

## Summary of the Results of the Evaluation Survey

<b>1. Outline of the Project</b>	
<b>Country:</b> Burkina Faso	<b>Project Title:</b> Project for reinforcement of sesame production
<b>Issue Sector:</b> Agricultural and Rural Development	<b>Cooperation Scheme:</b> Technical cooperation
<b>Division in Charge:</b> Rural Development Department	<b>Total Cost:</b> Approximately 465 Million Japanese Yen
<b>Period of Cooperation:</b> (R/D): 1 <sup>st</sup> October 2014 to 30 <sup>th</sup> September 2019	<b>Partner Country's Implementing Organization:</b> (1) DGPER (Direction Générale de la Promotion de l'Economie Rural) / MAAH (Ministère de l'Agriculture, et des Aménagements Hydrauliques) (2) DGPV (Direction Générale des Productions Végétales / MAAH (3) INERA (Institut National pour l'Environnement et de la Recherche Agricole) (4) DRAAH-BM (Direction Régionale de l'agriculture et des Aménagements Hydrauliques, Boucle du Mouhoun) (5) DRAAH-HB (Direction Régionale de l'agriculture et des Aménagements Hydrauliques, Hauts-Bassins)
	<b>Implementing Organization:</b> (1) Vision and Spirit for Overseas Cooperation (VSOC) Co., Ltd. (2) Japan Association for International Collaboration of Agriculture and Forestry
	<b>Supporting Organization:</b> None
<b>1-1. Background of the Project</b>	
<p>In Burkina Faso, sesame is an important cash crop in rural areas. By its relatively high resistance against drought and poor soil, sesame has been grown by many farmers. In most case, it is produced by extensive cultivation and the seeds are usually produced by the farmers themselves. Domestic demand in sesame is generally low and the farmers usually use only a small amount of sesame for self-consumption. For the processing of sesame also limited to making sesame biscuit or oil extraction. In the reason, the volume sold in the country remains insignificant. Therefore, the total domestic production of sesame evolved until the first half of the 2000s, between 10 and 20 thousand tons per year. Although the largest agricultural product exported from the country was cotton, the international price of cotton dropped sharply in the recent years. The government of Burkina Faso has promoted alternative cash crop such as sesame to diversify the export products. This promotion encouraged the gradual increase in acreage and production of sesame. As a result, sesame has been the third place by the amount of exports (INSD Census, 2008) since 2008 and plays an increasingly important role in the economy growth.</p> <p>The government of Burkina Faso has adopted the "Strategy for Accelerated Growth and Sustainable Development (SCADD)" in February 2010, which places agriculture as a priority sector to accelerate development of the country. At the same time, "Programme National du Secteur Rural (PNSR) 2011-2015" was developed as a framework to implement SCADD and it was considered as the most important Programme for Agriculture and Rural Development. In these strategies, oil crops including sesame are considered as a high potential product for exports to international markets. In the context,</p>	

the technical cooperation project aims to strengthen the sesame sector.

## 1-2. Project Overview

- (1) **Overall Goal:** Improve the sesame productivity in target area
- (2) **Project Purpose:** Improve the productivity and income of target sesame farmers
- (3) **Output 1:** Develop and disseminate appropriate technology and knowledge  
**Output 2:** Select new varieties of sesame  
**Output 3:** Increase the number of certified seed producing farmers and certified seed production.  
**Output 4:** Reinforce the marketing capacity of stakeholders in the sesame sector.

## (4) Inputs

### Japanese Side

- Japanese experts (Long-term): Three Long-term experts have been dispatched since October 2014. The field of expertise are 1) Chief Project Advisor, 2) Coordinator/Communality Development and 3) Farm management/Cultivation techniques. (Totally 63.8Man/Month).
- Japanese experts (Short-term): Eight Short-term experts (less than 12 months) have been dispatched since February 2016. The fields of expertise are 1) Chief Advisor, 2) Assistant Manager/Market, 3) Dissemination 1 (FFS/FBS management), 4) Dissemination 2 (Farmers' organization), 5) Dissemination 3 (Training materials/Coordinator), 6) Post-harvest, 7) Pesticide control, 8) Monitoring and Data collection and 9) Interpreter (Totally 91.9 Man/Month).
- Machinery and Equipment: Machinery and equipment such as vehicles, and cultivating and office equipment with a total cost of approximately 93,938,248 FCFA (90,002,184 FCFA and 756,000 JPY)<sup>2</sup>were provided.
- Training in Japan: Totally, 20 counterpart personnel participated in the training in Japan and 3 counterpart personnel participated in the training in a third country (Rwanda).

