

エチオピア連邦民主共和国
小規模農民のための優良種子振興
プロジェクト
終了時評価調査報告書

平成 25 年 12 月
(2013 年)

独立行政法人国際協力機構
農村開発部

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序 文

独立行政法人国際協力機構（JICA）は、エチオピア連邦民主共和国（以下、「エチオピア」と記す）からの要請に基づき、2010年2月より4年間の計画で技術協力プロジェクト「小規模農民のための優良種子振興プロジェクト」を開始しました。

今般、プロジェクトのこれまでの実績及び実施プロセスを評価5項目の視点に基づいて総合的に評価し、課題への対応に関する提言と今後への教訓の抽出を行うことを目的として、2013年8月11日から29日の19日間にわたって終了時評価調査団が派遣されました。調査団はエチオピア政府関係者とともに評価調査結果及び提言・教訓を合同評価報告書に取りまとめました。

本報告書は、その結果を取りまとめたものであり、他のプロジェクトを含め、プロジェクトの運営に広く活用されることを望むものです。

ここに、終了時評価調査にあたってご協力をいただいた内外関係者の方々に、改めて深い謝意を表するとともに引き続き一層のご支援をお願いする次第です。

平成25年12月

独立行政法人国際協力機構

農村開発部長 熊代 輝義

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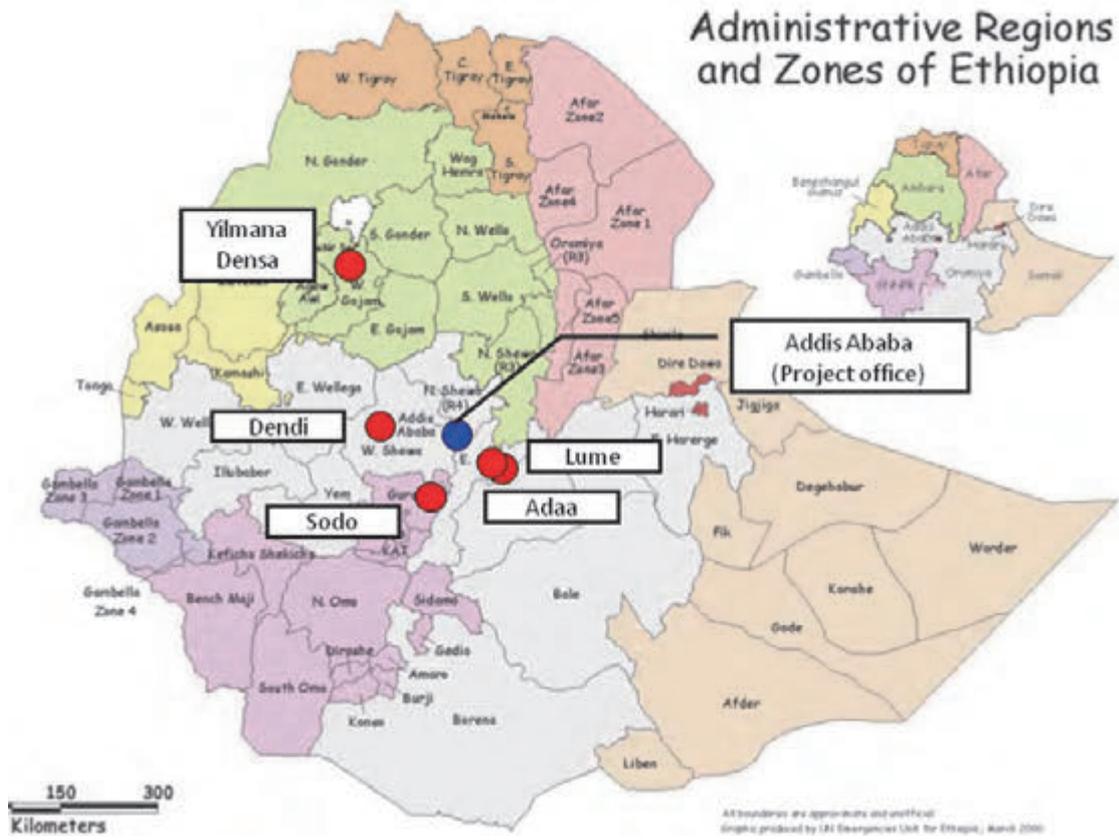
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地 図



写 真



農業事務所の敷地内に建設した
簡易種子品質検査ラボラトリー



エチオピア種子公社（ESE）へのヒアリング



種子農民学校（SFS）への参加・ヒアリング



SFS 卒業農家へのヒアリング



合同調整委員会（JCC）での SFS 視察



JCC でのレビュー結果報告

略 語 表

| 略 語 | 英 文 | 和 文 |
|-------|--|-----------------------|
| AGP | Agricultural Growth Program | 農業開発プログラム |
| ATA | Agricultural Transformation Agency | 農業改革庁 |
| ATVET | Agricultural Technical and Vocational Education and Training | 農業技術職業教育訓練 |
| C1 | Certified 1 Seed | 認証種子 |
| C/P | Counterpart | カウンターパート |
| DA | Development Agent | 普及員 |
| DZARC | Debre Zeit Agricultural Research Center | デブラゼイト農業試験場 |
| EIAR | Ethiopian Institute of Agricultural Research | エチオピア農業研究機構 |
| ESE | Ethiopian Seed Enterprise | エチオピア種子公社 |
| FAO | Food and Agriculture Organization | 国連食糧農業機関 |
| FFS | Farmers Field School | ファーマー・フィールド・スクール |
| FTC | Farmers' Training Center | 農家研修センター |
| GTP | Growth and Transformation Plan | 国家開発 5 カ年計画 |
| ISSD | Integrated Seed Sector Development | 総合種子セクター開発プロジェクト |
| JCC | Joint Coordinating Committee | 合同調整委員会 |
| MM | Man Month | 人月 |
| MoA | Ministry of Agriculture | 農業省 |
| ODA | Official Development Assistance | 政府開発援助 |
| PDM | Project Design Matrix | プロジェクト・デザイン・マトリックス |
| QDS | Quality Declared Seed | 種子法で規定されている優良種子 |
| QSPP | Quality Seed Promotion Project for Smallholder Farmers | 小規模農民のための優良種子振興プロジェクト |
| R-BoA | Regional Bureau of Agriculture | 州農業局 |
| SFS | Seed Farmers' School | 種子農民学校 |
| SNNPR | Southern Nations, Nationalities and Peoples Region | 南部諸民族州 |
| ToF | Training of Facilitators | ファシリテーター研修 |
| TT | Technical Training | 技術研修 |

終了時評価調査結果要約表

| | |
|--|---------------------------|
| 1. 案件の概要 | |
| 国名：エチオピア連邦民主共和国 | 案件名：小規模農民のための優良種子振興プロジェクト |
| 分野：農林水産・農業・農業一般 | 援助形態：技術協力プロジェクト |
| 所轄部署：農村開発部 | 協力金額（評価時点）：4億7,972万円 |
| 協力期間：2010年2月～2014年2月 （4年間） | 協力相手先機関：農業省（MoA） |
| | 日本側協力機関：なし |
| <p>1-1 協力の背景と概要</p> <p>エチオピア連邦民主共和国（以下、「エチオピア」と記す）では、人口の85%が農業に従事し、農業生産のGDPに占める割合が40%以上であり、経済・産業における農業の位置づけは極めて大きい。2010年から2015年までの国家開発5カ年計画（Growth and Transformation Plan : GTP）のなかでも、農業を核として経済成長を図ることが目標として掲げられている。しかしながら、農業生産の大部分が伝統的な技術に依存しているのが実情で、単位面積当たりの生産性が低く、安定的な食料生産・供給が行われていない状況にある。</p> <p>このようなエチオピアにおける低い農業生産性の一因は、改良種子の供給が需要を大きく下回っていることにある。エチオピアにおける肥料や農薬の使用量は増加の一途をたどっているにもかかわらず、改良種子の供給は依然として低水準にとどまっている。種子生産の中軸を担っている国営企業のエチオピア種子公社（Ethiopian Seed Enterprise : ESE）は、改良種子の生産・供給を任務としているが、供給量は農家需要のわずか20%程度にとどまっているといわれており、ほとんどの農民は前年収穫物の一部を保管して作付け用の種子とするか、地方市場でインフォーマルに農民が販売している種子を利用しているのが実態である。これらの種子は①生産性の低い在来種であること、②病気に感染しており発芽率が低く、実をつけないこと、③適切な管理がなされていないためさまざまな品種が混ざっており均質でないこと等の問題があり、農業生産性の観点から大きな課題となっている。</p> <p>このような状況から、エチオピア政府は改良種子の需要を満たすために農家自身による種子生産増加をめざし、州政府や郡、農業協同組合と協力して活動を行っている。しかしながら、①農民の種子生産技術が不十分であること、②州や郡職員の種子品質管理技術が不十分であること、③種子の価格設定方法がマーケットの状況を反映できていないこと、④行政手続きや収穫後の管理の問題から種子が適切な時期に利用者に配布されないことなど、生産技術、品質管理、流通に至るまで多くの課題を抱えている。こうした状況を受けて、独立行政法人国際協力機構（JICA）は2010年2月から2014年2月までの4年間の予定で本プロジェクトを実施している。</p> | |
| <p>1-2 協力内容</p> <p>本プロジェクトは、小規模農家を主とした種子栽培農家を対象に、エチオピアの主食であるインジェラの原料となるテフと、コムギの優良種子生産振興を図るものである。</p> <p>(1) 上位目標</p> <p>対象ワレダ（郡）において優良種子を利用して穀物生産量（主にテフ、コムギ）が増加する。</p> | |

(2) プロジェクト目標

対象ワレダ（郡）において優良種子の利用が増加する。

(3) 成果

1. 優良種子生産技術が改善される。
2. 優良種子生産技術が小規模農家に普及する。
3. 優良種子の品質認証が強化される。
4. 小規模農家による持続的な優良種子生産システムが提言される。

(4) 投入（評価時点）

総投入額 4億8,000万円

<日本側>

- ・長期専門家派遣：2名（51.5MM）
- ・短期専門家派遣：延べ15名（83.8MM）
- ・資機材供与：プロジェクト実施に必要な機材供与（総額2,063万2,000円）
- ・研修員受入れ：7名（本邦研修）、2名（第三国研修）
- ・在外事業強化費：総額1億3,404万9,000円

<相手国側>

- ・C/P配置：45名〔農業省普及局（プロジェクト・ダイレクター、プロジェクト・マネジャー、ほか）、州農業局（アムハラ州、オロミア州、南部諸民族州）ゾーン農業開発部、ワレダ農業事務所、デブラゼイト農業試験場（Debre Zeit Agricultural Research Center : DZARC）、等〕
- ・施設の提供、維持管理費：プロジェクト事務所等〔農業省普及局（オフィススペース）、オロミア州農業局（オフィススペース）、DZARC（オフィススペース、網室用地、種子増産圃場、有用技術実証試験圃場）、アムハラ州農業局（オフィススペース）、各ワレダ農業事務所（簡易種子検査ラボの建設用地）〕

2. 評価調査団の概要

| | | |
|------|--|------------|
| 調査者 | <日本側> | |
| | 総括 神 公明 (JICA エチオピア事務所 所長) 種子 西川 芳昭 (龍谷大学 経済学部教授) 協力計画 本村 美紀 (JICA エチオピア事務所 所員) 評価分析 田中 香織 (株式会社アイコンズ 主任コンサルタント) | |
| | <エチオピア側> | |
| | 総括 Mr. Hirago Feleke, Senior Expert, Agricultural Input Marketing Directorate, Ministry of Agriculture 団員 Mr. Aresawum Mengesha, Officer, Crops' Team, Food and Agriculture Organization | |
| 調査期間 | 平成25年8月11～29日 | 評価種類：終了時評価 |

3. 評価結果の概要

3-1 実績の確認

(1) 成果の達成度

成果1 優良種子生産技術が改善される。

指標 1-1 5種類以上の種子生産技術が実証される。

指標 1-2 種子生産技術マニュアルが作成される。

成果1は既に達成されている。

7種類の基本的な優良種子生産技術が、DZARCにおける実証試験と農家研修センター (Farmers' Training Center : FTC) における適応試験を経て、現地農家が適応可能な技術であることが実証されている (指標 1-1)。これら技術は種子農民学校 (Seed Farmers' School : SFS) を通じて農家に紹介されている。中間レビュー時に農業機械の改良について提言があったが、条播技術の導入に関しては条播機を100基ほど製造のうえ、ワレダ (郡) 事務所を通じて SFS 農家グループに配布している。このほか10種類の生産技術が、現地に適応可能で有効な技術として明らかにされ、これら技術を含めた優良種子生産技術に関するマニュアルが「テフ・小麦種子生産マニュアル」(2013年7月、第3版)として取りまとめられ、調査時点で農業省 (Ministry of Agriculture : MoA) の承認を待っている段階である (指標 1-2)。同報告書が承認された際には現地語に訳して関係機関に配布される予定である。

成果2 優良種子生産技術が小規模農家に普及する。

指標 2-1 対象ワレダ (郡) の農業事務所職員の指導員、あるいは普及員としての能力が向上する。

指標 2-2 種子農民学校 (SFS) を900人以上の農家が卒業する。

指標 2-3 SFSに参加した農家の80%以上が成果1で実証された種子生産技術を利用する。

成果2はプロジェクト終了時まで達成される見込みである。

種子生産技術の普及にあたる普及員 (Development Agent : DA) への研修は、主にファシリテーター研修 (Training of Facilitators : ToF) 及び技術研修 (Technical Training : TT) の形で実施されており、累積参加数は各199名、591名である。同研修に基づいて、農民への技術普及が SFS を通じて実施されているが、プロジェクト期間中に SFS 開催数は順調に数を増やし、SFS 卒業農家は現在実施中の第3期 SFS の推測値も含めると毎年約倍増している。また中間レビュー時に提言のあった SFS の継続的取り組みに関しては、現在実施されている SFS ではその半数がエチオピア政府主導で実施されており、プロジェクトからの支援は文房具類や雨よけ用のトタンやシート等に限定されているものの、主導する各ワレダの来年度以降の継続意欲は高い。さらに第1期と第2期の SFS 卒業率は94%と大変高く、調査期間中のインタビューからも農家の高い満足度がうかがえた。以上より DA の能力向上は順調に図られていることが推測される (指標 2-1)。またプロジェクト期間内における累積の SFS 卒業農家推計値は2,000人を超え、指標目標値の900人を大きく超える (指標 2-2)。プロジェクトが実施した農家へのフォローアップ調査¹によると、SFSで学習した技術の導入意欲も高い (指標 2-3)。

一方で、DAの高い離職・転職率がDAの能力向上における持続性を確保するうえでの

¹ プロジェクトは、2013年6月に第2期卒業生に対し、18村より各10世帯をランダムサンプリングし、計180世帯に対してアンケート調査を実施した。回答率は100%。

懸念として確認された。しかしながらこれによる成果2の実績への具体的なインパクトは、確認できる情報が限定的であり判断ができない。また成果2の各指標を明確に計測するためのデータ（実際に種子生産技術導入を図った農家数や、高い離職率に対応するためのDA間の技術移転状況等）が把握されておらず、それぞれの明確な達成値は確認できない。

成果3 優良種子の品質認証が強化される。

指標3-1 各ワレダ（郡）のラボラトリーに、種子検査（フィールド及びラボ検査）に関する研修に参加した職員が1名以上配置される。

指標3-2 SFSに参加した農民の80%以上がフィールドノート²を利用する。

指標3-3 簡易種子検査ラボラトリー向けの種子検査手順及びマニュアルが策定される。

指標3-4 種子検査ラボラトリーによってSFSに参加した80%以上の農民の作物の種子品質検査が実施される。

成果3はプロジェクト終了時までの達成は困難である。

成果3に関する活動は、種子品質管理分野の専門家派遣の遅延により関連活動の計画・実施が遅れたことで大きく遅延した。中間レビューで提言のあった簡易種子検査ラボラトリーについては調査時点までに設置され、検査機材の導入、検査職員の訓練及びラボへの配置（指標3-1）、品質検査手順の整理・マニュアルの整備（指標3-3）は実施されているが、SFS参加農民によるフィールドノートの記録（指標3-2）と、簡易種子検査ラボラトリーにおける実際の検査（指標3-4）は、限定的にしか行われていない。フィールドノートについては、複数年継続使用できる冊子型のものの配布は2013年5～6月に実施されており、現在SFSに参加中の農家内では一定の利用がなされているが、SFS卒業農家による利用状況については確認されていない。また種子検査については、今後第3期SFS卒業農家の生産種子に対する品質検査が可能となるのは、コムギ・テフの収穫時期とエチオピア側のDAの年間業務スケジュールを勘案すると、2014年4月～6月となるため、プロジェクト期間中には活動は終了しない。

成果4 小規模農家による持続的な優良種子生産システムが提言される。

指標4-1 成果1～3の結果が取り纏められ、種子戦略の実施や種子制度の改善に対して一定の貢献がなされる。

指標4-2 プロジェクトの模範例やよい結果等を取り纏めた報告書が準備される。

成果4はプロジェクト終了時までの達成は困難である。

優良種子生産に関する地域レベルでの持続的なシステムの提言のために、現在プロジェクトでは種子の流通システムと費用便益分析を実施中である。これらデータが取得され、また種子の品質検査により品質データが確認されれば、上記システムの一例をプロジェクトとして提示することが可能となる（指標4-1）。よって成果3の活動が達成されれば成果4も達成される。プロジェクト活動における優良事例を取りまとめた報告書については現在事例が収集されており、プロジェクト期間内に作成される予定である（指標4-2）。

² フィールドノートとは、「基礎データ」「計画」「実際の結果」等を記載するものである。「基礎データ」は生産農家、種子などの種子生産の基本となる情報、「計画」は農家による種子生産の計画、「実際の結果」は、計画された作業の実施情報である。これらを記録することで、だれが、どの作物の種子を、どこで、どのように生産したのか把握できる。

(2) プロジェクト目標の達成度

プロジェクト目標：対象ワレダ（郡）において優良種子の利用が増加する。

指標1 対象ワレダ（郡）において、プロジェクト・アプローチを通じて、栽培シーズン毎に40トン以上の優良種子が生産される。

指標2 対象ワレダ（郡）において、プロジェクト・アプローチを通じて、栽培シーズン毎に優良種子の75%以上が利用または販売される。

プロジェクト目標はプロジェクト終了時までの達成は困難である。

プロジェクト終了時までには2,044名のSFS卒業農家が輩出し（第3期SFS卒業率を90%と仮定）、同農家がSFS参加に際し割り当てた種子生産用の土地0.1haで種子生産を継続すれば、今後毎年367.9tの種子が生産される見込みである（生産量は第2期SFS農家の平均生産量1.8t/haをベース値として計算）。5つのワレダで生産量を割っても平均73.6tの生産量となることから各作期40tの生産は達成される。一方で生産された種子が優良であるか確認するためには成果3の達成を待つ必要があるため、プロジェクト期間中に達成されるかどうかの判断はできない（指標1）。また上述したプロジェクトによる180の農家世帯向けのフォローアップ調査によると、大部分の農家が生産された種子を穀物ではなく種子として使用あるいは販売しているとのことだが、本調査期間中のインタビューでは穀物として使用している農家も確認されたため、判断ができない（指標2）。成果3の達成を受けて、優良種子の利用・販売に関しプロジェクトによる包括的なモニタリングや確認が必要である。

3-2 評価結果の要約

(1) 妥当性

本プロジェクトの妥当性は高いと判断される。

エチオピア政府における農業開発政策及び日本のODA政策との整合性についてはプロジェクト開始時から変更はない。優良種子を地域レベルで増産し流通させるとのプロジェクト・アプローチの妥当性も引き続き高い。ターゲットエリアやターゲット層の選択についても、SFS開催前のワレダでの計画委員会や各村での説明会を開催し、SFS対象村や参加農家を選別しており、SFS卒業率も第1期から第2期SFSでは94%となっており、引き続き高い妥当性が確保されている。

(2) 有効性（阻害要因と貢献要因）

本プロジェクトの有効性はやや低いと判断される。

上述のとおり成果3に関する活動の遅れから、プロジェクト目標をプロジェクト期間中に達成することは困難である。

プロジェクト目標と成果に対する阻害要因として、プロジェクト・デザイン・マトリックス（Project Design Matrix：PDM）がプロジェクト期間中に2度変更され、これに伴いプロジェクト活動や成果の一部が変更され一貫したアプローチでの活動ができなかったこと、エチオピア政府が明解で統一した種子政策を保持していないこと、日本人専門家の短期間での変更（チーフアドバイザー含む）や種子品質管理分野の専門家派遣の遅れ、第1期SFS時に入手した認証種子（Certified 1 Seed：C1）の品質が粗悪であったこと、2011年のアフリカにおけるコムギ黄さび病の発生、DAの離職率の高さ、エチオピア側の連邦レベルでの事業運営への関与の低さ等が挙げられる。

貢献要因として、中間レビュー以降に活動の遅れを取り戻すために雇用されたローカル

スタッフや派遣された短期専門家による成果3や成果4の活動への貢献、SFSの活動やアプローチに対するプロジェクト内外からの高い評価、農家によるSFS参加意欲や協力、エチオピア政府の条播技術推進政策の導入時期との一致等が挙げられる。

(3) 効率性

本プロジェクトの効率性はやや低いと判断される。

効率性に関連する項目として以下が確認された。なかでも専門家派遣の遅延やチーフアドバイザーの短期間での交代はプロジェクト活動を遅延させた主因のひとつとなっている。

日本側の投入に関しては、研修内容や技術移転方法の適切さ、供与機材の適切さが評価される一方で、活動対象地域の広範さに比した長期専門家数の不足、チーフアドバイザーの2度の交替、種子品質管理分野の短期専門家派遣の遅延が指摘された。エチオピア側の投入に関しては、プロジェクト運営に関するカウンターパート（Counterpart : C/P）の関与不足、種子品質管理のスタッフ不足、普及員の離職・転職率の高さ、プロジェクト事務所が十分な広さでなかったこと等が確認された。

(4) インパクト

現時点では上位目標の達成予測は困難であるが、プロジェクトのインパクトは中程度と判断される。

特にSFSのアプローチが種子生産技術向上に及ぼすインパクトについてはプロジェクト内外より高い評価が確認された。

プロジェクト目標内のインパクトとしては、種子生産技術に関する技術移転が参加農民や関係者の高い意欲の下で効果的に進められた点、DAと農家間の関係性が強化された点、農家間での種子交換が促進された点、政府主導のSFSが開始され高い継続意欲が確認される点、エチオピア側の条播技術の普及政策に対し条播機を開発し直接貢献した点などが挙げられる。プロジェクト目標外のインパクトとしては、SFS卒業農家が種子生産組合を組織した点、一部SFS農家はESEの契約農家であり間接的にC1種子の品質向上や生産増等に貢献している点、小規模農家にグループ単位での技術研修を行い能力強化を図っている点など、良いインパクトを与えている。

(5) 持続性

本プロジェクトの持続性は中程度と判断される。

プロジェクトは地域レベルで優良種子へのアクセスを向上させるうえで効果的なアプローチであった。一部プロジェクト活動に遅延があり、プロジェクト成果を総合的に確認・推測したうえでの総合的な判断ができないが、以下のとおり制度・財政面、技術面での懸念が確認される。

政策面では、妥当性の項目で確認したとおり持続性は高い。種子法との整合性もあり、今後プロジェクトの成果によってはインフォーマルな種子流通システムや品質確認された種子システム（Quality Declared Seed System）の具体化への貢献も期待できる。

制度・財政面では、まずプロジェクトの運営が一般に日本人専門家チームによって実施されており、エチオピア側の特に連邦レベルでの関与が少なく、プロジェクト終了後の運営管理面での技術移転状況に懸念がある。一方で、第3期よりSFSの半数は政府が主体的に実施している。プロジェクトが支援するSFSに比べ物質的な困難に直面しているものの、種子や肥料は参加農家自身が負担し、継続的に運営されている。同SFSアプローチを

用いたプロジェクトの成果はプロジェクト内外で高く評価されており、政府による既存の農業技術普及システムへプロジェクト活動を取り込んでいく可能性が検討されており、これによって農民グループが政府に公式に各種要請を行える仕組みとすることが検討されている。また他ドナーからの予算支援の可能性についても検討されている。また、5つの対象ワレダに設置された簡易種子検査ラボラトリーの機能と位置づけについても各州農業局（Regional Bureau of Agriculture : R-BoA）管轄下のものとして位置づけ、制度的持続性を確保する必要がある。

技術面では、基礎的技術の農家への適応試験による確認を行い、DAの能力も十分高まったと判断されることから、今後プロジェクトにより開発された技術の持続性については高いと考えられる。「優良種子」の基準については成果3及び4の結果を踏まえ、地域の現実とニーズに即した基準について関係者と合意し、機能的で持続性のある優良種子生産流通システムの事例を提言し、関係機関と合意することが望まれる。人材面での技術的持続性については、DAの高い離職・転職率より、移転技術の持続性に懸念が確認される。一方、今後エチオピア政府はDAの職場環境改善のための予算を計上し、教育機会の提供、勤務地における宿泊施設の準備、職務に用いるユニフォームやブーツ等の支援を実施する予定である。

3-3 効果発現に貢献した要因

- ・合同調整委員会（Joint Coordinating Committee : JCC）は適切に運営され、機能してきた。JCCはこれまで、2010年10月28日、2011年8月3日、同年11月4日、2012年5月30日、同年12月12日、また調査期間中の2013年8月26日に開催され、ほぼ半年に1度の頻度で開催されてきた。会期ごとに各地域のC/Pにより活動状況の進捗や成果が報告され、主要な決議事項が協議され決定された。
- ・SFSの参加農家は一般的に技術向上の意欲が高くプロジェクト活動への協力もみられ、SFSを成功裏に進めるための重要な貢献要因となった。
- ・上述のとおり、SFSの開期を重ねるにつれて、プロジェクトへの評価や対外的な認知度が高まったことは、エチオピア側C/P機関のプロジェクトに対する理解やオーナーシップ認識を深化させるうえで貢献した。
- ・プロジェクトは月間進捗報告書及び週間計画を関係者間で共有し続け、プロジェクトの調整とモニタリング・メカニズムを機能させてきた。月間進捗報告書は1カ月から2カ月に1度の頻度で、プロジェクト・ダイレクター、プロジェクト・マネジャー、R-BoAやワレダ農業事務所のC/Pなど、すべての関係者間で共有されている。週間計画は、日本人専門家、プロジェクト・スタッフ、連邦・州・DZARCやエチオピア農業研究機構（Ethiopian Institute of Agricultural Research : EIAR）等の中核的な役割を果たすC/P間で週に1度の頻度で共有されている。プロジェクトはこのほかにも種々のPR資料を作成しており、エチオピア種子セクターにおける関係各機関の間での本プロジェクトの認知度の向上に貢献した。

3-4 問題点及び問題を惹起した要因

- ・チーフリーダーの不在が断続的に繰り返されたことで、種子品質管理分野を中心としてプロジェクト全体の進捗に遅延が生じた。特に最初のチーフリーダーは約3カ月間及び6カ月間の派遣、続くリーダーは4カ月間弱の派遣であった。またプロジェクト期間を通じてチーフリーダーが2度交替することによって、プロジェクトの実施・運営方針等がその都度変更したことも、プロジェクトの戦略やアプローチの変更、モニタリングの不足等につながり、効

率的なプロジェクト活動の実施に負の影響を与えた。2012年8月よりチーフリーダーは長期専門家として派遣されており、2名の専門家が常駐することとなり専門家投入の適切性についても改善された。

- ・プロジェクト期間中にPDMが2度改定された。これによってプロジェクトの焦点が変更され、有効性の項目で後述するとおり、プロジェクト活動の進捗に負の影響を与えた。
- ・SFSは3州における5つのワレダ内の複数の村において、村・ワレダ・ゾーン・州・連邦の各行政レベルのC/P機関と調整のうえ、8カ月の間実施されてきた。一方で特にプロジェクトの前半には専門家の投入が十分ではなく、これらプロジェクト活動の運営、モニタリング、フォローアップ等の活動が十分になされてこなかった。
- ・プロジェクト全体の運営管理を行うエチオピア側C/Pは、配置されているものの関与が大変少なく、特に連邦レベルでのプロジェクトに対するオーナーシップ認識の欠如が確認された。また中間レビュー以前には、配置された各C/Pの業務分掌やJICAのプロジェクト実施方針やデザインが明確に認識されていなかった。プロジェクトでは、中間レビューの提言を受けフォーカルパーソンの任命を行い、中核となるC/Pに対し繰り返しプロジェクトについての説明を行った。結果、先方のプロジェクトへの理解も進み、SFSへの評価が高まるにつれ、特にワレダレベルでのエチオピア側の関与も深まった。一方でプロジェクト運営管理全般においては、調査時点でも日本人専門家チームが主体となって行っている。

3-5 結 論

プロジェクトは農家自身が種子不足に対応するための新たなアプローチを導入し、SFSを通じて農家への技術普及をめざした活動はプロジェクト内外から高い評価を得、高い妥当性とインパクトが確認された。一方で効率性と有効性に関しては、種子の品質検査に関する活動が遅延しており、中程度と判断される。持続性については主に制度面、技術面で懸念が確認される。今後品質検査の結果を待って地域レベルの優良種子生産流通システムへの提言を行うことが期待されており、第3期SFS農家の生産種子の簡易種子検査ラボラトリーでの品質検査は、DAによる他業務への専従期間を終えた2014年4～6月に実施されることとなるため、約半年間のプロジェクトの延長が必要であると判断する。

3-6 提 言

調査結果を踏まえ、調査団はプロジェクトが今後取り組むべき事項として以下のとおり提言した。

(1) SFSアプローチを中心とするプロジェクト成果の継続性の確保

SFSアプローチを既存のMoAの普及システムに統合する方途について残りの協力期間を通じ検討のうえ、先方政府に対して提言することが望まれる。調査時点では以下3つの可能性が挙げられる。

- 1) 農家向け研修プログラムを行っているFTCへの統合を検討。
- 2) MoAは既存の農業技術職業教育訓練(Agricultural Technical and Vocational Education Training: ATVET)やFTCを用いつつ国内の全農家に今後数年間で研修を施す計画を検討中であり、これら研修アプローチのひとつとして用いる可能性を検討。
- 3) 第3期より政府主導のSFSが実施されており、継続意欲も高い。人材面、財政面の課題に取り組み、活動を継続させる方途を検討。

(2) SFS 卒業農家のモニタリング

SFS 卒業農家の導入技術の活用状況や、DA による技術的フォローアップの有無、種子生産の継続性等についてプロジェクトによる確認が十分に行われていない。プロジェクト成果を十全に生かすためにも適切なモニタリングとフォローアップの方途について速やかに検討・導入することが望まれる。

(3) 種子認証システム

地域レベルでの農家のための優良種子生産流通システムを機能させるために、ワレダレベルでの適切な優良種子基準と試験手順につき残りの協力期間にて検討し、具体的提言を行うことが望まれる。

(4) プロジェクトの知見の制度化

プロジェクトの知見を、インフォーマルな優良種子生産流通システムの強化のために用いていくことが望まれる。このために、種子分野の関係機関〔農業改革庁（Agricultural Transformation Agency : ATA）や総合種子セクター開発プロジェクト（Integrated Seed Sector Development : ISSD）等〕と継続的に協議・検討を行っていくことが必要である。

また、種子法で規定されている優良種子（Quality Declared Seed : QDS）の現実的な品質基準について、本プロジェクトの成果を踏まえ協力期間終了までに具体化し提言することで、QDS 概念の具体化に貢献することが望まれる。

3-6-1 日本側への提言事項

- (1) 成果 3 と 4 の活動を了するため、SFS 農家による生産種子の品質検査を各ワレダの簡易種子検査ラボラトリーで実施させることが必要であり、日本側はこのための検査官への技術支援を実施する必要がある。
- (2) 新たに配置されたワレダの簡易種子検査ラボラトリーの検査官に対して、エチオピア側が研修を実施する際に技術的な支援を行う。
- (3) 種子流通調査を実施し、プロジェクトで指導した種子栽培農家により生産された種子の利用・販売状況について確認を行う。

3-6-2 エチオピア側への提言事項

- (1) プロジェクトによって設置された簡易種子検査ラボラトリーに必要な人員を遅延なく配置し、新規に配置されたスタッフには必要な訓練を施す必要がある。
- (2) 州レベルにある公的なラボラトリーとプロジェクトによって設置されたワレダレベルの簡易種子検査ラボラトリーの組織的連携を確保し、ワレダレベルの簡易種子検査ラボラトリーが種子の品質について証明書を発行できる権限を与えることが必要である。
- (3) エチオピア政府が今後種子検査基準や手順として具体化し、制度化していくプロセスのなかで、プロジェクト活動によって得られたデータや知見を有効に活用していくことが望まれる。

3-7 教訓

- (1) 本プロジェクトでは ESE から純度の高い C1 種子を入手することが想定されていたが、実際には C1 種子の純度は期待したレベルではなかったことが協力開始後に判明した。つまり前提条件が十分満たされていなかったことになるが、プロジェクト活動の工夫により農家レベルで純度を上げるため種子の世代を 1 つ更新する対応を取り、最終的には C2 種子の生産を実現することができた。前提条件が十分満たされていない場合であっても、大局的視点から目標達成への道筋をとらえなおし、プロジェクトによる努力で課題の解決が図られたことは他の協力を行ううえでも参考になる。

- (2) 効率的な専門家の配置を達成するために短期専門家の派遣が適した活動と、長期的に配置することで活動方針の一貫性を維持しモニタリングを行うための専門家派遣に適した活動の差異を見極め、適切な専門家の配置を行うことが望まれる。

Summary of Terminal Evaluation

| | |
|---|---|
| 1. Outline of the Project | |
| Country: The Federal Democratic Republic of Ethiopia | Project: Quality Seed Promotion Project For Smallholder Farmers |
| Issue/Sector: Agriculture/ Forestry/ Fisheries, Agriculture, Agriculture/General | Type of Cooperation: Technical Cooperation Project |
| Division in charge: Rural Development Department | Amount of Cooperation (accumulated amount until the Project Terminal Evaluation) : ¥ 480 million |
| Period of Cooperation (R/D): From February 2010 to February 2014 (Four years) | Partner Country's Implementing Organization: Ministry of Agriculture |
| | Supporting Organization in Japan: None. |

1-1. Background and Profile of the Cooperation

The agriculture sector in Ethiopia is crucial for Ethiopian's economic growth, since it shares about 40% of GDP and 85% of rural population of the country. Therefore, the importance of agricultural sector is clearly described in the national development plan ("Growth and Transformation Plan") for 2010-2015. However, most of the farmers are still relying on traditional farming practices that lead to low productivity, and it brings about unstable food production and supply.

