addition, the Project Manager has been positioned as a full-time counterpart since the middle of the Project. In the meantime, the work environment has been better organized enabling constant communication with the Project Director and Sub-Director since the Project office was moved from Mossoró to Natal, into the headquarters of the SAPE in late May 2010. The Project Director and Sub-Director, however, were changed when the personnel in the state government were reshuffled due to the administrative change in the federal government in 2011, although the policies and the understanding about the Project remained the same and there is no

particular problem with communication with them.

4. Evaluation Results

4.1 Relevance

The relevance of the Project was regarded high when the Project was formulated, and continues to be high even at the stage of Terminal Evaluation regarding to the target areas, needs of the target group and beneficiaries of the Project.

(1) Selection of the target areas, Needs of the target groups/beneficiaries

JICA has been executing a Technical Cooperation Project in the State of RN for the western parts of the State where are semi-arid regions in Brazil and are placed in severe environmental condition. And the Project is considered to go in line with the target group, because the Project focuses on "Social inclusion" which is stated as the Project title, and supports small-scale family farmers to produce suitable crops in the target areas.

(2) Brazilian national policy and ODA policies of the Government of Japan

On the other hand, the Project is in line with the Brazilian development strategy/policy which put priorities in promoting the National program for the production and use of biodiesel (PNPB) and Social Fuel Stamp. Also, Japanese national development strategy/policy to Brazil have been maintained and have not been dramatically changed since the inauguration of the Project, agricultural development and rural development is still located as an important issue in the country.

4.2 Effectiveness

(1) Prospects for achieving project purpose

As mentioned in 3.4. Achievement of Outputs, the effectiveness of the Project is moderate since the degree of realization of some outputs is not satisfactory.

After the commencement in April 2009, the Project implemented various activities such as i) formulate a strategy of the production of oilseed crops/ establish diversified utilization chain of processed products, ii) prepare rain-fed and simple irrigated farming systems, iii) support establishment and administration of model cooperatives, and iv) examine and demonstrate suitable (drought-tolerant) oilseed crops in various conditions.

However, due to rainfall deficits, it was not successfully cultivated crops under rainwater conditions; therefore, it would be difficult to establish a BDF production and processing oilseed crop model through rainfed agriculture that the Project was originally proposed. To reflect such conditions, the Project modified the approach and undertook the examination and demonstration in the areas, not only by rainfed agriculture but also adding irrigated

agriculture, such as sprinkler and drip irrigation method. Even though, the time is too short to prove the establishment a BDF production and processing oilseed crop model, it is said that the achievement the Project purpose will not visible at this stage.

(2) Logic between Project Purpose and Outputs

The Project aims at establishing a sustainable BDF production and processing oilseed crop model through "establishment of production chain and diversified farming system" (Output 1 and 2) which ultimately lead to "exploration of distribution channel" (Output 3), "establishment and management of cooperative" (Output 4) and, "manual preparation for cooperative" (Output 5).Therefore, the logical sequence of the causal relationship between outputs and the Project purpose is enough explanatory.

4.3 Efficiency

An extent of the efficiency of the Project is evaluated as adequate by the following reasons. With regards to quality and quantity, input from the Japanese side is appropriate, however, the placement of Brazilian C/Ps was not implemented as indicated in the original PDM, and most of them are part-time staffs and cost allocation shared by the Brazilian side for the Project activities were not sufficient in initial stage of the Project.

On the other hand, with regards to timing of inputs, delay of construction of oil extraction plants and procurement of oil squeezing machines has caused empirical oil squeezing practices by farmers' cooperatives.

For sake of the Project stakeholders, all inputs allocated to the Project have been fully utilized for project implementation.

4.4 Impact

Due to natural condition and external assumption against the Project, the impact of the Project seems to be difficult to observe. However, the following positive impacts have been gradually observed.

(1) Possibility of agricultural development and technical dissemination with drought tolerant crops in the target areas

Under the severe circumstances of semi-arid zones in the target areas, the Project attempts to introduce and examine new oilseed crop production and its processing. Then it assumes that the introduced suitable crops will contribute further agricultural development and technical dissemination in the areas and also attribute for the life improvement of small-scale family farmers.

(2) Establishment of Farmers' Cooperatives

Official farmers' cooperatives have been established among small-scale family farmers to sell agricultural products. This task was not expected in the original project activities, but

officially added as a result of a partial revision of the PDM in 2011.

The establishment of cooperatives in the Project areas is seemed to be breakthrough. Because surrounding on the Project areas, they had a history of a cycle of foundation and dissolution of many small-scale cooperatives. Thus, the image of cooperatives was extremely bad in their minds, which resulted in the voices of a majority of farmers doubting successful management of such cooperatives. Therefore, it is a big challenge of founding and managing cooperatives, but through the proposal and assistance from the Project made certain consensus and promoted group works among farmers.

Gradually more and more model farmers (members of cooperatives) have shown their interests and demonstrated active participation in cooperative activities.

(3) Deepen understanding and interests to the Project

Nearby small scale farmers in the Project areas, other municipalities, private oilseed companies, mass media, they have been interesting in the Project activities, in particular on oilseed (sesame) production and its processing products. Then they visited to the demonstration farm in the Project site or participated/joined the Project seminar and food fair.

4.5 Sustainability

Institutional/political and technical sustainability is medium. However, since organizational/financial sustainability is still not confirmed, the overall sustainability of the Project is comprehensively judged as low.

To attain project objective and also establish sustainable production channel system, it is required of promoting cooperative activities and also technical and financial supports from both sides.

(1) Institutional/Political aspect

Since it goes in line with the development strategy/policy of Brazilian government which put priorities in promoting the oilseed crop production for biodiesel for small-scale family farmers, the sustainability of the Project would be supported. In additions, the state government has been gradually understanding of the importance of the Project, it can be concluded that the sustainability of the Project could be achieved with initiatives of Brazilian side.

(2) Technical aspect

It is still needed to realize outputs of the Project. Therefore it is not the stage of technological dissemination of the farming model to any other areas. However, it is certain the introduction of new oilseed crop cultivation in semi-arid areas such as sesame. To attain the technological innovation and adoption, it is possible to do the activities by Brazilian side because of the existing crop experts in EMBRAPA as well as acquisition of basic knowledge and experience of the crop even by small-scale family farmers.

Current irrigation techniques which are intended to introduce are new methods but the techniques have been already introduced in surrounding areas, them it is no matter of after care. Finally it is still required of capacity in marketing and business promotion to farmer cooperatives.

(3) Organizational/Financial aspect

Since the Project started, limited budget supports from state government, financial source for the Project activities were not sufficiently secured. However, construction of oil extraction plants for the cooperatives has completed, and no remained big concern any others, so it is expected to manage the Project activities until the Project period.

On the other hands, the cooperatives has been established and been enhanced their mutual works and group mind, however it is still required to improve their financial and management capacity which they can acquire working capital and its managerial knowhow.
Finally, the Brazilian side is requested to share more project activity costs.

4.6 Factors that promoted realization of effects

(1) Factors concerning to Planning

(Flexible project management)

According to the real situation facing in the Project, at the time on Mid-term Review, PDM of the Project were revised to which included the focus on "processing of oilseed crop" and added new activity "establishment and management of cooperatives". By this revision, it is becomes realistic and flexible ways that the target crops were diversified and suitable crops proposed in the areas.

(2)Factors concerning to the Implementation Process

(Active involvement of the Lucrécia city)

Local city has been recognizing the importance and validity of the Project, so they are actively participating into the Project and start to provide the place for oil extraction plant and gives priority to rent out a tractor for the model farm.

4.7 Factors that impeded realization of effects

(1) Factors concerning to Planning

N/A.

(2) Factors concerning to the Implementation Process

(Irregular & Unfavorable climate condition)

Unfortunately, the Project coincided with drought in the periodical weather fluctuation and fell into a bad time when it was completely impossible to carry out crop cultivation, which is essential to the Project success.

5. Conclusion and Recommendation

In the harsh natural environment of the semi-arid areas in the Northeast region of Brazil, through active implementation by experts, C/Ps, and the relevant stakeholders, the Project produced its outcomes at a certain level. However, the outcomes have not yet been achieved completely and the production level of the outcomes is relatively limited, as stated in the Mid-term Review, since the outcomes of some activities have not yet been obtained because of unimplemented activities. The Project Purpose and PDM were revised on the basis of the Mid-Term Review; however, after that, the Project areas have been unfortunately affected by a severe drought, and thus, the oilseed crops have not been able to be cultivated. Such a severe drought is very rare and occurs once in decades. It has been especially devastating this year (2012), and it is difficult to provide even the minimum water intake necessary for irrigation.

Droughts for three consecutive years had negative effects on the overall progress of the Project, and, in particular, these following activities specified in PDM were delayed and are not expected to be completed by the end of the Project.

Activity 2-1 To prepare rain-fed and simple irrigated farming system models for model cooperatives incorporating oilseed crops

Activity 2-3 To analyze the result of the demonstration and establish the farming systems

Activity 2-4 To demonstrate cultivation of drought-tolerant oilseed crops

Activity 3-2 To distribute oilseed crops and their processed products on the distribution plan

Activity 3-3 To establish a proper distribution plan based on the result of the activities

Activity 4-3 To support the businesses of the cooperatives

Because some activities are not yet implemented and it is difficult to achieve the Project purpose within the project duration, the Project duration should be extended and the activities continued, to yield and obtain the Outputs.

Therefore, the Joint Evaluation Team recommends the following:

(1) The Project duration should be extended in order to implement the activities that were not completed, because of the drought that lasted for three consecutive years, especially the critical drought in 2012, and to yield Outputs and achieve the Project Purpose. During the extension period, the following activities will be focused on, according to PDM.

a. To demonstrate the rain-fed and irrigated farming system models by using sesame and other crops and to establish a proper distribution plan for the processed products made from sesame and other crops.

b. To demonstrate the possibility of sunflower cultivation (oleaginous plants for the generation of BDF) by irrigated farming system models and to try practices for the distribution of processed sunflower seeds and/or oil under the Social Fuel Stamp

programme.

c. To demonstrate the introduction of drip irrigation farming.

(2) Regarding the extension period of the Project, in order to implement at least two cycles of demonstration for not only the cultivation of oilseed crops but also processing and marketing, and in consideration of a preparation period for the irrigation, the Project should be extended for two (2) years, up to April 2015.

(3) Oilseed crops are expected to have diverse uses, such as distribution of oil and processed products and desterilization of residue. Thus, stable and multiple agriculture models should be considered by combining these forms. In this case, it is expected that the demonstration will be continued and the results will be shared to the small-scale farmers, with the support of EMPARN as well as research institutions such as EMBRAPA.

(4) Regarding the type of irrigation suitable for the target areas, it is preferable to select drip irrigation, which requires a relatively small amount of water, considering the weather conditions and the uneven rainfall in the target areas of the Project provided that there are no restrictions regarding economic efficiency or the purchase of equipment. Water from reservoirs, wells, and rivers is used for drip irrigation in the target areas. In case of drought, however, the water intake is restricted as the water is required for drinking. Therefore, in order to ensure water catchment required for the cultivation, it is necessary to consider the construction of underground dams. Furthermore, to ensure a stable supply of water in the future for agricultural use in the state of RN, including the target area of the Project, the practical introduction of irrigation systems by the Federal and/or State Government has to be done in a timely manner.

(5) To properly use the sets of oil extractors provided by the Project and for continuous maintenance by the cooperatives, constant support from the State Government of RN and EMATER is required. Likewise, continuous support is required for the processing of oilseed crops and the establishment of distribution channels. Therefore, assignment of the extension staff of EMATER or adequate staff from the State Government of RN should be considered. Furthermore, the extension staff at the Pau dos Ferros regional office of EMATER should be increased to assign more C/P(s) responsible for Marcelino Vieira cooperative.

(6) It is a challenge to consolidate the management and financial/accounting management system of cooperatives. To deal with this and achieve stable cooperative management, it is effective to hire outside expert(s) who undertake(s) managing role(s). In addition, it is worth considering the possibility of diversifying measures to obtain financial assistance

through the PRONAF (National Program for Strengthening Family Agriculture), other financial institutions and/or public programmes.

(7) Continuous support is essential to maintain stable farming systems and cooperatives, not only during the period of this Project but also after its completion. Therefore, it is critically important for the sustainability of the Project that the State Government of RN secures adequate human and financial resources, ensure continuity of the activities, and disseminate the results of the Project.