### Burkinabe Side

- Counterparts: 15 counterpart personnel, including A National coordinator / Project Director, have been assigned to the Project.
- Land and facilities: Office spaces for the Japanese experts (3 places: DRAAH-BM, DRAAH-HB, and DGPER) and Experimental fields (4 places: CPR Kodougou, INERA Gampela, INERA Farako-Ba, and INERA Niangoloko) have been provided by Burkinabe side.
- Operational cost: Total: The information regarding the actual expenditure is not available. The total amount of budget disbursement is FCFA 114,978,750. No budget in 2014 and 2015 were disbursed to the Project.

## 2. Evaluation Team

Members	Designation	Name	Organization
Japanese Side	Team Leader	Mr. NOGUCHI Shinichi	Director, Team 5, Agriculture and Rural Development Group 2 Rural Development Department, JICA
	Cooperation Planning	Mr. ABE Go	Assistant Director, Team 5, Agriculture and Rural Development Group 2 Rural Development Department, JICA
	Evaluation Analysis	Mr. OKANO Teppei	Consultant, ICONS Inc.

<sup>2</sup> FCFA 1= JPY 0.192070 / JICA Monthly exchange rate in March 2019

Burkinabe Side	Team member	Mr. TRAORE S. Lionel Daniel	Direction Générale des Études et des Statistiques Sectorielles (DGESS) , MAAH
	Team member	Mr. BATIONO Jacques	DGPER, MAAH
Period of evaluation	12 March 2019 to 25 March, 2019 10 June 2019 to 20 June, 2019	Type of Evaluation: Terminal evaluation	

### 3. Results of Evaluation

#### 3-1 Verification of Achievement

##### (1) Progress of Activities

At the time of terminal evaluation, all activities were conducted as planned and there were no major delays in the process. Since the activities related to the selection of new varieties of sesame seed were completed in 2018, activities in the second half of the Project focused on FFS/FBS training and seed production. The project conducted simultaneous monitoring and followed-up on the dissemination of technical training components to participating core farmers.

##### (2) Level of the achievement of Outputs

The activities of the Project were implemented in line with the PO, and the all indicators set for Outputs 1, 2 and 3 were achieved. However, Output 4, Indicator 4-2 has not yet been achieved. In addition, Indicator 4-3 is unlikely to be achieved by project's end.

	Verifiable Indicator	Status
Output 1	1-1 Modules and materials for training (on FFS/FBS, Capacity building of farmer's group) to core farmers are formulated	100% achieved
	1-2 More than 180 core farmers participated in trainings	100% achieved
	1-3 More than 90% of farmers participated in FFS/FBS adopt more than one technical component.	100% achieved
Output 2	2-1 More than one new variety is selected for seed registration	100% achieved
	2-2 Technical guidance for varieties selection and foundation and breeders seed production are formulated.	100% achieved
Output 3	3-1 Modules and materials for training (on seed production) to core farmers are formulated	100% achieved
	3-2 More than 180 core farmers participated in trainings.	100% achieved
	3-3 At least one seed producing farmer is registered in more than half of target group.	100% achieved
	3-4 More than 60 ha area of certified seed production per year on average by target seed producers is declared	100% achieved
Output 4	4-1 Training materials on sesame quality control are formulated.	100% achieved
	4-2 More than 10 training/ session/ workshop to stakeholders in sesame sector on the quality control is conducted.	90% achieved
	4-3 More than one of the ANACES-B members has direct contract with Japanese importer.	0% achieved

#### Output 1: Improve the productivity of crashing sesame seed.

All the indicators of Output 1 have been achieved. Regarding Indicator 1-1, TORs were developed for training in 2017 and 2018 and a total of 13 training materials were formulated for the farmers. As to Indicator 1-2, A total of 191 core farmers were trained from 2016 to 2018. An additional 72 core

farmers will be trained in 2019. A total of 263 will be trained by project's end. For Indicator 1-3, more than one technical component was adopted by farmers during their sesame production.

**Output 2: Introduce and construct production system of edible sesame seed.**

Regarding Output 2, the both indicators set in the PDM have been achieved. Three varieties of sesame (PAKRE SAAYA, BO NOGORA, and A KILOM) were selected for seed registration, applied in February 2018 and to be completed registration. Although the data collection for two other potential varieties of sesame (SKC34-BDL4 and SKC35-BDL5) was not complete, it was entrusted to INERA for future registration. The "National Catalogue of Registered Varieties" is updated every five years. The next opportunity for registration is in 2019. Once the SNS approves the application, distribution of the seeds can be started. The variety listed in the national catalogue of Burkina Faso will be recognized as an authorized variety of seed by Economic Community of West African States (ECOWAS) countries as well. Therefore, Indicator 2-1 have been achieved.