One of the causes of these problems is believed to be the limited use and supply of good quality seed. Considering the significant current and future role of the agriculture sector, a seed system that provides quality seed to meet with demand of farmers is an essential enabler to continued economic and social development of Ethiopia.

There are several organizations, research institutes, universities such as Ethiopian Seed Enterprise (ESE), who bear the backbone of seed production in Ethiopia and have the duty to produce and supply certified seeds. However, the amount of its supply is limited to only about 20% of its demand. Consequently, most of the farmers use farm-saved seed, informal seed or grains as seed.

These seeds are mostly with low yield, low germination and low purity. This situation led the Government of Ethiopia (GOE) to aim at increase in quality seed production by (seed) farmer to satisfy (grain) farmer's demand. But 'seed farmers' have a number of problems related to the production technique, quality management and distribution, such as 1) Farmers' seed production technique is insufficient, 2) Seed quality control is not sufficient at local level, 3) Low seed price does not motivate producers and 4) Seed is not timely distributed to farmers.

In this situation, GOE requested the Government of Japan to implement JICA technical cooperation project related to seed production with the Ministry of Agriculture and Rural Development (now the Ministry of Agriculture: MoA) as C/P organization. In response to the request, JICA has started the implementation of the Technical Cooperation Project "Quality Seed Promotion Project for Smallholder Farmers", aiming at the increase in self-pollinating crops of teff and wheat production through utilization of quality seed produced by smallholder farmers, since February 2010 for 4 years till February 2014, in the target woredas in three regions namely Amhara, Oromia and SNNP (Southern Nations, Nationalities, and People's).

1-2. Cooperation Overview

(1) Overall Goal:

Production of mainly self-pollinating crops, teff and wheat, is increased through utilization of quality seed in the target woredas.

(2) Project Purpose:

Use of quality seeds is increased in the target woredas.

(3) Outputs:

Output 1: Quality seed production technologies are improved.

Output 2: Quality seed production technology is disseminated to seed producing farmers and/or farmers who want to start seed production.

Output 3: Quality assurance of seed is strengthened.

Output 4: Sustainable system of quality seed production for smallholder farmers is suggested.

(4) Inputs (at the time of Evaluation):

< Japanese Side >

- Long-Term Expert: 2 persons (51.5MM)
- Short-Term Expert: 15 persons (83.8MM)
- Provision of Equipment: Necessary equipment for the Project implementation (20.6 million Japanese Yen)
- Training in Japan: 7 persons / Training in Third Country: 2 persons
- Project Local Cost: 134.1 million Japanese Yen

< Ethiopian Side >

- C/P Assignment: 45 persons
- Project Places and Facilities:
 - Office spaces in Ministry of Agriculture, the Regional Bureau of Agriculture (BoA) in Amhara and Oromia, and DZARC.
 - Land space for building for seed inspection laboratory in Five Woreda Agricultural Offices (Ada'a, Dendi, Lume, Sodo and Yilmanadensa woredas)
 - Agricultural land for verification activities in DZARC.
- Utilities Cost for Project Places: Running cost (electricity and water, etc.) for the office spaces.

2. Evaluation Team and Period

| | |
|---------------------------|--|
| Evaluation Members | <Japanese Side> Mr. Kimiaki Jin / Team Leader Chief Representative, JICA Ethiopia Office Dr. Yoshiaki Nishikawa / Seed Professor, Faculty of Economics, Ryukoku University Ms. Miki Motomura / Evaluation Planning Assistant Representative, Japan International Cooperation Agency (JICA) Ethiopia Office Dr. Kaori TANAKA / Evaluation Analysis Senior Consultant ICONS Inc. |
|---------------------------|--|

| | |
|---|--|
| | <Ethiopian Side> Mr. Hirago Feleke / Team Leader Senior Expert, Agriculture Input and Supply Directorate, Ministry of Agriculture Mr. Aresawum Mengesha / Member Officer, Crops' Team, Food and Agriculture Organization |
| Period of Evaluation: August 11 th to 29 th 2013 | Type of Evaluation: Terminal Evaluation |
| 3. Summary of Evaluation Results | |
| 3-1. Verification of the Project's Achievement | |
| (1) Achievement Level of Outputs | |
| <div style="border: 1px solid black; padding: 5px;"> <p>Output 1: Quality seed production technologies are improved.</p> <p>1-1. At least five (5) seed production technologies are verified.</p> <p>1-2. A seed multiplication technology manual is produced.</p> </div> | |
| <p><u>The output 1 has been achieved.</u> The project identified 7 kinds of seed production technologies, by the verification trials through DZARC, as well as the adaptability trials through Farmers' Training Center (FTC) (Indicator 1-1). The project has introduced these technologies through SFS. As the row planting technology is one of the critical technologies for the quality seed production, which is officially enhanced by ATA, the project has especially advocated this technology by fabricating and introducing a row sowing machine to the SFS farmers. Adding to the above 7 basic technologies, 10 kinds of production technologies have been identified by the project. All those technologies has been compiled in "Teff & Wheat Seed Multiplication Manual" (ver.3, July 2013), which is under the approval process in Ministry of Agriculture at the moment of evaluation (Indicator 1-2). Upon the approval, the manual will be translated to the local language and will be distributed to all the stakeholders.</p> | |
| <div style="border: 1px solid black; padding: 5px;"> <p>Output 2: Quality seed production technology is disseminated to smallholder farmers and/or farmers who want to start seed production.</p> <p>2-1. Capacity of extension staff of the target woredas as trainer or facilitator is enhanced.</p> <p>2-2. More than 900 farmers are graduated the SFS.</p> <p>2-3. At least 80 % of farmers participated in SFS adopts one of the seed production technology verified in Output 1.</p> </div> | |
| <p><u>It is expected that output 2 will be achieved by the end of the project.</u></p> | |
| <p>The project provided the trainings for extension agents through Training of Facilitators (ToF) and Technical Training (TT). The cumulative numbers of the staff trained is 199 in ToF, and 591 in TT. SFS have been conducted based on these trainings, and the number of SFS has been increasing steadily during the project. The number of graduated farmers from SFS has also increased almost double every year based on the estimation on the third round SFS. Half of the third round SFS are organized by the initiative of Ethiopian government. Although the support from the project is limited to the provision of stationery or the material of hut installation (blue sheet etc.), there is high motivation among the woreda agricultural offices to continue SFS. The graduation rate for the past SFS is high (94% in average), and the team confirmed high satisfaction among the farmers interviewed. Thus, the team concluded that the capacity building among extension agents have been satisfactory implemented (Indicator 2-1). The cumulative number of expected SFS graduates during</p> | |

the project period exceeds 2000, exceeding far beyond 900 (Indicator 2-2). According to the follow up survey conducted by the project¹, there is high motivation by farmers to introduce one of the technologies studied through SFS (Indicator 2-3).

On the other hand, the team noted for the high turnover rate among extension agents, and there is a concern in terms of sustainability of the capacity development, although the team could not judge the concrete impact of it toward output 2 due to the lack of information. The data to measure indicators of output 2 (such as the number of farmers who have introduced the seed production technologies, or the technology transfer methods among extension agents to tackle high turnover rate) were not available as well, thus the exact achievement level of each indicator could not be assessed.

Output 3: Quality assurance of seed is strengthened.

- 3-1. More than 1 person who has attended training on seed inspection (field and laboratory) is assigned at the laboratory in each woreda.
- 3-2. At least 80% of farmers participated in SFS utilize Field Notes
- 3-3. Seed testing procedure and manual for simple seed laboratories are developed.
- 3-4. Seed testing laboratories conduct seed quality tests to products of more than 80% of farmers participated in SFS

It is difficult to achieve the output 3 by the end of the project. Activities under output 3 have been delayed considerably due to the delay of dispatch in the field of seed quality control.

By the time of evaluation, the construction of laboratories and installation of testing equipment in 5 woredas, trainings for inspectors and their allocation to each laboratory (Indicator 3-1), preparation of the procedure and manual for the seed quality testing (Indicator 3-3) have been implemented.

However utilization of field notes by SFS farmers seems to be limited (Indicator 3-2), and full scale seed testing activities at the laboratories (Indicator 3-4) have not yet been conducted. As for the field note, the current version which can be utilized for several years have been distributed to the farmers in May to June 2011. According to the project, the ratio of utilization among the farmers who participate in the ongoing SFS is quite high; however the utilization of the notes after SFS graduation is not confirmed. As for the seed testing at the laboratory, it is expected to be conducted from April to June 2014, considering to the harvesting season and the annual work schedule of extension agents. Thus output 3 cannot be achieved during the project period.

Output 4: Sustainable system of quality seed production for smallholder farmers is suggested.

- 4-1. Outcomes of the outputs 1, 2 and 3 are compiled and make certain contribution for implementation of the seed strategy and/or improvement of seed system.
- 4-2. A report compiled good practices and good outcomes of the Project, etc. is prepared.

Output 4 cannot be achieved by the end of the project. To suggest an overall system of quality seed production in woreda level to be sustainable, it is important to study a seed distribution system as well as a cost and benefit analysis in woreda level. This study is currently under implementation (activity 4-2, and 4-3). Based on this study, as well as the result acquired by the seed quality testing for 3rd round SFS graduates, the project will compile final suggestions for a potential approach to be introduced in Ethiopia (Indicator 4-1).

¹ The follow up survey was conducted in June 2013 to 2nd round SFS graduates in 18 villages out of 24. 10 farmers were selected from each village, and answered questionnaire. There were 180 answers gathered by the time the mission team starts evaluation survey.

Thus, if the activities under output 3 are achieved, the output 4 will be achieved.

As for the report compiled good practices and outcomes of the project, the project is correcting the materials to be compiled in the report, and it will be published before the end of the project (Indicator 4-2).

(2) Achievement Level of Project Purpose

Project Purpose: Use of quality seeds is increased in the target woredas.

1. At least 40 tons of quality seed multiplied in a cropping season through the project approach is produced in the target woredas.
2. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed.

The project purpose cannot be achieved by the end of the project.

If the rate of graduates exceeds 90% for the third rounds SFS, it is expected that 2044 SFS farmers is to be graduated. If all these farmers continue producing seeds for 0.1ha with the yield of 1.8 ton/ha, which is the average yield of the second round SFS farmers for teff production, the total annual production will be 367.9 tons. Assuming equal number of SFS farmers among each woreda, this makes 73.6 ton per woreda, thus it exceeds 40 tons. However, it is necessary to wait for the result by the output 3 to confirm if the produced seeds are quality seeds, thus it cannot be judged if it will be achieved during the project period (Indicator 1).

Although the follow up survey mentioned above suggests the most of the production by SFS farmers with allocated lots have been utilized or sold as seeds not as grains, the team noted other examples of the farmers utilizing their production as grains. It needs data to judge indicator 2, and it is expected that the project makes monitoring activities in this regard.

3-2. Summary of Evaluation

(1) Relevance

Relevance of the project is assessed as high. There is no change in conformity with the agricultural development policy of Ethiopian government y as well as with the Japanese ODA policy toward Ethiopia. The relevancy of the project approach to increase the production and circulation of the quality seed in local level continues to be high. The planning committees in each woreda and the orientation to the farmers in each village have been organized during the process of target areas and groups' selection. Considering quite high graduation rate for first and second SFS rounds (94%), it can be assessed that the high relevancy is kept in target areas and groups' selection as well.

(2) Effectiveness (Inhibiting and Promoting Factors)

Effectiveness of the project is assessed as relatively low. The project cannot be completed by the end of the project due to the delay in activities under output 3.

The inhibiting factors for the project purpose and outputs are: repeated revisions of PDM, which have been followed by the changes of project activities and outputs; lack of a unified view on seed system among relevant organizations in Ethiopia; repeated changes of Japanese experts with rather short terms (including the chief advisor); the delay of the expert dispatch in the field of seed quality control; less purity of C1 seeds procured for first round SFS; outbreak of stripe rust in Africa on wheat production in 2011; high turnover rate among extension agents; lack of involvement by Ethiopian counterparts especially in federal level etc.

The promoting factors are: contributions to the activities under output 3 and 4 by the short term experts or

local staff assigned after the mid-term review; high recognition and reputation for SFS activities or approaches from within and without the project; high motivation to participate and contributions by SFS farmers; the timing of policy enhancement by the Ethiopian government to introduce the row seeding technology etc.

(3) Efficiency

Efficiency of the project is assessed as relatively low.

As for the input by Japanese side, training contents and approaches and procurement of equipment have been properly and efficiently implemented; on the other hand, modality of expert dispatches as mentioned above especially during the first half of the project term was noted as one of the major causes in delaying the project activities.

As for the input by Ethiopian side, there were lack of involvement of counterparts in project management, lack of staff assigned in seed quality control activities, high turnover rate, and lack of the office space provided for the project team.

(4) Impact

Impact of the project is medium. Even the achievement level of the overall goal cannot be measured at the moment of evaluation; there are generally very high recognition and appreciation by the various stakeholders in seed sector, especially as to the SFS approach towards the seed production technology improvement.

As for the impact inside of the project purpose, the following impacts have been recognized: the technologies on seed production increase have been delivered soundly with the high cooperation by the farmers, the project has strengthened the linkage between development agents and SFS farmers; it has facilitated farmer-to-farmer seed exchanges; there is high motivation of the stakeholders to continue government run SFSs; it has contributed the government policy to disseminate row-sowing etc.

As for the impact outside of the project purpose, the following impacts have been recognized: some of the SFS graduates organized themselves as a primary seed cooperative for seed production; some of SFS members are contract farmers of ESE, thus indirectly improving the seed quality for basic seed or C1 productions; the human capital building approach in SFS produced huge impact in smallholder farmers' daily farm operation, as well as producing the group dynamics among them etc.

(5) Sustainability

Sustainability of the Project is assessed as medium. The project has demonstrated an effective approach to improve availability of quality seeds at local level. However, due to the delay of some of project activities, the data available at the moment is not enough to judge sustainability of the project in total. Some of the points recognized by the team in terms of sustainability are described below:

In terms of policy aspects, as mentioned in the clause of the Relevance, the project has high relevancy and the project intervention is supported with government policy through the new seed law proclamation. There is possibility that the project contributes to materializing the informal seed distribution or quality declared seed system by sharing its experience.

In terms of institutional and financial aspects, there has been general dependency of the project management toward Japanese experts' team, and lack of involvement of counterparts in federal level that leaves concerns in the level of technical transfer in terms of project management. On the other hand, half of the third round SFSs have been organized by the initiative of Ethiopian government and there is high willingness to continue, despite the difficulty in the arrangement of materials necessary for the trainings. There is "readiness" of the

government to institutionalize the project approach into the existing government system so as to formalize various requests by farmers' groups. The possibility to have financial support by other donors has been also considered. As to the woreda laboratories, its functions and status need to be institutionalized under the regional bureau of agricultures.

In terms of technical aspect, to see the introduced quality seed production technologies to be functional and sustainable, it is necessary to recommend a level of quality standard that can be satisfactory for the local demands, and agree to it with the relevant stakeholders. As to the technical sustainability in human resources, there is a concern in sustainability of the skills and knowledge transferred to the woreda staff in target areas, due to the high turn-over rate. At the moment, there is a budget allocation planned by the government to tackle with the issue improving working conditions of extension agents.

3-3. Conclusion

The evaluation team confirmed that the project has produced a great change by introducing different ways for farmers to counteract seed shortage and confirmed there is high relevancy and impact. On the other hand, there is a delay in seed quality testing activities, so that effectiveness and efficiency of the project are assessed medium. As to sustainability, there are concerns in terms institutional and technical aspects.

At the moment, the team confirmed it is necessary to put one of the focus on the seed quality inspection activities and based on that the project needs to suggest a functional local level quality seed production and circulation system. As the testing activities at the woreda laboratories can be made only from April to June 2014 when the extension agents finish their mandates to fully involve in other programs, thus the team concludes it is necessity for the project to extend for another half year after the project period (until August 20th, 2014).

3-4. Recommendations

Based on the conclusion above, the evaluation team recommended the following actions to be taken in the remaining cooperation period.

(1) Continuation of the Project Components (especially SFS approach)

It is necessary to study and suggest how to incorporate the SFS approach into the existing extension system of MoA. The evaluation team identified three possibilities to be considered as below:

- iv) FTC has training programs for farmers, and the SFS approach may be incorporated as a program inside FTC.
- v) Ministry of Agriculture has a plan to implement trainings for all the farmers in the country in the coming years, utilizing ATVET and FTC, and the SFS approach may be incorporated as one of the training approaches.
- vi) There are the existing practices of the SFS approach inside of the project by the initiatives of each regional and woreda authorities, as the government run SFSs. This initiative in conducting government-run SFSs is very encouraging, and it should be continued and expanded while making utmost efforts in improving the quality of the SFSs (in the aspect of human resources, and financially and technically).

(2) Monitoring of the SFS graduates

It is necessary to study a mechanism of monitoring and follow-up the SFS graduates so as to confirm sustainability of the introduced technologies and to expand its technical contributions.

(3) Ensuring the Seed Assurance System

It is necessary to study and recommend an appropriate quality standard and testing procedure at woreda level for the seeds produced by the SFS farmers at woreda level, so as to function a local seed circulation system for farmers.

(4) Institutionalizing the QSPP experience and knowledge

- It is necessary that the experience of QSPP is integrated into the process of strengthening the informal seed distribution system. For this end, it is advisable to continue dialogues with the organizations and initiatives (or program stakeholders) such as ATA and ISSD, which are the major stakeholders regarding the seed system development in Ethiopia.
- It is advisable to study on how to contribute materializing the quality declared seed (QDS) which is defined in the new seed proclamation. It is necessary to study the possibility of distribution of the seeds as QDS, which are produced based on the approach developed by QSPP, and contribute materializing as a part of the QDS concept.

3-4-1. Recommended Actions to be taken by the Japanese Side

- It is necessary that Japanese side supports the inspectors in woreda laboratories for them to implement testing for the seed produced by the SFS farmers, so as to complete the activities under the output 3 and Output 4 that are based on other Outputs.
- It is necessary that Japanese side to support technically the trainings of newly assigned inspectors in the woreda laboratories, which will be conducted by Ethiopian side.

3-4-2. Recommended Actions to be taken by the Ethiopian Side

- It is necessary that Ethiopian side to assign necessary staff in woreda laboratories in timely manner so as to let the staff practice necessary assignments. If there will be a replacement of the staff, knowledge transfer or sharing have to be done properly.
- It is necessary that Ethiopian side to develop a linkage between regional laboratories and woreda laboratories, and thus to authorize woreda laboratories to issue certificate for seed qualities.
- It is necessary that the data and experience gained by the project activities are integrated into the process of materializing and institutionalizing a system of seed testing standard and procedure.

3-5. Lessons Learnt

- 3) It is desirable that the availabilities of experts in the core fields of the project are to be confirmed before the project starts.
- 4) It is desirable to determine the most appropriate modality of expert dispatch assessing whether it is preferable to dispatch short-term experts in terms of efficiency, or long-term experts to ensure consistency of approaches in project activities, and to monitor project performances.

End.

第1章 調査の概要

1-1 調査の背景と目的

エチオピア連邦民主共和国（以下、「エチオピア」と記す）では、人口の85%が農業に従事し、農業生産のGDPに占める割合が40%以上であり、経済・産業における農業の位置づけは極めて大きい。2010年から2015年までの「国家開発5カ年計画（Growth and Transformation Plan : GTP）」のなかでも、農業を核として経済成長を図ることが目標として掲げられている。しかしながら、農業生産の大部分が伝統的な技術に依存しているのが実情で、単位面積当たりの生産性が低く、安定的な食料生産・供給が行われていない状況にある。

このようなエチオピアにおける低い農業生産性の一因は、改良種子の供給が需要を大きく下回っていることにある。エチオピアにおける肥料や農薬の使用量は増加の一途をたどっているにもかかわらず、改良種子の供給は依然として低水準にとどまっている。種子生産の中軸を担っている国営企業のエチオピア種子公社（Ethiopian Seed Enterprise : ESE）は、改良種子の生産・供給を任務としているが、供給量は農家需要のわずか20%程度にとどまっているといわれており、ほとんどの農民は前年収穫物の一部を保管して作付け用の種子とするか、地方市場でインフォーマルに農民が販売している種子を利用しているのが実態である。これらの種子は①生産性の低い在来種であること、②病気に感染しており発芽率が低く、実をつけないこと、③適切な管理がなされていないためさまざまな品種が混ざっており均質でないこと等の問題があり、農業生産性の観点から大きな課題となっている。

このような状況から、エチオピア政府は改良種子の需要を満たすために農家自身による種子生産増加をめざし、州政府や郡、農業協同組合と協力して活動を行っている。しかしながら、①農民の種子生産技術が不十分であること、②州や郡職員の種子品質管理技術が不十分であること、③種子の価格設定方法がマーケットの状況を反映できていないこと、④行政手続きや収穫後の管理の問題から種子が適切な時期に利用者に配布されないことなど、生産技術、品質管理、流通に至るまで多くの課題を抱えている。

こうした状況を受けて、独立行政法人国際協力機構（JICA）は2010年2月から2014年2月までの4年間の予定で本プロジェクトを実施しており、これまで本プロジェクトでは、チーフアドバイザー／種子生産政策・制度、農機具改良、農業機械、種子生産技術、流通・農業経済、種子生産モニタリング、研修運営、教材作成、種子品質管理、普及システム等の各分野の専門家が派遣されている。

現在までの実績、プロジェクト目標と成果の達成度をプロジェクト・デザイン・マトリックス（Project Design Matrix : PDM）に基づき確認し、さらに評価5項目の観点からプロジェクトの評価を行うとともに、プロジェクト終了前後の活動に関する提言と類似案件のための教訓を得ることを目的として、終了時評価を実施した。

1-2 調査団の構成

<日本側評価団員>

| 担当分野 | 氏名 | 所属 |
|------|------|------------------|
| 総括 | 神 公明 | JICA エチオピア事務所 所長 |

| | | |
|------|-------|---------------------|
| 種 子 | 西川 芳昭 | 龍谷大学経済学部 教授 |
| 評価分析 | 田中 香織 | 株式会社アイコンズ 主任コンサルタント |
| 計画管理 | 本村 美紀 | JICA エチオピア事務所 所員 |

<エチオピア側評価団員>

| 担当分野 | 氏 名 | 所 属 |
|------|-----------------------|---|
| 総 括 | Mr. Hirago Feleke | Senior Expert, Agriculture Input and Supply Directorate, Ministry of Agriculture |
| 団 員 | Mr. Aresawum Mengesha | Officer, Crops' Team, Food and Agriculture Organization, Ethiopia Office |

1-3 調査日程

付属資料1のとおり。

1-4 評価方法

質問票に対する回答、現地調査（プロジェクトサイト視察、関係者へのインタビュー等）を行い、評価グリッド（付属資料3）に基づき、プロジェクト目標・成果の達成状況や実施プロセスの検証、評価5項目（妥当性、有効性、効率性、インパクト、持続性）の観点から評価を行った。評価5項目の視点は以下のとおり。

| 項 目 | 視 点 |
|-------|---|
| 妥当性 | プロジェクトのめざしている効果（プロジェクト目標や上位目標）が、評価を実施する時点において妥当か、問題や課題の解決策として適切か、相手国と日本側の政策との整合性はあるか、プロジェクトの戦略・アプローチは妥当かなど）を問う。 |
| 有効性 | プロジェクトの実施により、本当に社会等への便益がもたらされているのか（あるいは、もたらされるのか）を問う。 |
| 効率性 | プロジェクトのコストと効果の関係に着目し、投入要素等が有効に活用されているか（あるいは、されるか）を問う。 |
| インパクト | プロジェクト実施によりもたらされる、より長期的・間接的効果や波及効果を見る。予期していなかった正・負の効果・影響を含む。 |
| 持続性 | 協力が終了しても、プロジェクトで発現した効果が持続しているか（あるいは、持続の見込みがあるか）を問う。 |

第2章 プロジェクトの実績と現状

2-1 投入実績

2-1-1 日本側投入

(1) 専門家派遣

調査時点で、長期専門家が2分野で2名、短期専門家が10分野で17名が派遣されている。調査時点での派遣実績概要は以下のとおり。

<長期専門家派遣実績>

| | 氏名 | 分野 | 派遣期間（日本発着） | | MM (人月) |
|---|-------|---------------------|------------|------------|-------------------|
| | | | 開始 | 終了 | |
| 1 | 八木 和彦 | チーフアドバイザー | 2012年8月27日 | 2014年2月20日 | 18.1 |
| 2 | 中村 謙仁 | 業務調整/ 種子生産モニタリング | 2011年5月23日 | 2014年2月20日 | 33.5 |
| 計 | | | | | 51.5 ¹ |

<短期専門家派遣実績>

| | 氏名 | 分野 | 派遣期間（日本発着） | | MM (人月) | 分野別 MM | |
|---|--------|-------------------------|-------------|-------------|-------------|-----------|-----|
| | | | 開始 | 終了 | | | |
| 1 | 櫃田 木世子 | チーフアドバイザー/ 種子生産政策・制度 | 2010年2月23日 | 2010年5月18日 | 2.8 | 12.4 | |
| | | | 2010年6月30日 | 2010年12月25日 | 5.9 | | |
| 2 | 仲田 茂 | | 2011年7月31日 | 2011年11月19日 | 3.7 | | |
| 3 | 松本 巖 | 農業機械 | 2010年2月23日 | 2010年4月18日 | 1.8 | 11.9 | |
| | | | 2010年10月10日 | 2010年12月11日 | 2.1 | | |
| 4 | 濱中 透 | | | 2011年10月17日 | 2011年12月13日 | | 1.9 |
| | | | | 2012年12月9日 | 2013年3月1日 | | 2.7 |
| | | | 2013年6月10日 | 2013年8月6日 | 1.9 | | |
| 5 | 徳本 靖 | | 2012年2月29日 | 2012年4月13日 | 1.5 | | |
| 6 | 松本 巖 | 農機具改良 | 2010年6月30日 | 2010年8月13日 | 1.5 | 1.5 | |
| 7 | 松井 猛彦 | 種子生産技術 | 2010年6月30日 | 2010年8月30日 | 2.0 | 13.2 | |
| | | | 2010年11月15日 | 2011年1月14日 | 2.0 | | |
| | | | 2011年5月21日 | 2011年9月2日 | 3.5 | | |
| | | | 2011年10月10日 | 2011年12月8日 | 2.0 | | |
| | | | 2012年6月17日 | 2012年8月13日 | 1.9 | | |
| | | | 2012年10月22日 | 2012年12月17日 | 1.9 | | |
| 8 | 伴場 賢一 | 流通・農業経済 | 2010年7月5日 | 2010年9月2日 | 2.0 | 5.7 | |
| | | | 2010年11月24日 | 2010年12月23日 | 1.0 | | |
| | | | 2011年2月3日 | 2011年3月14日 | 1.3 | | |
| | | | 2011年10月25日 | 2011年12月9日 | 1.5 | | |

¹ 小数点以下第二位までの四捨五入の計算に基づき 51.5 となる。

| | | | | | | |
|----|--------|------------|---|--|--------------------------|------|
| 9 | 中村 謙仁 | 種子生産モニタリング | 2010年7月5日 | 2011年3月17日 | 8.5 | 8.5 |
| 10 | 小川 奈穂子 | 研修運営 | 2011年3月14日 | 2011年8月22日 | 5.4 | 13.8 |
| | | | 2011年9月27日 | 2012年1月17日 | 3.7 | |
| 11 | 郭 詠理 | | 2012年5月2日 | 2012年9月21日 | 4.7 | |
| 12 | 仲里 麻也子 | 教材作成 | 2011年4月5日 | 2011年6月2日 | 1.9 | 3.9 |
| 13 | 田口 明男 | | 2012年4月15日 | 2012年6月13日 | 2.0 | |
| 14 | 伴場 賢一 | 普及システム | 2011年4月19日 2011年7月12日 2012年2月26日 2012年5月1日 | 2011年5月18日 2011年8月30日 2012年3月30日 2012年6月30日 | 1.0 1.6 1.1 2.0 | 5.7 |
| 15 | 白石 正明 | 種子品質管理 | 2011年10月9日 | 2011年12月30日 | 2.7 | 6.1 |
| | | | 2012年7月27日 | 2012年9月8日 | 1.4 | |
| 16 | 村上 雅彦 | | 2012年12月9日 | 2013年2月4日 | 1.9 | |
| 17 | 新井 司郎 | | 2013年8月4日 2013年12月上旬 | 2013年10月2日 2014年2月下旬 | | |
| 計 | | | | | 82.7 | |

(2) 本邦研修・第三国研修の受け入れ

調査時点までに9名のプロジェクト関係者が本邦及びケニア共和国（以下、「ケニア」と記す）における第三国研修に参加している。詳細は下表のとおり。今後2013年9月中にさらに5名のカウンターパート（Counterpart：C/P）がケニアでの第三国研修に、また9月中旬から10月にかけて4名のC/Pが本邦研修に参加する予定である。

| | 氏名 | 期間 | 研修コース | 本邦／第三国 | 研修参加時の職位 |
|---|--------------------|---------------|---------------------|------------|---|
| 1 | Mr. Assefa Ayele | 2010年12月5～11日 | ケニアの農民学校視察 | 第三国研修（ケニア） | Senior Expert, Agricultural Extension Directorate, MoA（本プロジェクトのプロジェクト・マネジャー） |
| 2 | Mr. Dejene Mebratu | | | | Senior Expert, Agricultural Extension Directorate, MoA |
| 3 | Mr. Assefa Ayele | 2012年7月6～18日 | 小麦の種子生産及び品質管理に関する視察 | 本邦研修 | Senior Expert, Agricultural Extension Directorate, MoA（本プロジェクトのプロジェクト・マネジャー） |
| 4 | Mr. Emiru Mijana | | | | Senior Seed Agronomist, Agricultural Input Supply, Distribution & Credit Follow Up Process, Oromia R-BoA（本プロジェクトの主要C/P） |

| | | | | | |
|---|-------------------------|-------------------|---------------------------|------|---|
| 5 | Mr. Abebaw Adane | | | | Senior Seed Quality Inspector, Quarantine, Inspection & Quality Control, Amhara R-BoA |
| 6 | Mr. Tekle Bahiru | | | | Senior Expert of Seed Multiplication and Quality Control in SNNPR BoA (本プロジェクトの主要 C/P) |
| 7 | Mr. Likisa Kurmana | 2012年10月14～31日 | 地方開発における若手指導者研修 | 本邦研修 | Agronomist, Agricultural Input Supply, Distribution & Credit Follow Up Process, Oromia R-BoA (本プロジェクトの主要 C/P) |
| 8 | Mr. Hailu Adugna | 2013年2月14～16日 | 農民主導による普及手法 | 本邦研修 | Senior Economist, Agricultural Input Supply, Distribution & Credit Follow Up Process, Oromia R-BoA (本プロジェクトの主要 C/P) |
| 9 | Ms. Medhin Gebereselase | 2013年7月15日～10月12日 | 種子品質管理及び高品質種子流通促進のための種子実生 | 本邦研修 | Seed laboratory technician, Animal and plant Health Regulatory/Seed Quality, MoA |

(3) 機材供与

車両、オートバイ、事務機器、種子生産技術改良機材や簡易種子検査関連機材が供与された。供与機材の総額は392万ブル（円換算で約2,066万円²）である。詳細リストについては、付属資料4.「合同評価報告書」Annex 5を参照のこと。