Annex 1

Schedule of the Terminal Evaluation for "Social Inclusion through the Incentive to Produce Oleaginous Plants for the Generation of Bio-diesel in the State of Rio Grande do Norte"

	Date		Schedule		Stay
			I. Leader (Mr. Makoto NAKAO) Project Planning (Mr. Yoshiyuki SAGARA)	II. Evaluation and Analysis (Mr. Akira MATSUMOTO)	
1	10/26	Fri		15:55 NARITA, Tokyo (DL296) →15:05 ATLANTA 20:15 (DL221) →	
2	10/27	Sat		AM6:55 Arrive at Brasilia	Brasilia
3	10/28	Sun		Documents Preparation	Brasilia
4	10/29	Mon		09:00 Meeting at JICA Brazil Office 12:45 Brasilia (JJ3426)→14:30 arrive at NATAL 16:00 Meeting with JICA Experts	Natal
5	10/30	Tue		On-site survey at Natal AM Meeting with SEPLAN, SAPE, EMATER, EMPARN, PM Petrobras Biocombustivel at RN	Natal
6	10/31	Wed		Natal→ Apodi 12:30 Visit at EMPARN - JICA demonstration field 15:30 Visit at the irrigated area in Pau dos Ferros	Pau dos Ferros
7	11/1	Thu		Pau dos Ferros→Marcelino Vieira (On-site survey) →EMATER (Pau dos Ferros Office) →Portalegre	Portalegre
8	11/2	Fri		Portalegre → Lucrecia (On-site survey) → Mossoro	Mossoro
9	11/3	Sat	15:30 Narita, Tokyo (DL296) →14:35 ATLANTA 20:35	Documents Preparation	Mossoro
10	11/4	Sun	→AM 7:25 arrive at Brasilia	Documents Preparation	I. Brasilia II. Mossoro
11	11/5	Mon	AM Meeting at JICA Brazil Office Brasilia →Fortaleza Meeting of the team	Natal →Fortaleza Meeting of the team	Fortaleza
12	11/6	Tue	AM Meeting at Petrobras Biocombustivel at Fortaleza Fortaleza--> Natal Work progress report from Brazilian side Japanese side explained the evaluation method and schedule		Natal
13	11/7	Wed	Natal → Mossoro → Apodi 11:00 - 12:00 Visit at Otani Farm in Apodi 14:30 - 16:00 EMPARN—JICA demonstration field Apodi → Portalegre		Portalegre
14	11/8	Thu	Portalegre → Umarizal (on-site survey/ interview with CP) → Lucrecia (on-site survey/ interview with CP) → Portalegre		Portalegre
15	11/9	Fri	Portalegre → Marcelino Vieira (on-site survey/ interview with CP) → Pau dos Ferros (on-site survey/ interview with CP)		Pau dos Ferros
16	11/10	Sat	Pau dos Ferros → Natal Prepare for Joint Evaluation Report and M/M		Natal
17	11/11	Sun	Prepare for Joint Evaluation Report and M/M		Natal
18	11/12	Mon	Discussion on Joint Evaluation Report and M/M		Natal
19	11/13	Tue	Discussion on Joint Evaluation Report and M/M Signing of Joint Evaluation Report		Natal
20	11/14	Wed	AM JCC (Joint Coordination Committee) PM Signing of M/M		Natal
21	11/15	Thu	13:00 NATAL(JJ3427)→ 16:36 arrive at Brasilia		Brasilia
22	11/16	Fri	Visit at JICA Brazil Office Courtesy Call to the Embassy of Japan, Brazilian Cooperation Agency (ABC), Ministério do Desenvolvimento Agrário (MDA) 23:40 BRASILIA (DL222) →		
23	11/17	Sat	→AM 5:45 ATLANTA 12:00(DL295)→ Mr. NAKAO and Mr. MATSUMOTO: return to Japan Mr. SAGARA: way to El Salvador		

Annex 2: Project Design Matrix (PDM)

Name of the Project: Project of Social Inclusion through the Incentive to Produce Oleaginous Plants for the Generation of Bio-diesel in the Stateof Rio Grande do Norte

Duration: from 2009 to 2013(4years)

Target Area: Western region of Rio Grande do Norte (Jurisdiction area of regional office of Pau dos Ferros and Umarizal of EMATER)

Beneficiaries: : Small-scale family farmers in the target areas

Ver.05 Date of preparation: Jun 07, 2012

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	External conditions
Overall Goal Bio-diesel-fuel (BDF) production chain and processed products of oilseed cropsfor small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops	1) Small-scale family farmers' incomes increase by introducing oilseed crops and making diversified use of their processed products 2) The number of means for small- scale family farmers to gain income increases by introducing oilseed crops and making diversified use of their processed products	1) Related statistics of Rio Grande do Norte 2) Related statistics of Rio Grande do Norte	・The policy of the State of Rio Grande do Norte to promote BDF and support small-scale family farmers would not be changed
Project Purpose The model of BDF production chain and processing of oilseed crops for small-scale family farmers by cooperatives is established in the target area	1) Diversified farming modelsare introduced at model farmers 2) Proposals of effective utilization of the sub-products of oilseed crops are introduced by the model farmers 3) Oilseed crops of the model farmers and processed products of the model cooperatives are sold on the experimental basis to related companies and individuals 4) Oilseed crops suitable for Rio Grande do Norteare proposed 5) Oilseed crops are produced by cooperatives mainly consisting of small-scale family farmers. 6) Diversified utilization modelof oilseed cropsand their processed productsare proposed.	1) Reports related to the Project	・The structures of implementation of the Project does not change by the personnel transfers ・Enormous natural disasters that could affect the agricultural products does not occur
Output1 The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated	1) The strategy toward establishing a system of production, processing and diversified utilization of oilseed crops is documented, and the consensus among the related organizationson the strategy is confirmed by an agreement signed by them.	1) The strategy document 2) Agreement concerned of the strategy	
Output2 Diversified farming system including oilseed crops for small-scale family farmers is established in the model area	1) Oilseed crops are cultivated in addition tosubsistence crops 2) Sub products of oilseed crops are used effectively	1) Reports related to the Project 2) Reports related to the Project	
Output3 Distribution channels to facilitate market access of oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established	1) Various sales channels of oilseed crops andtheirprocessed productsare proposed according to the market situations.	1) Reports related to the Project	

Output4 Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses	1) The competent public organization authorizesthe establishment of the modelcooperatives. 2) Understanding of the establishment and management of cooperatives among small-scale family farmers are consolidated. 3) Management capacity improves through workshops, training courses and study tours. 4) Themembers of the model cooperatives increase. 5) The model cooperatives are managed effectively by their members	1) Certificate of the state business registry office 2) The manual for cooperative establishment and management 3) Reports related to the Project	
Output 5 A manual is prepared for cooperatives mainly constituted of small-scale farmers to promote processed products of oilseed crops and BDF production chain	1) Small-scale family farmers make use of themanual of the practices of oilseed crops production and diversified utilization of their processed products. 2) The manual of the practices of oilseed crops production and diversified utilization of their processed products is approved in the State of Rio Grande do Norte	1) The manual	

Activities 1-1To analyze the current situation of the production of BDF and edible oil in Brazil and neighboring countries 1-2 To plan a strategy of the production of oilseed crops and the establishment of diversified utilization chain of processed products of oilseed crops 1-3 To agree on the strategy among the related organizations 2-1To prepare rain-fed and simple irrigated farming systems models for model cooperatives incorporating oilseed crops 2-2 To select model farmers and demonstrate the farming systems 2-3 To analyze the result of the demonstration and establish the farming systems 2-4 To demonstrate cultivation of drought-tolerant oilseed crops 2-5 To analyze experiences of oilseed crops cultivation in the Northeast Region of Brazil and incorporate of good practices into the farming systems	**Inputs** <Brazil> ● Project Director, Project Sub Director, Project Manager ● Cost for project operation (demonstration of sustainable farming systems, and others) ● Office for the Project (head office in Natal, branch offices in Pau dos Ferros and Umarizal), including furniture, basic equipment, telephone, internet equipment, and others ● Space and facilities for oil extraction plants ● 2(two) Local consultants ● Vehicles ● Staff for the administration (secretaries, drivers) <Japan> ● Long-term experts (①Chief advisor/Policy support of small-scale family farmers, ②coordinator/distribution) ● Short-term experts (Farming system, others) ● Acceptance of trainee ● Equipment (Vehicles, Oil extractors, others) ● Complementary part of the project operational costs	・Model farmers would participate in the Project continuously

3-1 To verify a diversified distribution plan for oilseed crops and their processed products produced by the model farmers and cooperatives 3-2 To distribute oilseed crops and their processed products on the distribution plan 3-3 To establish a proper distribution plan based on the result of the activities		
4-1 To support establishment of model cooperatives mainly consisting of small-scale family farmers 4-2 To support the administration of the cooperatives 4-3 To support the businesses of the cooperatives		
5-1 To prepare a draft manual for the practices of oilseed crops production anddiversified utilization of their processed products based on the result of activities 1 to 4 5-2 To facilitate the process of review and approval of the draft manual by related organizations of the State Government of Rio Grande do Norte		

Annex 2: Plan of Operations (PO)

Overall Goal : Bio-diesel-fuel (BDF) production chain and processed products of oilseed crops for small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops

Project Purpose : The model of BDF production chain and processing of oilseed crops for small-scale family farmers by cooperatives is established in the target area

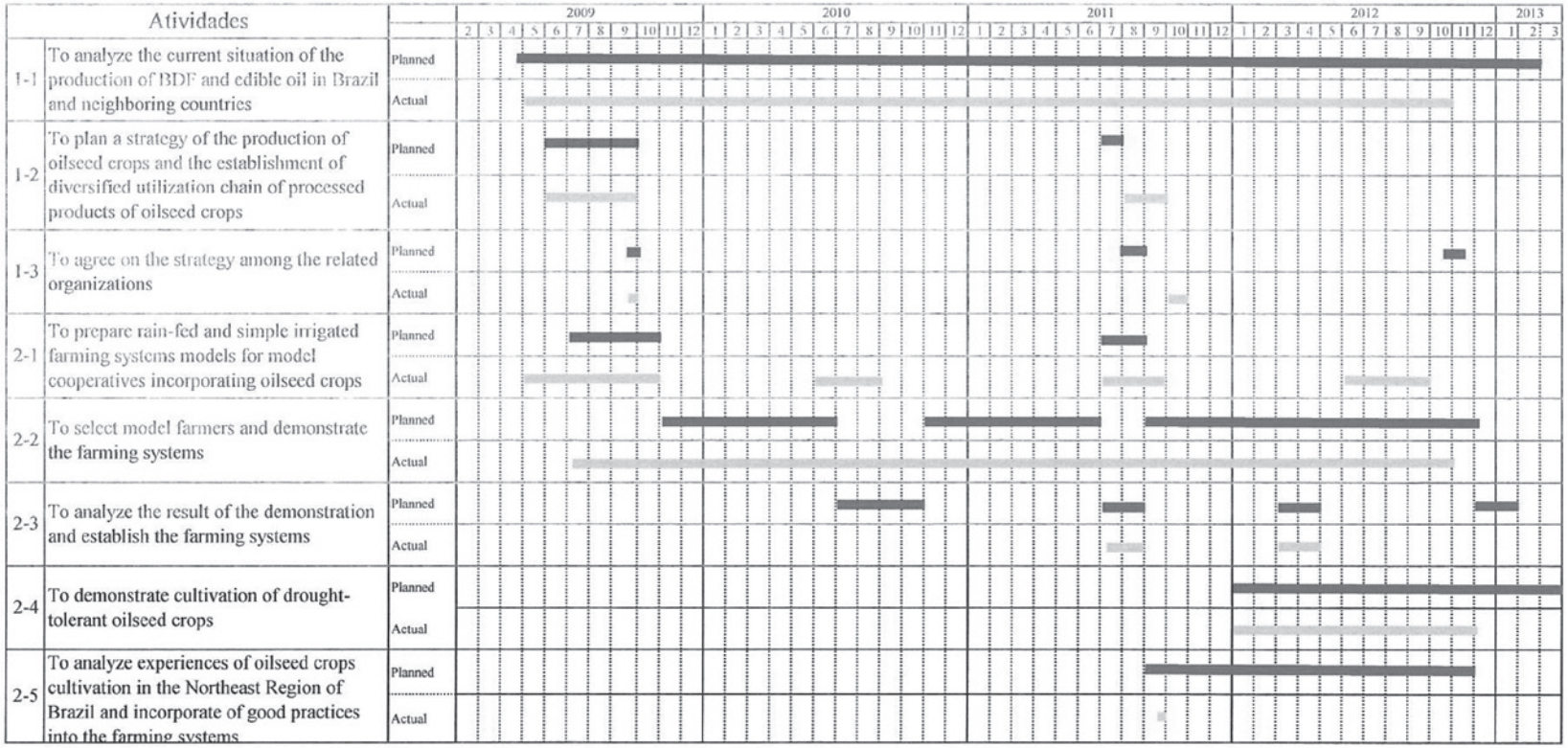
Output1 : The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated

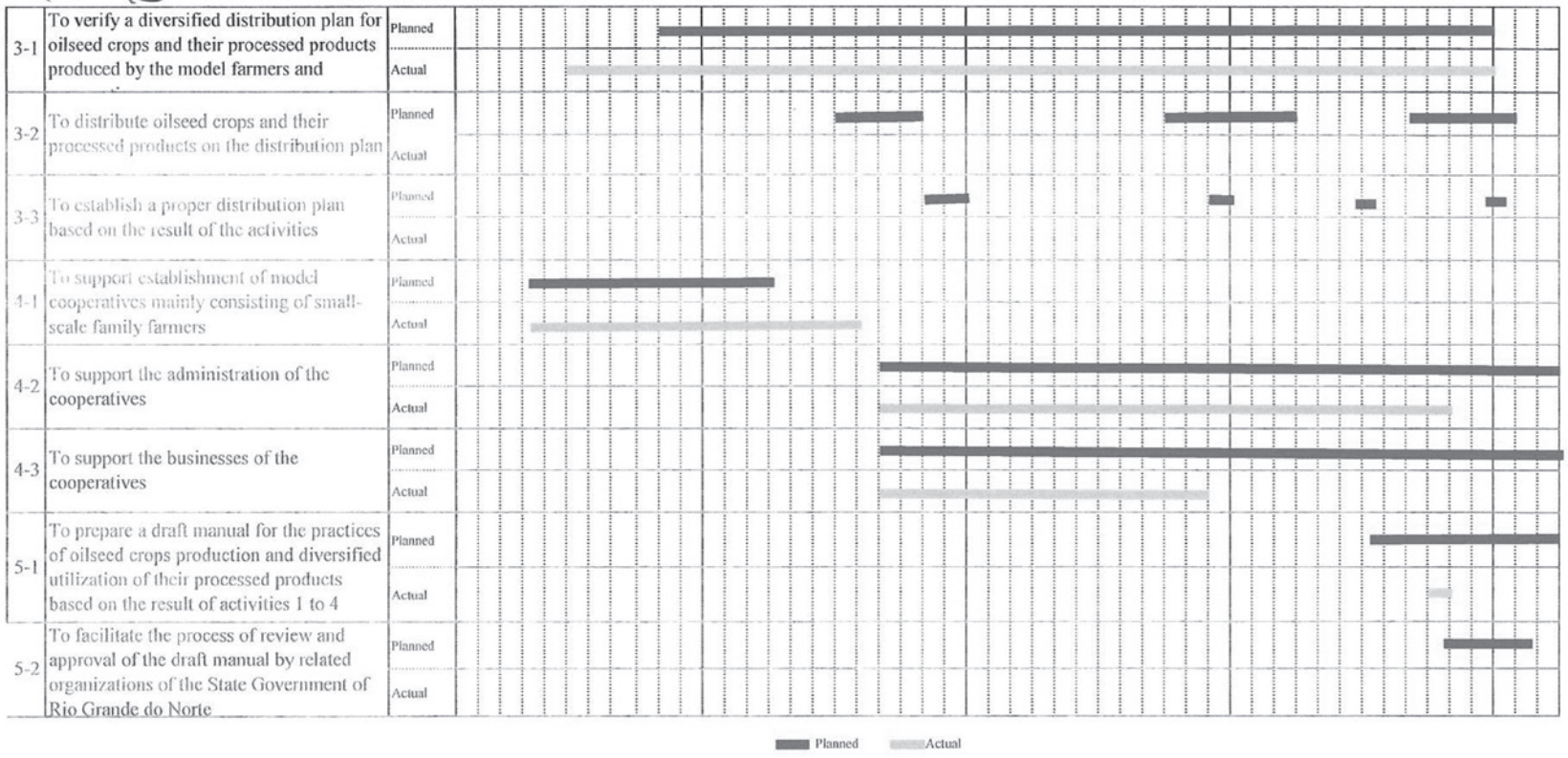
Output2 : Diversified farming system including oilseed crops for small-scale family farmers is established in the model area