Regarding Indicator 2-2, the project team formulated a manual for certified seed production ("Manuel de technique de Production de Semences Certifiées au Burkina Faso –Sésame -2ème édition") and It was released in a workshop held in April 2018.

**Output 3: Develop the system for production and distribution of sesame seeds selected by the project.**

Indicators of Output 3 also have been achieved. For Indicator 3-1, the project team formulated training modules on seed production, and an illustrated manual for certified seed production. The illustrated manual was released in 2018 and was well received by regional stakeholders. Indicator 3-2 is about the number of the participants in the training. Since the training on seed production is conducted simultaneously with FFS / FBS facilitator training, a total of 263 core farmers will be trained by project's end as stated in Indicator 1-2. Concerning to Indicator 3-3 and Indicator 3-4, more than 1 seed producing farmer was registered in 78 groups out of the 96 target groups (81.3%) and the average seed production area in 2018 was 61.6 ha.

**Output 4: Reinforce the marketing capacity of stakeholders in the sesame sector.**

As to Output 4, Indicator 4-1 have been achieved. Training materials for sesame quality control (including residue pesticides, aflatoxins, warehouse management, Cahier des Charges) were formulated through discussion with the training instructors. Indicator 4-2 is expected to be achieved by the end of the Project, since a total of 9 stakeholder training sessions on quality control were conducted in the sesame sector. Additional training sessions will be conducted in 2019. On the other hand, Indicator 4-3 is unlikely to be achieved during the project period. There are no certain outcomes that directly contribute to establishing a new business relationship between Japanese importers and Burkinabe traders.

**(3) Achievement of Project Purpose**

**Project Purpose: Improve the productivity and income of target sesame farmers.**

2 indicators set for the Project Purpose are expected to be achieved. Although it is necessary to wait for the final result of the end-line survey, Indicator 1, "More than 70% of target farmers increase their sesame production income" is likely to be achieved by project's end. Approximately 90 % of the target farmers increased their income because of sesame production. This percentage is based on intermediate results of the end-line survey and an interview with the joint terminal evaluation team.

Indicator 2, “Average Yield per hectare produced by target farmers increases more than 20%.” also is likely to be achieved. Compared to the baseline and end-line survey, the yield increased by 33.1% and the average yield increased 28.7% compared to the previous year and increased 52.8% 1 year after training, and 37.2% 2 years after training.

#### **(4) Achievement of Overall Goal**

The project took the ‘farmer to farmer approach’ for the dissemination of technology. This contributed to the achievement of the Overall Goal in several ways. (1) The technology was easy to utilize; (2) local farmers were interested in the successful results of core farmers trained by the Project; (3) the motivation to improve the yield remains high in the target region; (4) Proper utilization of certified seeds contributes to the improved yield; (5) A certain number of farmers switched their fields from cotton to sesame due to a price decline of cotton; and (6) Support in sesame sector by cooperation partners like IFAD and LWR is expected to continue.

However, in order to achieve the Overall Goal, core farmers who participated in the project training will be required to continue offering spontaneous dissemination of the technology to neighboring farmers. On top of that, there remain other issues such as, (1) The number of core farmers disseminating technology is unlikely to increase in the future; (2) There are no follow-up mechanisms, although there are concerns about the settlement of appropriate technologies; and (3) The newly applied varieties have not been registered at this time.

### **3-2 Summary of Evaluation Results**

#### **(1) Relevance (Relatively High)**

The Project Purpose and the Overall Goal are consistent with the national strategy of the agricultural sector in Burkina Faso. The government of Burkina Faso formulated SCADD in February 2010 and put priority on the agriculture sector to accelerate economic growth. At the same time, “Programme National du Secteur Rural (PNSR) 2011-2015” was developed as an implementation plan of SCADD, and it was positioned as the primary program in the agricultural and rural development sector. In the successor program, "PNSR-II (2016-2020)", cash crops such as sesame are regarded as an important factor for economic growth. The objective of the Project also satisfies the needs of local sesame farmers. The project takes an approach that encourages farmers to disseminate technology to other farmers without the support of the government and the approach is deemed as appropriate. On the other hand, there was a gap between the regular duties of C/P and the project activities. Due to the gap, some C/P could not be actively involved in the Project, and did not have the sense of ownership