(4) プロジェクト運営費（在外事業強化費）

現地でのプロジェクト運営費（在外事業強化費）は、調査時点で2,544万ブル（円換算で約1億3,400万円³）である。詳細については、付属資料4.「合同評価報告書」Annex 6を参照のこと。

2-1-2 エチオピア側投入

(1) C/Pの配置

合計45名のC/Pが配置されている。農業省（Ministry of Agriculture : MoA）普及局より3名（プロジェクト・ダイレクター、プロジェクト・マネジャー、C/P）、州農業局（Regional Bureau of Agriculture : R-BoA）〔アムハラ州、オロミア州、南部諸民族州（Southern Nations, Nationalities and Peoples Region : SNNPR）〕より9名、ゾーン農業開発部より4名、ワレダ農業事務所より29名、デブラゼイト農業試験場（Debre Zeit Agricultural Research Center : DZARC）より研究員2名がプロジェクト活動に関与している。詳細は、付属資料4.「合同評価報告書」Annex 7を参照のこと。

² 2013年9月3日の換算レート、1ブル=5.27円で計算。

³ 同上。

(2) 施設の提供

MoA 普及局、オロミア R-BoA 及びアムハラ R-BoA が、それぞれプロジェクト事務所を提供していたが、特に MoA 普及局における事務所スペースは手狭であり、日本側からの要請の結果、今後 MoA 内に新たな執務スペースが提供される予定である。またプロジェクト活動対象ワレダの各農業事務所が簡易種子検査ラボラトリーの建設用地を提供している。さらに DZARC が専門家執務スペース、網室用地、種子増産圃場及び有用技術実証試験圃場を提供した。

(3) プロジェクト運営費

エチオピア側は、上記施設の光熱水費等の維持管理費を負担している。

2-2 成果の達成状況

各成果の達成状況を以下のとおり確認した。

2-2-1 成果 1：優良種子生産技術が改善される。

成果 1 は既に達成されている。7 種類の基本的な優良種子生産技術が現地農家に適応可能な技術であることが実証され、これら技術は種子農民学校 (Seed Farmers' School : SFS) を通じて農家に紹介されている。またこれら技術を含めた優良種子生産技術に関するマニュアルが取りまとめられ、調査時点で MoA の承認を待っている段階である。同報告書が承認された際には現地語に訳して関係機関に配布される予定である。

指標 1-1：5 種類以上の種子生産技術が実証される。

本指標は達成されている。表 2-1 のとおり、7 種類の種子生産技術に用いられる基礎的な技術の実証が完了している。DZARC における実証試験と農家研修センター (Farmers' Training Center : FTC) における適応試験を経て、現地農家にとってこれら技術が有効であることが確認されている。その他プロジェクトによって確認された種子生産技術は表 2-2 のリストのとおりである。これら技術は「テフ・小麦の種子生産技術マニュアル」(2013 年 7 月第 3 版) に取りまとめられている。

プロジェクトはこれら技術に関連する農機具の改善・開発にも取り組んでおり、これまで計 11 種類の農機具が検討されてきた (表 2-3 参照)。中間レビュー時の提言に基づいて、プロジェクトは手動式条播機の開発・導入に注力し、同条播機の有効性について 2013 年 4 月の農業改革庁 (Agricultural Transformation Agency : ATA) ・エチオピア農業研究機構 (Ethiopian Institute of Agricultural Research : EIAR) 共催による機械フェアにおいて確認した。同条播機は、使用することで労働力と時間を削減できるだけでなく、使用される種子量の減少にも貢献し得るものである。プロジェクトは 100 機の条播機を製造し、これまで 90 機がワレダ事務所を通じて第 3 期 SFS の農家グループに配布されている。SFS 参加農家による同条播機の使用状況を確認した近隣農家が、独自に同様の条播機の製造を注文した事例も 2 件確認されている。

表 2-1 開発・実証済みの基礎的な種子生産技術

| |
|------------------------------|
| 1. 圃場準備（トウスハローを用いた碎土、均平化の効果） |
| 2. 播種方法（散播と比較した条播の有効性） |
| 3. 播種方法（最適な条間） |
| 4. 播種方法（条播機の開発と有効性の確認） |
| 5. 覆土・鎮圧の効果 |
| 6. 異株の抜き取りの効果と簡易な判別方法の確立 |
| 7. 収穫後処理（脱穀、精選を行う機械の開発と実証） |

表 2-2 検討・開発された種子生産技術

| 種子生産技術の種類 | 主要技術項目 | 手 段 |
|--------------------|--|--|
| 優良種子生産のための必須技術 | | |
| 1. 圃場整備 | 圃場記録（作物、種別、病虫害）、圃場特性（土壌肥沃度、排水）、隔離 | 事前インタビューの実施 |
| 2. 播種 | i) 条播による異株と雑草の効果的な除去 ii) 優良種子の選別 | i) 条播機の利用 ii) 種子の洗浄（ふるい） |
| 3. 出穂後処理 | 異株と雑草の除去 | 異株の認識方法の確立 |
| 4. 収穫後処理 | i) 収穫後の操作（雑種混入の予防） ii) 種子の紛失と多種との混合の予防 | i) 機械のメンテナンス ii) 脱穀機の使用後処理 |
| 優良種子生産のために有効なその他技術 | | |
| 5. 圃場整備 | i) 種子品質管理のための効果的な圃場設計 ii) 播種前の除草 | i) 播種床と圃場管理用の通路の確保 ii) マニュアルか除草剤 |
| 6. 播種 | 成熟種子の適切な播種量 | 適切な栽植密度 |
| 7. 施肥 | 適切な施肥による管理 | 適切な施肥 |
| 8. 収穫期処理 | 収穫期を逃した過剰成熟の予防 | 適時の収穫 |
| 9. 収穫後処理 | i) 適切な場所での脱穀 ii) 病虫害種子の除外 iii) 非成熟種子の除外による選別 | i) 隔離かプラスチックシートの利用 ii) 目視による選別 iii) 自動唐箕 |
| 10. 貯蔵 | 種子の品質と発芽性の確保 | 適切な貯蔵環境 |

表 2-3 検討・開発された農機具

| 種 別 | 開発状況 | 改善点等 |
|-------------|---------------------------|-------------------------------|
| 1. トウスハロー | モデルの開発後、機材開発活動の集中化を図り開発停止 | 仕様の統一化、強度の増加、重粘土への適応、コスト減が必要。 |
| 2. 条播機（コムギ） | 完了 | |
| 3. 条播機（テフ） | 完了 | |

| | | |
|--------------------|---------------------------|--|
| 4. 脱穀機 | モデルの開発後、機材開発活動の集中化を図り開発停止 | 軽量化、小型化、コスト減が必要。 |
| 5. クリーナー (精選機) | | 軽量化、強度増、コスト減が必要。 |
| 6. 唐箕 (手動、金属製) | | 耐性強化、風圧の統一、軽量化、仕様の統一が必要(圃場で脱穀済みの種子から未成熟種子及びゴミの除去を目的としたもの)。 |
| 7. 唐箕 (電動式、木製) | | 風圧増、耐性増が必要〔商業用目的の小麦種子から優良種子選別のために単位農協(Primary cooperative)やSFS卒業農家グループでの使用目的に考案された〕。 |
| 8. コンパクター (鎮圧機) | 農家圃場及び試験圃場で2010年、2011年に利用 | 土質に応じて、木枝か鎖による軽度な鎮圧あるいは覆土を行う。 |
| 9. 減菌機 | 2010年に農家圃場及び試験圃場で利用 | 2010年の試験結果にて、減菌済み種子と通常種子に有意な収量差が確認できず、機材投資額の回収が困難と判断され利用停止。 |
| 10. ミシン | 調達済み | 市販機を購入。 |
| 11. 足踏式脱穀機 | モデルの開発後、機材開発活動の集中化を図り開発停止 | 上記4番の脱穀機の重量・サイズ軽減のために日本より搬入されたが、搬入時期の遅延により更なる開発が実現せず。 |

指標 1-2：種子生産技術マニュアルが作成される。

本指標は達成されている。以下3種類の関連マニュアルが作成されている。

- ・テフ・小麦種子生産技術マニュアル(英語)
- ・条播機製造マニュアル(英語、アムハラ語)
- ・条播機運営管理マニュアル(英語、アムハラ語)

「テフ・小麦種子生産技術マニュアル」はプロジェクトによって開発・確認された種子生産技術を取りまとめたマニュアルであり、ワレダレベルの職員・普及員を対象としたものである。調査時点でMoA内部で承認プロセスにあり、承認され次第アムハラ語・オロミア語訳版も作成され、関係機関やゾーン農業開発事務所にある図書館、FTCへ配布され、MoAのホームページ等への掲載も検討されている。条播機の製造、運営管理マニュアルは英語及びアムハラ語版が作成されており、SFS農家や普及員(Development Agent: DA)、製造業者に配布された。

2-2-2 成果2：優良種子生産技術が小規模農家に普及する。

指標の達成度を確認するためのデータが幾つか不足しているものの、確認可能なその他データより、成果2はプロジェクト終了時までには達成される見込みが高い。達成度の明確な確認

のためには、実際に種子生産技術導入を図った農家数や、作成されたマニュアルの活用状況、DA 間の技術移転状況等のデータや情報等が必要だが、プロジェクト内で十分に把握されており、今後プロジェクト終了時までにより明確な事実確認が行われる予定である。

指標 2-1：対象ワレダ（郡）の農業事務所職員の指導員、あるいは普及員としての能力が向上する。

種子生産技術の普及にあたる DA や専門員への研修は、主にファシリテーター研修（Training of Facilitators : ToF）及び技術研修（Technical Training : TT）の形で実施されており、累積参加数は各 199 名、591 名である（研修の詳細は、付属資料 4. 「合同評価報告書」 Annex 8 を参照のこと）。普及員の能力が向上した度合いを測るための明確な基準やデータはないが、以下の点より十分な能力の向上がうかがえる。よって本指標は達成されている。

- ・ ToF、TT の参加者の満足度は高い。評価団によるサンプル調査⁴では、ToF 参加者の 100%（ToF 参加者全 33 名）が研修項目・内容、研修内容の現場への適応性・実践性について満足である旨回答している。また TT 参加者の 100%（TT 参加者全 49 名）が研修項目・内容に満足であり、96%（49 名中 47 名）が研修内容の現場への適応性・実践性について満足である旨回答している。
- ・ 同研修に基づいて、農民への技術普及が SFS を通じて実施されているが、プロジェクト期間中に SFS 開催数は順調に数を増やし、SFS 卒業農家は現在実施中の第 3 期 SFS の推測値も含めると毎年約倍増している（表 2-4 参照）。
- ・ 現在実施されている第 3 期の SFS はその半数がエチオピア政府主導で実施されており、研修を受けた DA や前年度までプロジェクト主導の SFS を指導した DA が指導している。プロジェクトからの支援は文房具類や雨よけ用のトタンやシート等に限定されているものの、主導する各ワレダの来年度以降の継続意欲は高い。
- ・ SFS は 32 週間（8 カ月間）にわたり毎週末開催されているが、第 1 期と第 2 期の SFS 卒業率は平均 94% と高く、調査期間中のインタビュー等からも農家の高い満足度がうかがえた。なお、卒業のために必要となる出席率は 75% である。
- ・ SFS はプロジェクト内外で農業や種子分野における関係機関から一般に高い評価を得ている。

一方で、DA の高い離職・転職率が DA の能力向上における持続性を確保するうえでの懸念として確認された。例えば、アムハラ州から第 3 期 ToF に参加した 12 名のうち現時点でワレダ農業事務所に残存するのは 4 名のみである。プロジェクトでは、SFS に関する以下の教材資料等を整備し移転技術の定着に努めている。以下資料は第 3 期 SFS 終了後に最終版として取りまとめられる予定である。

- ・ SFS の毎週のフリップチャート（第 1 週から第 32 週まで）（英語、オロミア語、アムハラ語版）
- ・ SFS の冊子、パンフレット（英語、オロミア語、アムハラ語版）
- ・ ファシリテーターを対象にフリップチャートの使い方をまとめた教本（英語）

⁴ 2013 年 7 月、調査団の現地調査に先立ってワレダ農業事務所職員向けに 55 の調査票を配布。回答数は 50、うち ToF 参加者数が 33 名、TT 参加者数が 49 名。

・普及教材（フリップチャート）開発マニュアル（英語）

指標 2-2：種子農民学校（SFS）を 900 人以上の農家が卒業する。

本指標は達成される見込みである。プロジェクト期間内における累積の SFS 卒業農家推計値は、第 1 期及び第 2 期の平均卒業率 94%を踏まえて第 3 期 SFS 参加農家の卒業率を 90%とすると、プロジェクト終了までに 1,537 人となり、指標目標値の 900 人を大きく超える。これに加え、第 3 期 SFS では政府主導の SFS も実施されており、現時点で 563 人が参加している。各ワレダごとの SFS 開催数、参加・卒業農家数は表 2-4 のとおりである。

表 2-4：SFS 開催数、参加・卒業農家数

| 州 | ワレダ | | 第 1 期 (2011/12) | 第 2 期 (2012/13) | 第 3 期 (2013/14) | | 計 |
|-------------------------------|------------|------------------|--------------------|--------------------|-------------------|-------------------|--------------------|
| | | | | | | 政府主導 | |
| アムハラ州 | イェルマナデンサ | SFS 開催数 | 0 | 5 | 5 | 4 | 14 |
| | | 参加農家数 (男性/女性) | 0 | 160 (114/46) | 162 (107/55) | 130 (89/41) | 452 (310/142) |
| オロミア州 | アダ、デンドイ、ルメ | SFS 開催数 | 9 | 15 | 9 | 10 | 43 |
| | | 参加農家数 (男性/女性) | 278 (179/99) | 483 (345/138) | 289 (212/77) | 309 (235/74) | 1,359 (971/388) |
| 南部諸民族州 | ソド | SFS 開催数 | 0 | 4 | 5 | 4 | 13 |
| | | 参加農家数 (男性/女性) | 0 | 132 (80/52) | 160 (132/28) | 124 (82/42) | 416 (294/122) |
| | 計 | SFS 開催数 | 9 | 24 | 19 | 18 | 70 |
| | | 参加農家数 | 278 | 775 | 611 | 563 | 2,227 |
| 卒業農家数 (男性/女性) 卒業率：94.1% | | | 257 (169/88) | 730 (500/230) | 550 (est.:90%) | 507 (est.:90%) | 2044 (est.) |

指標 2-3：SFS に参加した農家の 80%以上が成果 1 で実証された種子生産技術を利用する。

調査時点で本指標を確認するためのデータが収集されておらず、プロジェクトは今後プロジェクト終了時までに必要な事実確認を行う計画である。別途プロジェクトが 2013 年 6 月に実施した 180 世帯の農家へのフォローアップ調査によると、農家が SFS で学習した技術の導入意欲は高いことが推測される。以下表 2-5 のとおり、「条播」に関しては 81.4%が、「種子の準備」に関しては 53.2%が重要である旨回答しており、SFS 参加農家の 80%が学習した技術のうち少なくともひとつを導入する可能性は高いといえる。

表 2-5 第 2 期 SFS 卒業農家 180 世帯へのアンケート調査結果*

| SFS の学習項目のうち 3 つの重要な技術を選択 (回答) | 割合 | 回答数 (有効回答数 156) |
|-----------------------------------|-------|-----------------|
| a. 条播 | 81.4% | 127 農家 / 156 |
| b. 種子の準備 | 53.2% | 83 農家 / 156 |
| c. 圃場整備 | 46.2% | 72 農家 / 156 |
| d. 異株の除去 | 25.0% | 39 農家 / 156 |
| e. 施肥 | 21.8% | 34 農家 / 156 |

* プロジェクト・チームは、2013 年 6 月に第 2 期 SFS 卒業農家に対し、SFS を実施した全 24 村中 18 村を選択し、各 10 世帯 (計 180 世帯) に対してアンケート調査を実施した。

2-2-3 成果 3 : 優良種子の品質認証が強化される。

成果 3 はプロジェクト終了時までの達成は困難である。成果 3 に関する活動は、種子品質管理分野の専門家派遣の遅延により関連活動の計画・実施が遅れたことで大きく遅延した。調査時点までにラボラトリーの設置、検査機材の導入、検査職員の訓練及びラボへの配置 (指標 3-1)、SFS 参加農民によるフィールドノートの記録 (指標 3-2)、品質検査手順の整理・マニュアルの整備 (指標 3-3) は実施されているが、ラボラトリーにおける実際の検査 (指標 3-4) は、限定的にしか行われていない。今後第 3 期 SFS 卒業農家の生産種子に対する品質検査が可能となるのは、コムギ・テフの収穫時期とエチオピア側の DA の年間業務スケジュールを勘案すると、2014 年 4 月～6 月となるため、プロジェクト期間中に活動は終了しない。

指標 3-1 : 各ワレダ (郡) のラボラトリーに、種子検査 (フィールド及びラボ検査) に関する研修に参加した職員が 1 名以上配置される。

本指標は達成される見込みである。簡易種子検査ラボラトリーが 5 つの対象ワレダ農業事務所設置され、必要な機材が整備された。プロジェクトは各ワレダの農業事務所職員向けにフィールド検査及びラボ検査に関する研修を実施した。詳細研修リストは表 2-6 のとおりであり、一部研修は SFS C/P の TT の一部として実施された。研修を受けた職員のうち 10 名が、各ラボラトリーに 2 名ずつ検査官として配置された。今後プロジェクトでは、種子品質管理分野の短期専門家の支援を得て、検査官向けにフォローアップ研修・ワークショップを実施する予定である。調査時点で、配置された 10 名の検査官のうち 3 名が離職している。このうち 2 名はオロミア州のルメ・ワレダに配置された検査官であり、残り 1 名は SNNPR のソド・ワレダの検査官である。ルメ・ワレダには既に新規検査官が 2 名配置されているが、ソド・ワレダは現在 1 名体制であり新たな検査官の配置を待っている状況にある。

簡易種子検査ラボラトリーにおける検査官としての業務は、ワレダ職員としての通常の業務に追加で課された業務であったため検査官の業務が過剰となり、第 2 期 SFS 卒業農家の生産種子に対する検査活動は限定的な範囲で行われ、各 SFS グループの生産種子の品質を十分に確認できるレベルには至っていない。各ラボラトリーを十全に機能させるためには所与の条件を踏まえたうえで活動計画を十分に確認し取り組んでいく必要がある。第 3 期の種子検査への取り組みは第 2 期よりも前倒しでより組織立てた形で取り組まれる予定である。

表 2-6 種子品質検査研修リスト

| | 研修名 | 日時/場所 | 参加者 | 人数 |
|----|-----------------------------|--|---|----|
| 1 | 第 1 期 SFS 3 次 TT | 2011 年 10 月 13-14 日 オロミア州デブラゼイト | ゾーン・ワレダの専門家及び DA | 23 |
| 2 | フィールド検査研修 | 2011 年 11 月 2-3 日 オロミア州モジョ | ゾーン・ワレダの専門家及び DA、 種子ラボ検査員 | 21 |
| 3 | ラボ検査研修 | 2011 年 12 月 6-7 日 オロミア州アッセラ | ゾーン・ワレダの専門家及び DA、 種子ラボ検査員 | 11 |
| 4 | 第 2 期 SFS 3 次 TT (オロミア州) | 2012 年 8 月 3-5 日 オロミア州デブラゼイト | オロミア州 C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 32 |
| 5 | 第 2 期 SFS 3 次 TT (アムハラ州) | 2012 年 8 月 10-12 日 アムハラ州 | アムハラ州 C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 20 |
| 6 | 第 2 期 SFS 3 次 TT (SNNPR) | 2012 年 8 月 17-19 日 SNNPR ブタジラ | SNNPR C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 17 |
| 7 | フィールド検査研修 | 2012 年 9 月 4 日 オロミア州ビショフト | ワレダ専門家・DA | 32 |
| 8 | 第 2 期 SFS 5 次 TT (オロミア州) | 2012 年 11 月 16-18 日 オロミア州 DZARC, EIAR | オロミア州 C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 34 |
| 9 | 第 2 期 SFS 5 次 TT (アムハラ州) | 2012 年 11 月 23-25 日 アムハラ州イェルマナデンサ | アムハラ州 C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 28 |
| 10 | 第 2 期 SFS 5 次 TT (SNNPR) | 2012 年 11 月 29 日 -12 月 1 日 SNNPR | SNNPR C/P (州・ゾーン・ワレダの 専門家・普及員監督官・DA) | 22 |
| 11 | ラボ検査研修及び 基礎 PC 技術 | 2012 年 12 月 4-21 日 オロミア州農業省 | ウォルキテ種子ラボ検査官、MoA IT 局、5 ワレダ農業事務所の専門家 | 20 |

指標 3-2 : SFS に参加した農民の 80%以上がフィールドノート⁵を利用する。

本指標の事実関係を確認するためのデータが入手できなかった。プロジェクトは今後プロジェクト終了前に事実確認を行うためのフォローアップ調査を実施する予定である。フィールドノートは現在使用されている冊子型のものが 2013 年 5 月と 6 月に第 2 期及び第 3 期 SFS 参加農家に配布された。第 2 期参加農家については既に旧版のフィールドノートが配布されていたが、冊子型でなく A4 の紙に記録するものであったため、紛失も多く、再度新たなものを配布した。またこの際に単年度ではなく複数年度の記録を記すことができる構成とした。フィールドノートの使用は SFS の卒業要件ともなっているため、SFS に参加している間の利用率は高く、SFS 参加期間中は第 2 期農家のうち 94%以上が利用した。また、プロジェクトは、現在 SFS に参加している第 3 期農家の 9 割方が、第 2 期農家同様に、フィールドノートを有効に利用すべく、指導を行っている。一方、調査団のインタビュー調査では十分に使用していない SFS 農家も散見されたこと、また SFS 終了後の利用状況については確かな情報が入手できなかったことから指標の達成度については判断が困難である。

⁵ フィールドノートとは「基礎データ」「計画」「実際の結果」などを記載するものである。「基礎データ」は生産農家、種子などの種子生産の基本となる情報、「計画」は農家による種子生産の計画、「実際の結果」は、計画された作業の実施情報である。これらを記録することで、だれが、どの作物の種子を、どこで、どのように生産したのか把握できる。

フィールドノートは生産された種子の品質検査を行う際の基礎データ資料ともなるが、以上より多くの農家が少なくとも SFS 期間中は一定の記録を採っていることが想定されるため、簡易種子検査ラボラトリーにおける品質検査時に必要となる基礎情報は得られることが推測される。

指標 3-3：簡易種子検査ラボラトリー向けの種子検査手順及びマニュアルが策定される。

本指標は達成された。簡易種子検査ラボラトリー向けの検査手順は整備され、マニュアルとして取りまとめられ、品質検査に関する研修参加者に配布されている。本マニュアルに基づいて、第 2 期 SFS 卒業農家の生産種子の実際の検査が 2013 年 5 月～6 月にかけて一部実施されている。今後、調査時点に派遣中であった種子品質管理分野の短期専門家が同マニュアルを確認し、必要に応じて改定する予定である。

指標 3-4：種子検査ラボラトリーによって SFS に参加した 80%以上の農民の作物の種子品質検査が実施される。

本指標はプロジェクト期間中には達成されない。一方で種子の品質検査はプロジェクト目標を達成するために不可欠なものであるため、プロジェクト期間終了後にも本指標達成度のフォローを行うことが望まれる。

種子品質管理分野の短期専門家の派遣が遅延したことにより、種子の品質管理に関する活動の計画と実施が遅れた。第 2 期 SFS 卒業農家が生産した種子の一部は既に検査されたが、限定的であった。より体系的な簡易種子検査ラボラトリーにおける品質検査は第 3 期 SFS 卒業農家向けに今後実施される予定である。本年の収穫期は 2013 年 10 月～12 月であり、大部分の DA が関与することとなる「自然資源運営管理キャンペーン」期間が 2014 年 2 月～4 月頃まで続くため、実際の検査業務は 2014 年 4 月～6 月頃に実施される予定である。

第 3 期 SFS 卒業農家は、政府主導の SFS 参加農民を除くと、500 世帯を超えることが推測され、この場合ワレダごとの最大サンプル数は 120 を超える（ワレダごとに最大 5 つの SFS が開催され 162 世帯が参加。この 80%は約 120 世帯である）。ワレダごとに 120 のサンプルを対象に簡易種子検査ラボで検査を実施することは、各ラボの施設と人員の容量に基づき各村ごとの品質を確認することを考えた際に、必ずしも順当な基準でない可能性もある。プロジェクトはワレダごとまた各村（ケベレ）ごとの種子品質を確認するために必要な現実的で適合性のある目標値を検討する必要がある。

2-2-4 成果 4：小規模農家による持続的な優良種子生産システムが提言される。

成果 4 はプロジェクト終了時までの達成は困難である。優良種子生産に関する地域レベルで通用し得る持続的なシステムを提言するために、現在プロジェクトでは種子の流通システムと費用便益分析を実施中である。これらデータが取得され、また種子の品質検査により品質データが確認されれば、現地に導入可能な上記システムの一例をプロジェクトとして提示することが可能となるため、成果 4 の達成には成果 3 の達成を待つ必要がある。

指標 4-1：成果 1～3 の結果が取り纏められ、種子戦略の実施や種子制度の改善に対して一定の貢献がなされる。

成果1～3が達成されれば本指標も達成される。種子の品質が確認されSFS農家による優良種子の生産が可能であることが確認されたうえで、プロジェクトでは関係機関や政策策定機関を集めた最終セミナーを開催し、地域レベル（ワレダ）での優良種子生産システムに関する提言を含めたプロジェクト成果について報告する場が設けられる予定である。

さらにプロジェクトでは、プロジェクト期間を通じて、プロジェクト活動や成果に関して農業・種子分野の政策策定・実施機関含む関連機関への報告や各種PR活動を行い、活動内容や成果の共有を図ってきた。またATAやEIAR等の関連機関によって開催された各種のワークショップやセミナー等に参加することで、プロジェクトから得られた知見が共有されてきており、関係機関からの本プロジェクトへの一般的に高い評価にかんがみ、エチオピアにおける優良種子生産分野で一定の貢献を行ってきたことが推測される。

また特に評価の高いSFSについては、エチオピアにおける既存の普及システムに取り込む可能性やFTCの活用等を通じて継続させる可能性を検討すべく、プロジェクト終了後に実現可能な活動継続の方向性を議論するために、別途関係機関を集めたワークショップが開催される予定である。

さらにエチオピアにおける種子戦略への個別の貢献として、エチオピア政府による条播技術推進政策に対し、プロジェクトでは条播技術と条播機の導入をSFSを通じて行った点が挙げられる。

指標4-2：プロジェクトの模範例やよい結果等を取り纏めた報告書が準備される。

本指標は達成される予定である。プロジェクト活動における優良事例を取りまとめた報告書については現在DAより事例が収集されている最中であり、プロジェクト期間内に作成される予定である。

2-3 プロジェクト目標の達成状況

2-3-1 プロジェクト目標：対象ワレダ（郡）において優良種子の利用が増加する。

種子生産技術の改良や同技術を用いた種子生産の増加は認められるが、地域の需要に即した十分な品質の種子が生産されたかどうかは確認されていない。成果3の項目で既述のとおり、品質検査は2014年4月～6月に実施が可能となるため、プロジェクト目標の達成をプロジェクト終了時まで確認することはできない。

指標1：対象ワレダ（郡）において、プロジェクト・アプローチを通じて、栽培シーズン毎に40トン以上の優良種子が生産される。

本指標の達成には成果3の達成を待つ必要がある。2013年6月に実施されたプロジェクトによる既述のフォローアップ調査では、第2期SFS卒業農家のテフの平均生産高は1.8t/haである。表2-4に基づいて、プロジェクト終了時までには2,044名のSFS卒業農家が輩出し、同農家がSFS参加に際し割り当てられた種子生産用の土地0.1haで種子生産を継続すると仮定すれば、今後毎年367.9tの種子が生産される見込みである。5つのワレダで生産量を割っても平均73.6tの生産量となることから、すべての生産物が種子として用いられなかったとしても、各作期40tの生産は達成される可能性が高い。

一方で生産された種子が優良であるか確認するためには成果3の達成を待つ必要があるた

め、本指標がプロジェクト期間中に達成されるかどうかの判断はできない。第3期 SFS 卒業農家によって生産された種子の品質検査が2014年4月～6月に計画されているが、この結果に基づいて、プロジェクトでは地域需要に即したワレダレベルで流通されるべき種子の品質の妥当な基準について提言をすることが期待されている。種子の品質について調査時点で確認できる点としては、上述の180世帯を対象にしたフォローアップ調査において、78.1%（回答率は34%）が生産した種子の品質が向上したと回答している。

指標2：対象ワレダ（郡）において、プロジェクト・アプローチを通じて、栽培シーズン毎に優良種子の75%以上が利用または販売される。

上述のとおり、生産された種子が優良であるか確認するための検査業務は2014年4月～6月に行われる予定であり、これらの業務により優良種子として判断されたものの利用についての調査結果を行ったうえで指標の達成について判断する必要がある。上述のフォローアップ調査によると、大部分の農家が生産された種子を穀物ではなく種子として使用あるいは販売しているとのことだが、本調査期間中のインタビューでは穀物として使用している農家も確認された。現在プロジェクトではサンプル調査として村レベルでの種子流通調査を行っている。このほかにも SFS 卒業農家の種子生産の継続性等を確認するための包括的なモニタリングやフォローアップ体制について、プロジェクトにて検討される必要がある。

【参考データ】

参考データとして、以下に各ワレダにおける認証種子（Certified 1 Seed : C1）供給量、C1 種子を用いた栽培面積等のデータを記載する。本データはプロジェクト専門家チームにより各ワレダへの聞き取り調査によって入手された。

表2-7 Quantity of certified seeds (C1) supplied to the project targeted woredas (unit : ton)

| Region | Woreda | Crop | Cropping Season | | | | | | Average |
|--------|---------------|-------|-----------------|-----------------|---------|---------|--------------------|---------|---------|
| | | | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | |
| Oromia | Ada'a | Wheat | 208.47 | 118.20 | 17.57 | 30.60 | 94.50 | 58.81 | 88.02 |
| | | Tef | 0.87 | 8.96 | 4.73 | 9.00 | 6.33 | 26.46 | 9.39 |
| | Lume | Wheat | 36.75 | 284.35 | 140.62 | 45.65 | 390.85 | 36.00 | 155.70 |
| | | Tef | - ^{*1} | - ^{*1} | 3.85 | 3.52 | 3.45 | 4.40 | 3.81 |
| | Dendi | Wheat | 42.20 | 4.21 | 4.14 | 6.73 | 171.90 | 231.80 | 76.83 |
| | | Tef | 2.40 | 3.75 | 1.85 | 0.00 | 1.41 | 5.72 | 2.52 |
| SNNP | Sodo | Wheat | 135.68 | 238.80 | 273.68 | 224.95 | 382.40 | 650.10 | 317.60 |
| | | Tef | 0.38 | 5.15 | 19.00 | 32.30 | 1.00 | 71.06 | 21.48 |
| Amhara | Yilmana Densa | Wheat | 10.00 | 14.24 | 40.00 | 13.40 | 0.00 ^{*2} | 69.60 | 24.54 |
| | | Tef | 24.95 | 28.85 | 19.20 | 14.90 | 46.20 | 73.53 | 34.61 |

表 2 — 8 Cropped areas with certified seeds (C1) in the project targeted woredas (unit : ha)

| Region | Woreda | Crop | Cropping Season | | | | | | Average |
|--------|---------------|-------|-----------------|----------|----------|----------|--------------------|----------|----------|
| | | | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | |
| Oromia | Ada'a | Wheat | 1389.80 | 788.00 | 117.00 | 204.00 | 630.00 | 326.85 | 575.94 |
| | | Tef | 29.00 | 298.83 | 157.80 | 300.00 | 210.00 | 1764.00 | 459.94 |
| | Lume | Wheat | 245.00 | 189.57 | 937.47 | 304.33 | 2,605.67 | 240.00 | 753.67 |
| | | Tef | - | - | 128.33 | 117.33 | 115.00 | 146.67 | 126.83 |
| | Dendi | Wheat | 281.33 | 280.66 | 276.00 | 101.00 | 258.00 | 1,545.80 | 457.13 |
| | | Tef | 80.00 | 125.00 | 61.67 | - | 423.00 | 228.80 | 183.69 |
| SNNP | Sodo | Wheat | 1,345.00 | 1,633.00 | 1,824.50 | 1,534.50 | 2,549.75 | 4,334.00 | 2,203.46 |
| | | Tef | 14.00 | 187.25 | 691.00 | 1,174.50 | 363.00 | 2,584.00 | 835.63 |
| Amhara | Yilmana Densa | Wheat | 66.67 | 94.92 | 266.67 | 89.33 | 0.00 ^{*2} | 46.40 | 94.00 |
| | | Tef | 831.67 | 961.67 | 640.00 | 496.67 | 1539.83 | 2451.00 | 1,153.47 |

表 2 — 9 Production of wheat and tef in the project targeted woredas (unit : ton)

| Region | Woreda | Crop | Cropping Season | | | | | | Average |
|--------|---------------|-------|-----------------|----------|----------|----------------------|--------------------|-----------|----------|
| | | | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | |
| Oromia | Ada'a | Wheat | 6,254.23 | 3,152.00 | 351.00 | 6,936.00 | 2,205.00 | 1,192.43 | 3,348.44 |
| | | Tef | 52.20 | 397.66 | 378.72 | 750.00 | 504.00 | 4,474.40 | 1,092.83 |
| | Lume | Wheat | 1,016.75 | 1,025.57 | 5,343.58 | 1,080.37 | 10,709.30 | 1,620.00 | 3,465.93 |
| | | Tef | - | - | 320.83 | 211.19 | 277.15 | 353.47 | 290.66 |
| | Dendi | Wheat | 675.19 | 912.15 | 1,104.00 | 355.92 | 1,032.00 | 5,407.50 | 1,581.13 |
| | | Tef | 96.00 | 187.50 | 129.51 | - | 930.00 | 501.60 | 368.92 |
| SNNP | Sodo | Wheat | 4,013.60 | 6,205.40 | 5,108.60 | 5,677.65 | 8,732.89 | 12,243.55 | 6,996.95 |
| | | Tef | 16.80 | 262.15 | 967.40 | 2,172.83 | 698.78 | 4,134.30 | 1,375.38 |
| Amhara | Yilmana Densa | Wheat | 159.74 | 250.21 | 1,178.41 | 254.41 ^{*3} | 0.00 ^{*1} | 153.12 | 290.25 |
| | | Tef | 1,217.56 | 1,638.69 | 1,224.32 | 1,059.89 | 2,771.69 | 7,353.00 | 2,544.19 |

表 2 — 10 Yield of wheat and tef in the project targeted woredas (ton/ha)

| Region | Woreda | Crop | Cropping Season | | | | | | Average |
|--------|--------|-------|-----------------|---------|---------|---------|---------|---------|---------|
| | | | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 | 2012/13 | |
| Oromia | Ada'a | Wheat | 4.50 | 4.00 | 3.00 | 3.40 | 3.50 | 3.65 | 3.68 |
| | | Tef | 1.80 | 2.00 | 2.40 | 2.50 | 2.40 | 2.55 | 2.28 |
| | Lume | Wheat | 4.15 | 5.41 | 5.70 | 3.55 | 4.11 | 6.75 | 4.95 |
| | | Tef | - | 2.00 | 2.50 | 1.80 | 2.41 | 2.41 | 2.22 |
| | Dendi | Wheat | 2.40 | 3.25 | 4.00 | 3.52 | 4.00 | 3.50 | 3.45 |
| | | Tef | 1.20 | 1.50 | - | - | 2.20 | 2.20 | 1.78 |

| | | | | | | | | | |
|--------|---------|-------|------|------|------|------|------|------|------|
| SNNP | Sodo | Wheat | 3.00 | 3.80 | 3.20 | 3.60 | 3.43 | 2.83 | 3.31 |
| | | Tef | 1.20 | 1.40 | 1.40 | 1.85 | 1.93 | 1.60 | 1.56 |
| Amhara | Yilmana | Wheat | 2.40 | 2.64 | 4.42 | 2.85 | 2.30 | 3.00 | 2.94 |
| | Densa | Tef | 1.46 | 1.70 | 1.91 | 2.13 | 1.80 | 3.30 | 2.05 |

*1 : Data not corrected.