Output3 : Distribution channels to facilitate market access of oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established

Output4 : Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses

Output 5 : A manual is prepared for cooperatives mainly constituted of small-scale farmers to promote processed products of oilseed crops and BDF production chain



3-1	To verify a diversified distribution plan for oilseed crops and their processed products produced by the model farmers and	Planned	
		Actual	
3-2	To distribute oilseed crops and their processed products on the distribution plan	Planned	
		Actual	
3-3	To establish a proper distribution plan based on the result of the activities	Planned	
		Actual	
4-1	To support establishment of model cooperatives mainly consisting of small-scale family farmers	Planned	
		Actual	
4-2	To support the administration of the cooperatives	Planned	
		Actual	
4-3	To support the businesses of the cooperatives	Planned	
		Actual	
5-1	To prepare a draft manual for the practices of oilseed crops production and diversified utilization of their processed products based on the result of activities 1 to 4	Planned	
		Actual	
5-2	To facilitate the process of review and approval of the draft manual by related organizations of the State Government of Rio Grande do Norte	Planned	
		Actual	

Planned Actual

Annex 3: Dispatch of experts

Long-Term Japanese Experts

Field of Experts	Name	Total Assignment	2009 First Year										2010 Second Year										2011 Third Year										2012 Fourth Year									
			Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.
Chief Advisor/ Policy support of small-scale family farmers	Naoto WATANABE	33.26M/M																																									
Project Coordinator/ Distribution	Daisuke KOBAYASHI	42.00M/M																																									

Short-Term Brazilian Experts

Field of Experts	Name		2009 First Year										2010 Second Year										2011 Third Year										2012 Fourth Year									
			Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.
Farming system/ Interpreter	Ana Yumiko KOJIMA	40.50M/M																																									
Farmer organization	Diamantino Barrionuevo JUNIOR	10.05M/M																																									

Annex 4: Acceptance of C/Ps for Training in Japan

No.	Name of Counterpart	Post at assignment time	Training in Japan		
			Year	Name of Training Course	Duration
1	Ms. Tarcisio Bezerra Dantas	Deputy Secretary of Department of Agriculture, Forestry and Fisheries	2009	Agriculture extension and Cultivation technique	Nov.29 - Dec.8,2009
2	Mr. Mario Varela Amorin	Technical Director of EMATER	2009	Agriculture extension and Cultivation technique	Nov.29 - Dec.8,2009
3	Mr. Domingos Savio Azevedo Cabral	Promoter of EMATER	2010	Agriculture extension and Cultivation technique	Aug.3 - Aug.26,2010
4	Mr. Rogerio Fernando Martinelli	Promoter of EMATER	2010	Agriculture extension and Cultivation technique	Aug.3 - Aug.26,2010
5	Mr. Adeilton Alves da Cunha	Promoter of EMATER	2010	Agriculture extension and Cultivation technique	Aug.3 - Aug.26,2010
6	Mr. Aldo Ronaldo Dantas	Promoter of EMATER	2010	Agriculture extension and Cultivation technique	Aug.3 - Aug.26,2010
7	Mr. Jose Simplicio de Holanda	Deputy Secretary of Department of Agriculture, Forestry and Fisheries	2011	Agriculture extension and Cultivation technique	Dec.2 - Dec.15,2011
8	Mr. Sebastiao Ronaldo Martins Cruz	President of EMATER	2011	Agriculture extension and Cultivation technique	Dec.2 - Dec.15,2011

Annex 5: Provision and Procurement of Equipment

Note: Frequency of Use (A: Always B: Often C: Sometimes)
Condition (A: Good B: Fair C: No good)

No.	Item	Amount	Price(BRL)	Date	Frequency of Use	Condition	Remarks
1	4x4 Pick-up truck	1	90.990,00	Mar.2009	A	B	
2	4WD car	1	140.591,00	Jan.2012	A	A	
3	Digital Video Camera	1	2.299,00	Jul.2012	B	A	
4	Projector	1	2.699,00	〃	B	A	
5	Laser jet printer	3	580,00	Apr.2009	-	-	
			911,00	Dec.2009	-	-	
			665,00	Sep.2010	A	A	
6	Sprinkler irrigation system	3	180.256,14	1) Experiment Station of Lucrecia : Nov.2011	A	A	Pipes, Pumps, Sprinklers, and etc.
				2) Experiment Station of M.Vieira: Sep. 2010	A	A	
				3) Experiment Station of M.Vieira: Dec. 2010	A	A	
				4) Apodi (EMPARN experimental station): Aug.2012	A (Planned)	A	
7	Oil extraction equipment	2	427.700,00	Jan.2011	B	A	Oil extractors, Seed dehullers,Oil Filter presses,Stainless steel tanks, Conveyors
8	Tractor	1	85.000,00	Nov.2011	A	A	Lucrecia family farms cooperative
9	Earth-moving plate	1	24.000,00	〃	A	A	〃
10	Tractor cart	1	7.000,00	〃	A	A	〃
11	Tractor disc harrow	1	15.000,00	〃	A	A	〃
12	Tractor plows	1	7.500,00	〃	A	A	〃
13	Cultivator	1	21.510,00	Mar.2012	A	A	Experiment station of EMPARN-Apodi
14	Rotary cultivator	1	4.360,00	〃	A	A	〃
15	Mower	1	4.410,00	〃	A	A	〃
16	Seeder	1	5.800,00	〃	A	A	〃
17	Sprayer	1	12.320,00	〃	A	A	〃
18	Soxhlet extractor	1	3.613,00	〃	A	A	EMPARN-Natal
19	Gas range	1	399,00	〃	B	A	To produce oilseed products on a trial basis
20	Gas Ovens	1	2.420,00	〃	B	A	〃
21	Stainless steel work table	2	1.400,00	〃	B	A	〃
22	Sealer	1	180,00	〃	B	A	〃
23	Drip irrigation system	1	7.550,65	Jun.2012	A	A	Experiment station of Lucrecia
24	TV LCD 32"	2	1.778,00	〃	B	A	
25	DVD player	2	238,00	〃	B	A	
26	Wood shelf	1	7.625,70	〃	B	A	
27	Sesame sorting machine	1	5.500,00	Aug.2012	A(Planned)	A	
28	Oil extraction plant, shipping containers' specification	1	408.000,00	Sep.2012	A (Planned)	A	M.Vieira family farms cooperative
			1.472.295,49	(BRL)			
			57.419.524	(JPY*)			*Note: 1BRL=39.00JPY

Annex 6: Assignment of Counterpart Personnel

1 Department of Agriculture, Forestry and Fisheries (SAPE)

Name	Title
Jose Simplicio de Holanda	Project Director
Eribaldo Cabral de Vasconcelos	C/P for special subject

2 EMATER

Name	Title
Sebastião Ronaldo Martins Cruz	Project Sub-Director
Rogerio Fernando Martinelli	Project Manager
Francisca Jales da Costa Diniz	Promoter(Responsible for "Farming" of Umarizal area)
Washinton Luiz Jales	Promoter(Responsible for "Farming" of Umarizal area)
Adeilton Alves da Cunha	Promoter(Responsible for "Farming" of Umarizal area)
Aderban Medeiros da Silva	Promoter(Responsible for "Farming" of Umarizal area)
Jose Gomes da Costa Sobrinho	Promoter(Responsible for "Farming" of Pau dos Ferros area)
Aldo Ronaldo Dantas	Promoter(Responsible for "Farming" of Pau dos Ferros area)
Domingos Savio Azevedo Cabral	Promoter(Responsible for "Organization of Famers" of Both areas)

3 EMPARN

Name	Title
Jose Geraldo Medeiros da Silva	Researcher
Marcelo Abdon Lira	Researcher
Aldo Arnaldo de Medeiros	Researcher
Florisvaldo Xavier Guedes	Researcher

MINUTES OF MEETING
BETWEEN
THE JAPANESE TERMINAL EVALUATION TEAM
AND
THE STATE GOVERNMENT OF RIO GRANDE DO NORTE
ON THE TERMINAL EVALUATION ON
THE PROJECT FOR SOCIAL INCLUSION THROUGH THE INCENTIVE TO PRODUCE OLEAGINOUS PLANTS FOR THE GENERATION OF BIO-DIESEL IN THE STATE OF RIO GRANDE DO NORTE

The Japanese Terminal Evaluation Team, organized by Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Makoto Nakao, reviewed the progress of the Project for Social Inclusion Through the Incentive to Produce Oleaginous Plants for the Generation of Bio-Diesel in the State of Rio Grande do Norte (hereinafter referred to as "the Project") from 29 October to 16 November, 2012 together with the Brazilian Evaluation Team in the form of joint review.

The Joint Evaluation Team (hereinafter referred to as "the Team"), which consists of three (3) members from Japanese side and one (1) member from the Brazilian side, was organized for the purpose of conducting the evaluation of the progress and for preparation of necessary recommendations to the respective governments.

After the intensive study and analysis of the activities and achievements of the Project, the Team prepared the Joint Terminal Evaluation Report (hereinafter referred to as "the Report"), and presented it to the Joint Coordinating Committee (hereinafter referred to as "JCC") that was held on November 14, 2012.

JCC discussed the major issues presented in the Report and agreed to report to the respective organizations the matters referred to in the document attached hereto.

Natal-RN, November 14, 2012

中尾誠

Mr. Makoto Nakao
Leader,
Japanese Terminal Evaluation Team,
Japan International Cooperation Agency,
Japan

Mr. José Lacerda Alves Felipe
Deputy Secretary,
Secretário de Estado do Planejamento e das Finanças (SEPLAN)
State Government of Rio Grande do Norte
Federative Republic of Brazil

Mr. Jose Simplicio de Holanda
Acting Secretary,
Secretaria de Estado da Agricultura, da
Pecuária e da Pesca (SAPE)
State Government of Rio Grande do Norte
Federative Republic of Brazil

JCC received the Report from the Team, and confirmed that the parties concerned will take necessary measures to materialize the recommendations described in the Report. Those recommendations are as follows;

Recommendation

(1) The Project duration should be extended in order to implement the activities that were not completed, because of the drought that lasted for three consecutive years, especially the critical drought in 2012, and to yield Outputs and achieve the Project Purpose. During the extension period, the following activities will be focused on, according to PDM.

a. To demonstrate the rain-fed and irrigated farming system models by using sesame and other crops and to establish a proper distribution plan for the processed products made from sesame and other crops.

b. To demonstrate the possibility of sunflower cultivation (oleaginous plants for the generation of BDF) by irrigated farming system models and to try practices for the distribution of processed sunflower seeds and/or oil under the Social Fuel Stamp programme.

c. To demonstrate the introduction of drip irrigation farming.

(2) Regarding the extension period of the Project, in order to implement at least two cycles of demonstration for not only the cultivation of oilseed crops but also processing and marketing, and in consideration of a preparation period for the irrigation, the Project should be extended for two (2) years, up to April 2015.

(3) Oilseed crops are expected to have diverse uses, such as distribution of oil and processed products and desterilization of residue. Thus, stable and multiple agriculture models should be considered by combining these forms. In this case, it is expected that the demonstration will be continued and the results will be shared to the small-scale farmers, with the support of EMPARN as well as research institutions such as EMBRAPA.

(4) Regarding the type of irrigation suitable for the target areas, it is preferable to select drip irrigation, which requires a relatively small amount of water, considering the weather conditions and the uneven rainfall in the target areas of the Project provided that there are no restrictions regarding economic efficiency or the purchase of equipment. Water from reservoirs, wells, and rivers is used for drip irrigation in the target areas. In case of drought, however, the water intake is restricted as the water is required for drinking. Therefore, in order to ensure water catchment required for the cultivation, it is necessary to consider the construction of underground dams. Furthermore, to ensure a stable supply of water in the future for agricultural use in the state of RN, including the target area of the Project, the practical introduction of irrigation systems by the Federal and/or State Government has to be done in a timely manner.