#### **(2) Effectiveness (High)**

Judging from an interview conducted by the joint terminal evaluation team, and the intermediate result of the end-line survey, the indicators of the Project Purpose are likely to be achieved. As for Indicator 1, the possibility of achieving “More than 70% of target farmers increase the income by sesame production” is high. According to the intermediate results of the end-line survey, about 88.5% of the core farmers reported that their income from sesame was increased. In the interview survey, all interviewees answered that their income was improved. As for Indicator 2, the prospect of achieving “Average Yield per hectare produced by target farmers increases more than 20%” is also high. The yield of core farmers has increased compared to the year prior to training. Compared to farmers in the baseline and end-line surveys, yields increased by 33.1%. Also, the causal relationship between

the Project Purpose and each outcome is properly set. Selection of highly motivated core farmers is cited as a contributing factor.

### **(3) Efficiency (Moderate)**

While Japanese inputs were generally appropriate and led to the achievement of the expected results, there was the issue on the budget allocation and disbursement by Burkinabe side. The active participation of C/P personnel was inhibited due to the lack of financial resources and a delay in budget disbursement. The main activities in the second half of the Project were conducted in rural areas in HB and BM; dispatching personnel from DGPER was limited due to the setbacks. Also, the establishment of the follow-up mechanism has not progressed sufficiently because of financial constraints. As pointed out at the mid-term review, strengthening the monitoring and follow-up mechanisms is an issue that still needs to be resolved. Concerning to the collaboration with other projects, the Project utilized the manual created by the previous JICA's Project in formulating the seed production manual. In addition, the Project and GIZ collaborated by using teaching materials and co-sponsored events in the sesame sector.

### **(4) Impact (Moderate)**

Through the achievement of the Project Purpose, the basis for achieving the Overall Goal was established. However, in order to disseminate the technical compornets to 2 target regions within several years, it is necessary to carry out continuous dissemination activities. At this point, it is still unclear how to promote the dissemination of the Project results to other areas. To achieve the Overall Goal, this issue needs to be resolved. On the contrary, when the variety selected by the Project is registered in the National Catalogue, the impact of the Project will increase. Other positive spillover effects include the improvement of the living conditions of the target farmers. The causal relationship between the Project Purpose and the Overall Goal is generally appropriate.

### **(5) Sustainability (Relatively High)**

Political aspect: The formulation of strategic policies that prioritize sesame production in the sesame sector will continue. One C/P of the Project, DGPER is responsible for formulation and implementation of policy in the agricultural sector. Therefore, it is expected that DGPER will develop the strategy utilizing the results of the Project. In the current strategic plans of the agriculture sector, such as PNDES (2016-2020) and PNSR II (2016-2020), sesame was regarded as an important cash crop. If the efficiency of the Project's approach is recognized at a national level, the outcome of the Project would need to be utilized continuously.

Institutional aspect: C/Ps at a regional level participated in activities with high ownership. Know-how on implementation of training was transferred to the focal points of DRAAH. In the final stages of the Project, C/P personnel took the initiative to conduct a series of training sessions. In those sessions, they acquired skill and knowledge about activities occurring after the Project from the Japanese experts. Such technology transfer is available to DGPER as well. However, it is not clear how the technology transferred to DGPER will be used, because the dissemination of technology is not their mandate.

Financial aspect: In terms of financial sustainability, it is difficult for DGPER to secure enough budget for extension of training after the project period, because the dissemination of technology is not their mandate. Also, other C/Ps such as DRAAH, DGPV, and INERA do not have concrete plan for the budget allocation after the end of the Project.

Technical aspect: As for technical sustainability, the technology transferred to the core farmers is easy enough to be utilized at an adequate level. The FFS/FBS is an extension mechanism which transfers the technology among farmers on their own initiative. The approach is suitable for Burkina Faso's social environment, which accepts mutual assistance and joint work. However, if the follow-up mechanism is not properly prepared, the technology may not be settled properly. Therefore, it is necessary to continue regular follow-up after the Project.

### **3-3 Contributing Factors**

- The framework of the Project was reviewed, and the appropriate indicators were set according to the actual situation surrounding the Project. Throughout the process of the revision of the PDM, mutual understanding among the stakeholders was fostered and it contributed to the smooth implementation of the activities.
- The selection of highly motivated core farmers contributed to the effective technology transfer. The core farmers were selected based on criteria set by the Project.
- As the price of cotton dropped sharply in the recent years, the farmers in the target area increased their interest in the sesame production. The situation helps motivate the core farmers and disseminate technical compoment to other farmers.