*2 : Not supplied due to the yellow rust (wheat fungus disease) epidemics.

*3 : Due to yellow rust disease and instant rainfall.

2-4 プロジェクト実施プロセス

2-4-1 実施プロセスへの阻害要因

特にプロジェクト期間の前半において、一部のプロジェクト活動に遅延がみられた。その他、プロジェクトの実施プロセスにおいて確認された阻害要因を以下に列挙する。

- (1) チーフリーダーの不在が断続的に繰り返されたことで、種子品質管理分野を中心としてプロジェクト全体の進捗に遅延が生じた。特に最初のチーフリーダーは約3カ月間及び6カ月の派遣、続くリーダーは4カ月間弱の派遣であった。またプロジェクト期間を通じてチーフリーダーが2度交替することによって、プロジェクトの実施・運営方針等がその都度変更したことも、プロジェクトの戦略やアプローチの変更、モニタリングの不足等につながり、効率的なプロジェクト活動の実施に負の影響を与えた。2012年8月よりチーフリーダーは長期専門家として派遣されており、2名の専門家が常駐することとなり専門家投入の適切性についても改善された。
- (2) プロジェクト期間中にPDMが2度改定された。これによってプロジェクトの焦点が変更され、有効性の項目で後述するとおり、プロジェクト活動の進捗に負の影響を与えた。
- (3) SFSは3州における5つのワレダ内の複数の村において、村・ワレダ・ゾーン・州・連邦の各行政レベルのC/P機関と調整のうえ、8カ月の間実施されてきた。一方で特にプロジェクトの前半には専門家の投入が十分ではなく、これらプロジェクト活動の運営、モニタリング、フォローアップ等の活動が十分になされてこなかった。
- (4) プロジェクト全体の運営管理を行うエチオピア側C/Pは、配置されているものの関与が大変少なく、特に連邦レベルでのプロジェクトに対するオーナーシップ認識の欠如が確認された。また中間レビュー以前には、配置された各C/Pの業務分掌やJICAのプロジェクト実施方針やデザインが明確に認識されていなかった。プロジェクトでは、中間レビューの提言を受けフォーカルパーソンの任命を行い、中核となるC/Pに対し繰り返しプロジェクトについての説明を行った。結果、先方のプロジェクトへの理解も進み、SFSへの評価が高まるにつれ、特にワレダレベルでのエチオピア側の関与も深まった。一方でプロジェクト運営管理全般においては、調査時点でも日本人専門家チームが主体となっている。

2-4-2 実施プロセスへの貢献要因

実施プロセスへの貢献要因として以下が挙げられる。

- (1) 合同調整委員会 (Joint Coordinating Committee : JCC) は適切に運営され、機能してきた。JCC はこれまで、2010年10月28日、2011年8月3日、同年11月4日、2012年5月30日、同年12月12日、また調査期間中の2013年8月26日に開催され、ほぼ半年に1度の頻度で開催されてきた。会期ごとに各地域のC/Pにより活動状況の進捗や成果が報告され、主要な決議事項が協議され決定された。
- (2) SFS の参加農家は一般的に技術向上の意欲が高くプロジェクト活動への協力もみられ、SFS を成功裏に進めるための重要な貢献要因となった。
- (3) 上述のとおり、SFS の開期を重ねるにつれて、プロジェクトへの評価や対外的な認知度が高まったことは、エチオピア側 C/P 機関のプロジェクトに対する理解やオーナーシップ認識を深化させるうえで貢献した。
- (4) プロジェクトは月間進捗報告書及び週間計画を関係者間で共有し続け、プロジェクトの調整とモニタリング・メカニズムを機能させてきた。月間進捗報告書は1か月から2か月に1度の頻度で、プロジェクト・ダイレクター、プロジェクト・マネジャー、R-BoA やワレダ農業事務所の C/P 等、すべての関係者間で共有されている。週間計画は、日本人専門家、プロジェクト・スタッフ、連邦・州・DZARC や EIAR 等の中核的な役割を果たす C/P 間で週に1度の頻度で共有されている。プロジェクトはこのほかにも種々の PR 資料を作成しており、エチオピア種子セクターにおける関係各機関の間での本プロジェクトの認知度の向上に貢献した。

第3章 評価結果

3-1 5項目評価

3-1-1 妥当性

本プロジェクトの妥当性は高いと判断される。

(1) エチオピア政府の政策及び戦略との整合性

プロジェクト目標及び上位目標は、引き続きエチオピア政府の国家政策と高い整合性を保持している。エチオピアの国家開発5カ年計画である“GTP (Growth and Transformation Plan 2010/11 - 2014/15)”では、「農業を経済成長の主要源として維持する」としている。同計画内では、農業・農村開発の重点目標のひとつとして改良種子の供給増が掲げられており、2009/10年度の5万6,000tから2014/15年度には36万tとすることがめざされている。さらにMoAの政策文書である「エチオピア国農業セクター政策・投資枠組み文書：2010～2020年」においても、政府の努力にもかかわらず改良種子の活用が極めて限られていること、また小規模農家の低い生産性を改善することが大きな課題である旨確認されている⁶。

(2) 日本の対エチオピア ODA 政策との整合性

日本の対エチオピア ODA 政策と本プロジェクトの整合性についても変更はなく、高い。対エチオピア ODA 政策の重点分野のひとつは「農業・農村開発」であり、日本の援助は、農業生産性の向上と市場を通じた食糧アクセスの改善を目的に行っていくこととしている。エチオピア向けの ODA 事業展開計画において、本プロジェクトは「農業生産性向上プログラム」の下に位置づけられており、同プログラムは重点分野「農業・農村開発」内における最重要項目として位置づけられている。

(3) プロジェクト・アプローチとの整合性

本プロジェクトの基本的なアプローチに変更はなく、妥当性は高い。改良種子（改良品種）の生産量はエチオピア国内で増加しているものの、テフ及びコムギの種子の供給率は、公式需要に比して大変低いレベルにとどまっている。表3-1で確認されるとおり、2005年から2008年の供給率の平均値は、テフが14.5%、コムギが26.3%となっている。この需給ギャップは地域レベルでのインフォーマルな種子の取引によって満たされており、これら取引は農家間で種子の品質への十分な認識もなく行われていることが多く、生産量の改善に負の影響を及ぼしている。本プロジェクトはこのような課題に対応するために、地域レベルで優良種子の供給を増加させるために開始されたものである。

⁶ “The use of chemical fertilizer and improved seeds is quite limited despite Government efforts to encourage the adoption of modern, intensive agricultural practices. Low agricultural productivity can be attributed to limited access by smallholder farmers to agricultural inputs, financial services, improved production technologies, irrigation and agricultural markets; and, more importantly, to poor land management practices that have led to severe land degradation” 出典：「エチオピア国農業セクター政策・投資枠組み文書：2010～2020年」、p3.

表 3-1 公式需要に対するテフ・コムギの種子供給率（%）*

| 穀物 | 2005 | 2006 | 2007 | 2008 | 平均 |
|-----|------|------|------|------|------|
| テフ | 5 | 12 | 22 | 19 | 14.5 |
| コムギ | 20 | 38 | 23 | 24 | 26.3 |

* 出典：” Seed, Fertilizer, and Agricultural Extension in Ethiopia” , Mar. 2011, International Food Policy Research Institute (IFPRI) .

(4) ターゲット地域及びターゲットグループの妥当性

ターゲット地域及びターゲットグループの妥当性に変更はなく、引き続き高い。

アムハラ州、オロミア州、SNNPR はエチオピアにおける主要穀倉地帯である。これら州において、プロジェクトは SFS の各期開始前に州、ゾーン、ワレダレベルの C/P を招聘した計画委員会を開催し、一定の基準(種子生産の経験、外部からのアクセスの容易さ、コミュニケーションの容易さ等)の下に、他ドナー支援との重複を避け、対象となる村を選別している。

SFS 参加農家の選別については、各村の DA が SFS 開催前に説明会を開催し、プロジェクトと SFS の趣旨について説明を行ったうえで、関心のある農家だけを男女比や年齢的なバランスも考慮しながら決定している。

3-1-2 有効性

本プロジェクトの有効性はやや低いと判断される。

(1) プロジェクト目標達成の見込み

第2章の2-3節で確認したとおり成果3に関する活動の遅れから、プロジェクト期間内にプロジェクト目標の達成を確認することはできない。

(2) プロジェクト目標及び成果の達成に影響を与えた阻害及び促進要因

本プロジェクトの目標及び成果の発現に影響を与えている正負の要因として、以下の点が挙げられる。

1) 阻害要因

a) PDM の変更

PDM がプロジェクト期間中に2度変更され、各項目の表現が明瞭化される一方で、活動項目や指標、また成果がその都度大きく変更されることで、一貫したアプローチでの活動がされにくかったことが推測される。特に過去の PDM に比して、現在の PDM (Ver. 3) は種子生産技術の向上に大きな焦点を置いた内容となっているように見受けられ、優良種子の認証システムや持続的システムに関連する成果3及び4の目標範囲が不明確である。活動項目としては関連項目が維持されており、プロジェクトでは流通調査や費用便益調査を実施中で、現実的な優良種子の流通システムについてプロジェクト期間中に提言を行うことが計画されている。

b) SFS 農家への種子供給

2011年に第1期 SFS 用に種子公社より購入された C1 種子は、純度が低く種子としての品質を保持していなかった。よって同 C1 種子より生産された C2 種子は穀物と

して消費・販売されることとなった。また 2011 年にアフリカでコムギ黄さび病が流行り、プロジェクトは十分な C1 種子を調達することが出来なかった。なお、ESE から購入される C1 種子の純度が低いという点については、プロジェクトの活動の範囲内で種子生産農家により 1 世代の生産過程を加えて純度を上げることで、種子としての純度の改善が図られるようになっている。

c) 人員の配置・関与

既述のとおり、DA や他ワレダ職員の高い離職・転職率、日本人専門家（特にチーフアドバイザー）が繰り返し変更された点、プロジェクト前半期のチーフアドバイザーの駐在期間が短期間であった点、またエチオピア側の連邦レベルでのプロジェクト運営・管理面での関与不足等が挙げられる。

d) 種子品質検査の遅延

種子品質管理分野の日本人短期専門家の派遣が遅延し、同分野での活動に遅延が生じた。簡易種子検査ラボラトリーに配置された検査員はラボ業務に兼任であっており、第 2 期 SFS 農家の生産種子に対して実施された検査は限定的な活動にとどまった。

2) 促進要因

a) 投入人材による貢献

中間レビュー時の提言を受けて、成果 3 や 4 に関連する活動の遅延を取り戻すために雇用されたローカルスタッフや派遣専門家が着実な活動を行い、遅延している活動項目の進捗に貢献した。また SFS の活動は広範囲にわたったが、長期専門家による十分な調整業務が行われ毎年活動範囲が拡大した。

b) SFS アプローチへの評価

関係機関や C/P 等から、SFS のアプローチの妥当性や実績に対して高い評価を得た点や、農家より SFS の有用性への理解が得られた点から、プロジェクト活動への十分な協力を得られた。

c) 条播技術を促進するエチオピア政府の政策

プロジェクトで導入した条播技術や条播機の普及が促進された。

3-1-3 効率性

本プロジェクトの効率性はやや低いと判断される。効率性に関連する項目として以下が確認された。

(1) プロジェクトの投入

1) 日本側の投入

a) TT 及び ToF に対する参加者の評価は一般的に高い。既述のとおりアンケート調査の結果では研修項目、研修アプローチ、講師の専門性、研修準備・調整等についても高い満足度が確認された。

b) プロジェクトの前半期は長期専門家は業務調整・種子生産モニタリング分野の 1 名のみで広範囲にわたるプロジェクト実施地域を網羅する必要があり、SFS 等の普及関連業務に業務が特化し、すべてのプロジェクト活動の実施促進を適切に行うことが困

難であった。また既述のとおり、チーフアドバイザーや種子品質管理分野での短期専門家の派遣についても負の影響があった旨確認された。

c) フィールド研修が実施された際の C/P 向けの日当については参加者の満足度が低く、研修に必要な数の DA を確保するうえで困難性があった。

2) エチオピア側の投入

a) 既述のとおり、プロジェクト運営に対するエチオピア側の関与が特に連邦政府レベルで不足していた。

b) 第 2 期 SFS 卒業農家の生産種子に関する検査について、配置された職員は兼任で通常業務をこなしながら検査活動を行う必要があり、特にフィールド訪問が必要となる種子検査関連業務が十分に実施されなかった。

c) DA をはじめとするワレダ職員の離職・転職率が高い。

d) エチオピア側より MoA 内に提供されたプロジェクト事務所は特にプロジェクト後半に長期専門家 2 名が派遣されて以降大変手狭となった。日本側からの繰り返しの要請に応じて、調査時点でエチオピア側では新たな執務スペースの提供が準備されている。

(2) 実施プロセス

第 2 章の 2-4 節で既述のとおり。

3-1-4 インパクト

プロジェクトのインパクトは中程度と判断される。現時点では上位目標の達成の予測は困難であるが、特に SFS のアプローチが種子生産技術向上に及ぼすインパクトについてはプロジェクト内外で高く評価されている点を確認された。

(1) 上位目標の達成可能性

上位目標：対象ワレダ（郡）において優良種子を利用して穀物生産量（主にテフとコムギ）が増加する。

指標 1：対象ワレダ（郡）において、プロジェクト・アプローチを通じて、栽培シーズンごとに 200t 以上の優良種子が生産される。

指標 2：対象ワレダ（郡）において、プロジェクト・アプローチを通じて栽培シーズンごとに生産された優良種子の 75% 以上が利用または販売される。

上位目標には上記の 2 つの指標があるが、プロジェクト終了後 3～5 年後の達成可能性についての判断は現時点では困難である。達成可能性を測るためには以下が明らかにされる必要がある。

- 1) SFS 卒業農家による種子生産の継続の可能性
- 2) 政府主導の SFS の活動の継続性・対象地域拡大の可能性
- 3) 農家が種子生産に割り当てた農地を継続利用するかあるいは拡大する可能性
- 4) 生産された種子が地域需要を満たし、販売される可能性
- 5) 種子の販売価格の利益率

6) 簡易種子検査ラボラトリーの機能性・物理的な検査容量の改善の可能性

上記のうち、1) や3) は今後プロジェクトが計画しているフォローアップ調査によって、4) や5) については成果3及び4に関連する活動を完了することによって、また、2) や6) については今後のプロジェクトの進捗のモニタリングによって確認することができる。

上位目標の達成可能性を高めるためには、プロジェクト終了時までには、得られた情報に基づいて、地域ニーズに基づいた現実的な優良種子流通システムについての提言がなされることが重要である。

(2) プロジェクト目標内のインパクト

- 1) 種子生産技術は農家によく普及されていることが、関係機関の SFS 継続意欲や、SFS 農家の参加意欲の高さから確認される。また SFS によって農家間での種子の流通が促進されている。
- 2) DA と SFS 農家の間の関係性が強化された。プロジェクトに関係した多くの DA より、ToF と TT を通じて農家への関係の仕方において自信を強めたこと、実践に役立つ普及の仕方等を学んだことなどが報告されている。
- 3) SFS は現在政府主導でも実施されており、今後の作期における継続・拡大可能性も高い。
- 4) プロジェクトは条播技術や条播機の使用方法を DA に技術移転し、SFS を通じて対象農家に導入支援を行い、条播技術を推進する政府政策に大いに貢献した。

(3) プロジェクト目標外のインパクト

- 1) SFS 卒業農家の一部は SFS 終了後、卒業農家をグループ化し、種子生産のための単位組合を設立し継続的に技術改良や種子・肥料等の共同購入、他ドナー支援プロジェクトへの参加等の活動を行っている。
- 2) SFS 参加農家の一部は ESE の契約農家であるため、プロジェクトは、原種子や C1 種子の品質向上に間接的に貢献している。ESE 契約農家の全体数は不明であるが、一例としてイェルマナデンサ・ワレダで実施されている第3期 SFS の参加農家すべてがアムハラ州種子公社の契約農家であった。

3-1-5 持続性

本プロジェクトの持続性は中程度と判断される。以下のとおり、政策面での持続性は高いが、制度・財政面、技術面における持続性の懸念が確認される。

(1) 政策面

妥当性の項目で確認したとおりであり、エチオピア側、日本側両国の政策との持続性も確認される。種子法の具体的な規則はまだ定められていないが、法概念一般との整合性もあり、今後プロジェクトの成果によっては特にインフォーマル・レベルでの種子流通システムや種子認証システム (Quality Declared Seed System) の具体化への貢献も期待できる。

(2) 制度面

プロジェクト運営は一般に日本人専門家チームによって実施されており、エチオピア側の特に連邦レベルでの関与が少なく、プロジェクト終了後の運営管理面での技術移転状況に懸念がある。一方で、第3期より SFS の半数は政府が主体的に組織し実施している。プロジェクトが支援する SFS に比べ物質的な困難に直面しているものの、継続的に運営されており、SFS アプローチをプロジェクト終了後、政府による既存の農業技術普及システムへ組み込んでいく可能性についても検討されている。

また、5つの対象ワレダに設置された簡易種子検査ラボラトリーの機能と位置づけについては、各 R-BoA 管轄下のものとして位置づけ、制度的持続性を確保する必要がある。

(3) 財政面

SFS を8カ月間一巡させるために必要な予算は比較的安価であり、教材費等の出費が主要なものである。種子生産圃場で必要となる種子や肥料に関しては現行の政府主導の SFS では、政府が支援をするか、参加農民自身が負担をしている。政府主導の SFS に対するプロジェクトからの支援は最低限に抑えられており、関係政府機関の来年度以降の継続意欲も高いため、SFS を継続するための財政的持続性は低くないと判断する。また、エチオピア側では今後 SFS を既存の普及システムに組み込み、農民グループらの各種要請事項を公式化させる方途や農業開発プログラム (Agricultural Growth Program : AGP) 等の他ドナーからの予算支援の可能性等も検討されている。

(4) 技術面

種子生産技術については、基礎的技術の適応試験等により、農家にとって有効であることが確認された。また、こうした技術を農家に伝える立場にある DA の能力も十分高まったと判断されている。こうしたことから、今後プロジェクトにより開発された技術の持続性については高いと考えられる。

「優良種子」の基準について、プロジェクトは関係機関と協議のうえ、地域的需要に基づいた種子の認証基準や試験プロセスに関して提示していく必要がある。さらにこれらについて関係者と合意し、機能的で持続性のある優良種子生産流通システムの事例が提言されることが望まれている。よって成果3と4に関する残りの活動項目は関連する組織や C/P 各機関と十分に協議しながら行っていく必要がある。

人材面での技術的持続性については、DA の高い離職・転職率より、移転技術の持続性に懸念が確認される。一方、調査時点で、今後エチオピア政府は DA の職場環境改善のための予算を計上し、教育機会の提供、勤務地における宿泊施設の準備、職務に用いるユニフォームやブーツ等の支援を実施する予定である。

またプロジェクトは、制作した条播機の開発技術が C/P 機関にとどまるよう、JICA 事務所を通じて特許権を取得している。プロジェクト終了後の特許権の MoA への移行等、C/P 機関と協議のうえ、必要な措置を取っていくことが望まれる。

3-2 結論

プロジェクトは農家自身が種子不足に対応するための新たなアプローチを導入し、SFS を通じ

て農家への技術普及をめざした活動を行っており、プロジェクト内外から高い評価を得ていることから、高い妥当性とインパクトが確認された。一方で効率性と有効性に関しては、生産された種子が十分な品質をもっているか、地域に流通し得るものかどうかを確認するため種子の品質確認や流通調査が必須であるが、成果3（優良種子の品質認証）及び成果4（小規模農家による持続的なシステム提言）はプロジェクト期間中に達成することは困難であり、この確認結果を待って地域レベルの優良種子生産流通システムを具体化させるための貢献が可能となるため、中程度と判断された。持続性については主に制度面、技術面で懸念が確認される。

今後品質検査の結果を待って地域レベルの優良種子生産流通システムへの提言を行うことが期待されており、第3期SFS農家の生産種子の簡易種子検査ラボラトリーでの品質検査は、DAによる他業務への専従期間を終える2014年4月～6月に実施されることとなるため、約半年間のプロジェクトの延長が必要であると判断する。

第4章 提言と教訓

4-1 提言

調査結果を踏まえ、調査団はプロジェクトが今後取り組むべき事項として以下のとおり提言した。

(1) SFS アプローチを中心とするプロジェクト成果の継続性の確保

SFS アプローチを既存の MoA の普及システムに統合する方途について残りの協力期間を通じ検討のうえ、先方政府に対して提言することが望まれる。調査時点では以下3つの可能性が挙げられ、プロジェクト内での検討が望まれる。

- 1) FTC は農家向けの研修を実施しており、FTC 内プログラムのひとつとして SFS アプローチを導入する可能性が考えられる。
- 2) MoA は既存の農業技術職業教育訓練 (Agricultural Technical and Vocational Education and Training : ATVET) や FTC を用いつつ今後数年の間に国内の全農家に対して研修を施す計画を進めており、SFS はこれら研修アプローチのひとつとして用いられる可能性が考えられる。
- 3) プロジェクトでは第3期 SFS より政府主導での SFS を実施している。関係政府機関の継続意欲も高く、SFS の質を維持・改善しながら継続・拡大していく方途が検討されることが望まれる (特に人材面、財政面、技術面の課題への対処方針等が明確にされる必要がある)。

(2) SFS 卒業農家のモニタリング

SFS 卒業農家の導入技術の活用状況や、DA による技術的フォローアップの有無、種子生産の継続性等についてプロジェクトによる確認が十分に行われていない。プロジェクト成果を十全に生かすためにも SFS 卒業農家の適切なモニタリングとフォローアップの方途について速やかに検討し、実施する必要がある。

(3) 種子認証システムの強化

地域レベルでの農家のための優良種子生産流通システムを機能させるために、簡易種子検査ラボラトリーでの適切な優良種子基準と試験手順につき残りの協力期間にて検討し、具体的提言を行うことが必要である。

(4) 小規模農民のための優良種子振興プロジェクト (QSPP) の知見を生かした優良種子 (QDS) 制度化への貢献

プロジェクトの知見を、インフォーマルな優良種子生産流通システムの強化のために用いていくことが望まれる。このために、種子分野の主要関係機関である ATA や総合種子セクター開発プロジェクト (Integrated Seed Sector Development : ISSD) 等と継続的に協議・検討を行っていくことが重要である。

また、種子法で規定されている優良種子 (Quality Declared Seed : QDS) の現実的な品質基準について、本プロジェクトの成果を踏まえ協力期間終了までに具体化し提言することで、

QDS 概念の具体化に貢献することが望まれる。

4-2 日本側への提言事項

- (1) 成果3と4の活動を了するために、SFS 農家による生産種子の品質検査を各ワレダの簡易種子検査ラボラトリーで実施させることが必要であり、日本側はこのための検査官への技術支援を実施する必要がある。
- (2) 新たに配置されたワレダの簡易種子検査ラボラトリーの検査官に対して、エチオピア側が研修を実施する際に技術的な支援を行う。
- (3) 種子流通調査を実施し、プロジェクトで指導した種子栽培農家により生産された種子の利用・販売状況について確認を行う。

4-3 エチオピア側への提言事項

- (1) プロジェクトによって設置された簡易種子検査ラボラトリーに必要な人員を遅延なく配置し、新規に配置されたスタッフには必要な訓練を施す必要がある。
- (2) 州レベルにある公的なラボラトリーとプロジェクトによって設置されたワレダレベルの簡易種子検査ラボラトリーの組織的連携を確保し、ワレダレベルの簡易種子検査ラボラトリーが種子の品質について証明書を発行できる権限を与えることが必要である。
- (3) エチオピア政府が今後種子検査基準や手順を具体化し制度化していくプロセスのなかで、プロジェクト活動によって得られたデータや知見を有効に活用していくことが望まれる。

4-4 教訓

- (1) 本プロジェクトではESEから純度の高いC1種子を入手することが想定されていたが、実際にはC1種子の純度は期待したレベルではなかったことが協力開始後に判明した。つまり前提条件が十分満たされていなかったことになるが、プロジェクト活動の工夫により農家レベルで純度を上げるため種子の世代を1つ更新する対応を取り、最終的にはC2種子の生産を実現することができた。前提条件が十分満たされていない場合であっても、大局的視点から目標達成への道筋をとらえなおし、プロジェクトによる努力で課題の解決が図られたことは他の協力を行ううえでも参考になる。
- (2) 効率的な専門家の配置を達成するために短期専門家の派遣が適した活動と、長期的に配置することで活動方針の一貫性を維持しモニタリングを行うための専門家派遣に適した活動の差異を見極め、適切な専門家の配置を行うことが望まれる。

第5章 所 感

5-1 技術団員所感（種子）

- (1) 種子システムにおいて、種子の90%前後を供給している農家をシステムを認識する必要についてはこれまでも国内外関係者等から強調されているが、このような考えに賛同する関係者は少数であった。そのなかで、種子法に基づく種子保証を行わずに、独自の種子品質基準に基づくC2種子の生産及び地域内消費をめざす本プロジェクトの趣旨を連邦から農家レベルのすべての関係者に理解してもらうことは非常に大きなチャレンジであったが、SFSの経験がエチオピア側各レベルの関係者に成功例として認識されていること、新しい種子法の成立によって今後の種子流通のあり方が具体的に検討される環境になっていることなどから、今後小規模農民のための優良種子振興プロジェクト（Quality Seed Promotion Project for Smallholder Farmers : QSPP）の経験が活用される可能性は十分にあると考えられる。
- (2) 今回のJCCでもスライドを用いて注意喚起を行ったが、優良種子の不足を緩和する方法はフォーマルセクターの強化による優良種子の生産増加だけではなく、農家の種子リサイクル能力の向上による需要の抑制（ESE総裁もその旨発言している）も含めて多様な方法が存在する。QSPPのアプローチ及び実績がその選択肢を広げていることについて継続的にエチオピア側の理解を得る努力を専門家や事務所が行う必要があるだろう。ATAやISSD関係者の多くは、そのようなアプローチも否定はしていないので、より積極的な連携が期待される。
- (3) 具体的にQSPPが制度構築に貢献するには、現在行われている地域の種子流通調査の結果を関係者と共有するとともに、昨年度のSFS卒業生の生産した種子の動向（自分の畑で利用・マーケットでの販売・交換等）をサンプル調査でもいいので今作期の終了時に合わせて調査しデータをまとめることが重要であろう。DAによる調査が信頼できない場合は、農民研究グループを通じた適正技術開発・普及プロジェクトと連携して信頼できるEIAR研究者への委託も考えられる。
- (4) 現在、R-BoA傘下の種子検査室で行われている検査をワレダレベルで実施できる可能性については依然否定的な意見が主流であったが、オロミアR-BoAの発言ではフォーマルシステムに組み込まれる可能性もゼロではないと考えられる。しかしながら、プロジェクトの範囲内で活用するには、あくまでも非公式の検査施設を整備しその能力構築を支援するとともに、農家レベルでの圃場検査結果を室内検査が担保する形で品質を保証された種子が流通することを実績として示し、そのような実績の下に将来公式の検査室にする可能性を残すことが考えられよう。
- (5) 延長期間の最後に計画されている経験共有のセミナーでは、SFSの具体的なプロセスや開発された技術の説明とともに、種子不足の問題に対してQSPPアプローチがどのように貢献したか、また、し得るかについての報告を含めることによって、今後の種子法の精緻化・種子戦略策定への具体的な貢献が可能になる。

Different Approaches for Seed System Improvement



図 5 - 1 JCC で使用した優良種子不足に対する多様な対策説明図

5 - 2 団長所感

エチオピアにおいて穀物の生産性を向上させるためには、農業投入財としての肥料と改良種子の利用量を増加させることが喫緊の課題であると、過去 20 年近くにわたっていわれてきた。最近の推移をみると、国内における肥料の投入量については、2003 年から 2012 年の 10 年間で約 2.5 倍に増加したが、穀物生産のための耕作地の面積も約 1.5 倍に拡大しているため、単位面積当たりの肥料投入量の増加は 1.7 倍にとどまっている。改良種子については、統計上の使用量は過去 10 年間で 6.7 倍になっているが、フォーマルな認証種子が使われているのは、実際の穀物生産の 10% 程度で、残りの 90% は農家が自家消費もしくは近隣地域に供給するために生産するインフォーマルな種子によってなされている。このため、農家による種子生産システムを強化し、その品質を向上させることが本プロジェクトの主たる目標である。

農家による種子生産システムを強化するためには、大規模資本が商業ベースで行う契約栽培による種子生産ビジネスとは違った取り組みが必要である。それは、小農に対する農業技術の普及プロセスと同じく、優良技術のデモンストレーションとその技術習得のための細かな指導を必要とする時間のかかるプロセスである。QSPP は、小農に対する種子の生産技術をファーマー・フィールド・スクール (Farmers Field School : FFS) という手法を種子に応用し、SFS として普及させた。この手法は、農民が実際に作物を栽培する畑の近くに簡易の研修施設を設置し、農民の畑を用いて、新しい技術を農民グループ自らが試み、観察し、議論しつつ習得する手法である。それは、マニュアルや座学で学ぶ知識ではなく、特別に整備された条件の良い試験圃場におけるデモンストレーションでもない。それは、JICA が長く取り組んできた Learning by doing による技術協力であり、農業の現場における DA と農民の協働のプロセスでもある。その有効性は、これまで多くの JICA プロジェクトで示されてきたが、QSPP においても有効であることが示された。エチオピア側も SFS を高く評価しており、プロジェクトの終盤である第 3 期 (2013 年の耕作期) においては、全体 SFS の半数をエチオピア側が主体的に実施している。その意味では、今後、SFS 手法がエチオピアの農業普及制度のなかに取り込まれ、活用される可能性は高く、QSPP はエチオピアの農業普及の手法に一定の貢献をしたといえる。また、今後、SFS がエチオピア国内