(5) To properly use the sets of oil extractors provided by the Project and for continuous maintenance by the cooperatives, constant support from the State Government of RN and EMATER is required. Likewise, continuous support is required for the processing of oilseed crops and the establishment of distribution channels. Therefore, assignment of the extension staff of EMATER or adequate staff from the State Government of RN should be considered. Furthermore, the extension staff at the Pau dos Ferros regional office of EMATER should be increased to assign more C/P(s) responsible for Marcelino Vieira cooperative.

(6) It is a challenge to consolidate the management and financial/accounting management system of cooperatives. To deal with this and achieve stable cooperative management, it is effective to hire outside expert(s) who undertake(s) managing role(s). In addition, it is worth considering the possibility of diversifying measures to obtain financial assistance through the PRONAF (National Program for Strengthening Family Agriculture), other financial institutions and/or public programmes.

(7) Continuous support is essential to maintain stable farming systems and cooperatives, not only during the period of this Project but also after its completion. Therefore, it is critically important for the sustainability of the Project that the State Government of RN secures adequate human and financial resources, ensure continuity of the activities, and disseminate the results of the Project.

ANNEX 1: List of Participants of JCC

Reference: Joint Terminal Evaluation Report on The Project For Social Inclusion Through The Incentive to Produce Oleaginous Plants For The Generation of Bio-Diesel in The State of Rio Grande Do Norte

ANNEX 1

List of Participants of JCC

Data:November 14, 2012
Venue: SAPE, The State of Rio Grande do Norte

Secretaria de Estado doPlanejamento e das Finanças –SEPLAN
1. Mr. José Lacerda Alves Felipe (DeputySecretary)

Secretaria de Estado da Agricultura, daPecuária e da Pesca – SAPE
1. Mr. José Simplício de Holanda (Acting Secretary)
2. Mr. Eribaldo Cabral de Vasconcelos (Technical Director)

Empresa de Pesquisa Agropecuária do Rio Grande do Norte – EMPARN
1. Mr.José Geraldo Medeiros da Silva (Director-President)
2. Mr.Aldo Arnaldo Medeiros (Researcher)
3. Mr.Marcelo Abdon Lira (Researcher)

Instituto de Assistência Técnica e Extensão Rural do Rio Grande do Norte – EMATER
1. Mr.Sebastião Ronaldo Martins Cruz (Technical Director)
2. Mr. Domingos Sávio Azevedo Cabral (Technologist)
3. Mr.Rogério Fernando Martinelli (Project Manager)

Japan International Cooperation Agency– JICA
1. Mr. Naoto Watanabe (Expert)
2. Mr. Daisuke Kobayashi (Expert)
3. Ms. Ana Kojima (Expert)
4. Mr. Diamantino Barrionuevo Junior (Expert)
5. Mr. Kazuaki Komazawa (Project Coorinator, JICA-Brazil)

The Joint Evaluation Team:
Brazilian Evaluation Team
1. Mr. Flávio Augusto M. Fernandes (Consultant, EPAGRI)

JICA Evaluation Team
1. Mr. Makoto Nakao (Leader)
2. Mr. Yoshiyuki Sagara
3. Mr. Akira Matsumoto

Other Organizations
Secretaria de Estado da Infra Estrutura - SIN
1. Mr. Omar Romero de Medeiros Sobrinho (Deputy Secretary)

Petrobras Biocombustível S.A. - Pbio
1. Ms. Kelem Cristiany Nunes Silva (Consultant)

Universidade Politécnica de Valencia – Espanha
1. Ms. Jeane Martins (Doctor course student)

６．質問票

ブラジル国「リオグランジドノルテ州小農支援を目指したバイオディーゼル燃料のための油糧作物の導入支援計画」
プロジェクト・カウンターパートの方へのアンケート

この度は、お世話になります。
プロジェクトの終了時評価の現地調査に先立ち、カウンターパートの皆さまに下記質問にご回答いただけるようお願い申し上げます。なお、終了時評価調査の主な目的は、以下のとおりです。

(1) 本件プロジェクトは、2009 年から 4 年間の予定で開始され、**プロジェクト終了の約半年前において、プロジェクト目標の達成見込み、効率性及び持続性等の観点から協力の実施状況を総合的に評価し、プロジェクトを終了することの適否やフォローアップの必要性等を判断する。上記目的を達成するため、具体的には、以下の調査項目を相手国側と合同で実施します。**

i. プロジェクトの実績及び実施プロセスを把握する。
ii. 評価5項目（妥当性、有効性、効率性、インパクト、自立発展性）の観点からプロジェクト現状の評価を行い、プロジェクトの実施に影響を及ぼしている促進要因、阻害要因について検証する。
iii. 上記調査結果を合同評価レポートに取りまとめて関係者間で共有するとともに、この結果を踏まえ、協力終了の適否等についてブラジル国側と協議し、必要な提言を行う。

現地活動でご多忙のなか、お手数をおかけしますが、ご協力のほど、よろしくお願いします。

2012 年 9 月 1 日
評価分析担当　松本　彰

お名前:	
担当分野:	

終了時評価調査
カウンターパート向け質問票

第一部　実績および実施プロセスに関する設問

Q1　　PDM では予定される成果が次の通りですが、それぞれの成果の達成状況についてコメントをください。
＜達成状況を図る3段階評価の尺度：〇＝ほぼ満足のいく成果が生み出された。△＝満足行くものではないが、一定の成果は挙げられた。×＝予定された成果にまで至っていない。＞

予定される成果	達成状況（3 段階評価：〇、△、×）	予測される達成時期、プロジェクト目標達成への影響程度等についてのコメント
(1) 小農を中心とした農協による油糧作物加工品及び BDF 生産チェーンの確立に向けた戦略が策定される		
(2) 対象地域において小農を対象とした油糧作物を含む多角的営農モデルが確立される		
(3) モデル農家及びモデル組合を対象とした油糧作物及び油糧作物加工品の流通ルートが開拓される		
(4) 搾油事業等を実施するためのモデル組合が設立・運営される		
(5) 小農を中心とした農協による油糧作物加工品及び BDF 生産チェーン普及のためのマニュアルが作成される		

Q2　　プロジェクト活動についてどのように評価されますか？またその理由もお答えください。

【　】ほぼ計画通りであった　【　】計画通りでなかった　【　】わからない（判断できない）
理由（説明）：

プロジェクトのマネジメント体制について。

Q3　　プロジェクトのマネジメント体制は有効に機能しましたか。

モニタリングの仕組みや意思決定過程、	【　】有効であった　【　】有効でなかった 理由（説明）：
プロジェクト内のコミュニケーションの仕組み	【　】有効であった　【　】有効でなかった 理由（説明）：

Q4　進捗上の問題点や、外部条件の変化に応じてプロジェクト活動の内容は適切に修正されましたか。

コメント：

プロジェクト内のコミュニケーションの仕組み、専門家とカウンターパートとの関係について

Q5　日常のプロジェクト関係者間のコミュニケーション、信頼関係の確立についてはどのように評価されますか。

【 】よかった　【 】まあまあだった　【 】あまりよくなかった

コメント：

第二部　評価5項目に関する設問

1. 妥当性

QB1　プロジェクトのアプローチ、目標達成への方法論は適切であったと思いますか。適切でなかった点があるとお考えの場合、具体的な理由を記述ください。

【 】たいへん適切だった　【 】まあまあである　【 】あまり適切でなかった

【 】分からない

コメント：

QB2　本プロジェクトの開始以降、プロジェクトをとりまく環境（政策、経済、社会等）にプロジェクト実施に対して、プラスあるいはマイナスの影響を及ぼすような変化はありましたか。

【 】特に変化はない

【 】プラスの変化があった

【 】マイナスの変化があった

コメント：

2. 有効性

プロジェクト目標の達成状況について

QB3　これまでの進捗から判断して、PDM または R/D で示されたプロジェクト目標「対象地域において小農を中心とした農業協同組合（農協）による油糧作物加工及び BDF 生産チェーンのモデルが構築される」は、協力期間終了までに、どの程度達成されるとお考えですか。また、各々の回答を選ばれた理由も記述下さい。

【 】完全に達成されるだろう（100%以上）　【 】概ね達成されるであろう（8～9 割程度）

【 】あまり達成されない（6～7 割程度）　【 】かなり厳しい（5 割以下）　【 】何とも言えない

コメント（達成の可否を示唆する事実、現象等があれば記載ください）：

プロジェクト目標達成の「貢献要因」について

QB4　PDM に記載されている投入、活動のうち、プロジェクト目標の達成に特に効果があった事項は何と思いますか。

コメント：

QB5　PDM には記載されていないが（プロジェクトの実施過程で工夫した事等で）プロジェクト目標達成に著しく貢献した事項があればご説明ください。

説明：

プロジェクト目標達成の「阻害要因」について

QB6　計画される投入や活動等のなかで、プロジェクト目標の効果的、効率的達成を阻害するような不適切な部分がありましたか。

コメント：

QB7　プロジェクト外部の要因（人事異動によるプロジェクト実施体制の変動の発生、農業に影響を及ぼすような自然災害の発生等）でプロジェクト目標の効果的、効率的達成を阻害するような事柄がありましたか。

コメント：

3. 効率性

QB8　PDMに設定された活動項目は成果を達成するのに適切であったと思いますか（過不足などはなかったか、成果達成のためにあまり効果のない活動はなかったか、或いは重要な活動が欠けていたり、記述されていない活動を、補完的に行ったりしたか）。

【　】適当(必要・十分)であった。
【　】不要あるいはあまり効果のないものが含まれていた。
【　】必要あるいは極めて有効な項目が欠けていた。
理由/コメント:

プロジェクトのコストについて

QB9　成果の発現度・プロジェクト目標の達成度は投入コストに見合ったものだと思いますか。

コメント:

4. インパクト

上位目標の達成見通しについて

QB10　PDM では上位目標「小農を対象とした油糧作物加工品及び BDF 生産チェーンが普及されるとともに油糧作物の栽培を通じて小農の生計が向上する。」の達成度を計るために、以下の指標を設定しています。

1)　油糧作物を生産し油糧作物加工品を多角的に利用した小農の収入が向上する
2)　油糧作物を生産し油糧作物加工品を多角的に利用した小農の収入手段が増加する

これまでの投入・成果の実績、活動の状況、政府の対応や社会・経済条件等に照らし合わせて、この指標は数年後までにどの程度実現されると思いますか。また、各々の回答を選ばれた理由も記述ください。

【　】数年以内に達成すると思う。
【　】数年以内に達成できるかどうか微妙である。
【　】数年以内では達成できないと思う。
【　】わからない。
コメント:

QB11　上位目標の達成を阻害する要因があればそれは何と考えられますか。

コメント:

上位目標以外に、プロジェクトの波及効果について

QB12　これまでのプロジェクト活動の結果、当初から想定されているアウトプットや目標として設定されていること以外に、何らかのインパクト（プロジェクトがもたらしたプラス、マイナスの影響や効果）が起きているのを観察されていますか。あるいは、この後、起きる可能性があると思いますか。ある場合、それを簡単に説明下さい。

【　】特にインパクトは観察されない　【　】インパクトがある 【　】特にインパクトはない　　【　】分からない
説明/コメント：

5. 自立発展性

組織・財政面について

QB13　協力終了後も効果を上げていくための活動を実施するに足る組織能力はあると思いますか（人材配置、意思決定プロセスなど）

コメント：

ブラジル国側の政策・制度面について

QB14　政府の上位機関、関係省庁、関係機関等はプロジェクトに対してどのように理解・協力していますか。

【　】良好 【　】まあまあ良かった 【　】良くなかった 【　】分からない
理由/コメント：

技術面について

QB15　総合的に勘案して、プロジェクトの自立発展性についてどのように評価されますか。

【　】かなり高い
【　】なんとかなる
【　】自立発展性には不安が大きい。
コメント：

QB16　プロジェクト終了後、ブラジル国側が上位目標に向けての活動を継続する上で直面すると思われる主要な問題点は何と思いますか。

問題点:

最後に、その他、今回のプロジェクト実施の経験をふまえ、今後ブラジル国において類似のプロジェクトを企画・実施する場合、あるいは他の国において同様な分野ないし、類似の協力を行う場合、留意すべき事項等につきご意見をお願いします。

ご意見:

ご協力ありがとうございました。

RECORD OF DISCUSSIONS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY,
THE BRAZILIAN COOPERATION AGENCY,
AND
THE AUTHORITIES CONCERNED OF THE STATE GOVERNMENT OF RIO GRANDE DO NORTE ON THE JAPANESE TECHNICAL COOPERATION FOR THE PROJECT FOR SOCIAL INCLUSION THROUGH THE INCENTIVE TO PRODUCE OLEAGINOUS PLANTS FOR THE GENERATION OF BIO-DIESEL IN THE STATE OF RIO GRANDE DO NORTE

With regard to the Japanese technical cooperation for the Project for Social Inclusion Through the Incentive to Produce Oleaginous Plants for the Generation of Bio-Diesel in the State of Rio Grande do Norte (hereinafter referred to as "the Project") based on the record of discussions signed in Natal on January 16, 2009 (hereinafter referred to as "R/D"), the Coordinator for Technical Cooperation of Japan in Brazil and the Brazilian authorities concerned held a series of discussions in accordance with the recommendations of the terminal evaluation conducted in November 2012.

As a result of the discussions, both sides agreed the modification of R/D in conformity with the lines described in the document attached hereto.

Natal-RN, January 24, 2013

Mr. Satoshi Murosawa
Coordinator for Technical Cooperation of Japan in Brazil,
Japan International Cooperation Agency (JICA),
Japan

Mr. Fernando José Marroni de Abreu
Director,
Brazilian Cooperation Agency (ABC),
Ministry of External Relations
Federative Republic of Brazil

Mr. Francisco Obery Rodrigues Junior
Secretary of Planning and Financing (SEPLAN)
State Government of Rio Grande do Norte
Federative Republic of Brazil

Mr. Jose Simplicio de Holanda
Acting Secretary,
Secretary of Agriculture, Livestock and Fisheries (SAPE)
State Government of Rio Grande do Norte
Federative Republic of Brazil

José Lacerda Alves Felipe
Secretario Adjunto da SEPLAN

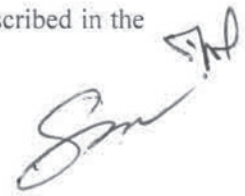
THE ATTACHED DOCUMENT

I. Extension of the duration of the Project

The duration of the Project will be extended for two (2) years and the closing date will be changed from April 4, 2013 to April 4, 2015.