### **3-4 Constraining Factors**

- The limitation of financial resources and the delay in the execution of budget inhibited effective implementation of the Project. Most of the activities in the second half of the Project were implemented in the HB region and BM region. C/P at the regional level actively participated in the Project. On the other hand, C/P at the national level did not actively participate due to limited financial resources. In addition, local agricultural agencies such as ZAT and UAT, could not be involved in the Project. Even though ZAT and UAT were expected to support the farmers after completion of the Project, the mechanisms for following-up and monitoring have not been developed yet.
- Because there is a gap between the C/P's regular duties and project activities, it is still unclear who will take over the outcome of the Project. The issue has been an inhibiting factor on the activities which establish a structure to secure sustainability.
- Some activities, such as selection of candidate site and monitoring, were constrained by deterioration of security.

### **3-5 Conclusion**

From the perspective of the five evaluation criteria, the relevance of the Project is assessed as "Relatively High", since the Project objective is highly consistent with the national policy and development needs of Burkina Faso as well as Japan's aid policy. However, there was a gap between the regular duties of CP and the project activities. The effectiveness of the Project is deemed as "High", the indicators set in the PDM is likely to be achieved by the end of the Project. The efficiency is assessed as "Moderate". Although most of the input from Japanese side implemented as planned, there were issues on financial limitation in Burkinabe side. The Project's impact is "Moderate". The foundation for achieving the Overall Goal was established. However, the follow-up structure after the completion of the Project has not yet been developed. The sustainability of the Project is assessed as "Relatively High", because some issues remain from financial and institutional aspects. For further improvement of the Project in the remaining term of the Project and the

post-project period, the Joint Terminal Evaluation Team recommends the measures presented in “3-6. Recommendations.”

### **3-6 Recommendations**

(1) Recommendations for the Project team

#### The Project leaving strategy.

In order to monitor and compare before and after the project properly and continuously in a same manner, it is required to maintain a consistency ways of monitoring and surveys, and hand it over to counterpart personnel who will take care after the project. The ways of surveying the outcomes of training program for each core farmer and the degree of overall indicators are needed to be defined as soon as possible so as not to avoid any confusion arising after the Project.

#### Future collaboration with other partners.

In Burkina Faso, several cooperation partners such as IFAD, LWR, and IFC support the sesame sector. From the viewpoint of sustainability, it is recommended that the Project continue to share information regarding activities, and start discussion on further future collaboration with these organizations to utilize the results of the Project.

#### Establish a mechanism to increase the number of core farmers.

There are many core farmers who have improved sesame productivity and income with the support of the Project. In order to exchange the experience and share good practices, the evaluation team recommends that the Project team establish a mechanism to increase the number of core farmers.

(2) Recommendations for Burkina Faso side

#### Secure the budget for future activities.

In the second half of the Project, some C/P could not participate in the activities due to the lack of financial resources. To secure sustainability, the joint evaluation team recommended that DGPER make an effort to secure the budget for local cost of the Project. It is necessary for Ministry of Finance to timely allocate budget to DGPER/MAAH for successful implementation activities according to appropriate agricultural calendar.

#### Development a monitoring mechanism

An appropriate monitoring mechanism is important to ensure that the technical components transferred to the core farmers are settled in the target area and continuously utilized. As agricultural extension workers, ZAT/UAT provide technical support to farmers on a daily basis. The evaluation team recommended that the Burkina Faso side establish a monitoring mechanism in cooperation with ZAT/UAT.

#### Follow-Up training in 2-3 years

According to the interim report of the end-line survey, the yield decreased 2 years after the training. Although there are changes in production volume each year depending on external conditions, it is expected that the results of the training will diminish as time passes. Therefore, it is desirable to conduct follow-up training in 2-3 years to ensure that the transferred technology is settled in the area.

#### Proper pesticide management



As sesame is a promising cash crop to support Burkina Faso's economy by exporting to overseas countries, it is recommended that all stakeholders, including farmers, middlemen and traders, who are involving in a sesame value chains in the nation need to give most attention to the pesticide residue issues continuously. In term of activity 4-2 of the Project, lasting proper pesticide management is expected to expand of international markets.

Support research to make basic seed available

Research is a very important chain in the seed production and distribution channel. After the closure of the project and for the sustainability of its achievements, a budget support must be provided to this Research institution to develop and disseminate new selected varieties in quantity for producers.

(3) Recommendation for Japan side

Extension of the Project period

The Project will be completed on September 2019. At that time, it will be in the middle of the cultivation period of sesame. The implementation of training through the cultivation period is one of the features of this project. In order to increase the number of core farmers who are expected to disseminate technical skills on sesame production to ordinary farmers in the target area, it is recommended to extend the project period.