でどの程度普及するかは、関心をもってみていく必要がある。

種子生産技術に関しても、条播や異株・雑草の抜き取りなど、10の有用技術に関する知見を整理してマニュアルも整備している。それ自体は農業技術者の努力と工夫の結晶であり、プロジェクトの重要な成果である。また、その普及はSFSを通じて行うことが効果的であることをQSPPは実証した。ただし、終了時評価時点では、種子の品質認証の強化（成果3）と種子生産システムに係る提言（成果4）について、当初目標の達成が困難であると判断したため、プロジェクト期間を約半年延長することが妥当であると結論づけた。プロジェクトは、今後、延長期間を含めて、第4章の提言に示した項目を実施することで、当初目標の達成をめざすべきであると考える。

プロジェクト期間を半年延長したのち、JICAがどのような対応を取るべきかについては、今回の調査の結果を踏まえても明確な判断は難しい。QSPPの協力期間内に種子生産技術は確立されたため、今後はエチオピア側がそのスケールアップを政府主導で行い得るとの意見がある。他方、種子の生産技術に重点を置いた現在の協力では、生産した種子を販売し更に生産を拡大していく持続的なモデルの提示に至っていないため、今後も更に協力をすべきとの意見もある。また、エチオピア MoA のウォンディラッド国務大臣は、今回プロジェクトが提示したモデルを気候や市場の条件が異なる地域に拡大していくためには、日本側の更なる協力が不可欠であると発言している。

エチオピア側がプロジェクトの成果を独自にスケールアップしていくためには、ATAが現在策定している「種子システム変革5カ年戦略」の中に、インフォーマルな優良種子（C2種子）の活用拡大のための方策を盛り込むとともに、政府がそれを積極的に実践していく必要がある。このための一助となる活動を、本調査団の提言の中にも含めてある。しかし、政府が独自に実践していくことについて、あるべき論として指摘することは容易であるが、実際に農村において改革を実現していくことは、予想していない失敗や障害に直面することもあり得るため、決して容易な作業ではない。その意味では、農民やDAとの協働を通じた learning by doing を得意とするJICAが、スケールアップのプロセスに貢献する余地は大きいと考える。

他方、エチオピアの農業・農村分野における課題は多様で、複雑である。種子に限らず、作目の多様化、農業の機械化、農産物加工や流通・販売による収入の拡大等、JICAは多くの課題に取り組まなければならない一方で、我々のリソースは限られている。また、日本の知見の比較優位を生かして、より効果の大きい協力を行っていくために、戦略的な判断も求められる。このため、終了時評価では、本プロジェクト終了後の協力のあり方について、方針を出すには至らなかった。しかし、これまで現場で活躍されてきた、そして今も活躍されている日本人専門家各位の勇気と不断の努力には、深く深く敬意を表したい。

付 属 資 料

1. 評価調査日程
2. 主要面談者一覧
3. 評価グリッド
4. 合同評価報告書
5. JCC ミニッツ (M/M)

1. 評価調査日程

| 月日 | 曜日 | 団長 | 種子 | 評価計画 | 評価分析 |
|--------|-----|----|-------|---|-----------------------------|
| 11-Aug | Sun | | | | 日本発 |
| 12-Aug | Mon | | | | 13:30 エチオピア着 17:30 専門家面談 |
| 13-Aug | Tue | | | 09:00 Internal meeting among the mission team 13:30 Meeting with Ethiopian Mission Team at JICA office 15:00 Meeting with Japanese experts 17:00 Meeting with P.D. / P.M. | |
| 14-Aug | Wed | | | 6AM Leave AA and move to site AM: SFS visit in Oromia (in Tilti Garbi village, Lume woreda) Interview to SFS farmers and DA PM: Visiting a seed lab, Interview and meeting with woreda experts | |
| 15-Aug | Thu | | | 7:30AM Leave each hotel 8AM-9AM Meeting with Dr. Tafese, head of ESE, at ESE HQs 11AM-12AM Meeting with ISSD project under EKN, Dr. Amsalu Ayana Director of ISSD Ethiopia and Mr. Mohammed Hassena, National Partnership Coordinator 14:00 Meeting with Mr. Yonas Sahlu, Acting Director of ATA, PM: Meeting with C/Ps in Oromia BoA (Tentative) | |
| 16-Aug | Fri | | | 7:20AM Leave AA to BJR by ET126 08:30AM Move to Bahir Dar 9:30AM Meeting with C/Ps in Amhara regional BoA, Mr. Lanteyideru, Process owner of Agricultural extension process, Amhara regional BoA 11AM- Meeting with ASE (Deputy director, Mr. Bitew Melese or ESE Amhara branch (Director, Mr. Mulat) | |
| 17-Aug | Sat | | | 6AM Leave Bahir Dar to Adet 7:30AM Breakfast at site 8AM-11AM SFS monitoring at site 11AM Interview to SFS farmers PM: Interview to woreda expert 3PM Move to Bahir Dar 7PM Fly to ADD | |
| 18-Aug | Sun | | | 6AM Leave hotel to site 7:30AM Breakfast at site 8AM-11AM SFS monitoring at Dendi woreda 11AM Interview to SFS farmers PM: Interview to woreda expert 2PM Leave site to AA | |
| 19-Aug | Mon | | | 評価報告書とりまとめ | |
| 20-Aug | Tue | | | 評価報告書とりまとめ | |
| 21-Aug | Wed | | | 合同評価団打合せ | |
| 22-Aug | Thu | | | 合同評価団打合せ | |
| 23-Aug | Fri | | | 合同評価報告書署名 | |
| 24-Aug | Sat | | | 資料整理 | |
| 25-Aug | Sun | | | 資料整理 | |
| 26-Aug | Mon | | | 06:00 Move to Sodo from Addis Ababa 08:00-09:35 Visiting a SFS and a seed lab in Sodo woreda, SNNPR 09:35-10:15 Move to Rediat Hotel, Butajira 10:15- 16:00 6th JCC meeting 16:00 Back to Addis Ababa | |
| 27-Aug | Tue | | 事務所報告 | | 事務所報告 |
| 28-Aug | Wed | | | | エチオピア発 |
| 29-Aug | Thu | | | | 日本着 |

2. 主要面談者一覧

1. プロジェクト・カウンターパート及びターゲットグループ

| | |
|--|---|
| Dr. Dagnachew Beyene | Director, Agricultural Extension Directorate, MoA Project Director of QSPP |
| Mr. Furo Beketa | Process Owner, Input and Supply Process, Oromia Regional BoA Oromia Regional Project Director of QSPP |
| Mr. Lanteyideru Tesfaye | Process owner of Agricultural Extension Process, Amhara Regional BoA Amhara regional laboratory |
| Mr. Ketema Getachew Mr. Mesfin Seyoum | Head of Extension Department, Lume Woreda Agricultural Office Expert, Lume Woreda Agricultural Office |
| Mr. Ale Desta Biru Mr. Mulu Meselu | Deputy Administrator & Head of Yilmenadensa Woreda Agricultural Office Input and Supply Process Owner, Yilmenadensa Woreda Agricultural Office |
| Mr. Kebede Debelo | Agricultural Office |
| SFS 参加農民 | Head, Dendi Woreda Agricultural Office Lume, Yilmenadensa, Dendi, Sodo 各地の SFS 対象村 |

2. プロジェクト専門家・ローカルスタッフ

| | |
|----------------------|---|
| 八木 和彦 | チーフアドバイザー |
| 中村 謙仁 | 業務調整/種子生産モニタリング |
| 新井 司郎 | 種子品質管理 |
| Mr. Lijalem Workineh | Regional Facilitator/ Extension Monitoring & Evaluation Officer in Amhara Region |
| Mr. Getahun Belay | Extension Monitoring & Evaluation Officer in Oromia Region |

3. エチオピア国における種子セクター関係機関

| | |
|----------------------|---|
| Dr. Tafese | Head of ESE |
| Mr. Mulat Mekonnen | General Manager, Amhara Seed Enterprise |
| Mr. Zemenu | Quality Control Staff, Amhara Seed Enterprise |
| Dr. Amsalu Ayana | Director, ISSD Ethiopia Program |
| Mr. Mohammed Hassena | National Partnership Coordinator, ISSD Ethiopia Program |
| Mr. Yonas Sahlu | Acting Director of ATA |
| Mr. Tefera Zeray | Senior Seed Technical Expert of ATA |

4. JICA エチオピア事務所

| | |
|--------|------------------|
| 木村 卓三郎 | JICA エチオピア事務所 次長 |
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Evaluation Grid (Draft)
Terminal Evaluation of the “Quality Seed Promotion Project for Smallholder Farmers” in Ethiopia

1. 5 Criteria Evaluation

As of August 1st, 2013

| Evaluation Criteria | Evaluation Questions | | Information/Data Required | Information Sources | Data Collection Method |
|---------------------|---|--|---|--|----------------------------|
| | Main Questions | Sub Questions | | | |
| Relevance | Are the project purpose and the overall goal covering well the needs in the target areas and societies? | <p>Necessity of Quality Seed for Tef & Wheat in the target Woredas.</p> <p>◇Project Purpose: Use of quality seeds is increased in the target Woredas.</p> <p>◇Overall goal: Production of mainly self-pollinating crops, tef and wheat, is increased through utilization of quality seed in the target area.</p> | Info. on the needs in the target areas & societies | Farmers & facilitators in the target Woredas, officials in charge in Zones & Regions etc. | Questionnaire, Interviews |
| | Is the project in accordance with the needs of target group? | ◇ Target Group: Seed producing farmers and farmers who want to start seed production in the target Woredas | Information & comments by stakeholders on target group's needs | Farmers, facilities in the target Woredas, MOA officials in target regions | Interviews |
| | Relevancy of planned effects and approaches by the project with the national policy in Ethiopia | Is the promotion of quality seed production by farmers in accordance with the national policy? | Project positioning in overriding policy Comments by stakeholders | National Development Plan (Growth and Transformation Plan 2010/11 - 2014/15), other relevant policy papers, officials in MOA | Document review, Interview |
| Relevancy with | | Japanese prioritised | Documents regarding | Document | |

| | | | | | |
|--|---|---|--|--|----------------------------|
| | Japanese policy toward Ethiopia | ODA toward Ethiopia | cooperation sectors in Ethiopia | Japanese ODA policy and projects toward Ethiopia | review |
| | Relevancy of cooperation approach and methods | Were the project approaches, selection of target areas appropriate? | Comments stakeholders, Confirmation of the project results | Project Reports Japanese Experts, CPs | Document review, Interview |
| | | Was the selection of target groups appropriate? | Comments stakeholders, Confirmation of the project results | Project Reports Japanese Experts, CPs | Document review, Interview |
| | | Do the Japanese technologies relevant to the project have enough competency ? | Comments stakeholders, Confirmation of the project results | Project Reports Japanese Experts, CPs | Document review, Interview |

| Evaluation Criteria | Evaluation Questions | | Information/Data Required | Information Sources | Data Collection Method |
|---------------------|--|--|---|--|----------------------------|
| | Main Questions | Sub Questions | | | |
| Effectiveness | Is the project purpose expected to be achieved? ◇ Project Purpose: Use of quality seeds is increased in the target Woredas. | | (Confirm with “3. Analysis of Indicators”) | | |
| | Do the Project outputs contribute to the project purpose? | Have the outputs been enough to achieve the project purpose? Have there been enough logics between the project purpose and outputs? | Comments stakeholders | by Japanese experts, CPs | Interview |
| | Influence Important assumptions | by ◇ Quality C1 seed is sufficiently supplied. ◇ Serious natural disaster(s) is/are not occurred. ◇ Grain price is not widely fluctuated. ◇ Trainees are kept their same assignment. | Comments stakeholders | by Project Reports Japanese Experts, CPs | Document review, Interview |
| | Have there been other factors contributed to the project achievement? | | Information implementation process Comments | on Japanese Experts, CPs | Document review, Interview |

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|---|--------------------------|--|
| | stakeholders | |
| Have there been other factors hindered the project achievement? | Comments by stakeholders | Project Reports, other relevant documents, Japanese experts, CPs |
| | | Document review, Interview |

| Evaluation Criteria | Evaluation Questions | | Information/Data Required (Confirm with "3. Analysis of Indicators") | Information Sources | Data Collection Method |
|---------------------|---|--|---|--|---|
| | Main Questions | Sub Questions | | | |
| Efficiency | Are the outputs expected to be achieved? Have the qualities, quantities, and timings of inputs been appropriate comparing with the outputs achieved? | How appropriate has the assignment of Experts been in terms of the number of experts, their expertise and capabilities, and the dispatched periods and timings? | Records of dispatches by stakeholders | Project Reports, other relevant documents, Japanese experts, CPs | Document review, Questionnaire, Interview |
| | | How appropriate has the provision of equipment been in terms of its quality and quantity? | Records of equipment procurement, and usage situation, Comments by stakeholders | Project Reports, other relevant documents, Japanese experts, CPs | Document review, Questionnaire, Interview |
| | | How appropriate has C/P training in Japan and/ or in Third Countries been in terms of the number of participants, training contents, and the dispatched period and its timing? | Records of trainings | Project Reports, other relevant documents, Japanese experts, CPs | Document review, Interview |
| | | How appropriate has the assignment of C/Ps been in terms of the number and functions & timings assigned, in consideration of the responsibilities they are expected to take, and their capabilities? | Records of assignments of CP by stakeholders | Project Reports, other relevant documents, Japanese experts, CPs | Document review, Questionnaire, Interview |
| | | How appropriate the buildings and facilities provided by Ethiopian sides been in terms of qualities, sizes, and conveniences ? | Observation of buildings& facilities, Comments by stakeholders | Project Reports, other relevant documents, Japanese experts, CPs | Observation, Interview |

| | | | | |
|--|--|---|--|---|
| | Have the project cost by Ethiopian side been appropriate ? Have they been executed in right timings? | Records of the costs by Ethiopian side | Project Reports, other relevant documents | Document review, Questionnaire |
| | Have the coordination among relevant organizations in Ethiopian side been well maintained ? | Status of coordination among Ethiopian stakeholders | Project Reports, other relevant documents Japanese experts, CPs | Document review, Questionnaire, Interview |
| | Have the inputs been utilized appropriately? | Usage situation of equipment | Records of equipment usage Japanese experts, CPs, Observation | Document review, Interview, Observation |
| | Have there been any other factors prohibited the project efficiency? | Changes of C/Ps' assignment | Project Reports, other relevant documents | Document review, Interview |
| | Have there been any other factors? | Comments stakeholders | Japanese experts, CPs | Questionnaire, Interview |

| Evaluation Criteria | Evaluation Questions | | Information/Data Required | Information Sources | Data Collection Method |
|---------------------|--|--|--|--------------------------|------------------------|
| | Main Questions | Sub Questions | | | |
| Impact | Is the overall goal expected to be achieved? ✧ Production of mainly self-pollinating crops, tef and wheat, is increased through utilization of quality seed in the target area. | | (Confirm with “3. Analysis of Indicators”) | | |
| | Are there enough measures taken or planned for the achievement of the overall goal? | | Information by stakeholders | by Japanese experts, CPs | Interview |
| | Contributing and obstructing factors for the overall goal | Possibility of influence by the important assumption ✧ Quality C1 seed is sufficiently supplied. Are there other contributing or obstructing factors ? | Information by stakeholders | by Japanese experts, CPs | Interview |
| | Other impacts recognized for groups/ things other than the target group. | Other impacts by the project activities recognized for groups/ things other than the target group | Information by stakeholders | by Japanese experts, CPs | Interview |

| | | | | | |
|----------------------------|---|---|--|---|-------------------------------|
| | Other positive or negative impacts | Other positive or negative impacts (social, cultural, environmental aspects etc.) | Information stakeholders | by Japanese experts, CPs | Interview |
| Evaluation Criteria | Evaluation Questions | | Information/Data Required | Information Sources | Data Collection Method |
| | Main Questions | Sub Questions | | | |
| Sustainability | Policy Aspect: Is it expected that the importance of quality seed promotion policy by farmers in the national development plan and/ or sector strategy papers will continue ? | | National policies, other relevant policies | National development plan, other policy documents in agricultural sector Officials in MOA, regional bureaus | Document review, Interview |
| | How have the CP organizations (national, regional, zone, woreda level & research center) been recognizing the project ? | | Comments by stakeholders | Officials in MOA, regional BOAs, zones, Woredas, and Research center | Interview |
| | Institutional Aspects: Is there enough sustainability in the approach presented by the project, i.e. “production of quality seed by small scale farmers, quality assurance and promotion of quality seed in woreda level” ? | | Comments by stakeholders | Officials in MOA, regional bureaus, zones and Woredas Japanese Experts, CPs | Interview |
| | Organizational Aspects: Does the CP organization (esp. regional BOA, zones and woreda offices) have the necessary organizational system to utilize and sustain the project approach (to produce and distribute the quality seed) ? | | Records of the project, Comments by stakeholders | Officials in MOA, regional bureaus, zones and Woredas Japanese Experts, CPs | Interview |
| | Is there enough sustainability in staff employment ? | | Comments by stakeholders | Officials in MOA, regional bureaus, zones and Woredas Japanese Experts, CPs | Interview |
| Sustainability | Financial Aspect: Does the CP organization maintain necessary budget and budget acquiring capability to ensure the financial sustainability after the project completion, so as to utilize and develop the project outcomes ? (esp. for the activities in regional BOAs, zones and woreda offices) | | Comments by stakeholders | Officials in MOA, regional bureaus, zones and Woredas Japanese Experts, CPs | Interview |
| | Communication and Coordination Aspects: Is it expected that the coordination among the stakeholders in | | Comments by stakeholders | Officials in MOA, regional bureaus, zones | Interview |

| | | | |
|---|-----------------------------------|--|--------------------------|
| Ethiopia continues to be well maintained ? Is there a clear mechanism for such a coordination ? | and Woredas Japanese Experts, CPs | | |
| Technical Aspect: Has the CP staff acquired the capacity to utilize and implement the project approach after the project completion ? Is there enough sustainability in staff employment in the offices? (esp. staff in regional BOAs and Woredas) Is there enough sustainability in CP employment? Have the procured equipment maintained appropriately? Will they be maintained appropriately after the project completion ? List up contributing and obstructing factors for sustainability. | Comments by stakeholders | by Officials in MOA, regional bureaus, zones and Woredas Japanese Experts, CPs | Interview |
| | Comments by stakeholders | Japanese Experts, CPs | Interview |
| | Comments by stakeholders | Japanese Experts, CPs | Questionnaire, Interview |

2. Evaluation for the Implementation Process

| Evaluation Criteria | | Information Sources | Data Collection Method |
|--|--|---|--------------------------------|
| Main Questions | Sub Questions | | |
| Necessary adjustments of the project plan and implementation system to achieve the original outputs | Have there been any tasks recognized during the project implementations ? How have those tasks been dissolved ? Have the recommendations by Japanese experts and/ or occasional missions been well reflected ? | Relevant Project Reports Japanese Experts, CPs | Document review, Interview |
| Issues in technical transfer (transfer topics, technical level, applicability on the ground, level of acquirement, materials etc.) | Have there been any issues in technical transfer by Japanese experts ? If yes, in which topic and transfer methodologies? How have they been dissolved ? | Relevant Project Reports Japanese Experts, CPs | Document review, Questionnaire |
| Ownership by Ethiopian side | 1.Appropriateness of CP assignment 2.Appropriateness of budget allocation | Relevant Project Reports | Document review |
| | Are the recognition and participation level by the officials in charge (region, zone & woreda level) high enough ? | Officials in charge in regional BOAs, zones and woredas | Interview |

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|--|---|---|------------------|----------------------------|
| Issues in the project monitoring & management system | Has JCC been organized as planned? Have all the necessary issues been raised and discussed in each JCC? | Relevant Reports Japanese Experts, CPs | Project Experts, | Document review, Interview |
| | Have the decision making mechanism been functioned well through various meetings and occasions by the project team (Japanese experts, CPs, other stakeholders)? | Relevant Reports Japanese Experts, CPs | Project Experts, | Document review, Interview |
| | How has the project progress been monitored? | Japanese Experts, CPs | Experts, | Interview |
| | Have the communications among the Japanese experts, CP organizations & staff been functioned well? | Japanese Experts, CPs | Experts, | Questionnaire |
| | Have the communication and cooperation between JICA Ethiopia office and JICA HQ been well functioned? | Japanese Experts | Experts | Interview |

3. Analysis of the Indicators

| | Narratives | Indicators | Information Sources | Data Collection Method |
|-----------------|--|--|--|------------------------|
| Overall goal | Production of mainly self-pollinating crops, tef and wheat, is increased through utilization of quality seed in the target area. | <ol style="list-style-type: none"> At least 200 ton of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed. | <ol style="list-style-type: none"> SFS related Reports SFS related Reports | Document review |
| Project purpose | Use of quality seeds is increased in the target woredas. | <ol style="list-style-type: none"> At least 40 ton of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed. | <ol style="list-style-type: none"> Project Reports Project Reports | Document review |
| Output 1 | Quality seed production technologies are improved. | <ol style="list-style-type: none"> At least five (5) seed production technologies are verified. One seed production technology manual is produced. | <ol style="list-style-type: none"> Project Reports The Manual | Document review |

| | Narratives | Indicators | Information Sources | Data Collection Method |
|----------|--|--|---|------------------------|
| Output 2 | Quality seed production technology is disseminated to smallholder farmers. | <p>2-1. Capacity of extension staff of the target woredas as trainer or facilitator is enhanced.</p> <p>2-2. More than 900 farmers are graduated from SFS</p> <p>2-3. At least 80% of farmers participated in SFS adopts one of the seed production technology verified in Output 1.</p> | <p>2-1. Project Reports</p> <p>2-2. Project Reports</p> <p>2-3. Project Reports</p> | Document review |
| Output 3 | Quality assurance of quality seed is strengthened. | <p>3-1. More than 1 person who has attended training on seed inspection (field and laboratory) is assigned at the laboratory in each woreda.</p> <p>3-2. At least 80% of farmers participated in SFS utilize Field Notes</p> <p>3-3. Seed testing procedure and manual for simple seed laboratories are developed.</p> <p>3-4. Seed testing laboratories conduct seed quality tests to products of more than 80% of farmers participated in SFS.</p> | <p>3-1. Current Condition in Labs.</p> <p>3-2. Project Reports</p> <p>3-3. Project Reports</p> <p>3-4. Project Reports, Records in Labs</p> | Document review |
| Output 4 | Sustainable system of quality seed production by smallholder farmers is suggested. | <p>4-1. Outcomes of outputs 1, 2 and 3 are compiled and make certain contribution for implementation of the seed strategy and/or improvement of seed system.</p> <p>4-2. A report compiled good practices and good outcomes of the Project, etc. is prepared.</p> | <p>4-1. Project Reports</p> <p>4-2. Reports good Summarized good practices etc.</p> | Document review |

THE JOINT TERMINAL EVALUATION REPORT
ON QUALITY SEED PROMOTION PROJECT FOR SMALLHOLDER
FARMERS

Addis Ababa, August 26, 2013



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Abbreviations and Acronyms

| | |
|--------|---|
| AESA | Agro Ecosystem Analysis (in SFS) |
| AGP | Agriculture Growth Program |
| ASE | Amhara Seed Enterprise |
| ATA | Agricultural Transformation Agency |
| BS | Basic Seed |
| C1 | Certified 1 Seed |
| CP(s) | Counterpart(s) |
| DA(s) | Development Agents |
| DZARC | Debre Zeit Agricultural Research Center |
| EIAR | Ethiopian Institute of Agricultural Research |
| ESE | Ethiopian Seed Enterprise |
| FAO | Food and Agriculture Organization |
| FFS | Farmer Field School |
| FTC | Farmer's Training Center |
| GOE | Government of Ethiopia |
| GTP | Growth and Transformation Plan |
| ISSD | Integrated Seed Sector Development |
| ISTA | International Seed Testing Agency |
| JCC | Joint Coordinating Committee |
| JICA | Japan International Cooperation Agency |
| Lab. | Laboratory |
| MoA | Ministry of Agriculture |
| ODA | Official Development Aid |
| OSE | Oromia Seed Enterprise |
| PDM | Project Design Matrix |
| PO | Plan of Operation |
| PTD | Participatory Technology Development (in SFS) |
| Pre-BS | Pre Basic Seed |
| QSPP | Quality Seed Promotion Project for Smallholder Farmers |
| R-BoA | Regional Bureau of Agriculture |
| R/D | Record of Discussion |
| SFS | Seed Farmers School |
| SNNP | Southern Nations, Nationalities, and People's |
| SSE | Southern Nation's Nationality and Peoples Seed Enterprise |
| ToF | Training of Facilitators |
| TT | Technical Training |




1. Introduction

1-1 Objectives of the Terminal Evaluation

- (1) To review the progress of the Project and evaluate the achievement in accordance with the five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, and Sustainability);
- (2) To identify the promoting factors and inhibitory factors of achievements of the Project;
- (3) To discuss the plan for the Project for the rest of the project period together with Ethiopia side based on the reviews and analysis results above; and
- (4) To summarize the results of the study in Joint Terminal Evaluation Report.

1-2 Member of the Joint Review Team

The evaluation was jointly conducted by Ethiopian and Japanese members. The members of the Joint Evaluation Team (hereinafter referred to as “the Team”) were listed below.

1-2-1 Japanese Terminal Evaluation Team

| No. | Field | Name | Present Occupation |
|-----|-------------------------|------------------------|---|
| 1 | Team Leader | Mr. Kimiaki Jin | Chief Representative, Japan International Cooperation Agency (JICA) Ethiopia Office |
| 2 | Seed | Dr. Yoshiaki Nishikawa | Professor, Faculty of Economics, Ryukoku University |
| 3 | Evaluation and Analysis | Dr. Kaori Tanaka | Senior Consultant, ICONS Inc. |
| 4 | Project Management | Ms. Miki Motomura | Assistant Representative, Japan International Cooperation Agency (JICA) Ethiopia Office |

1-2-2 Ethiopian Terminal Evaluation Team

| No. | Field | Name | Present Occupation |
|-----|-------------|-----------------------|--|
| 1 | Team Leader | Mr. Hirago Feleke | Senior Expert, Agriculture Input and Supply Directorate, Ministry of Agriculture |
| 2 | Member | Mr. Aresawum Mengesha | Officer, Crops' Team, Food and Agriculture Organization |

1-3 Schedule of Review

The schedule is attached as Annex 1.

1-4 Methodology of the Terminal Evaluation

1-4-1 Method of Review

The Project was reviewed jointly by the Ethiopian and Japanese Terminal Evaluation teams based on materials showing the framework of the Project such as PDM, PO and the Record of Discussion (R/D). The review activities including analysis on reports, field surveys, and interviews with staff of the Ministry of Agriculture, Regional Bureau of Agriculture, Woreda Agricultural Office in the project target areas mainly Oromia Region, Amhara Region, JICA experts, farmers participated in the Seed Farmers School and other concerned personnel in the Project, and related organizations. This Terminal Evaluation was conducted based on the following Five Evaluation Criteria.

1-4-2 Evaluation Criteria (Five Evaluation Criteria)

(1) Relevance

Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of the authorities concerned of Ethiopia as well as the needs of beneficiaries and assistance policy of Japan.

(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. It examines whether the inputs of the Project have been efficiently converted into outputs.

(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 refers to the extent to which the Project can be further developed by the authorities concerned of Ethiopia and the extent to which the benefits generated by the Project can be sustained under national policies, technology, systems and financial state.

2. Outline of the Project

2-1 Background of the Project

The agriculture sector in Ethiopia is crucial for Ethiopian's economic growth, since it shares about 40% of GDP and 85% of rural population of the country. Therefore, the importance of agricultural sector is clearly described in the national development plan ("Growth and Transformation Plan") for 2010-2015. However, most of the farmers are still relying on traditional farming practices that lead to low productivity, and it brings about unstable food production and supply.

One of the causes of these problems is believed to be the limited use and supply of good quality seed. Considering the significant current and future role of the agriculture sector, a seed system that provides quality seed to meet with demand of farmers is an essential enabler to continued economic and social development of Ethiopia.

There are several organizations, research institutes, universities such as Ethiopian Seed Enterprise (ESE), who bear the backbone of seed production in Ethiopia and have the duty to produce and supply certified seeds. However, the amount of its supply is limited to only about 20% of its demand. Consequently, most of the farmers use farm-saved seed, informal seed or grains as seed.

These seeds are mostly with low yield, low germination and low purity. This situation led the Government of Ethiopia (GOE) to aim at increase in quality seed production by (seed) farmer to satisfy (grain) farmer's

demand. But 'seed farmers' have a number of problems related to the production technique, quality management and distribution, such as 1) Farmers' seed production technique is insufficient, 2) Seed quality control is not sufficient at local level, 3) Low seed price does not motivate producers and 4) Seed is not timely distributed to farmers.

In this situation, GOE requested the Government of Japan to implement JICA technical cooperation project related to seed production with the Ministry of Agriculture and Rural Development (now the Ministry of Agriculture: MoA) as C/P organization. In response to the request, JICA has started the implementation of the Technical Cooperation Project "Quality Seed Promotion Project for Smallholder Farmers", aiming at the increase in self-pollinating crops of teff and wheat production through utilization of quality seed produced by smallholder farmers, since February 2010 for 4 years till February 2014, in the target woredas in three regions namely Amhara, Oromia and SNNP (Southern Nations, Nationalities, and People's).

2-2 Summary of the Project

The framework of the project was decided in the R/D signed on August 31, 2009. PDM for the Project was modified and agreed in the third JCC on November 4, 2011, and in fifth JCC on December 12, 2012. The project summary described in PDM version 3 is as follows; (For more details, see Annex 2).

(1) Overall Goal

Production of mainly self-pollinating crops, teff and wheat, is increased through utilization of quality seed in the target woredas.

(2) Project Purpose

Use of quality seeds is increased in the target woredas.

(3) Outputs

- Output 1: Quality seed production technologies are improved.
- Output 2: Quality seed production technology is disseminated to seed producing farmers and/or farmers who want to start seed production.
- Output 3: Quality assurance of seed is strengthened.
- Output 4: Sustainable system of quality seed production for smallholder farmers is suggested

3. Achievement of the Project

3-1 Inputs

3-1-1 Japanese Side

(1) Dispatch of Experts

Long-term experts were dispatched to the Project in the following fields: 1) Chief Advisor, and 2) Coordinator/ Monitoring of Seed Production. Short-term experts were dispatched in the following fields: 1) Chief Adviser/ Seed Production Policy and its System, 2) Monitoring of Seed Production, 3) Seed Production Technique, 4) Agricultural Machinery, 5) Extension System, 6) Training Management, 7) Extension Material Development 8) Quality Control of Seeds, and 9) Improved Agricultural Tool, and 10) Marketing/ Agricultural Economy. For details, see Annex 3.

(2) Trainings in third country and Japan

By the time of the Terminal Evaluation, nine counterparts participated in the trainings in Kenya and in

Japan. For details, see Annex 4. It is scheduled additionally that five counterparts are going to participate in the trainings in Kenya in September 2013 and four counterparts in September to October 2013 in Japan.

(3) Provision of Equipment

Vehicles, bicycles, office equipment such as computers, printers, projectors and office furniture etc., and agricultural equipment such as threshers, winnowers, cleaners, seeders, seed moisture tester etc., have been procured or fabricated for the project activities. Cost for procurement of equipment is around 3.9 million Birrs as of June 2013. For details, see Annex 5.

(4) Local Cost Allocated by Japanese Side

Local cost allocated by JICA for the implementation of the project activities is 25.4 million Birrs as of June 2013. For details, see Annex 6.

3-1-2 Ethiopian Side

(1) Assignment of Ethiopian Counterparts

Currently, 45 counterparts in total are assigned, i.e. 3 persons of Ministry of Agriculture as project director, project manager and counterpart, and 9 persons of Regional Bureaus of Agriculture (Amhara, Oromia and SNNP), 4 persons of Zone Agricultural Departments, and 29 persons of Woreda Agricultural Offices. For details, see Annex 7. In addition, 2 researchers of DZARC had cooperated for the project activities.

(2) Project Operation Cost Allocated by Ethiopian Side

Running cost (electricity and water, etc.) for the office spaces have been shouldered by Ethiopian side.

(3) Provision of Facilities

Office spaces for Japanese experts are facilitated at the Ministry of Agriculture and the Regional Bureau of Agriculture in Amhara and Oromia. Five Woreda Agricultural Offices provided land space for building for seed inspection (Ada'a, Dendi, Lume, Sodo and Yilmanadensa woredas), and DZARC have facilitated office space with electricity and water, agricultural land for verification activities, and technical support by technical assistant researchers, etc.

3-2 Outputs

3-2-1 Output 1: Quality seed production technologies are improved.