II. Others

All matters other than the mentioned above shall be treated in the same manner as prescribed in the articles of R/D.



８．延長期間を含む日本側投入実績

<table>
<tr><th>ミニッツの計画</th><th>実績(2015 年 1 月 31 日現在)</th></tr>
<tr><td>1.　専門家
(1) 長期専門家
1) チーフアドバイザー/小農支援
2)業務調整/流通
(2) 短期専門家
1) 営農
2) 農民組織化</td><td>(1)　長期専門家：
チーフアドバイザー／小農支援：渡部　直人
No.　派遣期間
1　2009 年 4 月 5 日　～　2010 年 2 月 15 日
2　2010 年 4 月 16 日　～　2010 年 8 月 6 日
3　2010 年 9 月 1 日　～　2011 年 3 月 16 日
4　2011 年 6 月 27 日　～　2011 年 12 月 5 日
5　2012 年 1 月 23 日　～　2012 年 7 月 14 日
6　2012 年 9 月 15 日　～　2013 年 3 月 12 日
7　2013 年 7 月 2 日　～　2014 年 1 月 7 日
8　2014 年 3 月 4 日　～　2014 年 7 月 31 日
9　2014 年 10 月 7 日　～　2015 年 4 月 4 日

業務調整／流通：小林　大祐
No.　契約期間
1　2009 年 5 月 6 日　～　2011 年 5 月 5 日
2　2009 年 5 月 6 日　～　2013 年 4 月 4 日 (第一次延長)
3　2010 年 5 月 6 日　～　2013 年 6 月 30 日 (第二次延長)
4　2013 年 8 月 8 日　～　2015 年 4 月 4 日

2)　短期専門家：
● 営農/Ana Y.Kojima
雨期を中心に年間半年程度の派遣が当初計画では想定されていたが、プロジェクト開始後からチーフアドバイザーの通訳を兼ねる形で「通年契約」され、常勤している。
● 農民組織化/Diamantino Barrionuevo Jr.
2011 年 9 月から長期契約を結んだ(詳細は以下のとおり)
<table><tr><th>年度</th><th>2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th></tr><tr><td>M/M</td><td>0.5</td><td>1.5</td><td>3.0</td><td>11.0</td><td>11.0</td><td>11.0</td></tr></table></td></tr>
<tr><td>2.　C/P 本邦研修</td><td><u>2009 年度(準高級)</u>
・ Tarcisio Bezerra Dantas (SAPE 次官=当時)
・ Mario Varela Amorin (EMATER 技術部長=当時)</td></tr>
</table>

	期間：2009 年 11 月 29 日～12 月 8 日, 2010 年度(一般) ・ Domingos Azevedo Cabral Savio (EMATER-Natal) ・ Rogerio Fernando Martinelli (EMATER-Umarizal 地域) ・ Adeilton Alves da Cunha(EMATER- Umarizal 地域) ・ Aldo Ronaldo Dantas (EMATER-Pau dos Ferros 地域) 期間：2010 年 8 月 3 日～8 月 26 日 2011 年度(準高級) ・ José Simplício de Holanda(SAPE 次官) ・ Sebastião Ronaldo Martin Cruz(Emater 総裁) 期間：2011 年 12 月 2 日～12 月 15 日 2011 年度以降は実績なし。
3. プロジェクト活動のための機材	以下の表８－１「供与機材リスト」を参照
4.研修実績	以下の表８－２「研修実績」を参照
5. 現地業務費実績	2015 年 1 月 31 日まで現地業務費としての支額は以下のとおり。 （プロジェクト側の支出及びブラジル事務所側の支出を含む。） 2008 年度：1,724 千円 2009 年度：11,735 千円 2010 年度：11,280 千円 2011 年度：17,740 千円 2012 年度：30,019 千円 2013 年度：30,000 千円 2014 年度：36,036 千円

表８－１　供与機材リスト

No.	機材	数	金額(R$)	投入時期	使用頻度	状態	備考
1	ピックアップトラック (L200)	1	90,990.00	JICA ブラジル事務所が事前調達	A	C	プロジェクト車両
2	プリンター	1	580.00	2009.4	D	D	プロジェクト事務所用
3	スタビライザー	1	215.26	〃	A	A	〃
4		1	69.00	〃	A	A	〃
5		1	69.00	〃	A	A	〃
6		1	68.90	2009.5	A	A	〃
7	書類棚/本棚	2	500.00	2009.7	A	A	〃
8	椅子	3	1,350.00	〃	A	A	〃
9	ビデオカメラ	1	2,299.00	〃	C	A	〃
10	釘穴開け機	1	95.75	2009.8	B	A	加工品実証用
11	PH 測定器	1	221.18	2009.9	C	A	農業実証用
12	プリンター	1	911.00	2009.12	A	A	プロジェクト事務所用
13	プリンター	1	665.00	2010.9	D	D	〃
14	スプリンクラー灌漑設備一式	4	180,256.14	2010.9, 2010.12, 2011.11 and 2012.8	B	B	2010.9 / M.Vieira 圃場 2ha 2010.12 / M.Vieira 圃場 1ha 2011.11 / Lucrecia 圃場 12ha 2012.8 / EMPARN-Apodi 圃場 (ブラジル事務所で購入したもの。総額のみ把握)
16	搾油設備一式	2	427,700.00	2011.1	B	A	搾油機、皮むき機、フィルター、

							タンク、輸送機等
17	変圧器	1	2,709.00	〃	A	A	Lucrecia
18	トラクター	1	85,000.00	〃	B	A	Lucrecia
19	フロント排土板	1	24,000.00	〃	B	A	〃
20	荷台	1	7,000.00	〃	B	A	〃
21	ハロー	1	15,000.00	〃	B	A	〃
22	3 枚プラウ	1	7,500.00	〃	B	A	〃
23	四輪駆動車(Pajero)	1	140,591.00	2012.1	A	A	プロジェクト車両
24	プロジェクター	1	2,699.00	〃	C	A	プロジェクト事務所用
25	スタビライザー	1	66.00	2012.3	A	A	〃
26	無停電電源装置	1	217.55	〃	A	A	〃
27	電子はかり機	1	400.00	〃	B	A	加工品実証用
28	ガステーブル	1	399.00	〃	B	A	〃
29	ステンレス製調理テーブル	2	1,400.00	〃	B	A	〃
30	シーラー	1	180.00	〃	C	A	〃
31	攪拌機	1	94.13	〃	B	A	〃
32	耕運機	1	21,510.00	〃	B	A	EMPARN-Apodi
33	耕運機ロータリー	1	4,360.00	〃	B	A	〃
34	草刈機	1	4,410.00	〃	B	A	〃
35	灌漑パイプ(Tubo PVC)	100	5,043.07	2012.5	B	B	Lucrecia 圃場
36	液晶 TV32 型	2	1,778.00	2012.6	C	A	講習会/見本市/直売所(ショールーム)
37	DVD プレーヤー	2	238.00	〃	C	C	〃
38	商品棚・家具式	1	7,625.70	〃	B	B	展示会/直売所
39	TV サポート	2	148.00	〃	B	A	〃
40	スピーカー	1	205.00	〃	C	A	〃
41	椅子	8	684.00	〃	A	A	〃
42	点滴灌漑設備一式	1	7,550.65	〃	B	A	Lucrecia 圃場 1ha パイプ、ホース、フィルター等
43	TV サポート	2	148.00	〃	B	A	展示会/直売所

44	スピーカー	1	205.00	〃	C	A	〃
45	工業用ドライヤー	2	380.00	〃	B	A	加工品実証用
46	ゴマ選別機	1	5,500.00	2012.8	C	A	収穫後処理
47	コンテナ(搾油所仕様)	1	408,000.00	2012.9	A	A	M.Vieira
48	ビニールカプセル接着機材(発熱機)	1	275.00	〃	B	A	加工品実証用
49	プリンター	1	664.00	2012.11	A	A	プロジェクト事務所用
50	農機具・トラクター収納小屋の建設材料	1	5,295.00	2012.12	A	A	レンガ、瓦、セメント(Lucrecia)
51	システルナ（貯水槽）資材一式	1	1,227.10	〃	A	A	Lucrecia
52	椅子	40	800.00	2013.1	A	A	〃
53	テーブル	2	78.00	〃	B	A	〃
54	エアコンディショナー（室外機付)	1	1,200.00	2013.2	A	A	〃
55	システルナ（貯水槽）資材一式	1	994.00	〃	A	A	M.Vieira
56	ノートパソコン	1	1,699.00	2013.3	A	A	Lucrecia
57	プリンター		649.00	2013.3	A	A	〃
58	無停電電源装置		379.00	〃	A	A	〃
59	ステンレス製調理テーブル	1	675.00	〃	B	A	加工品実証用
60	ミキサー	1	513.00	〃	B	A	〃
61	ノートパソコン	1	1,747.55	2013.5	A	A	M.Vieira
62	プリンター	1	649.00	〃	A	A	〃
63	無停電電源装置	1	386.00	〃	A	A	〃
64	農機具・トラクター収納小屋の建設材料	1	1,484.41	〃	A	A	Lucrecia
65	草刈機	1	6,779.41	2013.6	B	A	EMPARN-Apodi
66	播種機	1	5,800.00	〃	B	A	〃
67	散布機	1	12,320.00	〃	B	A	〃
68	オイル抽出器	1	3,613.00	〃	C	A	〃
69	椅子	2	390.00	2013.7	A	A	Lucrecia
70	椅子	1	140.00	2013.8	A	A	M.Vieira

71	扇風機	1	140.00	〃	A	A	〃
72	シーラー	1	700.00	2013.10	B	A	加工品実証用
73	プラスチック製収納・運搬用ケース(大/小)	2	74.00	〃	B	B	展示会/直売所
74		3	141.00	〃	B	B	〃
75	養蜂箱木製二段ラングストロース式	30	6,000.00	2013.12	C	B	M.Vieira
76	遠心分離機	1	4,947.00	2014.3	C	A	〃
77	蜂蜜用タンク	1	1,110.00	〃	C	A	〃
78	養蜂作業机	1	1,525.00	〃	C	A	〃
79	椅子	1	299.00	2014.5	A	A	プロジェクト事務所用
80	トラクター整備用工具	1	575.19	〃	A	A	Lucrecia
81	工具箱	1	62.80	〃	A	A	〃
82	プラスチック製収納・運搬用ケース(大/小)	2	59.80	〃	B	B	展示会/直売所
83		4	70.00	2014.6	B	B	〃
84		6	95.00	〃	B	B	〃
85	蜜蓋かき器	6	120.00	2014.7	C	A	M.Vieira
86	ステンレス製バケツ	3	300.00	〃	C	A	〃
87	バケツ用蜜こし器	3	50.00	〃	C	A	〃
88	ロウを板状にする道具セット	1	500.00	〃	C	A	〃
89	巣礎シリンダー(養蜂)	1	600.00	〃	C	A	〃
90	蜂蜜収容バケツ	50	1,050.00	〃	C	A	〃
91	沈殿タンク	1	762.00	2014.8	A	B	〃
92	タンク三脚台	1	156.00	〃	A	B	〃
93	ステンレス製着脱可能バルブ	1	180.00	〃	A	B	〃
94	フィルター用蜜こし器	1	155.00	〃	C	A	〃
95	シリンダー12L	1	2,700.00	〃	B	A	〃
96	攪拌機	1	2,635.00	2014.8	B	A	加工品実証用
97	果物野菜乾燥器	1	2,450.00	〃	B	A	〃
98	木箱	50	1,200.00	2014.9	B	A	蜂蜜瓶収納・運搬用
99	パレット	12	1,160.00	〃	B	A	展示会/直売所
100	木材パネル 12 ㎡	1	2,000.00	〃	B	A	〃

101	ガステーブル	1	629.00	〃	B	A	加工品実証用
102	オーブン	1	2,420.00	〃	B	A	〃
103	ステンレス製調理テーブル	1	765.00	〃	B	A	養蜂施設用
104	冷蔵庫	1	1,599.00	〃	B	A	〃
105	台所用品収納棚のセット	1	799.00	〃	B	A	〃
106	業務用調理鍋	2	232.00	2014.10	B	A	〃
107	キッチンタイマー	1	21.90	〃	B	A	〃
108	テーブル	1	125.00	〃	B	A	〃
109	電子はかり機	2	290.00	2014.10	B	A	〃
110	マルチプロセッサー	1	464.90	〃	B	A	〃
111	木箱	15	375.00	〃	A	A	オイル製品収納・運搬用
112	鉄製収納ケース	15	600.00	〃	A	A	モデル商品展示用
113	木箱	7	700.00	2014.12	A	A	〃

供与機材の合計金額	1,557,878.16	(R$)	為替レート：ブラジルレアル（R$)＝45 円で計算(小数点以下切捨て）
	¥70,104,517.00	（円）	

表８－２　研修実績

日付	場所	研修名	内容	
2009/8/21	Apodi	イベント：農業技術サーキット	EMATER 普及員/一般農民向けにヒマワリその他の栽培技術移転に農民及び普及員が参加	EMPARN 研究員
2009/9/2	Apodi	EMATER 普及員対象ヒマワリ栽培技術研修会	EMPARN 試験場のヒマワリ畑で栽培技術、管理等を普及員に指導	Dr. Jose Renato C. Bezerra（EMBRAPA 研究員）
2009/9/21	Portalegre	モデルサイトカウンターパート研修会	2009 年度の活動についてオリエンテーション、プロジェクト計画、それぞれの役割分担	渡部　直人（プロジェクトリーダー）
2009/9/24	Marcelino Vieira	組織化の基礎情報セミナー	農民向けに「組合の役割とは」を指導	Domingos S.A.Cabral（EMATER/Natal）
2009/9/25	Lucrécia	組織化の基礎情報セミナー	農民向けに「組合の役割とは」を指導	Domingos S.A.Cabral（EMATER/Natal）
2009/10/8	Marcelino Vieira	ヒマワリ栽培セミナー	農民向けに土壌分析、土壌管理、ヒマワリ作付けをフィールドで指導	Marcos Romualdo, Domingos, Miguel, Adeilton, Aldo & Laila (EMATER Mossoro, Natal, M.Vieira, Piloes, Alexandria)

2009/10/9	Lucrécia	ヒマワリ栽培セミナー	農民向けに土壌分析、土壌管理、ヒマワリ作付けをフィールドで指導	Marcos Romualdo, Domingos, Adeilton, Washington, Aderban (EMATER Mossoro, Natal, Lucrecia, Frutuoso Gomes, Messias Targino)
2009/10/13、14	Marcelino Vieira & Lucrécia	モデル圃場管理及び組合設立研修会	ヒマワリ栽培普及のための圃場管理及び組合設立のための指導	Ana Kojima & Domingos S.A.Cabral (営農専門家 & EMATER/Natal)
2009/10/23	Portalegre	EMATER 普及員研修会	2009 年度の活動についてオリエンテーション、プロジェクト計画、それぞれの役割分担、現場の状況確認	渡部 直人（プロジェクトリーダー）
2009/12/7	Portalegre	EMATER 普及員研修会	2010 年度の活動計画、現場の状況確認	渡部 直人（プロジェクトリーダー）
2009/12/16	Umarizal	EMATER 普及員研修会	2009 年度の活動の振り返り、2010 年度のプロジェクト活動計画、現場の状況確認	Mario Amorim（プロジェクト･サブダイレクター & EMATER 技術普及部長）
2009/12/17	Marcelino Vieira	組合設立の総会	組合参加農民と共に COAAF 組合設立のために第 1 回総会を開催	Domingos S.A.Cabral (EMATER/Natal)
2009/12/18	Lucrécia	組合設立の総会	組合参加農民と共に COAFAL 組合設立のために第 1 回総会を開催	Domingos S.A.Cabral (EMATER/Natal)

2010/1/26	Lucrécia	ヒマワリ栽培セミナー	ヒマワリの栽培、管理、収穫、土壌分析結果、天水栽培について指導	Dr. Marcone, Dr. Marcelo, Dr. Simplicio (EMPARN 研究員)
2010/1/27	Marcelino Vieira	ヒマワリ栽培セミナー	ヒマワリの栽培、管理、収穫、土壌分析結果、天水栽培について指導	Dr. Marcone, Dr. Marcelo, Dr. Simplicio (EMPARN 研究員)
2010/2/3	Mossoró	プロジェクト広報イベント・記者会見	プロジェクト広報（伝統文芸コルデル形式のプロジェクト広報冊子を配布）	プロジェクトメンバー一同（JICA ブラジル担当者含む）
2010/2/25	Marcelino Vieira	ゴマ栽培セミナー	ゴマ栽培（植え付け、管理、収穫、マーケット）の指導	Dr. Queiroga (EMBRAPA-Algodão)
2010/2/26	Lucrécia	ゴマ栽培セミナー	ゴマ栽培（植え付け、管理、収穫、マーケット）の指導	Dr. Queiroga (EMBRAPA-Algodão)
2010/7/14	Lucrécia	組合運営講習会	組合の書類手続き、運営、今後の活動について指導	Domingos S.A.Cabral (EMATER/Natal)
2010/7/15	Marcelino Vieira	組合運営講習会	組合の書類手続き、運営、今後の活動について指導	Domingos S.A.Cabral (EMATER/Natal)
2010/8/11、12	Apodi	モデル組合員対象研修会、及び参考組合を視察	COOPAPI 組合(養蜂、カシュナッツ、手芸品）の経営、振り返り	Fatima Torres & Diamantino Barrionuevo Jr. (COOPAPI 組合理事長 & 組織化専門家)

2010/8/26、27	Lucrécia & Marcelino Vieira	灌漑設備の管理セミナー	機材の使用、管理その他	Daisuke Kobayashi（JICA 調整員）
2010/9/15	Marcelino Vieira	ゴマ播種機の使用講習会	機材の使用、植え付け方の指導	Dr. Queiroga（EMBRAPA-Algodão）
2010/10/22	Marcelino Vieira	植物性農薬セミナー	綿花やその他の油を用いた自然殺虫剤の作り方、使い方	Jurandir Barbosa Junior（EMATER-Marcelino Vieira インターン）
2010/10/23	Lucrécia	植物性農薬セミナー	綿花やその他の油を用いた自然殺虫剤の作り方、使い方	Jurandir Barbosa Junior（EMATER-Marcelino Vieira インターン）
2010/11/10	Lucrécia	コンポスト講習会	収穫後の残渣、枯葉、生ゴミを利用したコンポスト作り	Jurandir Barbosa Junior（EMATER-Marcelino Vieira インターン）
2010/11/11	Marcelino Vieira	コンポスト講習会	収穫後の残渣、枯葉、生ゴミを利用したコンポスト作り	Jurandir Barbosa Junior（EMATER-Marcelino Vieira インターン）
2010/12/8、9	Lucrécia & Marcelino Vieira	ゴマ料理講習会	ゴマ及びヒマワリの利用した料理の指導	Dr. Queiroga/ Ayice / Paulo de Tarso（EMBRAPA-Algodão）
2010/12/17	Lucrécia	組合設立総会	農民を含む COAFAL 組合設立の説明、書類記入	Domingos S.A.Cabral（EMATER/Natal）
2010/12/18	Marcelino Vieira	組合設立総会	農民を含む COAAF 組合設立の説明、書類記入	Domingos S.A.Cabral（EMATER/Natal）

2010/2/2	Lucrécia	トラクター、農業機材管理講習会	トラクター及び農業機材の使い方、管理、基礎情報をプロジェクト農民に指導	Dr. Queiroga / Cicero （ EMBRAPA-Campina Grande）
2010/12/3	Marcelino Vieira	ゴマ料理講習会	トラクター及び農業機材の使い方、管理、基礎情報をプロジェクト農民に指導	Dr. Queiroga / Cicero （EMBRAPA-Algodão）
2011/2/10	Lucrécia	プロジェクト広報イベント、ヒマワリ栽培セミナー	対象地域（Lucrecia,Marcelino Vieira, 近辺）の農民を中心にプロジェクト広報、ヒマワリ脱穀	JICA 専門家、EMPARN、EMATER、SAPE
2011/2/21-26	Marcelino Vieira & Lucrécia	組合運営講習会	プロジェクト参加農民を対象に組合運営の指導	JICA 専門家、EMATER
2011/2/27	Marcelino Vieira	プロジェクト広報イベント	Marcelino Vieira 近辺の市民を中心にプロジェクト広報	Miguel, Junior, Suiann, Isaac （Emater－Marcelino Vieira）
2011/5/18	Marcelino Vieira	ヒマワリ、ソルガムのサイレージ作り講習会	ヒマワリ、トウモロコシの残渣とソルガムを用いた家畜用のサイレージ講習会	Miguel, Junior, Miguel Cavalcante & Ana Kojima （Emater－Marcelino Vieira & 営農専門家）

2011/5/26	Marcelino Vieira	ヒマワリ、ソルガムのサイレージ作り講習会	乾期の餌不足に備えてヒマワリ、トウモロコシの残渣とソルガムを用いたサイレージ作り（フィールド）	Miguel, Junior, Miguel Cavalcante & Ana Kojima （Emater－Marcelino Vieira & 営農専門家）
2011/6/22	Marcelino Vieira	機械化講習会	トラクターのメンテナンス、土地起こし、その他の指導	Dr. Queiroga / Cicero （EMBRAPA-Algodão）
2011/8/27	Lucrécia	Dia de Campo	ヒマワリとゴマを中心とした農民･普及員向けイベント	JICA 専門家、EMATER 、EMBRAPA-Algodão
2011/9/27	Lucrécia	営農講習会	油糧作物その他の栽培・営農・農機具利用	Dr.Queiroga (EMBRAPA-Algodão) Ana Kojima (営農専門家) Rogerio Fernando Martinell (EMATER)
2011/11/15	Marcelino Vieira	組合指導	組合運営、資金調達	Diamantino Barrionuevo Jr. (組織化専門家) 渡部　直人(プロジェクトリーダー)
2011/11/25	Lucrécia	農民講習会	油糧作物及び自給用作物と昆作法の指導	Dr.Queiroga (EMBRAPA-Algodão) Ana Kojima (営農専門家) Rogerio Fernando Martinell (EMATER)
2011/12/7	Portalegre	販売マーケティングセミナー	ゴマ、セサミオイルの販売マーケティング手段について	Daisuke Kobayashi （JICA 調整員）

2011/12/8	Marcelino vieira	Dia de Campo	マルセリノヴィエイラ実証圃場の油糧作物と昆作栽培法の紹介	Dr.Queiroga (EMBRAPA-Algodão) Ana Kojima (営農専門家) Rogerio (EMATER)
2012/1/13	Lucrécia	多角化営農セミナー	実証圃場の営農指導	Ana Kojima (営農専門家) Dr.Queiroga (EMBRAPA-Algodão) Rogerio Fernando Martinell (EMATER)
2012/1/25	Marcelino Vieira	Dia de Campo	マルセリノヴィエイラ実証圃場の油糧作物と昆作栽培法の紹介	Ana Kojima (営農専門家) Jose Miguel Cavalcante&Aldo Ronaldo Dantas(EMATER)
2012/2/17	Paudos Ferros	ゴマ栽培セミナー	EMATER 普及員向けのゴマ栽培講習会	Ana Kojima (営農専門家)
2012/3/15、16	Lucrécia	加工品講習会	さまざまなゴマ加工品の作り方についてレシピから衛生管理、機材の使い方まで指導	Emiko Nakamura (料理コンサルタント)
2012/3/24	Lucrécia	ゴマ栽培・管理講習会	ゴマ・その他の作物の管理指導	Rogerio Fernando Martinell (EMATER)Ana Kojima (営農専門家)
2012/4/24	Lucrécia	実証圃場設置講習会	油糧作物実証圃場設置のための指導	Jeane Medeiros Martins de Araújo (EMPARN インターン)

2012/5/3、4	Marcelino Vieira	加工品講習会	さまざまなゴマ加工品の作り方についてレシピから衛生管理、機材の使い方まで指導	Emiko Nakamura（料理コンサルタント）
2012/5/10	Lucrécia	灌漑講習会	点滴灌漑の利用・経済性	Masatoshi Otani(メロン生産者) Ana Kojima（営農専門家）
2012/5/27	Apodi	地域会合(ENCONTRO REGIONAL COOPERATIVISTA)	地域の組合同士で交流を深め組織運営についての知見を深める	OCB/SESCOOP/RN
2012/5/29	Portalegre	加工品講習会	食品衛生に関する指導	EMBRAPA-Algodão 食品加工チーム
2012/5/31 、6/1	Lucrécia	加工講習会	モデル商品試作の構想を伝え製造法を指導	Daisuke Kobayashi（JICA 調整員）
2012/6/9	Apodi	Dia de Campo	油糧作物普及活動	EMPARN
2012/6/9,10,11,12	Lucrécia	加工講習会	見本市への参加を見据えた梱包・包装の実習	João Dias(Sagê デザイナー)
2012/6/25 ～28	Lucrécia	搾油講習会	搾油機材の適正な使用法について指導	Scott Tech 社(Guilerme 氏)
2012/8/2	Lucrécia	ゴマ講習会	ゴマの収穫･ゴミ処理講習会	Ana Kojima（営農専門家）
2012/8/23	Baraúna	灌漑講習会	点滴灌漑を用いた営農モデル（果	Ana Kojima（営農専門家）

			物、穀類生産）	Masatoshi Otani（メロン生産者）
2012/8/30	Lucrécia	Dia de Campo	実証圃場を通して多角的生産及びゴマ普及	Ana Kojima（営農専門家） Rogerio Fernando Martinell(EMATER) Dr.Queiroga (EMBRAPA-Algodão)
2012/11/2	Pau dos Ferros	組合役員研修会	組合運営、資金調達	渡部　直人（プロジェクトリーダー）
2012/11/7	Lucrécia	組合運営講習会	OJT トレーニング	Diamantino Barrionuevo Jr.（組織化専門家）
2012/11/20	Lucrécia	ゴマ栽培セミナー	農機具保管、ゴマ種子の発芽率モニタリング指導	Ana Kojima（営農専門家）
2012/12/6	Marcelino Vieira	組合運営講習会	OJT トレーニング	Diamantino Barrionuevo Jr.（組織化専門家）
2012/12/10	Pau dos Ferros	組合運営セミナー	組合会計及び税務	Wagner Fonseca Mendonca (OCB-RN) Diamantino Barrionuevo Jr.（組織化専門家）
2012/12/12	Lucrécia	ゴマ種子講習会	栽培普及用のゴマ種子保管法	Ana Kojima（営農専門家）
2013/1/16	Pau dos Ferros	組合運営講習会	Banco do Nordeste 銀行(BNB)での融資指導	BNB 銀行職員