The output 1 has been achieved. The project has developed and verified necessary basic seed multiplication technologies in accordance to the local agricultural necessities. The project has introduced these technologies through SFS. There are some cases where non-SFS farmers have utilized one of the technologies after observing and learning from the neighboring SFS farmers. As the row planting technology is one of the critical technologies for the quality seed production, which is officially enhanced by ATA, the project has especially advocated this technology by fabricating and introducing a row sowing machine to the SFS farmers.

| |
|---|
| Indicator 1-1: At least five (5) seed production technologies are verified. |
|---|

It has been achieved. As shown in the table 3a, verifications of 7 kinds of seed production technologies were completed. The verification trials through DZARC, as well as the adaptability trials through Farmers' Training Center (FTC) have been conducted, and the effectiveness of these technologies for the local farmers has been confirmed. The holistic list of the important production technologies identified by the project is shown in the table 3b. These technologies have been compiled in "Teff & Wheat Seed

Multiplication Manual” (ver.3, July 2013) shown in indicator 1-2.

The project has also worked on improvement and development of some of the agricultural tools or machinery. As shown in the table 3c, there are 11 kinds of agricultural tools or machinery which have been studied by the project. In accordance to the recommendation made in the mid-term review, the project has focused on the development and introduction of “hand-driven row seeder/ planter” as mentioned above, and its effectiveness has been verified through the machine fair held by ATA and EIAR in April 2013. The machine can contribute not only reducing labour or time for planting, but also reducing the amount of seeds to be used. The project has fabricated 100 row seeders, and of which 90 had been distributed for the 3rd round SFS farmers through the woreda agricultural offices. The adaptability of this machine has been further confirmed by the project as two neighboring farmers of SFS members in different places have placed an order for fabrication and introduced the machine by their own expenses.

Table 3a: Basic seed production technologies developed and verified

| |
|---|
| 1. Land preparation using spike tooth hallow (soil crushing and leveling) |
| 2. Sowing method (effectivity of row sowing in comparison of broadcast sowing) |
| 3. Sowing method (optimum interrow space) |
| 4. Sowing method (a row sowing machine development and confirmation of its effectivity) |
| 5. Soil covering and light soil compaction |
| 6. Quality improvement of seeds by taking off of off-type plants, and establishment of a method for identifying off-type plants |
| 7. Postharvest treatment (a threshing and a cleaner machine development) |

Table 3b: Seed production technologies developed

| Kind of Seed Production Technology | Key Points | Countermeasure |
|---|---|--|
| Essential Technology for Quality Seed Production | | |
| 1. Land preparation | Cultivation history (crop, variety, insect and disease), field property (soil fertility and drainage), isolation | Conduct preliminary interviews |
| 2. Sowing | i) Effective management for off type and weeding by row sowing ii) Quality seed selection | i) Utilization of row seeder ii) Seed cleaning (sieve) |
| 3. After heading | Elimination for off type and weeds | Establishment of Off-type identification |
| 4. Post-harvest | i) Operation after harvest (prevention of contamination) ii) Avoid the seed loss and mixed with other materials | i) Machine maintenance ii) Post-operated threshing machine |
| Other Available Technology for Quality Seed Production | | |
| 5. Land preparation | i) Field design for effective work for seed quality ii) Weeding before sowing | i) Sowing bed and operation aisles ii) By hand or herbicides |
| 6. Sowing | Proper seed rate for well mature seeds | Proper plant density |
| 7. Fertilization | Proper fertilizer management with active seeds | Proper fertilization |
| 8. Harvest time | Prevention of excessive mature after harvest timing | On time harvest |
| 9. Post-harvest | i) Selection of working place for threshing ii) Elimination of insect damage and disease seeds iii) Select of quality seed by elimination of immature seeds | i) Isolation or plastic sheet ii) Seed selection by eye after harvest iii) Auto-fan winnower |

| | | |
|-------------|---|--------------------------|
| 10. Storage | Maintain seed quality and activity (germination activity) | Proper storage condition |
|-------------|---|--------------------------|

Table 3c: Agricultural machinery or tools identified

| Kind of Machinery | Status | Condition or Points to be Improved |
|---------------------------------------|---|--|
| 1. Tooth Hallow | Developed a proto-type, but furthermore improvement was not prioritized | Unification of specification, increase of strength, adaptation for heavy clay soil and cost reduction |
| 2. Row sowing machine (wheat) | Completed | |
| 3. Row sowing machine (teff) | Completed | |
| 4. Threshing machine | Developed a proto-type, but furthermore improvement was not prioritized | Weight reduction, smaller size, cost reduction. Pedal type threshing machine will be fabricated. |
| 5. Cleaner (selection) | | Weight reduction, increase of strength, and cost reduction |
| 6. Winnower (manual type, metal made) | | Increase of durability, stabilization of air volume, weight reduction, unification of specification. (Purpose of this winnower is to remove immature seeds and rubbish within threshed seeds at field.) |
| 7. Winnower (electric, wooden) | | Increase of air volume and increase of durability. (In order to select quality seeds from commercialized wheat seeds. Use at primary cooperative or cooperative union) |
| 8. Compactor | Utilized in farmers' and test fields in 2010 & 2011 | In accordance with soil character, compaction by tree branch or chain, or soil covering methods can be used. |
| 9. Sterilizer | Utilized in farmer's field in 2010 | Based on the examination in 2010, no significant difference was found between sterilized seed and non-sterilized seed. Less possibility of income increase recover the cost of machinery. Thus sterilization of seed was not implemented since 2011. |
| 10. Sewing machine | Procured | Ready-made item. |
| 11. Pedal type threshing machine | Developed a proto-type, but furthermore improvement was not prioritized | It was procured by Japan in order to reduce weight and size of the above No.4 item; however due to the delay of arrival to Ethiopia, further development could not be materialized. |

Indicator 1-2: One Seed production technology manual is produced.

It has been achieved. Three relevant manuals as listed below have been developed.

- ◇ Teff & Wheat Seed Multiplication Manual (English)
- ◇ Row-seeder Fabrication Manual (English and Amharic)
- ◇ Row-seeder Operation & Maintenance Manual (English and Amharic)

“Teff & Wheat Seed Multiplication Manual” is the manual for the seed production technologies developed by the project. It is currently under the approval process in Ministry of Agriculture, which may be completed by September 2013. The target users of the manual are the woreda agricultural office staff, thus it will be translated to the local language once approved. The project also plans to distribute it to all other counterpart organizations or stakeholders as well as Zone level libraries or FTCs, and also upload to the MoA's webpage.

In addition, the fabrication manual, and the operation & maintenance manual for the row seeder have been developed in English and Amharic and distributed to the SFS farmers, DA, fabricators etc.

3-2-2 Output 2: Quality seed production technology is disseminated to smallholder farmers and/or farmers who want to start seed production.

Although some of the data to confirm the indicators' achievement level are not available; there is a high possibility that output 2 will be achieved by the end of the project.

2-1 Capacity of extension staff of the target woredas as trainer or facilitator is enhanced.

The cumulative numbers of extension staff (development agents) trained is 199 in Training of Facilitators (ToF), and 591 in Technical Training (TT) (c.f. Annex 8: The list of trainings and workshops held by the project). There is no exact data to measure the level of capacity enhancement; however the team has confirmed many positive signs that indicate satisfactory enhancement of the relevant woreda staff's capacity, as listed below:

- There are high satisfaction rates by participants for ToF and TT. According to the questionnaire implemented by the team, 100% of the participants for ToF (33 persons in 3 regions) answered that they were satisfied ("very satisfied" and "satisfied") for the "Topics/Contents of training", and "Applicability or practicability of the training". 100% of the participants for TT (49 persons in 3 regions) answered that they were satisfied ("very satisfied" and "satisfied") for the "Topics/Contents of training", and 96% were satisfied for "Applicability or practicability of the training".
- As shown in the table 3d, the numbers of SFS has been increased steadily.
- The Government run SFSs have been conducted by development agents (who previously conducted the project run SFS) with minimum intervention by the project.
- There are very high graduation rate (94% by average) for SFS even it continues for 32 weeks (8 months) in each weekend.
- High evaluations and appreciations for SFS in general by other partner organizations in agricultural sector.

On the other hand, the high turn-over rate of the extension staff has been a major threat for the sustainability of the capacity developed in each staff. Though the exact influence from this could not been confirmed by the evaluation team, there is a case that among the 12 participants of 3rd round ToF in Amhara region, only 4 staff are remained in the office.

The project has developed the below materials for SFS. The final versions of these materials are to be compiled after the 3rd round SFS completion.

- ✧ Flip charts for SFS (week 1 to 32) (English, Oromifa and Amharic)
- ✧ SFS brochure and pamphlet (English, Oromifa and Amharic)
- ✧ Guide of lesson plan for trainers (English)
- ✧ Manual for the development of teaching materials (English)

Indicator 2-2: More than 900 farmers are graduated the SFS.

It has been achieved. There were 257 SFS graduates in 1st round, and 730 in 2nd round, totaling 987 in 2 years. The project is at present conducting 19 SFSs with 611 farmers, and they are to complete in January 2014. These will surpass the target 900 SFS graduates. In addition, there are 18 government-run SFSs conducted by woreda offices with 563 participants.

Table 3d: Number of SFS, Participants and Graduates

| Region | District (Woreda) | 2011/12 | 2012/13 | 2013/14 | 2013/14 By Ethiopian Government | Total |
|--------|-------------------|---------|---------|---------|------------------------------------|-------|
| | | | | | | |

(Handwritten mark)

(Handwritten signature)

| | | | | | | | |
|---|-----------------------|-------------------------------|------------------|-------------------|------------------|------------------|---------------------|
| Amhara | Yilmana Densa | No. of SFS | 0 | 5 | 5 | 4 | 14 |
| | | No. of Farmers (Male/ Female) | 0 | 160 (114/ 46) | 162 (107/ 55) | 130 (89/ 41) | 452 (310/ 142) |
| Oromia | Ada'a, Dendi and Lume | No. of SFS | 9 | 15 | 9 | 10 | 43 |
| | | No. of Farmers (Male/ Female) | 278 (179/ 99) | 483 (345/ 138) | 289 (212/ 77) | 309 (235/ 74) | 1,359 (971/ 388) |
| SNNP | Sodo | No. of SFS | 0 | 4 | 5 | 4 | 13 |
| | | No. of Farmers (Male/ Female) | 0 | 132 (80/ 52) | 160 (132/ 28) | 124 (82/ 42) | 416 (294/ 122) |
| | Total | No. of SFS | 9 | 24 | 19 | 18 | 70 |
| | | No. of Farmers | 278 | 775 | 611 | 563 | 2,227 |
| No. of Farmers Graduated (Male/ Female) | | | 257 (169/ 88) | 730 (500/ 230) | | | |
| <i>Average Graduation Ratio: 94.1%</i> | | | | | | | |

Indicator 2-3: At least 80% of farmers participated in SFS adopts one of the seed production technology verified in Output 1.

Exact data to judge this indicator have not been collected and the project plans to conduct a survey to confirm the adaptation rate of the technologies before the project completion. According to the follow-up survey conducted by the project in June 2013¹, 81.4% of the graduates regard “row sowing” as one of the most important topics learned, followed by “seed preparation (53.2%)” and “land preparation (46.2%)”. This result shows that majority of the farmers confirmed the effectiveness of the introduced technologies and may indicate high possibilities of them in adopting the technologies, especially the row-sowing technology.

3-2-3 Output 3: Quality assurance of seed is strengthened

Although the facilities, techniques, and staff for a quality testing for seed have been prepared for a certain level, due to the delay of the planning and implementation of the activities under the output 3, full scale seed testing activities is not yet conducted, and currently being prepared for the seed of 3rd round SFS graduates. As the harvesting season continues from October to December 2013, and as there is a national campaign of the natural resource management from February to April 2014, when development agents are occupied by other assignment, it is expected the testing is to be conducted from April to June 2014. Thus output 3 cannot be achieved during the project period.

Indicator 3-1: More than 1 person who has attended training on seed inspection (field and laboratory) is assigned at the laboratory in each woreda.

It will be achieved. Simple seed laboratories have been created at 5 Woreda agricultural offices under the project, and all necessary equipment have been installed.

The project conducted training on field inspection and laboratory test of seeds as listed in the table 3e. Some trainings were conducted as a part of TT for the counterparts. Among the participants to those trainings, 10 inspectors (2 from each target woreda) have been assigned to the laboratories. Follow-up training/workshop is to be organized with the support of a quality control short-term expert. At the time of the terminal evaluation survey, 3 out of 10 laboratory inspectors assigned have left their positions, 2 from Lume woreda in Oromia, 1 from Sodo woreda in SNNP. Lume woreda has already assigned 2 new staffs but not yet in Sodo woreda.

¹ The follow up survey was conducted in June 2013 to 2nd round SFS graduates in 18 villages out of 24. 10 farmers were randomly selected from each village, and answered questionnaire. There were 180 answers gathered by the time the mission team starts evaluation survey.

It should be noted that the assignment as an inspector at the laboratories are the additional work for all the staff allocated to the laboratories, and this caused the less laboratory testing and operation.

Table 3e: Training on Seed Quality Inspection and Testing

| | Training Title | Date/ Place | Participants | No. |
|----|---|---|---|------------|
| 1 | 3rd TT for 1R SFS | Oct. 13-14, 2011/ Debrezeit, Oromia | Experts from Zone, woreda, & DAs | 23 |
| 2 | Training on field inspection | Nov. 2-3, 2011/ Mojo, Oromia | Experts from Zone, woreda, & DAs, Officer from Seed Lab | 21 |
| 3 | Training on lab. test | Dec. 6-7, 2011, Assela, Oromia | Experts from Zone, woreda, & DAs, Officer from Seed Lab | 11 |
| 4 | 3rd TT for SFS 2R in Oromia | Aug. 3-5, 2012/ Debrezeit, Oromia | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in Oromia | 32 |
| 5 | 3rd TT for SFS 2R in Amhara | Aug. 10-12, 2012/ Amhara | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in Amhara | 20 |
| 6 | 3rd TT for SFS 2R in SNNP | Aug. 17-19, 2012/ Butajira, SNNP | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in SNNP | 17 |
| 7 | Training for Field Inspection | Sept. 4, 2012/ Bishoftu, Oromia | Woreda experts & DAs | 32 |
| 8 | 5th TT for SFS 2R in Oromia | Nov. 16-18, 2012/ DZARC, EIAR, Oromia | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in Oromia | 34 |
| 9 | 5th TT for SFS 2R in Amhara | Nov. 23-25, 2012/ Yilmana Densa, Amhara | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in Amhara | 28 |
| 10 | 5th TT for SFS 2R in SNNP | Nov.29- Dec.1, 2012/ SNNP | C/Ps (Expert from region, zone, woreda, DA supervisor, & DA) in SNNP | 22 |
| 11 | Training for lab. test & basic PC skill | Dec. 4-21,2012/ MoA, Oromia | Inspectors of Walkite Seed lab., IT dept. of MoA, & experts from five woreda agricultural offices | 20 |

Indicator 3-2: At least 80% of farmers participated in SFS utilize Field Notes.

There is no data to confirm the achievement level of this indicator for the moment.

Filed Note has been distributed in May and June 2013 to 2nd round and 3rd round SFS participants. As use of the field notes has been a mandate to graduate from SFS, all the SFS graduates have been utilizing them during the SFS, thus the utilization rate exceeds 90% for the 2nd round participants. The continuation of the field note utilization after SFS graduation has not been surveyed yet, and the project plans to make a follow up survey before the project termination.

Indicator 3-3: Seed testing procedure and manual for simple seed laboratories are developed.

It has been achieved. The procedures and manual have been developed, compiled and distributed to the participants of laboratory training. Based on the procedure and the manual, the seed quality testing has been conducted sometime from May to June in 2013 for some of the seed produced by 2nd round SFS graduates. Currently the seed quality control expert is confirming the manual. Some updates might be conducted according to the necessity.

3-4 Seed testing laboratories conduct seed quality tests to products of more than 80% of farmers participated in SFS.

It will not be achieved during the project period. On the other hand, seed quality tests are essential to determine the project's achievement level, thus it is recommended to follow up this indicator even after the

project completion.

Due to the dispatch delay of a seed quality control expert, the planning and implementation for the activities in seed quality control has been delayed. A part of the seeds produced by 2nd round SFS graduates have been collected and tested, but in a limited scale. A more systematic testing is to be conducted for the 3rd round SFS graduates after the harvesting period, which continues from October to December 2013. Considering the capacity limitation of the laboratories and staff, as well as the national campaign of the natural resource management period for woreda staff from February to April this indicator will not be achieved by February 2014.

It is expected the 3rd round SFS graduates exceed 500 farmers and the maximum samples in one woreda to be collected and tested may exceed 120 samples (80% of 160 participated SFS farmers in Yilmana Densa, Amhara). Considering the above mentioned capacity of the testing facilities and staff, to collect more than “80% of farmers” samples in each woreda may not be realistic and may not be necessary to assure a testing credibility. The project needs to seek realistic and conforming target of this indicator so as to assure a seed quality in each Kebele and woreda.

3-2-4 Output 4: Sustainable system of quality seed production for smallholder farmers is suggested.

Output 4 cannot be achieved by the end of the project.

To suggest an overall system of quality seed production in woreda level to be sustainable, it is important to study a seed distribution system in woreda level. This study is currently under implementation (activity 4-2, and 4-3). Based on this study, as well as the result acquired by the seed quality testing for 3rd round SFS graduates, the project will compile final suggestions for a potential approach to be introduced in Ethiopia.

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| Indicator 4-1: Outcomes of outputs 1, 2 and 3 are compiled and make certain contribution for implementation of the seed strategy and/or improvement of seed system. |
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If outputs 1 to 3 were achieved, it will be achieved.

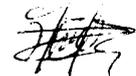
The project has shared its activities and outcomes with stakeholders including policy makers in agricultural sector by reporting, or other PR activities. The project also has attended various workshops and seminars organized by relevant organizations, such as ATA, EIAR and shared the experience. In addition, the project is planning to conduct a final seminar to present project activities and achievement to the relevant stakeholders and policy makers, including ideas on the quality seed production system in region and woreda levels.

Furthermore, the project plans to conduct a workshop inviting all the stakeholders, and to discuss the feasible directions to be sought after the completion of the project, such as incorporation of SFS activities to the existing extension system in Ethiopia, utilization of FTC etc.

As one concrete example of the project contribution toward Ethiopian relevant policy, the row sowing technology and machine development can be mentioned. The row sowing technology has been introduced by the project to the farmers in the timing when the Ethiopian government is promoting the same technology, and thus the project contributed to this technology enhancement from the bottom up.

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|---|
| Indicator 4-2: A report compiled good practices and good outcomes of the Project, etc. is prepared. |
|---|

It will be achieved. The draft content and some examples have already been prepared. The project is now collecting more cases to be compiled from the extension agents. This is to be done by the end of the project.



3-3 Project Purpose

Project Purpose: Use of quality seeds is increased in the target woredas.

Although there are good outputs confirmed in the improvement of seed production technologies and the amounts of seed production increased, it is difficult to confirm if the quality of these seeds are satisfactory to the local demands, as there is no exact data to confirm its quality. Thus it is unlikely whether the Project Purpose is achieved by the end of the Project.

Indicator 1: At least 40 ton of quality seed multiplied in a cropping season through the project approach is produced in the target woredas.

Follow-up survey in June 2013 shows an average teff yield of 100 effective answers of SFS farmers to be 1.8ton/ha in 2012/13 cropping season. There were total 987 SFS graduates in 2 years. If the rate of graduates exceeds 90% for all three rounds, it is expected more than 1,057 ((611+563)*90%) SFS farmers in 3rd round. If all these farmers of the round 1 to 3, 2,044 farmers, continue producing seeds for 0.1ha with the above average yield, the total production will be 367.9 tons. Assuming equal number of SFS farmers among each woreda, this makes 73.6 ton per woreda. Though not all the farmers are utilizing their productions as seed, there is high possibility the production amount of the seed exceeds the numerical standard of this indicator.

As confirmed in output 3, the quality testing is to be implemented next year from April to June. Thus, even the production amount can exceed 40 tons, this indicator cannot be judged correctly from the viewpoint of its quality before the project termination. Based on the testing results, and based on the Ethiopian standard, the project will recommend the feasible level of quality seed to be circulated at woreda level. For the moment, as one of the sign for the seed quality produced, most of the farmers who answered in the follow-up survey 78.1% (118 farmers) of the farmers answered they feel the quality increase in their own seed production.

Indicator 2: At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed.

It is unlikely that it will be achieved during the project period. According to the follow-up survey, most of them are utilizing the produced seed as seed; however from some of the interviews to the farmers, some are utilizing them as grains. Currently the project is conducting a seed distribution survey for the past production.

3-4 Implementation Process of the Project

3-4-1 Challenges in the Implementation Process

There were several challenges in the project for its implementation process. Especially during the first half of the project, progresses of activities have been rather slow. The major reasons for this have been listed as below:

- Repeated changes of chief advisors and their short term assignment during the first half of the project negatively affected the project process. The activities relating to the chief advisors, i.e. overall management of the project activities, have been delayed, especially in the field of seed quality control. Adding to this, the project approaches or directions have been changed according to each chief advisor assignment and this also caused inefficiency of the project process.
- The project experienced two times of PDM revision. The focuses of the project have been changed accordingly and that also negatively affected the project operation.
- There was lack of long-term Japanese experts to cover the activities in 5 woredas in 3 regions.

Especially SFS have been continued for 8 months in coordination with various administrative levels of counterparts. There has been general lack of human resources to manage, monitor and follow up all the activities held in 3 regions.

- The interventions by Ethiopian side especially in terms of overall management of the project were low. This also might be reflecting general lack of ownership consciousness among counterpart personnel in Ethiopian sides. The counterparts' responsibilities in Ethiopian side assigned for each output have not been clearly mandated as well, especially before the mid-term review, thus increased dependency to the Japanese experts' team.

3-4-2 Contributors in the Implementation Process

On the other hands, the overall project structure has been well functioned, and there were several supporting factors in the implementation process as well as listed below:

- The Joint Coordinating Committee (JCC), the decision-making body of the Project, had been managed properly. Until now, JCC had been held 5 times (1st JCC on October 28, 2010, 2nd JCC on August 3, 2011, 3rd JCC on November 4, 2011, 4th JCC on May 30, 2012, and 5th JCC on December 12, 2012.), almost once in half year. Activities in each region have been reported to the counterpart or partner organizations, and major issues have been discussed and agreed upon based on the consultations.
- As mentioned above, the project has been operated covering wide ranges of the country in a dotted manner. Even there is general lack of human resources for both sides, when it was operated, the cooperation and participations of counterparts personnel were very motivating, especially even SFS activities continue for 8 months in each weekend. It should be noted that the farmers who participated to SFS also have showed high motivation and have cooperated well for the project activities.
- As the project starts to show its achievement especially in terms of SFS approach, the recognition of the project has increased. Especially during the latter half of the project, the project approaches also had become clearer, and there were more organic dialogues between Ethiopian and Japanese sides. This also helped Ethiopian side to increase their ownership. Adding to this the success on the ground by SFS has increased ownership consciousness as well among counterpart organizations. In the 3rd round of SFS, there are 18 SFS operated with minimum supports by the project and there are generally good motivation for its continuation and expansion by regional and woreda offices.
- The project has continued to share monthly progress reports and weekly plans, and this had served as coordination and monitoring mechanism of the project. Monthly progress reports had been submitted once a month or two months, to PD (Project Director), PM (Project Manager), other counterparts in regional bureau of agriculture (R-BoAs), woreda offices of agriculture etc. Weekly Plans had been shared once a week within Japanese experts, project staffs, and core counterpart personnel such as MoA, R-BoAs, and DZARC/EIAR. The project also produced various PR materials and that also helped QSPP to be widely recognized among stakeholders in the Ethiopian seed sector development.

4. Results of Review

4-1 Relevance

The relevance of the Project is high.

4-1-1 Consistency with the Ethiopian Government's policy and strategy

The Project purpose and overall goal remain consistent with the national policy of the Government of Ethiopia. The national five year development plan of Ethiopia, "Growth and Transformation Plan 2010/11 - 2014/15 (GTP)" states "maintaining agriculture as major source of economic growth". One of the major

targets for agriculture and rural development in the plan is to increase supply of improved seeds from 56,000 tons in 2009/10 to 360,000 tons in 2014/15. The policy paper by Ministry of Agriculture, “Ethiopian Agricultural Sector policy and Investment framework, 2010-2020” as well puts one of the focuses on improved seeds’ utilization, and to tackle with low productivity by smallholder farmers¹.

4-1-2 Consistency with the Japanese ODA strategy toward Ethiopia

The Japan’s ODA policy in the agricultural sector toward Ethiopia remains unchanged since the beginning of the Project. One of the priority areas in Japan’s ODA (Official Development Assistance) to Ethiopia is “Agriculture/ Rural Development” and the assistance is to be carried out in order to improve agricultural productivity and food access through market mechanism. The project is located under the detailed objective of “Agricultural Productivity Improvement Program” and this objective has the top priority among others.

4-1-3 Appropriateness of the project approach

Basic concept of the project approach is unchanged and has high relevancy. Although production of improved seeds (improved varieties) is increasing in Ethiopia, supply rates of seeds of teff and wheat compared with its official demands are still in low level as described in the table below, i.e. 14.5% and 26.3% respectively (average from 2005 to 2008). This mismatching gap is covered by the informal seed provision among farmers without enough quality consciousness, and hindering the improvement of yields. The project has been thus developed to increase the local supply of improved seed at woreda levels.

| Crop | Supply rates against the official demand (%) ² | | | | |
|-------|---|------|------|------|---------|
| | 2005 | 2006 | 2007 | 2008 | Average |
| Teff | 5 | 12 | 22 | 19 | 14.5 |
| Wheat | 20 | 38 | 23 | 24 | 26.3 |

4-1-4 Relevance of the Project for the target areas and the target groups

The justification of the selection for the target areas and target groups remain the same as in the mid-term review and it has high relevancy.

Three regions of Amhara, Oromia, and SNNP have been targeted as they are the major grain production regions in Ethiopia. In each region, the project organized a planning committee before each SFS round, inviting counterparts in region, zone, and woreda level, and selected in accordance to a certain criteria (i.e. seed production experience, accessibility, communicability etc.) and avoiding the duplication of areas with other donors’ interventions.

As of selection of farmers, development agents in each village have implemented an orientation session before SFS, explaining the project purpose and the concept of SFS. Thus only the interested farmers to SFS have been selected, and the project adjusts a team member to have a good balance in terms of age or sex.

4-2 Effectiveness

The team concluded the effectiveness of the project implementation is medium.

In addition to the evaluation items shown below, the level of achievements on project purpose and outputs are also considered to judge effectiveness. As stated already, due to the delay of some of the

¹ “The use of chemical fertilizer and improved seeds is quite limited despite Government efforts to encourage the adoption of modern, intensive agricultural practices. Low agricultural productivity can be attributed to limited access by smallholder farmers to agricultural inputs, financial services, improved production technologies, irrigation and agricultural markets; and, more importantly, to poor land management practices that have led to severe land degradation” *Source: Ethiopian Agricultural Sector Policy and Investment Framework, 2010-2020, page 3.*

² Seed, Fertilizer, and Agricultural Extension in Ethiopia, March 2011, International Food Policy Research Institute (IFPRI).

activities under output 3, the achievement level of the project purpose cannot be measured properly and need to wait for the seed quality testing which can be implemented after the project period.

4-2-1 Effectiveness of the Project Design Matrix (PDM)

PDM has been revised twice so far, and some modifications of the project approaches have been made. Current PDM has more focus on the production technology improvement, and one of the major approaches for this end is SFS implementation. The general high evaluation and appreciation toward SFS from the various stakeholders in seed and agricultural sector, and the participated farmers' continuous high motivation and willingness to engage in the activities show that SFS approach had a high effectiveness in general. This is also due to the fact that the smallholder farmers in general have been lacking opportunities to improve production skills itself, thus the holistic technical approach by SFS had been well appreciated.

On the other hand, to increase the quality seed production as aimed in the project purpose and the overall goal, not only the technology improvement but also a functional distribution system of quality seed needs to be studied and enhanced. The current PDM does not have enough focus on this aspect, although the current project team has continued to work on the issue.

4-2-2 Important factors that prevented the project purpose and outputs from being achieved

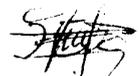
- The C1 seeds procured from a formal seed enterprise in 2011 for the 1st round SFS activities had less purity and not to the level of the seed. Thus the C2 seeds produced by these C1 seeds have been consumed or sold as grain.
- Outbreak of stripe rust in Africa especially on wheat production in 2011 affected the project to procure enough C1 seeds.
- High turn-over rate of developments agents and woreda staff, as well as frequent change of Japanese expert personnel (esp. Chief Advisors) dispatch.
- Less involvement in the overall project management and implementation by Ethiopian side in federal level.
- Seed quality testing have not been progressing as planned, mainly due to other government assignments DAs are having, as well as the planning and implementation delay due to the Japanese short term expert dispatch delay.
- The governmental organizations in Ethiopia do not have a unified view on seed system and this affected project management.

4-2-3 Important factors that accelerated achieving the Project purpose and outputs

- As mentioned during the Mid-term review, the delayed achievement in output 3 and 4 are being mended through the dispatch of Japanese short-term experts and hiring one local staff who had worked as a senior seed expert.
- High appreciation for the relevance of the approach and performance of SFS.
- There have been high motivations among farmers, and cooperation by the farmers who participated to SFS.
- The policy to enhance row planting technology by Ethiopian government accelerated the project to introduce this technology and developed machine.

4-3 Efficiency

The Team judges the efficiencies of the Project implementation is medium. Some of the points noted by the evaluation team are the followings:



4-3-1 Adequacy of the inputs by Japanese side

- Almost all the interviewees and the results of questionnaire suggest that TT and ToF, as well as the group trainings have been satisfactory, in terms of technical transfer approaches, topics and lecturers knowledge.
- The items and usages of the equipment procured have been appropriate.
- In the first half of the project, dispatch of long-term Japanese expert is only a person in charge of coordination/ monitoring of seed production, who had covered all the project target areas that ranges for 5 woredas in 3 regions. The extension activities have taken majority work for the expert and caused the delay in other activities such as seed quality testing. The frequent change e of chief advisors and the shorter periods of their stays in the first half of the project caused the changes of project strategies or approaches and lack of monitoring, and hindered a smooth project implementation, managing overall progress of project activities in collaboration with Ethiopian counterparts. Since the team leader has been dispatched as a long term Japanese expert from Aug. 2012, the over-loaded situation has been mitigated.
- There was a delay in dispatching a short term Japanese expert in charge of seed quality control. as mentioned already.
- Field trip allowance rate set by JICA in agricultural sector was not satisfied by CPs.

4-3-2 Adequacy of inputs by Ethiopian side

- There has been general lack of Ethiopian counterparts' involvements in the project management, which have been improved gradually according to their increased understanding and consciousness on the project activities.
- Timely field inspection of multiplied seeds is compromised by limited human resources and logistics.
- High turn-over rate of woreda staff has been a major threat for the technical transfer activities by the project.
- The project office provided by Ethiopian side had limited space, especially since the two long term experts have been dispatched. Ethiopian side is now underway to take a certain measure.

4-4 Impact

The impact of the Project is high. Even it is unlikely that the overall goal is to be achieved for the moment, the project has produced high impact in seed production improvement. The evaluation team confirmed generally very high recognition and appreciation toward the project activities by the various stakeholders in seed and agriculture sector, although these recognitions seemed to be more focused on SFS approaches.

4-4-1 Prospect for Achieving the Overall Goal

Overall Goal: Production of mainly self-pollinating crops, teff and wheat, is increased through utilization of quality seed in the target woredas.

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| Indicator 1: At least 200 ton of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. |
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|---|
| Indicator 2: At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed. |
|---|

There are two indicators for the overall goal as shown above; however it is difficult to prospect whether

this will be achieved by 3 to 5 years after the completion of the project, due to the lack of data, such as 1) whether the farmers graduated SFS will continue the seed production, 2) whether the government run SFS will continue to operate and expand their target areas, 3) whether the farmers will expand the seed production plot, 4) whether the seeds produced can be sold and satisfactory for the local demands, 5) whether the unit price of produced seeds can be profitable for the farmers, 6) whether woredas will expand the capacities of laboratories etc.

Some of the data mentioned above such as 1) and 3) can be obtained during the project period by implementing a follow up survey, and 4) and 5) can be measured by completing the activities under output 3 and 4. Based on these data, it is important that the project will provide suggestions to the Ethiopian governments as to approaches or a functional system of local quality seed distribution in woreda level.

4-4-2 Other Impacts

(1) Impact Inside of the Project Purpose

- The technologies on seed production increase have been delivered soundly, and this is confirmed by the high motivation of the stakeholders to continue SFSs, as well as by some cases that non SFS members' own initiative to involve or create SFS activities.
- It has facilitated farmer-to-farmer seed exchanges.
- Strengthened the linkage between development agents and SFS farmers. Many of the development agents commented that through ToF and TT, they have learned how to relate to the farmers and increased their confidence.
- The government has adapted the experience of SFS in some of target Kebeles, and is willing to continue its activities.
- The project contributed the government policy to disseminate row-sowing, by developing technologies and machines.

(2) Impact Outside of the Project Purpose

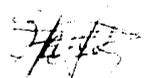
- Some of the SFS graduates organized themselves as a primary seed cooperative for seed production.
- Some of SFS members are contract farmers of ESE, thus indirectly improving the seed quality for basic seed or C1 productions (though the exact data is not available, as one example, all the members in one SFS in Yilmana Densa are contracted farmers with ASE).
- The human capital building approach in SFS produced huge impact in smallholder farmers' daily farm operation, as well as producing the group dynamics among them.

4-5 Sustainability

Sustainability of the Project is assessed to be medium. The project has demonstrated an effective approach to improve availability of quality seeds at local level. However, the current data confirmed by the team is not enough to judge the sustainability of the project, and there are several concerns which are mentioned in the below part.

4-5-1 Policy Aspect

As mentioned in the article of the Relevance, the project has high relevancy and is in alliance to the national policy of Ethiopian government. The project intervention is supported with government policy through the new seed law proclamation as well, although regulations and directives of the proclamation have not yet been materialized. The project especially may have alliance in terms of informal seed



distribution or quality declared seed system. There is possibility that the project contributes to materializing these approach or concept by sharing its experience.

4-5-2 Institutional Aspects

There is a general dependency of the project management toward Japanese experts' team, as well as high turn-over rate of woreda staff. On the other hand, there is an increasing recognition of the project activities and approaches inside of the counterpart organizations. The experiences of QSSP at different levels were highly recognized and appreciated by partner institutions as one of the major intervention to improve the quality seed production. Thus, there is "readiness" of the government to institutionalize the project approach into the existing government system.

As to the coverage of "quality seed", it is important that the project agrees with the counterpart organizations for its quality standard and testing processes according to the local reality and based on the local demands, thus the project activities under output 3 and 4 need to be performed with a close collaboration with counterpart organizations.

Adding to the above, functions and status of woreda laboratories need to be shared by relevant stakeholders along with seed testing activities.

(3) Financial Aspect

The budget which is necessary for a cycle of SFS is not a significant amount. Already 18 government-run SFS without financial support by the project are underway, thus there is a good sign of financial sustainability, although the team confirmed several difficulties that the government run SFS have been facing such as lack of materials to be utilized in SFS, or disparity consciousness among farmers.

For now, there are several possibilities to tackle with the issues suggested by the different level of the counterpart organizations, such as incorporation to the existing extension system so as to formalize financial requests by farmers' unions and mainstream relevant activities by woreda staff, or to request a support to AGP fund, which is a donors' pool fund for the agricultural sector development. It is desirable if the project could confirm these possibilities and study a practical incorporation modality etc.

(4) Technical Aspect

To see the introduced quality seed production technologies to be functional and sustainable, it is necessary to complete seed quality inspections and a seed distribution survey, and to recommend a level of quality standard that can be satisfactory for the local demands, and agree to it with the relevant stakeholders.

As to the technical sustainability in human resources, there is high possibility that the introduced seed production technologies would remain in SFS farmers; however there is a concern in sustainability of the skills and knowledge transferred to the woreda staff in target areas, including the laboratory staff, due to the high turn-over rate for woreda staff. To tackle with this, the regional bureaus of agriculture are requesting the investment budget for development agents or experts, on the items such as education opportunities, transportation media, uniforms etc.

As for the row-sowing machine developed by the project, the project has gained a patent through JICA office to protect the technology to remain in the counterpart organizations. Sustainability of this technology will be kept if the patent is to be transferred to MoA after the project termination.

4-6 Conclusion of the Evaluation

The evaluation team confirmed that the project has produced a great change by introducing different ways for farmers to counteract seed shortage.

There are in general very high appreciation and recognition of SFS activities by the various stakeholders in seed and agriculture sector, inside and outside of the project. However, to evaluate the project achievement in terms of seed quality improvement and seed production increase, it is necessary to focus on the seed quality inspection activities and that cannot be implemented during the project term. Thus the team recognizes the necessity for the project to extend for another half year after the project period (until August 20th, 2014), and propose the extension as discussed in 4th and 5th JCC meeting, so as to complete the remaining activities under the output 3 and 4.

5. Recommendations

5-1 Recommended Actions to be taken by the Project in the Remaining Cooperation Period

Based on the conclusion above, the evaluation team recommends the below items:

5-1-1 Continuation of the Project Components (especially SFS approach)

It is necessary to study and suggest how to incorporate the SFS approach into the existing extension system of MoA. The evaluation team identified three possibilities to be considered as below:

- i) FTC has training programs for farmers, and the SFS approach may be incorporated as a program inside FTC.
- ii) Ministry of Agriculture has a plan to implement trainings for all the farmers in the country in the coming years, utilizing ATVET and FTC, and the SFS approach may be incorporated as one of the training approaches.
- iii) There are the existing practices of the SFS approach inside of the project by the initiatives of each regional and woreda authorities, as the government run SFSs. This initiative in conducting government-run SFSs is very encouraging, and it should be continued and expanded while making utmost efforts in improving the quality of the SFSs (in the aspect of human resources, and financially and technically).

5-1-2 Monitoring of the SFS graduates

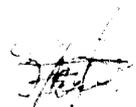
It is necessary to study a mechanism of monitoring and follow-up the SFS graduates so as to confirm sustainability of the introduced technologies and to expand its technical contributions.

5-1-3 Ensuring the Seed Assurance System

It is necessary to study and recommend an appropriate quality standard and testing procedure at woreda level for the seeds produced by the SFS farmers at woreda level, so as to function a local seed circulation system for farmers.

5-1-4 Institutionalizing the QSPP experience and knowledge

- It is necessary that the experience of QSPP is integrated into the process of strengthening the informal seed distribution system. For this end, it is advisable to continue dialogues with the organizations and initiatives (or program stakeholders) such as ATA and ISSD, which are the major stakeholders regarding the seed system development in Ethiopia.
- It is advisable to study on how to contribute materializing the quality declared seed (QDS) which is defined in the new seed proclamation. It is necessary to study the possibility of distribution of the



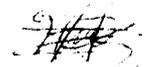
seeds as QDS, which are produced based on the approach developed by QSPP, and contribute materializing as a part of the QDS concept.

5-2 Recommended Actions to be taken by the Japanese Side

- It is necessary that Japanese side supports the inspectors in woreda laboratories for them to implement testing for the seed produced by the SFS farmers, so as to complete the activities under the output 3 and Output 4 that are based on other Outputs.
- It is necessary that Japanese side to support technically the trainings of newly assigned inspectors in the woreda laboratories, which will be conducted by Ethiopian side.

5-3 Recommended Actions to be taken by the Ethiopian Side

- It is necessary that Ethiopian side to assign necessary staff in woreda laboratories in timely manner so as to let the staff practice necessary assignments. If there will be a replacement of the staff, knowledge transfer or sharing have to be done properly.
- It is necessary that Ethiopian side to develop a linkage between regional laboratories and woreda laboratories, and thus to authorize woreda laboratories to issue certificate for seed qualities.
- It is necessary that the data and experience gained by the project activities are integrated into the process of materializing and institutionalizing a system of seed testing standard and procedure.



Annex 1 Schedule of the Terminal Evaluation

| Date and Day | | Joint Evaluation Team | | | | | |
|--------------|---------------|---|---|---|---|--|--|
| No | D | Leader (Mr. Kimiaki Jin) | Seed (Prof. Yoshiaki Nishikawa) | Evaluation Analysis (Dr. Kaori Tanaka) | Cooperation Planning (Ms. Miki Motomura) | Mr. Aresawum Mengesha (FAO ET) | Mr. Hirago (MoA/Univ) |
| | | Evaluation team from Japan side | | | Evaluation from Ethiopia side | | |
| 2 | 12-Aug Mon | | 17:30 Meeting with Japanese Experts at Amanaya Guest House, Addis Ababa | <AIP> 13:30 Arrive in AA by EK723 <Sedarr1> 14:30 Check Inn hotel 17:30 Meeting with Japanese Experts at Amanaya Guest House, Addis Ababa | 17:30 Meeting with Japanese Experts at Amanaya Guest House, Addis Ababa | | |
| 3 | 13-Aug Tue | 09:00 Internal meeting among the mission team | 13:30 Meeting with Ethiopian Mission Team at JICA office | | | 13:30 Meeting with Ethiopian Mission Team at JICA office | 13:30 Meeting with Ethiopian Mission Team at JICA office |
| 4 | 14-Aug Wed | 06:00 Leave AA and move to site SFS visit in Oromia (in Jogo Godedo village, Lume woreda) Interview to SFS farmers Visiting a seed laboratory Interview and meeting with woreda experts Back to AA | | | | | |
| 5 | 15-Aug Thu | 17:30 - 18:30 Courtesy Call to Dr. Dagnachew Beyene, Director, Agricultural Extension Directorate, MoA, Project Director of QSP | 08:00 - 09:00 Meeting with Dr. Tafese, head of ESE at ESE HQs | 11:00 - 12:00 Meeting with ISSD project under EKN, Dr. Amsalu Ayana Director of ISSD Ethiopia, and Mr. Mohammed Hassena, National Partnership Coordinator | 14:00 - 15:00 Meeting with Mr. Yonas Sahlu, Acting Director of ATA | | |
| | | 15:30 - 16:30 Meeting with Mr. Furo Beketa, Process Owner, Input and Supply Process, Oromia Regional BoA, Oromia Regional Project Director of QSP | | | | | |

| Date and Day | | Joint Evaluation Team | | | | |
|--------------|--------|---------------------------------|------------------------------------|---|--|--------------------------|
| No | D | D | D | D | D | |
| | | Leader (Mr. Kimiaki Jin) | Seed (Prof. Yoshiaki Nishikawa) | Evaluation Analysis (Dr. Kaori Tanaka) | Cooperation Planning (Ms. Miki Motomura) | Mr. Hirago (MoA/Unit) |
| | | Evaluation team from Japan side | | | Evaluation from Ethiopia side | |
| 6 | 16-Aug | Fri | | 07:20 Leave AA to BJR 9:30 Meeting with CIPs in Amhara regional BoA, Mr. Lanleyderu, Process owner of Agricultural extension process, Amhara regional BoA 11:00 Meeting with ASE, Mr. Mulat Mekonnen, General Manager 12:30 Visit to Amhara regional laboratory | | |
| 7 | 17-Aug | Sat | | 08:00 Leave Bahir Dar to Adet 08:00 - 10:00 SFS monitoring at site, interview to SFS farmers 11:30 Visit the Yilmanadensa Woreda Laboratory 12:00 Meeting with Mr. Ale Desta Biru, Deputy Administrator, Mr. Mulu Mesellu, Input and Supply Process Owner at Yilmanadensa Woreda Agricultural Office 19:00 Fly to ADD | | |
| 8 | 18-Aug | Sun | | 08:00 Leave AA to site 10:00 - 11:30 Meeting with Mr. Kebede Debelo, Head, Dendi Woreda Agricultural Office 11:30 - 13:00 Interview to SFS farmers Back to AA | 08:00 Leave AA to site 10:00 - 11:30 Meeting with Mr. Kebede Debelo, Head, Dendi Woreda Agricultural Office 11:30 - 13:00 Interview to SFS farmers Back to AA | |
| 9 | 19-Aug | Mon | | Preparation of Review Report | | |
| 10 | 20-Aug | Tue | | Preparation of Review Report | | |
| 11 | 21-Aug | Wed | | Internal Meeting and Preparation of Review Report | | |
| 12 | 22-Aug | Thu | | Preparation of Review Report | | |

| Date and Day | | Joint Evaluation Team | | | | |
|--------------|--------|---------------------------------|--|---|---|--|
| No | D | Leader (Mr. Kimiaki Jin) | Seed (Prof. Yoshiaki Nishikawa) | Evaluation Analysis (Dr. Kaori Tanaka) | Cooperation Planning (Ms. Miki Motomura) | |
| | | Evaluation team from Japan side | | | Evaluation from Ethiopia side | |
| 13 | 23-Aug | Fri | Preparation of Review Report | | | |
| 14 | 24-Aug | Sat | Preparation of Review Report | | | |
| 15 | 25-Aug | Sun | Preparation of Review Report | | | |
| | | | 06:00 Move to Sodo from AA | | | |
| | | | 08:00 - 09:35 Visiting SFS and seed laboratory in Sodo woreda, SNNPR | | | |
| 16 | 26-Aug | Mon | 09:35 - 10:15 Move to Rediat Hotel, Butajira | | | |
| | | | 10:15- 16:00 6th JCC meeting | | | |
| | | | 16:00 Back to AA | | | |
| 17 | 27-Aug | Tue | | | | |
| 18 | 28-Aug | Wed | | 16:10 Leave AA | | |
| 19 | 29-Aug | Thu | | 17:35 Arrive in Japan | | |

Annex 2 PDM Version 0, 1 and 2

(1) Project Design Matrix (Version 0)

Project Name: Quality Seed Promotion Project for Smallholder Farmers
 Target Area: Four (4) target woredas in Oromia, Amhara, and SNNP Regions
 Target Group: Seed producing farmers in the target woredas
 Beneficiaries: Target Seed Producing Farmers (a. core farmers, b. pilot farmers, c. promotion farmers, d. farmers in the target woredas)
 Duration: Four (4) years

Version 0 (31 August 2009)

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|--|---|---|---|
| <p>Overall Goal Production of mainly self pollinating crops, tef, and wheat, is increased through utilization of quality seed in the target woredas.</p> <p>Project Purpose Use of quality seeds is increased in the target woredas.</p> <p>Outputs 1. Quality seed production technology is improved. 2. Seed quality control is strengthened. 3. Quality seed is delivered to users timely. 4. Economical Quality Seed System is established.</p> <p>Activities 1-1. Produce technology package of seed production at farmers' level. 1-2. Conduct training of trainers (TOT) for seed production. 1-3. Train farmers on seed production and seed utilization. 1-4. Assist FCU and cooperatives in seed production. 2-1. Establish simple seed quality laboratory at woredas. 2-2. Produce technology manual for seed quality control. 2-3. Conduct training of trainers (TOT) for seed inspection and quality control. 2-4. Train DAs, supervisors and farmers on seed inspection and quality control. 2-5. Assist FCU and cooperatives in internal seed inspection. 3-1. Analyze on seed distribution channels and methods. 3-2. Propose improved seed distribution system. 3-3. Analyze the condition on contract between farmers and cooperatives. 3-4. Promote use of quality seed among cooperatives (including conduction of field day). 3-5. Support the development of seed production plan by cooperatives. 4-1. Calculate the economic effect of quality seed utilization. 4-2. Calculate the cost of seed producers and administration on seed production. 4-3. Calculate the cost of seed producers and administration on seed quality control. 4-4. Calculate the appropriate price of quality seed. 4-5. Propose the demand and supply plan on quality seed. 4-6. Select and propose the best performing seed production system to federal and regional administration.</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> |
| <p>Inputs</p> <p>Ethiopian Side - Administrative personnel and counterparts Project Director (Director of Agriculture Extension Directorate, MoARD) Project Manager (Senior Agronomist of Agriculture Extension Directorate, MoARD) Counterpart personnel (assigned by the Project Director) Relevant regional government officers in the target areas - Facilities: Land, office space and necessary facilities in MoARD for the Japanese experts and related staff members Rooms and space necessary for installation and storage of the equipment Other facilities mutually agreed upon as necessary - Local costs: Expenditure for counterparts Water and electricity charges necessary for operation and maintenance of the facilities - Tax exemption measure Japanese Side - Dispatch of experts: Four (4) long term experts (chief adviser, seed production system, economic analysis, and seed production technology) Other short term experts (in necessity for implementation of the Project within the framework of the Project.) - Provision of equipment: Machinery, equipment, vehicles, and other materials necessary for the effective implementation of the Project within budgetary limitators. - Provision of training course in Japan, in the third countries, or in Ethiopia.</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> | <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> <p align="center">- Not discussed -</p> |

* "Quality seed" means the multiplied from C1 seed

(2) Project Design Matrix (Version 1)

Project Name: Quality Seed Promotion Project for Smallholder Farmers
 Target Area: Five (5) target woredas in Oromia, Amhara and SNNP Regions
 Target Group: Farmers in the target woredas
 Duration: February 2010 to January 2014 (Four years)

| | | | Version 1 (4 th November 2011) | |
|---|--|--|--|--|
| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions | |
| <p>Overall Goal Production of mainly self pollinating crops, teff and wheat, is increased through utilization of quality seed in the target woredas.</p> | <ol style="list-style-type: none"> 1. At least 108 ton of quality seed multiplied through the project approach is produced in the target woredas. 2. At least 75% of quality seed multiplied through the project approach in the target woredas is used. | Reports concerning the SFS, Project documents | - | |
| <p>Project Purpose Use of quality seeds is increased in the target woredas.</p> | <ol style="list-style-type: none"> 1. At least 48 ton of quality seed multiplied through the project approach is produced in the target woredas. 2. At least 75% of quality seed multiplied through the project approach in the target woredas is distributed. | Project documents | <ul style="list-style-type: none"> • Quality CI seed is sufficiently supplied. | |
| <p>Outputs</p> <ol style="list-style-type: none"> 1. Quality seed production technologies are improved. 2. Quality seed production technology is disseminated to smallholder farmers. 3. Quality assurance of quality seed is strengthened. | <ol style="list-style-type: none"> 1-1. At least five (5) seed production technologies are verified. 1-2. One Seed production technology manual is produced. 2-1. More than 900 farmers are graduated the SFS. 2-2. More than 60% of SFS members pass check items. 3-1. More than 60% of SFS members receive inspection. 3-2. More than 1 inspector who passes the examination of seed inspection is assigned at the laboratory in each woreda. 3-3. Seed assurance procedure of quality seed is proposed. 4-1. Seed production plan is formulated in each target woredas 4-2. Seed Production Strategy is drafted. | <ol style="list-style-type: none"> 1. Seed production technology manual 2-1. SFS members' lists 2-2. Seed Production checklist 3-1. Inspection report 3-2. Acknowledgement of seed inspection ability, Interview to the woreda 3-3. Proposal of seed assurance procedure 4-1. Seed production plan 4-2. Seed Production Strategy (Draft) | <ul style="list-style-type: none"> • Quality CI seed is sufficiently supplied. • Serious natural disaster(s) is/are not occurred. • Grain price is not widely fluctuated. • Trainees are kept their same assignment. | |
| <ol style="list-style-type: none"> 4. Sustainable system of quality seed production by smallholder farmers is suggested. | | | | |

| Activities | Inputs | Pre-condition |
|---|--|---|
| <p>1-1. Conduct the verification trials in the research center.</p> <p>1-2. Conduct adaptability trials at local conditions in the selected target woredas.</p> <p>1-3. Produce the seed production technology manual for the concerned technical staffs and DAs in seed production.</p> <p>1-4. Fabricate simple agricultural machineries.</p> <p>1-5. Compile the manual on simple agricultural machineries for fabrication, operation, maintenance and repair.</p> <p>2-1. Produce (a) guide(s) and teaching/facilitating materials to implement Seed Farmers School (SFS).</p> <p>2-2. Conduct training courses related to SFS implementation for the concerned technical staffs and DAs in seed production.</p> <p>2-3. Carry out the SFS.</p> <p>2-4. Establish a SFS monitoring method.</p> <p>3-1. Produce technology manual for seed quality control.</p> <p>3-2. Establish a simple seed quality control laboratory at woreda level.</p> <p>3-3. Conduct training course(s) on seed inspection (field and laboratory) at woreda level.</p> <p>3-4. Propose seed assurance procedure of quality seed.</p> <p>4-1. Collect and analyze information concerning current situation of the seed system (seed law, production, quality control, management and distribution).</p> <p>4-2. Collect and analyze information concerning current situation of demand and supply, distribution channel at woreda level.</p> <p>4-3. Make (a) seed production plan(s) at woreda level.</p> <p>4-4. Conduct cost and benefit analysis on quality seed production.</p> <p>4-5. Propose sustainable system of quality seed production and distribution at woreda level.</p> <p>4-6. Draft seed production strategy.</p> | <p>Ethiopian Side</p> <ul style="list-style-type: none"> - Administrative personnel and counterparts - Project Director (Director of Agriculture Extension Directorate, MoARD) - Project Manager (Senior Agronomist of Agriculture Extension Directorate, MoARD) - Counterpart personnel (assigned by the Project Director) - Relevant regional government officers in the target areas <p>- Facilities:</p> <ul style="list-style-type: none"> - Land, office space and necessary facilities in MoARD for the Japanese experts and related staff members - Rooms and space necessary for installation and storage of the equipment - Other facilities mutually agreed upon as necessary <p>- Local costs:</p> <ul style="list-style-type: none"> - Expenditure for counterparts - Water and electricity charges necessary for operation and maintenance of the facilities - Tax exemption measure <p>Japanese Side</p> <ul style="list-style-type: none"> - Dispatch of experts: - Four (4) long term experts (chief adviser, seed production system, economic analysis, and seed production technology) - Other short term experts (in necessity for implementation of the Project within the framework of the Project.) - Provision of equipment: - Machinery, equipment, vehicles, and other materials necessary for the effective implementation of the Project within budgetary limitations. - Provision of training course in Japan, in the third countries, or in Ethiopia: | <ul style="list-style-type: none"> • National policy on seed production by farmers is not changed. • Costs of agricultural inputs are not widely changed. |

* "Quality seed" means the second generation seed multiplied from C1 seed on teff and wheat.

(3) Proposed Project Design Matrix (Version 2)

Project Name: Quality Seed Promotion Project for Smallholder Farmers
 Target Area: Five (5) target woredas in Oromia, Amhara and SNNP Regions
 Target Group: Seed producing farmers and farmers who want to start seed production in the target woredas
 Duration: February 2010 to February 2014 (Four years)

The project objective and concept: In this project, quality seed means C2 (second generation seed) seed which is multiplied through the quality inspection procedure of the government. Basically, this kind seed is distributed and used locally where seeds are produced. Quality seed in this project does not necessary to be seed which is certified through the quality inspection procedure of the government.

Proposed Version 2 (30 May 2012)

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|--|--|
| <p>Overall Goal Production of mainly self-pollinating crops, tef and wheat, is increased through utilization of quality seed in the target woredas.</p> | <p>1. At least 200 tons of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. 2. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed.</p> | <p>1. Survey results on seed production and marketing at the SFS (seed farmer's school) participated farmers 2. Survey results on seed production and marketing at the SFS participated farmers</p> | <p>-</p> |
| <p>Project Purpose Use of quality seeds is increased in the target woredas.</p> | <p>3. At least 40 tons of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. 4. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed.</p> | <p>1. Survey results on seed production and marketing at the SFS participated farmers 2. Survey results on seed production and marketing at the SFS participated farmers</p> | <ul style="list-style-type: none"> Quality C1 seed is sufficiently supplied. |
| <p>Outputs 1. Quality seed production technologies are improved. 2. Quality seed production technology is disseminated to seed producing farmers and/or farmers who want to start seed production.</p> | <p>1-1. At least five (5) seed production technologies are verified. 1-2. A seed multiplication technology manual is produced. 2-1. Capacity of extension staff of the target woredas as trainer or facilitator is enhanced. 2-2. More than 900 farmers are graduated the SFS. 2-3. More than 60% of SFS members pass check items. 2-4. At least XXXX % of farmers participated in SFS adopts seed production technology learned at SFS. 2-5. At least XXXX % of C2 seeds pass quality assurance check at laboratory of the target woredas.</p> | <p>1-1. Reports on the seed production technology verification 1-2. Tef and Wheat Seed Multiplication Manual 2-1. Results of questionnaire survey to extension staff and farmers participated in SFS 2-2. SFS members' lists and records on attendance 2-3. Field notes and scoring sheets 2-4. Results of questionnaire survey to farmers graduated SFS 2-5. Records of quality check at the laboratories of the target woredas</p> | <ul style="list-style-type: none"> Quality C1 seed is sufficiently supplied. Serious natural disaster(s) is/are not occurred. Grain price is not widely fluctuated. Trainees are kept their same assignment. |
| <p>3. Quality assurance of seed is strengthened.</p> | <p>3-1. More than 1 person who has attended training on seed inspection (field and laboratory) is assigned at the laboratory in each woreda. 3-2. Seed assurance procedure for C2 seed is proposed. 4-1. Seed production plan for C2 seeds by the SFS graduated farmers is drafted in each target woredas. 4-2. A report compiled good practices and good outcomes of the Project that can make contribution to seed system is prepared.</p> | <p>3-1. Interview to staff of the target woreda agricultural offices 3-3. Proposal of seed assurance procedure 4-1. Seed production plan 4-2. A report on of good practices and good outcomes, etc. of the Project</p> | |
| <p>4. Sustainable system of quality seed production for smallholder farmers is suggested.</p> | | | |

| Activities | Inputs | Pre-condition |
|--|---|---|
| <p>1-1. Conduct the verification trials in the research center.</p> <p>1-2. Conduct adaptability trials at local conditions in the selected target woredas.</p> <p>1-3. Produce the seed production technology manual for the concerned technical staffs and DAs in seed production.</p> <p>1-4. Fabricate simple agricultural machinery.</p> <p>1-5. Compile the manual on simple agricultural machinery for fabrication, operation, maintenance and repair.</p> <p>2-1. Produce (a) guide(s) and teaching/facilitating materials to implement Seed Farmers School (SFS).</p> <p>2-2. Conduct training courses related to SFS implementation for the concerned technical staff and DAs in seed production.</p> <p>2-3. Carry out the SFS.</p> <p>2-4. Establish a SFS monitoring method.</p> <p>3-1. Produce technology manual for seed quality control.</p> <p>3-2. Establish a simple seed quality control laboratory at woreda level.</p> <p>3-3. Conduct training course(s) on seed inspection (field and laboratory) at woreda level.</p> <p>3-4. Propose seed assurance procedure of quality seed.</p> <p>4-1. Collect and analyze information concerning current situation of the seed system (seed law, production, quality control, management and distribution).</p> <p>4-2. Collect and analyze information concerning current situation of demand and supply, distribution channel at woreda level.</p> <p>4-3. Estimate cost and benefit on quality seed production.</p> <p>4-4. Make a seed production plan for C2 seeds by the SFS graduated farmers in each target woredas</p> <p>4-5. Make presentation of outcomes of the Project at the various occasions of seed related seminars/workshops</p> <p>4-6. Conduct workshops at from federal to woreda level for presenting on going activities, outcomes of the Project, and sharing experiences etc.</p> <p>4-7. Prepare a report on good practices and good outcomes of the Project</p> | <p><u>Ethiopian Side</u></p> <ul style="list-style-type: none"> - Administrative personnel and counterparts Project Director (Director of Agriculture Extension Directorate, MoA) Project Manager (Senior Agronomist of Agriculture Extension Directorate, MoA) Counterpart personnel (assigned by the Project Director) Relevant regional government officers in the target areas <p>- Facilities:</p> <ul style="list-style-type: none"> Land, office space and necessary facilities in MoA for the Japanese experts and related staff members Rooms and space necessary for installation and storage of the equipment Other facilities mutually agreed upon as necessary <p>- Local costs:</p> <ul style="list-style-type: none"> Expenditure for counterparts Water and electricity charges necessary for operation and maintenance of the facilities - Tax exemption measure <p><u>Japanese Side</u></p> <ul style="list-style-type: none"> - Dispatch of experts: A (1) long term experts (coordinator/ monitoring of seed production) Other short term experts (chief adviser, seed production technique, agricultural machinery, extension system, training management and others in accordance with necessity for implementation of the Project within the framework of the Project.) - Provision of equipment: Machinery, equipment, vehicles, and other materials necessary for the effective implementation of the Project within budgetary limitations. - Provision of training course in Japan, in the third countries, or in Ethiopia. | <ul style="list-style-type: none"> • National policy on seed production by farmers is not changed. • Costs of agricultural inputs are not widely changed. |

*1: Ada'a, Dendi, and Lurie woredas in Oromia region, Yilmana densa woreda in Amhara region, and Sodo woreda in SNNP region

*2: "Quality seed" means the second generation seed multiplied from C1 seed on teff and wheat, which met quality standard that is set up under this project.

Proposed Project Design Matrix (PDM Version 3)

Project Name: Quality Seed Promotion Project for Smallholder Farmers
 Target Area: Five (5) target woredas in Oromia, Amhara and SNNP Regions
 Target Group: Seed producing farmers and farmers who want to start seed production in the target woredas
 Duration: February 2010 to August 2014 (Four years and six months)

Version 3 (12 December 2012)

The project objective and concept: In this project, quality seed means C2 (second generation seed) seed which is multiplied seed using C1 seed and has certain higher quality. Basically, this kind seed is distributed and used locally where seeds are produced. Quality seed in this project does not necessary to be seed which is certified through the quality inspection procedure of the government.

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|--|---|--|--|
| Overall Goal Production of mainly self-pollinating crops, teff and wheat, is increased through utilization of quality seed in the target woredas. | 1. At least 200 tons of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. 2. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed. | 1. Survey results on seed production and marketing at the SFS (seed farmer's school) participated farmers 2. Survey results on seed production and marketing at the SFS participated farmers | - |
| Project Purpose Use of quality seeds is increased in the target woredas. | 1. At least 40 tons of quality seed multiplied in a cropping season through the project approach is produced in the target woredas. 2. At least 75% of quality seed multiplied in a cropping season through the project approach in the target woredas is used or sold as seed. | 1. Survey results on seed production and marketing at the SFS participated farmers 2. Survey results on seed production and marketing at the SFS participated farmers | <ul style="list-style-type: none"> Quality C1 seed is sufficiently supplied. |
| Outputs 1. Quality seed production technologies are improved. 2. Quality seed production technology is disseminated to seed producing farmers and/or farmers who want to start seed production. | 1-1. At least five (5) seed production technologies are verified. 1-2. A seed multiplication technology manual is produced. 2-1. Capacity of extension staff of the target woredas as trainer or facilitator is enhanced. 2-2. More than 900 farmers are graduated the SFS. 2-3. At least 80 % of farmers participated in SFS adopts one of the seed production technology verified in Output 1 | 1-1. Reports on the seed production technology verification 1-2. Teff and Wheat Seed Multiplication Manual 2-1. Results of questionnaire survey to extension staff and farmers participated in SFS 2-2. SFS members' lists and records on attendance and submitted report. 2-3. Results of questionnaire survey to farmers graduated SFS | <ul style="list-style-type: none"> Quality C1 seed is sufficiently supplied. Serious natural disaster(s) is/are not occurred. Grain price is not widely fluctuated. Trainees are kept their same assignment. |
| 3. Quality assurance of seed is strengthened. | 3-1. More than 1 person who has attended training on seed inspection (field and laboratory) is assigned at the laboratory in each woreda. 3-2. At least 80% of farmers participated in SFS utilize Field Notes 3-3. Seed testing procedure and manual for simple seed laboratories are developed. 3-4. Seed testing laboratories conduct seed quality tests to products | 3-1. Interview to staff of the target woreda agricultural offices 3-2. Results of questionnaire survey to farmers graduated SFS 3-3. Developed procedures and manual 3-4. Results of laboratory test | |

| | | |
|---|--|---|
| <p>4. Sustainable system of quality seed production for smallholder farmers is suggested.</p> | <p>of more than 80% of farmers participated in SFS</p> <p>4-1. Outcomes of the outputs 1, 2 and 3 are compiled and make certain contribution for implementation of the seed strategy and/or improvement of seed system.</p> <p>4-2. A report compiled good practices and good outcomes of the Project, etc. is prepared.</p> | <p>4-1. Records of explanation/ presentation at workshops or seminars that are held by other organizations and the Project</p> <p>4-2. A report on of good practices and good outcomes, etc. of the Project</p> |
|---|--|---|

| Activities | Inputs | Pre-condition |
|--|---|---|
| <p>1-1. Conduct the verification trials in the research center.</p> <p>1-2. Conduct adaptability trials at local conditions in the selected target woredas.</p> <p>1-3. Produce the seed production technology manual for the concerned technical staffs and DAs in seed production.</p> <p>1-4. Fabricate simple agricultural machinery.</p> <p>1-5. Compile the manual on simple agricultural machinery for fabrication, operation, maintenance and repair.</p> <p>2-1. Produce (a) guide(s) and teaching/facilitating materials to implement Seed Farmers School (SFS).</p> <p>2-2. Conduct training courses related to SFS implementation for the concerned technical staff and DAs in seed production.</p> <p>2-3. Carry out the SFS.</p> <p>2-4. Establish a SFS monitoring method.</p> <p>3-1. Produce technology manual for seed quality control.</p> <p>3-2. Establish a simple seed quality control laboratory at woreda level.</p> <p>3-3. Conduct training course(s) on seed inspection (field and laboratory) at woreda level.</p> <p>3-4. Propose seed assurance procedure of quality seed.</p> <p>4-1. Collect and analyze information concerning current situation of the seed system (seed law, production, quality control, management and distribution).</p> <p>4-2. Collect and analyze information concerning current situation of demand and supply, distribution channel at woreda level.</p> <p>4-3. Estimate cost and benefit on quality seed production.</p> <p>4-4. Make presentation of outcomes of the Project at the various occasions of seed related seminars/workshops.</p> <p>4-5. Conduct workshops at from federal to woreda level for presenting on going activities, outcomes of the Project, and sharing experiences etc.</p> <p>4-6. Prepare a report on good practices and good outcomes of the Project</p> | <p>Ethiopian Side</p> <ul style="list-style-type: none"> - Administrative personnel and counterparts - Project Director (Director of Agriculture Extension Directorate, MoA) - Project Manager (Senior Agronomist of Agriculture Extension Directorate, MoA) - Counterpart personnel (assigned by the Project Director) - Relevant regional government officers in the target areas <p>- Facilities:</p> <ul style="list-style-type: none"> - Land, office space and necessary facilities in MoA for the Japanese experts and related staff members - Rooms and space necessary for installation and storage of the equipment - Other facilities mutually agreed upon as necessary <p>- Local costs:</p> <ul style="list-style-type: none"> - Expenditure for counterparts - Water and electricity charges necessary for operation and maintenance of the facilities - Tax exemption measure <p>Japanese Side</p> <ul style="list-style-type: none"> - Dispatch of experts: <ul style="list-style-type: none"> A (1) long term experts (coordinator/ monitoring of seed production) Other short term experts (chief adviser, seed production technique, agricultural machinery, extension system, training management and others in accordance with necessity for implementation of the Project within the framework of the Project.) - Provision of equipment: <ul style="list-style-type: none"> Machinery, equipment, vehicles, and other materials necessary for the effective implementation of the Project within budgetary limitations. - Provision of training course in Japan, in the third countries, or in Ethiopia. | <ul style="list-style-type: none"> • National policy on seed production by farmers is not changed. • Costs of agricultural inputs are not widely changed. |

*1: Adä a. Dendi, and Lume woredas in Oromia region, Yilmana densa woreda in Amhara region, and Sodo woreda in SNNP region

*2: "Quality seed" means the second generation seed multiplied from C1 seed on teff and wheat, which met quality standard that is set up under this project.