2013/1/24	Lucrecia	ゴマ栽培セミナー	ゴマ栽培のためのオリエンテーション・種子配布	Ana Kojima（営農専門家） Adeilton Alves da Cunha(COAFAL) Luccrecia 市役所
2013/2/20	Marcelino Vieira	組合の営農活動講習会	栽培の戦略講習会	Ana Kojima（営農専門家）
2013/3/5	Lucrecia	組合の営農活動講習会	栽培の戦略講習会	Ana Kojima（営農専門家）
2013/3/20	Mato Grande	組合運営講習会	灌漑油糧作物栽培、販売流通	COPEC 組合
2013/5/2	Pau dos Ferros	組合運営講習会、講演会	会計、登記に係る指導	州税務局検査官 Juvenal P. Souza （会計士）
2013/5/3	Pau dos Ferros	組合セミナー	サービス組合と生産組合の総合的活動	DiamantinoBarrionuevo Jr. （組織化専門家） Domingos S.A.Cabral (EMATER)
2013/5/7, 8	Lucrécia	第一回半乾燥地帯有機ゴマ生産・加工ワークショップ	ゴマ生産・加工(搾油)の技術講習	EMBRAPA-Algodão Scott Tech 社 (Guilerme 氏) Ana Kojima（営農専門家）
2013/5/18	Marcelino Vieira	組合事業講習会	女性参加の重要性と商品開発のプロセス	Fátima de Lima Torres （組合収益事業コンサルタント）

2013/5/22	Lucrécia	営農講習会	実証圃場の油糧作物(ヒマワリ+ゴマ)を事例に農民指導	Ana Kojima (営農専門家) Alexandra Alves (COAFAL 農業技師)
2013/5/23	Lucrécia	加工品講習会	商品づくりの発想、「資源」「技術」を活用した事業づくりに取り組むためのアイディア	João Dias (Sagê デザイナー)
2013/5/24	Marcelino Vieira	加工品講習会	商品づくりの発想、「資源」「技術」を活用した事業づくりに取り組むためのアイディア	João Dias (Sagê デザイナー)
2013/6/6	Lucrécia	組合事業講習会	PAA についてのオリエンテーション	Fátima de Lima Torres (組合収益事業コンサルタント)
2013/6/16	Pau dos Ferros	組合運営講習会	組合会計管理について	Juvenal P. Souza (会計士)
2013/6/20	Lucrécia	組合運営講習会	営農戦略	Ana Kojima (営農専門家)
2013/7/11	Lucrécia	組合事業講習会	環境ライセンスについてのオリエンテーション	Fátima de Lima Torres(組合収益事業コンサルタント)
2013/7/17,18	Marcelino Vieira Lucrécia	加工品セミナー	モデル加工品開発	João Dias & Daisuke Kobayashi (コンサルタント&JICA 調整員)

2013/8/3	Marcelino Vieira	組合事業講習会	さまざまな政府プログラムの紹介と参加資格や申し込み方法について	Fátima de Lima Torres(組合収益事業コンサルタント)
2013/8/7	Apodi	Dia de Campo	普及員、研究者、学生向けに油糧作物の結果紹介	EMBRAPA-Algodçao
2013/8/28	Apodi	Dia de Campo	ゴマ及びその他の油糧作物の紹介	EMBRAPA-Algodçao/ EMPARN 共催
2013/8/29	Lucrécia	ゴマ播種講習会	点滴灌漑を用いたゴマ播種・管理その他	Ana Kojima (営農専門家) Antônio Gessildo de Oliveira(COAFAL)
2013/9/8	Paudos Ferros	組合役員講習会	組合ビジネスマインド醸成、事業計画作成講習会	渡部　直人（プロジェクトリーダー）
2013/9/9	Lucrécia	組合講演会	市役所において組合についての講演	Diamantino Barrionuevo Jr. (組織化専門家)
2013/9/27	Angicos	油糧作物セミナー	油糧作物普及活動	EMBRAPA-Algodçao/ EMPARN 共催
2013/10/4	Lucrécia	組合事業講習会	若手の育成と女性の参加	Fátima de Lima Torres(組合収益事業コンサルタント)
2013/10/11	Marcelino Vieira	養蜂セミナー	養蜂と地域に適した生産可能な活動	渡部　直人(プロジェクトリーダー) José Simplicio de Holanda (SAPE) Ana Kojima (営農専門家)

2013/10/24	Pau dos Ferros	MDA 登録セミナー	政府機関の支援プログラムに組合等がアクセスするためのオリエンテーション	MDA(農地改革省)
2013/11/4	Pau dos Ferros	組合運営と多角化セミナー	両組合の多角的活動	プロジェクトメンバー一同
2013/12/6	Lucrécia	組合運営講習会	Bolsa Família について	Diamantino Barrionuevo Jr. (組織化専門家)
2013/12/10	Pau dos Ferros	組合運営と多角化セミナー	両組合の多角的活動	プロジェクトメンバー一同
2013/12/13	Lucrécia	加工品講習会	食品加工、調理の心得	Hailton Gazzaneo Cabral Filho (食品コンサルタント)
2013/12/18	Lucrécia	ゴマ栽培普及セミナー	両組合員を含むゴマ栽培と普及をするための戦略講習会	Everton Augusto Mesquita(EMATER) Ana Kojima (営農専門家)
2014/1/8	Lucrécia	多角的営農セミナー	多角的営農（野菜･畜産・穀類・養鶏）農家を事例として今後の組合活動に含むための講習会	Everton Augusto Mesquita (EMATER) Ana Kojima (営農専門家)
2014/2/7	Lucrécia	ゴマ種子保管講習会	ゴマ種子の選別・乾燥･パッキング指導	Ana Kojima (営農専門家)
2014/2/11,12	Marcelino Vieira	養蜂セミナー	安全な蜂蜜（生産から加工までの衛生管理)	Francisco José Pires Lima (SEBRAE 養蜂コンサルタント)

2014/2/13	Lucrécia	等高線講習会	等高線の作り方・役割･土壌環境保全（フィールド実施）	Ana Kojima（営農専門家）
2014/2/20	Lucrécia	点滴灌漑とゴマ栽培講習会	点滴灌漑がゴマに及ぼす影響	Dr.Queiroga (EMBRAPA-Algodão) Ana Kojima（営農専門家）
2014/3/13	Lucrécia	営農講習会	営農多角的生産及びゴマの栽培法	Ana Kojima（営農専門家）
2014/3/18	Piloes	ゴマ栽培講習会	市役所営農部員及び農民の指導	Ana Kojima（営農専門家）
2014/3/19	Vicosa	ゴマ栽培講習会	市役所営農部職員及びEMATER普及員の指導	Ana Kojima（営農専門家）
2014/5/29	Lucrécia	組合事業講習会	州政府のプログラム RN Sustentavel に係る説明とその参加資格、申し込み方法等について	Fátima de Lima Torres(組合収益事業コンサルタント)
2014/6/10	Apodi	Dia de Campo	EMBRAPA & EMPARN 油糧作物普及と実証結果の発表	Dr.Nair (EMBRAPA-Algodão) Dr.Marcelo 他 (EMPARN)
2014/6/10	Pau dos Ferros	組合運営講習会	納税などの組合に課せられる税金、納税について	Juvenal P. Souza （会計士）
2014/6/18	Lucrécia	組合事業講習会	食品加工生産と政府プログラムへのアプローチ	Fátima de Lima Torres (組合収益事業コンサルタント)

2014/7/12	Marcelino Vieira	養蜂と組合事業	COAAF 組合による養蜂事業の紹介及び新養蜂家への呼びかけ	Diamantino Barrionuevo Jr.（組織化専門家） COAAF 組合幹部
2014/7/19	Lucrecia	多角的営農事例	農産物（ゴマ、フェジョン、ミーリョ昆作)、家畜飼料用のソルガム･マタパスト・パームサボテン、羊飼育・養蜂･加工事業を含む多角的営農モデルの紹介	Ana Kojima（営農専門家） COAFAL 組合営農部員
2014/7/23	Apodi	養蜂セミナー	RN 州養蜂促進のための方針について	RN Sustentavel 関係者
2014/7/26	Pedro Avelino	畜産と飼料確保講習会	EMPARN 試験場にて畜産生産（牛･山羊･羊）及び飼料生産（パーム、ナピア、マメ科）	EMPARN Ana Kojima（営農専門家）
2014/8/2	Severiano Melo	羊生産講習会	羊の管理・経済性・販売ルート	José Simplicio de Holanda(EMPARN) Ana Kojima（営農専門家）
2014/9/5	Lucrécia	組合員講習会	組合の経営計画	Diamantino Barrionuevo Jr.（組織化専門家）
2014/9/16	Lucrécia	灌漑利用セミナー	半乾燥地域での灌漑利用と作付け法(時期・生産物・経済性)	Alexandra Alves (COAFAL 農業技師) Ana Kojima（営農専門家）

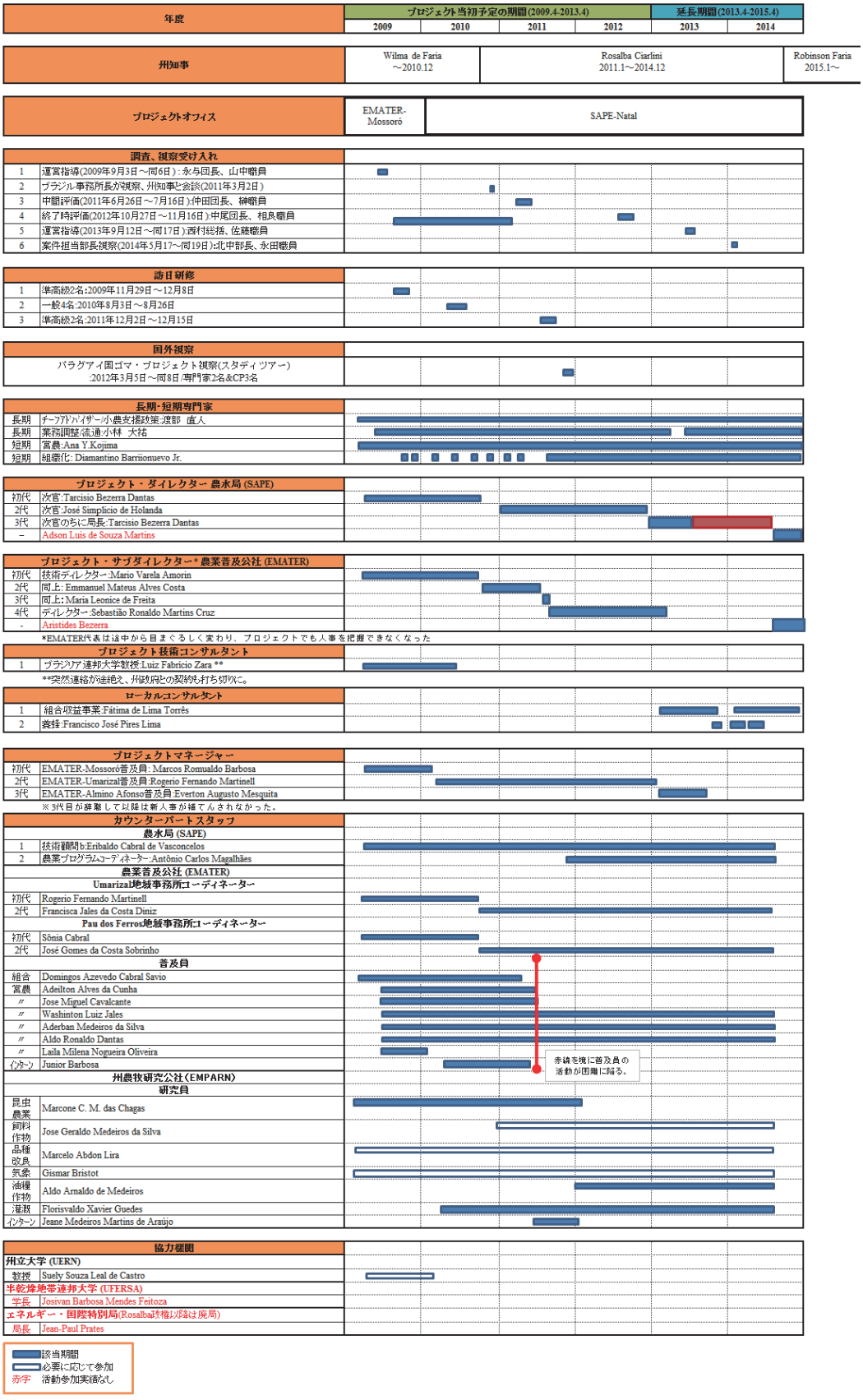
2014/9/16,17	Lucrécia	加工品講習会	Expofruit 販売用のゴマ加工品生産指導(クッキー、ジャム、お菓子)	Fátima de Lima Torres (組合収益事業コンサルタント) Ana Kojima (営農専門家)
2014/10/7、8	Natal	加工品講習会	ゴマ絞り粕利用加工品の製造	Padaria Puro Trigo のパン職人 Daisuke Kobayashi (JICA 調整員) Ana Y.Kojima(営農専門家)
2014/10/15	Marcelino Vieira	養蜂に役立つ植物マッピングセミナー	マルセリノヴィエイラ周辺で養蜂に役立つ植物マッピング及び植林の必要性	EMBRAPA-Tropical/CE Ana Kojima (営農専門家)
2014/10/21	Lucrécia	組合活動講習会	組合の活動戦略(栽培・加工・販売)	Francisco José Pires Lima (SEBRAE 養蜂コンサルタント) 渡部　直人(プロジェクトリーダー) Ana Kojima (営農専門家)
2014/11/11	Lucrécia	Dia de campo 多角的営農	スプリンクラー及び点滴灌漑を用いた小農向けの多角的営農モデルの紹介・実証	Ana Kojima (営農専門家) COAFAL 組合員
2014/12/12	Martins	組合セミナー	組合活動計画案の検討	プロジェクトメンバー一同

９. 延長期間を含むブラジル側投入

ミニッツの計画	実績(2015 年 1 月 31 日現在)
1. プロジェクト用の土地、建物、その他の施設の提供 (1) プロジェクトオフィス用スペース、及び家具、電話、インターネット等の完備 1) 本部(Mossoró) 2) 支部(Pau dos Ferros,Umarizal) (2) 搾油施設建設用地、及び建物 (3) 車輌	(1) プロジェクトのためのオフィススペースは Natal 市の SAPE の一室に設置され、机、電話、インターネット、冷房が提供され、定期的な清掃サービスも受けている。プロジェクト開始時は州立大学(UERN)の Mossoró キャンパスの研究所の片隅を間借りしている時期が数カ月続いたのち、2010 年 4 月までは EMATER-Mossoró の一室にあったが、カウンターパート機関すべての本部が州都に位置し、いずれも中央集権的/トップダウン的性格の強い組織であるゆえプロジェクトの戦略上、常に協議できる環境のある SAPE 内に移動。その後変更なし。 (2) Lucrecia 搾油所は州政府負担、M.Vieira 搾油所は JICA 負担で建設され、いずれも完成。なお、用地は前者が市役所の寄贈で、後者は地元農家の組合員個人からの寄付による。M.Vieira においては、その後、組合による搾油事業の運営が困難との判断になり、組合との話し合いの結果、建設した設備を組合による多角的営農活動（養蜂など）のための施設として活用することになった。 (3) プロジェクト開始当初より車輌・運転手ともに JICA 負担で投入されている。その後も変更なし。
2. C/P と事務スタッフの配置 (1)プロジェクト・ディレクター(SAPE 次官) (2)プロジェクト・サブディレクター(EMATER 技術ダイレクター) (3)プロジェクト・マネージャー(EMATER-Mossoró 普及員) (4) 技術分野の C/P 1) SAPE(パートタイム 1 名) 2) EMATER-Natal(パートタイム 1 名)	(1)～(6) : 以下の別添資料 11「カウンターパートと事務スタッフの配置状況」を参照。 (7) 秘書、運転手 事務スタッフとしては 2010 年 6 月から半年間インターンが勤務していた。

3) EMATER(フルタイム 6 名) －普及員(営農、Pau dos Ferros 地域) －普及員(組織化、Pau dos Ferros 地域) －普及員(搾油工場運営・流通、Pau dos Ferros 地域) －普及員(営農、Umarizal 地域) －普及員(組織化、Umarizal 地域) －普及員(搾油・流通、Umarizal 地域) 4)EMPARN(パートタイム 2 名) －研究員(Apodi 試験場) －研究員(Apodi 試験場) ※以上、フルタイム 6 名、パートタイム 4 名 (5)協力機関 1)州エネルギー・国際局 2)州立大学(UERN) 3)半乾燥地帯連邦大学(UFERSA) (6)ローカルコンサルタント (7)秘書、運転手	
3. 必要経費	SAPE/EMATER の負担金支出は以下のとおり。 会計年度(1 月~12 月) / 金額(R$) 2009 / 230.000 2010 / 50.000 2011 / 50.000 2012* / 270.000 2013 / 提示なし 2014 / 提示なし * このうちルクレシア搾油所建設費が約 R$150.000 を占めている 一方 2012 年 1 月から 2 年計画で実施された耐乾性作物共同実証は JICA 側が R$142.466,00、EMPARN 側が R$161.945,00 の費用負担で、合計額は R$304.411,00。

10. C/P と事務スタッフの配置状況



MINUTES OF MEETING BETWEEN JAPAN INTERNATIONAL COOPERATION AGENCY AND AUTHORITY CONCERNED OF THE STATE GOVERNMENT OF RIO GRANDE DO NORTE ON JAPANESE TECHNICAL COOPERATION FOR THE PROJECT OF SOCIAL INCLUSION THROUGH THE INCENTIVE TO PRODUCE OLEAGINOUS PLANTS FOR THE GENERATION OF BIO-DIESEL IN THE STATE OF RIO GRANDE DO NORTE

The Japan International Cooperation Agency (hereinafter referred to as "JICA") through The Coordinator for Technical Cooperation of Japan in Brazil had a series of discussions with the Brazilian authorities concerned on desirable measures to be taken for successful implementation of the Project of Social Inclusion through the Incentive to Produce Oleaginous Plants for the Generation of Bio-Diesel in the State of Rio Grande do Norte (hereinafter referred to as "the Project"). As a result of discussions, JICA and Brazilian authorities agreed on the matters referred to in the document attached hereto.

Brasilia, December 5th, 2014

Mr. Satoshi Murosawa
Coordinator for Technical Cooperation of Japan in Brazil,
Japan International Cooperation Agency
Japan

Mr.Tarcísio Bezerra Dantas
Secretary,
State Secretariat for Agriculture, Fisheries and Livestock
State Government of Rio Grande do Norte
Federative Republic of Brazil

Mr. Fernando José Marroni de Abreu
Director,
Brazilian Cooperation Agency (ABC),
Ministry of External Relations,
Federative Republic of Brazil

THE ATTACHED DOCUMENT

1. Modification of the Master Plan of the Project annexed to the Record of Discussions

As a result of the discussions held in the Joint Coordinating Committee on December 5th, 2014 with regard to the progress of activities, current situations, and desirable modifications to the framework of the Project, both sides agreed to modify the Master Plan of the Project that was annexed to the Record of Discussions for the Project signed on January 16, 2009 (hereinafter referred to as "R/D") as given in Annex 1 of the present Minutes of Meeting. The other provisions of R/D remain unchanged.

2. Project Design Matrix

Based on the modified Master Plan of the Project, both sides agreed on the Project Design Matrix (hereinafter referred to as "PDM") of the Project as given in Annex 2, respectively.

Annexes:

Annex 1: Modified Master Plan of the Project

Annex 2: Project Design Matrix (PDM)

ANNEX 1: MODIFIED MASTER PLAN OF THE PROJECT

Overall Goal
Bio-diesel-fuel (BDF) production chain and processed products of oilseed crops for small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops.

Project Purpose
The model of BDF production chain and diversified farming system including oilseed crops for small-scale family farmers by cooperatives is established in the target area.

Outputs
1) The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated.
2) Diversified farming system including oilseed crops for small-scale family farmers is established in the model area.
3) Distribution channels to facilitate market access of agricultural products for diversified farming system including oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established.
4) Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses.
5) A manual is prepared for cooperatives mainly constituted of small-scale farmers to produce agricultural products for diversified farming system including oilseed crops and their processed products.

Activities
1-1 To analyze the current situation of the production of BDF and edible oil in Brazil and neighboring countries.
1-2 To plan a strategy of the production of oilseed crops and the establishment of diversified utilization chain of processed products of oilseed crops.
1-3 To agree on the strategy among the related organizations.
2-1 To prepare rain-fed and simple irrigated farming systems models for model cooperatives incorporating oilseed crops.
2-2 To select model farmers and demonstrate the farming systems.
2-3 To analyze the result of the demonstration and establish the farming systems.
2-4 To demonstrate cultivation of drought-tolerant oilseed crops.
2-5 To analyze experiences of oilseed crops cultivation in the Northeast Region of Brazil and incorporate good practices into the farming systems.
3-1 To verify a distribution plan for agricultural products for diversified farming system including oilseed crops and their processed products produced by the model farmers and cooperatives.
3-2 To distribute agricultural products for diversified farming system including oilseed crops and their processed products based on the distribution plan.
3-3 To propose a proper distribution plan based on the result of the activities.
4-1 To support establishment of model cooperatives mainly consisting of small-scale family farmers.
4-2 To support the administration of the cooperatives.
4-3 To support the businesses of the cooperatives.
5-1 To prepare a draft manual for the practices of agricultural products for diversified farming

system including oilseed crops production and diversified utilization of their processed products based on the result of activities 1 to 4.
5-2 To facilitate the process of review and approval of the draft manual by related organizations of the State Government of Rio Grande do Norte.

ANNEX 2: PROJECT DESIGN MATRIX (PDM)

Name of the Project: Project of Social Inclusion through the Incentive to Produce Oleaginous Plants for the Generation of Bio-diesel in the State of Rio Grande do Norte

Duration: from 2009 to 2015(6 years)

Target Area: Western region of Rio Grande do Norte (Jurisdiction area of regional office of Pau dos Ferros and Umarizal of EMATER)

Beneficiaries: : Small-scale family farmers in the target areas

Ver.06 Date of preparation: , 2014

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	External conditions
Overall Goal Bio-diesel-fuel (BDF) production chain and processed products of oilseed crops for small-scale family farmers are promoted and income of small-scale family farmers is improved through the cultivation of oilseed crops.	1) Small-scale family farmers' incomes increase by introducing oilseed crops and making diversified use of their processed products. 2) The number of means for small- scale family farmers to gain income increases by introducing oilseed crops and making diversified use of their processed products.	1) Related statistics of Rio Grande do Norte 2) Related statistics of Rio Grande do Norte	・The policy of the State of Rio Grande do Norte to promote BDF and support small-scale family farmers would not be changed.
Project Purpose The model of BDF production chain and diversified farming system including oilseed crops for small-scale family farmers by cooperatives is established in the target area.	1) Diversified farming models are introduced at model farmers. 2) Proposals of effective utilization of the sub-products of oilseed crops are introduced by the model farmers. 3) Oilseed crops of the model farmers and processed products of the model cooperatives are sold on the experimental basis to related companies and individuals. 4) Oilseed crops suitable for Rio Grande do Norte are proposed. 5) Oilseed crops are produced by cooperatives mainly consisting of small-scale family farmers.	1) Reports related to the Project	・The structures of implementation of the Project does not change by the personnel transfers. ・Enormous natural disasters that could affect the agricultural products does not occur.
Output1 The strategy to establish BDF production chain and processing of oilseed crops by cooperatives mainly constituted of small-scale family farmers is formulated .	1) The strategy toward establishing a system of production, processing and diversified utilization of oilseed crops is documented, and the consensus among the related organizations on the strategy is confirmed by an agreement signed by them.	1) The strategy document 2) Agreement concerned of the strategy	
Output2 Diversified farming system including oilseed crops for small-scale family farmers is established in the model area.	1) Oilseed crops are cultivated in addition to subsistence crops. 2) Sub products of oilseed crops are used effectively . 3) The activities of agricultural production suitable for the pilot area,which can contribute to the improvement of income of small-scale family farmers is conducted.	1) Reports related to the Project 2) Reports related to the Project	

Output3 Distribution channels to facilitate market access of agricultural products for diversified farming system including oilseed crops and their processed products for model small-scale family farmers and model cooperatives are established .	1) Various sales channels of agricultural products for diversified farming system including oilseed crops and their processed products are proposed according to the market situations.	1) Reports related to the Project	
Output4 Model cooperatives are established and managed for running oil extraction and oilseed crops processing businesses .	1) The competent public organization authorizes the establishment of the model cooperatives. 2) Understanding of the establishment and management of cooperatives among small-scale family farmers are consolidated. 3) Management capacity improves through workshops, training courses and study tours. 4) The members of the model cooperatives increase. 5) The model cooperatives are managed effectively by their members.	1) Certificate of the state business registry office 2) The manual for cooperative establishment and management 3) Reports related to the Project	
Output 5 A manual is prepared for cooperatives mainly constituted of small-scale farmers to produce agricultural products for diversified farming system including oilseed crops and their processed products .	1) The draft manual for cooperatives mainly constituted of small-scale farmers to produce agricultural products for diversified farming system including oilseed crops and their processed products is elaborated. 2) The manual of production of agricultural products for diversified farming system, including oilseed crops and their processed products is approved in the State of Rio Grande do Norte.	1) The manual	

Activities 1-1 To analyze the current situation of the production of BDF and edible oil in Brazil and neighboring countries. 1-2 To plan a strategy of the production of oilseed crops and the establishment of diversified utilization chain of processed products of oilseed crops . 1-3 To agree on the strategy among the related organizations.	**Inputs** <Brazil> ● Project Director, Project Sub Director, Project Manager ● Cost for project operation (demonstration of sustainable farming systems, and others) ● Office for the Project (head office in Natal, branch offices in Pau dos Ferros and Umarizal), including furniture, basic equipment, telephone, internet equipment, and others ● Space and facilities for oil extraction plants ● 2(two) Local consultants ● Vehicles	・Model farmers would participate in the Project continuously.

2-1 To prepare rain-fed and simple irrigated farming systems models for model cooperatives incorporating oilseed crops. 2-2 To select model farmers and demonstrate the farming systems. 2-3 To analyze the result of the demonstration and establish the farming systems. 2-4 To demonstrate cultivation of drought-tolerant oilseed crops. 2-5 To analyze experiences of oilseed crops cultivation in the Northeast Region of Brazil and incorporate of good practices into the farming systems.	● Staff for the administration (secretaries, drivers) <Japan> ● Long-term exerts (①Chief advisor/Policy support of small-scale family farmers 48MM, ②coordinator/distribution48MM) ● Short-term experts (Farming system, others) ● Acceptance of trainee ● Equipment (Vehicles、Oil extractors, others) ● Complementary part of the project operational costs	
3-1 To verify a distribution plan for agricultural products for diversified farming system including oilseed crops and their processed products produced by the model farmers and cooperatives. 3-2 To distribute agricultural products for diversified farming system including oilseed crops and their processed products on the distribution plan. 3-3 To propose a proper distribution plan based on the result of the activities.		
4-1 To support establishment of model cooperatives mainly consisting of small-scale family farmers. 4-2 To support the administration of the cooperatives . 4-3 To support the businesses of the cooperatives.		
5-1 To prepare a draft manual for the practices of agricultural products for diversified farming system including oilseed crops production and diversified utilization of their processed products based on the result of activities 1 to 4. 5-2 To facilitate the process of review and approval of the draft manual by related organizations of the State Government of Rio Grande do Norte .		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