Annex 3. Dispatch of Japanese Experts

| SN | Field | Period/Arrival/Departure at Japan | Remarks | Total days | MM | MM field | JFY2009 | JFY2010 | JFY2011 | JFY2012 | JFY2013 | JFY2014 |
|------|--|--|---------------------------------|------------|-------|----------|---------|---------|---------|---------|---------|---------|
| 1-1 | Beet Adv. on Seed production policy and system | 24-Feb-2010 ~ 18-Mar-2010 (1st dispatch) | | 8 | 28 | | | | | | | |
| 1-2 | | 30-Jan-2010 ~ 25-Dec-2010 (2nd dispatch) | | 178 | 59 | 80.5 | | | | | | |
| 1-3 | | 01-Jul-2011 ~ 04-Nov-2011 | | 111 | 37 | | | | | | | |
| 1-4 | Chief Advisor | 27-Aug-2010 ~ 19-Feb-2012 (long term) | | 541 | 18.0 | | | | | | | |
| 2-1 | | 24-Feb-2010 ~ 18-Apr-2010 (1st dispatch) | | 54 | 1.8 | | | | | | | |
| 2-2 | | 10-Aug-2010 ~ 11-Dec-2010 | | 62 | 2.1 | | | | | | | |
| 2-3 | Agricultural machinery | 17-Aug-2011 ~ 14-Dec-2011 | | 57 | 1.9 | 11.9 | | | | | | |
| 2-4 | | 29-Jul-2012 ~ 13-Sep-2012 | | 44 | 1.5 | | | | | | | |
| 2-5 | | 09-Dec-2012 ~ 01-Mar-2013 | | 82 | 2.7 | | | | | | | |
| 2-6 | | 10-Jun-2013 ~ 06-Aug-2013 | | 57 | 1.9 | | | | | | | |
| 3-1 | Improved agricultural tool | 30-Jan-2010 ~ 13-Aug-2010 | | 44 | 1.3 | 1.5 | | | | | | |
| 3-2 | | 05-Jun-2010 ~ 06-Sep-2010 | | 95 | 3.1 | | | | | | | |
| 3-3 | | 15-Mar-2010 ~ 3-Jun-2011 | | 161 | 5.2 | | | | | | | |
| 3-4 | Seed production techniques | 21-Mar-2011 ~ 02-Sep-2011 (1st dispatch) | | 104 | 3.5 | 14.3 | | | | | | |
| 3-5 | | 10-Aug-2011 ~ 08-Dec-2011 (2nd dispatch) | | 39 | 2.0 | | | | | | | |
| 3-6 | | 19-Jun-2012 ~ 13-Aug-2012 (1st dispatch) | | 57 | 1.9 | | | | | | | |
| 3-7 | | 22-Aug-2012 ~ 17-Dec-2012 (2nd dispatch) | | 56 | 1.9 | | | | | | | |
| 3-8 | Marketing Agricultural economy | 05-Jul-2010 ~ 02-Sep-2010 | | 59 | 2.0 | 5.7 | | | | | | |
| 3-9 | | 24-Nov-2010 ~ 23-Dec-2010 (1st dispatch) | | 29 | 1.0 | | | | | | | |
| 3-10 | | 04-Feb-2011 ~ 04-Mar-2011 (2nd dispatch) | | 30 | 1.1 | | | | | | | |
| 3-11 | | 23-Aug-2011 ~ 04-Dec-2011 | | 45 | 1.5 | | | | | | | |
| 3-12 | Seed production Monitoring | 05-Jul-2010 ~ 17-Mar-2011 | | 253 | 8.3 | 8.3 | | | | | | |
| 3-13 | | 14-Mar-2011 ~ 27-Aug-2011 | | 161 | 5.4 | | | | | | | |
| 3-14 | Training management | 27-Sep-2011 ~ 17-Jun-2012 | | 112 | 3.7 | 13.8 | | | | | | |
| 3-15 | Extension material | 02-Mar-2012 ~ 21-Sep-2012 | | 142 | 4.7 | | | | | | | |
| 3-16 | development | 05-Apr-2011 ~ 02-Jun-2011 | | 58 | 1.9 | 3.9 | | | | | | |
| 3-17 | | 15-Apr-2012 ~ 14-Jun-2012 | | 59 | 2.0 | | | | | | | |
| 3-18 | | 19-Apr-2011 ~ 18-May-2011 (1st dispatch) | | 29 | 1.0 | | | | | | | |
| 3-19 | Extension system | 12-Jul-2011 ~ 09-Oct-2011 (2nd dispatch) | | 49 | 1.6 | 5.7 | | | | | | |
| 3-20 | | 20-Feb-2012 ~ 01-Mar-2012 (1st dispatch) | | 31 | 1.1 | | | | | | | |
| 3-21 | | 01-Mar-2012 ~ 09-Jun-2012 (2nd dispatch) | | 69 | 2.3 | | | | | | | |
| 10-1 | | 09-Aug-2011 ~ 01-Dec-2011 | | 82 | 2.7 | | | | | | | |
| 10-2 | Beet quality control | 27-Jul-2012 ~ 08-Sep-2012 | | 43 | 1.4 | 6.1 | | | | | | |
| 10-3 | | 09-Dec-2012 ~ 04-Feb-2013 | | 57 | 1.9 | | | | | | | |
| 10-4 | | | 1st dispatch | 6 | 0.0 | | | | | | | |
| 10-5 | | | 2nd dispatch | 0 | 0.0 | | | | | | | |
| 11-1 | Coordinating Monitoring | 23-Mar-2011 ~ 09-Feb-2012 (long term) | | 400 | 33.4 | 33.4 | | | | | | |
| | | | Sub total1 (long term Experts) | | 31.5 | MM | | | | | | |
| | | | Sub Total2 (short term Experts) | | 83.8 | MM | | | | | | |
| | | | Grand Total | | 115.2 | MM | | | | | | |

Annex 4. List of Counterpart Trainings in Japan and Third Country

| | Name | Period | Field/name of course | Contents | Implementing institution | Position at that time | Current position, Date of turnover |
|---|--------------------|---|--|--|---|--|---|
| 1 | Mr. Assefa Ayele | 5 th - 11 th Dec 2010 | Study Visit in Kenya FFS (Farmer Field School) | (A) To learn from the current on-going activities and experiences of FFS opportunities and challenges in Kenya (B) To collect farmers' best practices, knowledge and valuable experiences field oriented and farmer centered program. | <ul style="list-style-type: none"> • KFS (Kenya Forestry Service) • FAO Kenya Office • District agriculture office • FFS(Graduated / on-going) • JICA Kenya office | Senior Expert, Agricultural Extension Directorate, Ministry of Agriculture (Project manager of this project) | Ditto |
| 2 | Mr. Dejene Mebratu | | | | | Senior Expert, Agricultural Extension Directorate, Ministry of Agriculture | Moved to other directorate under the Ministry of Agriculture on 2011 Jan. |
| 3 | Mr. Assefa Ayele | 6 th - 18 th Jul 2012 | Study visit on the wheat seed production and quality control | To learn about the quality control technology of wheat seed from Hokkaido, Japan. | <ul style="list-style-type: none"> • JICA OBIC (Obihiro International Center) • Tokachi agricultural cooperative union, Agriculture and livestock department • NARO (National agriculture and food research organization), HARC (Hokkaido agricultural research center), Memuro branch office • Hokkaido research organization, Central agricultural experiment station, Plant genetic resource division • Hokkaido agriculture administration department, Food security promotion division. | Senior Expert, Agricultural Extension Directorate, Ministry of Agriculture (Project manager of this project) | Ditto |
| 4 | Mr. Emiru Mijana | | | | | Senior Seed Agronomist, Agricultural Input Supply, Distribution & Credit Follow Up Process, Oromia Regional BoA (Project focal Person of this Project) | Retired on March 2013, and then joined QSPP. |
| 5 | Mr. Abebaw Adane | | | | | Senior Seed Quality Inspector, Quarantine, Inspection & Quality Control, Amhara Regional BoA | Ditto |
| 6 | Mr. Tekle Bahiru | | | | | Senior Expert of Seed Multiplication and Quality Control in SNNP BoA (Project focal Person of this Project) | Ditto |
| 7 | Mr. Likisa Kurmana | 14 th ~ 31 st Oct 2012 | Young leaders training on rural Development | To learn Japanese technology for the youth leaders, and exchange among participants gathered from different developing countries | JICA Tsukuba (Tsukuba International Center, JICA) | Agronomist, Agricultural Input Supply, Distribution & Credit Follow Up Process, Oromia Regional BoA (Project focal Person of this Project) | Ditto |
| 8 | Mr. Hailu Adugna | 14 th Jan. ~ 16 th Feb 2013 | Farmer led extension | To learn a practical curriculum, learning a scientific thinking way and rural | JICA OBIC (Obihiro International Center) | Senior Economist, Agricultural Input Supply, Distribution & Credit Follow | Ditto |

| | | | | | | | |
|----|---|---|--|--|---|---|---------------|
| 9 | Ms Gebereselase Medhin | 15 th Jul. ~ 12 th Oct.2013 | method Tsukuba, Japan (Quality control system of seed and seedling to facilitate distribution of high quality seeds) | developmental ideas To learn implementing the PVP system and quality control of seeds and seedlings through seed testing and certification, in conformity agreed principles, in order to contribute to accelerated development in agriculture. | JICA Tsukuba (Tsukuba International Center, JICA) | Up Process, Oromia Regional BoA (Project focal Person of this Project) Seed laboratory technician, Animal and plant Health Regulatory/Seed Quality, Ministry of Agriculture | Ditto |
| 10 | 5 C/Ps from wareda agricultural/ administrative offices of QSP targeted wareda, and Mr. Kenji Nakamura | Sep. 2013 for 7-9 days including travel days | FFS study visit in Kenya | To learn sustainability and establishing network among FFS from the Kenya | To be decided | To be decided | To be decided |

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Annex 5. List of Equipment Procured by Japanese Side

QSPP Quality Seed Promotion Project for Smallholder Farmers

LIST OF EQUIPMENT (TO BE REGISTERED BY JICA ETHIOPIA OFFICE)

As of 23rd Aug. 2013

| JFY | Item Code (QSPP) | Equipment | Manufacturer | Model, Spec | Serial number | Date-in | QTY | Unit Price (Birr) | Total Price (Birr) | Location | Division | Purpose | Frequency of use | Condition |
|------|------------------|--------------------------------------|--------------|-----------------------|---------------|-----------|-----|-------------------|--------------------|------------|--------------------|--|------------------|-----------|
| 2009 | QSPP-JFY09-01 | Color Printer | hp | Color Laserjet 4700 | | unknown | 1 | 43,642.50 | 43,642.50 | Oromia BoA | QSPP office | For office work | A | A |
| 2009 | QSPP-JFY09-02 | Computer | Toshiba | Satellite L500-1PU | T9767197K | unknown | 1 | 15,295.00 | 15,295.00 | Bahir Dar | QSPP office | For office work. Mr. Ljalem (Project staff) | A | B |
| 2009 | QSPP-JFY09-03 | Computer | Toshiba | Satellite L500-1PU | T9766740K | unknown | 1 | 15,295.00 | 15,295.00 | MeA | Extension | For Mr. Assefa (Project Manager) | B | C |
| 2010 | QSPP-JFY10-01 | Generator | Honda | GZ2500 | | 14-Mar-10 | 1 | 14,500.00 | 14,500.00 | DZARC | QSPP office | To generate electricity for office work | B | A |
| 2010 | QSPP-JFY10-06 | Computer | Toshiba | Satellite L505-ES5015 | 3A250886Q | 11-May-10 | 1 | 13,790.00 | 13,790.00 | MeA | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-07 | Computer | Toshiba | Satellite L505-ES5015 | 3A249262Q | 11-May-10 | 1 | 13,790.00 | 13,790.00 | Bahir Dar | QSPP office | For office work. Mr. Beshadu (Project staff) | A | A |
| 2010 | QSPP-JFY10-08 | Computer | Toshiba | Satellite L505-ES5015 | 3A249486Q | 11-May-10 | 1 | 13,790.00 | 13,790.00 | MeA | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-10 | Color Laser Jet Printer | hp | CP2025dn | | 16-Jul-10 | 1 | 25,000.00 | 25,000.00 | MeA | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-11 | LCD Projector | | VPLE57 | | 3-Aug-10 | 1 | 13,000.00 | 13,000.00 | DZARC | QSPP office | For office work | D | D |
| 2010 | QSPP-JFY10-14 | Desktop Computer | Dell | Optiplex GX380 | | 16-Sep-10 | 1 | 11,800.00 | 11,800.00 | DZARC | Project staff: DZ | For office work | A | A |
| 2010 | QSPP-JFY10-15 | Desktop Computer | Dell | Optiplex GX380 | | 16-Sep-10 | 1 | 11,800.00 | 11,800.00 | MeA | Project staff: MeA | For office work | A | A |
| 2010 | QSPP-JFY10-16 | Laptop Computer | Toshiba | L500-204 | | 22-Oct-10 | 1 | 14,676.00 | 14,676.00 | MeA | Project staff: MeA | For office work | A | A |
| 2010 | QSPP-JFY10-17 | Laptop Computer | Toshiba | Satellite L500-204 | | 22-Oct-10 | 1 | 14,439.98 | 14,439.98 | DZARC | Project staff: DZ | For office work | A | A |
| 2010 | QSPP-JFY10-18 | Video Camera | Sony | Sony DCR-HC62E | | 11-Oct-10 | 1 | 12,075.00 | 12,075.00 | DZARC | QSPP office | For workshop field day etc | C | A |
| 2010 | QSPP-JFY10-19 | Multi crop thresher with cleaner | MY-Media | Ordermade | QSPP-S103 | 25-Oct-10 | 1 | 35,000.00 | 35,000.00 | Ada'a | Adaa. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-20 | Multi grain crop scale 50kg-300kg | MY-Media | Ordermade | QSPP-TH03 | 25-Oct-10 | 1 | 24,150.00 | 24,150.00 | Ada'a | Adaa. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-21 | Co-BA Italy Balance scale 50kg-300kg | | | | 24-Nov-10 | 1 | 11,016.00 | 11,016.00 | DZARC | QSPP | To weight seed or fertilizer | C | A |
| 2010 | QSPP-JFY10-22 | Multi crop thresher | MY-Media | Ordermade | QSPP-TH01 | 13-Dec-10 | 1 | 45,310.00 | 45,310.00 | Dendi | Dendi. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-23 | Multi crop thresher | MY-Media | Ordermade | QSPP-TH02 | 13-Dec-10 | 1 | 45,310.00 | 45,310.00 | Lume | Lume. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-24 | Multi crop thresher | MY-Media | Ordermade | QSPP-TH04 | 5-Jan-11 | 1 | 45,310.00 | 45,310.00 | Sodo | Sodo. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-25 | Multi crop thresher | MY-Media | Ordermade | QSPP-TH05 | 5-Jan-11 | 1 | 45,310.00 | 45,310.00 | Yimamadasa | Yimamadasa. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-26 | Grain cleaner | MY-Media | Ordermade | QSPP-S101 | 13-Dec-11 | 1 | 34,155.00 | 34,155.00 | Dendi | Dendi. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-27 | Grain cleaner | MY-Media | Ordermade | QSPP-S102 | 13-Dec-11 | 1 | 34,155.00 | 34,155.00 | Lume | Lume. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-28 | Grain cleaner | MY-Media | Ordermade | QSPP-S104 | 5-Jan-11 | 1 | 34,155.00 | 34,155.00 | Sodo | Sodo. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-29 | Grain cleaner | MY-Media | Ordermade | QSPP-S105 | 5-Jan-11 | 1 | 34,155.00 | 34,155.00 | Yimamadasa | Yimamadasa. Coop | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-30 | Multi crop thresher | MY-Media | Ordermade | QSPP-TH06 | 14-Feb-11 | 1 | 45,310.00 | 45,310.00 | DZARC | QSPP office | For demonstration and verification | C | A |

| JFY | Item Code (QSPP) | Equipment | Manufacturer | Model, Spec | Serial number | Date-in | QTY | Unit Price (Birr) | Total Price (Birr) | Location | Division | Purpose | Frequency of use | Condition |
|------------------|---------------------|----------------------|------------------------------------|--|---------------|-----------|-----|-------------------|---------------------|---|-----------------|---|------------------|-----------|
| | | | | | | | | | | | | | | |
| 2010 | QSPP-JFY10-31 | Grain cleaner | MY-Media | Ordermade | QSPP-S106 | 14-Feb-11 | 1 | 34,155.00 | 34,155.00 | DZARC | QSPP office | For demonstration and verification | C | A |
| 2010 | QSPP-JFY10-37 | Desktop Computer | Dell | Dell Optiplex780 | | 3-Mar-11 | 1 | 10,739.13 | 10,739.13 | DZARC | QSPP office | For office work | C | A |
| 2010 | QSPP-JFY10-38 | Desktop Computer | Dell | Dell Optiplex780 | | 3-Mar-11 | 1 | 10,739.13 | 10,739.13 | DZARC | QSPP office | For office work | C | A |
| 2010 | QSPP-JFY10-39 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-40 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-41 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-42 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-43 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-44 | Laptop Computer | Toshiba | ToshibaC650-JHR | | 3-Mar-11 | 1 | 11,521.73 | 11,521.73 | For Project staff | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-45 | Copy Machine | Canon | Canon iR2022 | | 3-Mar-11 | 1 | 83,500.00 | 83,500.00 | MoA | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-46 | Copy Machine | Canon | Canon iR2022 | F189700 | 3-Mar-11 | 1 | 83,500.00 | 83,500.00 | Bahir Dar | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-47 | Color Printer | hp | hp CP2025 | CNH5B02240 | 3-Mar-11 | 1 | 14,990.00 | 14,990.00 | Bahir Dar | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-48 | Digital Camera | Sony | Sony 14 1 | | 3-Mar-11 | 1 | 11,956.00 | 11,956.00 | DZARC | QSPP office | For office work | A | A |
| 2010 | QSPP-JFY10-49 | Digital Camera | Sony | Sony 14 1 | | 3-Mar-11 | 1 | 11,956.00 | 11,956.00 | BoA | QSPP office | For office work | A | A |
| 2011 | QSPP-JFY11-40 | LCD Projector | Sony | VPL-EX100 | 5076659 | 8-Dec-11 | 1 | 14,375.00 | 14,375.00 | Bahir Dar | QSPP office | For meeting, workshop | C | A |
| 2011 | QSPP-JFY11-42 | Desktop Computer | Dell | GX780 Computer Intel Core 2 Duo, 2.93GHZ, 19" Display, 500GB | FK6BB2S | 31-Jan-12 | 1 | 12,590.00 | 12,590.00 | Bahir Dar | QSPP office | For office work | A | C |
| 2011 | QSPP-JFY11-65 to 67 | Desktop Computer | Dell | Intel Core i3 3.1 GHZ, 19" Display, 500GB | | 14-Mar-12 | 3 | 11,390.00 | 34,170.01 | Adaa Lume, Dendi | Extension Dept. | For laboratory activities (Adaa Lume Dendi) | C | A |
| 2011 | QSPP-JFY11-82 to 84 | Grain moisture meter | | Made in Poland | | 15-Mar-12 | 3 | 14,000.00 | 41,999.99 | Adaa Lume, Dendi | Extension Dept. | For laboratory activities (Adaa Lume Dendi) | C | A |
| 2011 | QSPP-JFY11-E01 | Sieve machine | | | | | 1 | 12,488.22 | 12,488.22 | Debre zeit | DZARC | For seed selection | D | A |
| 2011 | QSPP-JFY11-E02 | Winpower | | | | | 1 | 9,606.41 | 9,606.41 | Debre zeit | DZARC | For separate quality seed from others | D | A |
| 2012 | QSPP-JFY12-03 | Generator | Subaru (But copy product of China) | Robin Generator, RGD5500, Diesel | F111022583 | 23-Jun-12 | 1 | 30,475.00 | 30,475.00 | Bahir Dar | QSPP office | For project office in Bahir Dar | C | A |
| 2012 | QSPP-JFY12-13 | Color Printer | HP | HP laser Jet 1525 Color | | 10-Oct-12 | 1 | 14,900.00 | 14,900.00 | Addis Ababa | Oromia BoA | For printing extension materials | B | A |
| 2012 | QSPP-JFY12-30 | LCD Projector | Sony | C71-07 | 5174457 | 22-Nov-12 | 1 | 14,500.00 | 14,500.00 | Addis Ababa | QSPP office | For QSPP AA office | C | A |
| 2012 | QSPP-JFY12-31 to 32 | Desktop Computer | | Windows7, with keyboard and mouse | | 10-Dec-12 | 2 | 12,799.99 | 25,599.99 | 1 for Lab in Amhara and other one in SNNP | Seed Lab | | A | A |
| 2012 | QSPP-JFY12-79 to 83 | Floor Balance | | Italy scale, 200kg | | 23-Jan-13 | 5 | 14,500.01 | 72,500.03 | for each lab | | To weight seed or fertilizer | C | A |
| Sub-Total | | | | | | | | | 1,280,099.75 | | | | | |

| JFY | Item Code (OSPP) | Equipment | Manufacturer | Model, Spec | Serial number | Date-in | QTY | Unit Price (Birr) | | Location | Division | Purpose | Frequency of use | Condition |
|------------------|------------------|----------------------|--------------------------|-------------|---------------|-------------|-----|-------------------|--------------------|--------------|-------------|------------------------------------|------------------|-----------|
| | | | | | | | | Unit Price (Birr) | Total Price (Birr) | | | | | |
| 2011 | QSPP-EE-01 | Grain moisture meter | | | | | 1 | 8,478.26 | 8,478.26 | Addis Ababa | QSPP office | For Seed Quality Control | C | A |
| 2011 | QSPP-EE-02 | Kalton (2pcs) | | | | | 2 | 650.00 | 1,300.00 | Addis Ababa | QSPP office | For Seed Quality Control | C | A |
| 2012 | QSPP-EE-03 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00743 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Addis Ababa | QSPP office | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-04 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00744 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Debre zeit | QSPP office | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-05 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00745 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Bahir Dar | QSPP office | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-06 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00746 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Ada'a | Seed Lab | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-07 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00747 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Lume | Seed Lab | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-08 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00748 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Dendi | Seed Lab | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-09 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00749 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Sodo | Seed Lab | To determine seed moisture content | C | A |
| 2012 | QSPP-EE-10 | Seed moisture tester | Kett electric laboratory | PM-600 | BC00750 | 15 Jan 2013 | 1 | 32,916.67 | 32,916.67 | Yimmanadensa | Seed Lab | To determine seed moisture content | C | A |
| Sub-Total | | | | | | | | | 273,111.59 | | | | | |

LIST OF EQUIPMENT (ED:Equipment for Donation)

| JFY | Item Code (OSPP) | Equipment | Manufacturer | Model, Spec | Serial number | Date-in | QTY | Unit Price (Birr) | | Location | Division | Purpose | Frequency of use | Condition |
|--------------------|------------------|--------------|--------------|-------------|---------------|---------|-----|-------------------|---------------------|-------------|---------------|--|------------------|-----------|
| | | | | | | | | Unit Price (Birr) | Total Price (Birr) | | | | | |
| 2010 | QSPP-ED-01 | Land cruiser | TOYOTA | | | | 1 | 706,034.00 | 706,034.00 | Addis Ababa | MoA, OSPP | | A | A |
| 2010 | QSPP-ED-02 | Land cruiser | TOYOTA | | | | 1 | 706,034.00 | 706,034.00 | Bahir Dar | ABoA, OSPP | | A | A |
| 2012 | QSPP-ED-03 | Pickup Truck | TOYOTA | | | | 1 | 502,616.00 | 502,616.00 | Addis Ababa | Oromia OSPP | | A | A |
| 2012 | QSPP-ED-04 | Motorbike | SUZUKI | | | | 1 | 89,412.99 | 89,412.99 | Ada'a | woreda office | For monitoring of SFS and farmers' field | B | A |
| 2012 | QSPP-ED-05 | Motorbike | SUZUKI | | | | 1 | 89,412.99 | 89,412.99 | Lume | woreda office | For monitoring of SFS and farmers' field | B | A |
| 2012 | QSPP-ED-06 | Motorbike | SUZUKI | | | | 1 | 89,412.99 | 89,412.99 | Addis Ababa | MoA | For monitoring of SFS and farmers' field | D | A |
| 2012 | QSPP-ED-07 | Motorbike | SUZUKI | | | | 1 | 89,412.99 | 89,412.99 | Sodo | woreda office | For monitoring of SFS and farmers' field | B | A |
| 2012 | QSPP-ED-08 | Motorbike | SUZUKI | | | | 1 | 89,412.99 | 89,412.99 | Addis Ababa | MoA | For monitoring of SFS and farmers' field | D | A |
| Sub-Total | | | | | | | | | 2,861,748.97 | | | | | |
| Grand Total | | | | | | | | | 3,914,960.32 | Birr | | | | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

Quality Seed Promotion Project for Smallholder Farmers (QSPP) in Ethiopia

Annex 7 List of Ethiopian Counterparts Assigned to the Project

| Name and Position of C/Ps | Field of C/P | Name and Period of training in Japan and/or TC | Name of Japanese Experts who worked with | Field of C/Ps in QSPP | Work Period as a C/P in QSPP | Remarks |
|--|---|---|---|---|------------------------------|--|
| 1) Federal Ministry of Agriculture (MoA) | | | | | | |
| Mr. Wondirad Mandefro State Minister, Agricultural Extension 1 st Project Director of QSPP | Agricultural Extension | | Dr. Kiyoko Hitsuda (CA/ production and system) | Project management | 2010. Feb – 2010. Oct. | Promoted to State Minister from Director of agricultural extension directorate as of October 2010. |
| Mr. Fikru Amenu Deputy Director, Agricultural Extension Directorate, Ministry of Agriculture 2 nd Project Director of QSPP | Agricultural Extension (Coffee, Tea) | | | Project management | 2010. Oct. – 2011. Aug. | |
| Dr. Dagnachew Beyene Director, Agricultural Extension Directorate, Ministry of Agriculture Current Project Director of QSPP | Agricultural Extension (Animal health) | OVOP training in Japan (Not by QSPP) | Mr. Shigeru Nakada (CA/ production and system), and Seed policy | Project management | 2011. Aug. – now | As well as project director of OVOP project/ JICA/ MoA |
| Mr. Assefa Ayele Senior Expert, Agricultural Extension Directorate, Ministry of Agriculture Project Manager | Crop Production / Protection Expert | Study visit on the wheat seed production and quality control in Hokkaido, Japan From 6 th to 18 th July 2012 Study Visit in Kenya FFS (5 th Dec. 2010 – 11 th Dec. 2010) | Dr. Kazuhiko Yagi (CA) | Project management | 2010. Apr - now | He was in China when the project was launched, so that his work period has started from Feb. 2010 even though he is a project manager. |
| Mr. Dejene Mebratu Senior Expert, Agricultural Extension Expert | Crop Protection Expert | Study Visit in Kenya FFS | Dr. Kiyoko Hitsuda (CA/ Seed) | Project management, Preliminary survey | 2010. Feb – 2011. just Jan. | Moved to other directorate under the |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| Directorate, Ministry of Agriculture Ex-C/P | (5 th Dec. 2010 – 11 th Dec. 2010) | production and system) | policy after starting project phase | MoA on January 2011, and left from QSPP |
|---|--|---|---|--|
| Mr. Fekede Wondmagen Senior Expert, Agricultural Extension Directorate, Ministry of Agriculture Ex-C/P | Agronomist | Mr. Shigeru Nakada (CA/ production and system) | Project management, 2011. Aug - now | |
| Mr. Teshager Abebaw Seed Expert, Extension Directorate, Ministry of Agriculture | Plant Science | | Project management | MSc Study in the Haramaya University for 2 years |
| Mr. Kelelegn, Machinery Expert, Agricultural Extension Directorate, Ministry of Agriculture | Agricultural Machinery Expert | Mr. Toru Hamanaka, and Mr. Osamu Tokumoto (Agricultural Machinery) | Survey and data collection concerning agricultural machinery | 2011. Aug - now |
| 2) Oromia Region | | | | |
| Mr. Furo Beketa Head of Input and Supply Department, Oromia Regional Bureau of Agriculture Regional Project Director | Agricultural Input and Supply | Mr. Shigeru Nakada (CA/ production and system), and Dr. Kazuhiko Yagi (CA) | Project management in Oromia region | 2010. Dec- now |
| Mr. Emiru Mijana Senior Expert, Input and Supply Department, Oromia Regional Bureau of Agriculture | Seed Expert | Study visit on the wheat seed production and quality control in Hokkaido, Japan From 6 th to 18 th July 2012 Mr. Masaaki Shiraiishi & Dr. Masahiko Murakami (Seed control), Mr. Kenichi Bamba (Extension system), Ms. Naoko Ogawa (Training management), Mrs. Ayako Nakazato & Mr. Akio Taguchi (Extension material development), and Mr. Kenji Nakamura (PC/ Seed production) | SFS Implementation, 2010. Dec- 2013 on March 2013, and then join QSPP as a senior seed expert | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSP

| | | | | | |
|--|------------------------|--|---|-----------------|--|
| Mr. Mekonnen Senior Expert, Input and Supply Department, Oromia Regional Bureau of Agriculture | Agricultural Economist | | Mr. Masaaki Shiraiishi & Dr. Masahiko Murakami (Seed control). | 2010. Dec- now | |
| Mr. Hailu Adguna Senior Expert, Input and Supply Department, Oromia Regional Bureau of Agriculture | Seed Expert | Farmer extension method in Hokkaido, Japan from 14 th Jan 2013 to 16 th Feb 2013 | Mr. Kenichi Bamba (Extension system), Ms. Naoko Ogawa (Training management), Mrs. Ayako Nakazato & Mr. Akio Taguchi (Extension material development), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | | |
| Mr. Gariso Expert, East Shewa Zone Agricultural Department | Seed Multiplication | | Assist implementation and monitoring of SFS in Oromia | 2011. May - now | |
| Mr. Olijira Expert, West Shewa Zone Agricultural Department | Seed Multiplication | | Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2011. May - now | |
| Mr. Demmisu Lemma Expert, Ada'a wareda agriculture office | Agronomist | | Implementation of SFS and monitoring | 2011. May - now | |
| Mr. Kebede Tulu Expert, Ada'a wareda agriculture office | | | | 2011. May - now | |
| Ms. Belyenshe Demeke Expert, Ada'a wareda agriculture office | | | | 2011. May - now | |
| Ms. Zemenaye Assefa DA, Ada'a wareda agriculture office | | | Facilitation of SFS 1R | 2011. May - now | |
| Mr. Degefa Momecha DA, Ada'a wareda agriculture office | | | | 2011. May - now | |
| Mr. Abinet Amanuel DA, Ada'a wareda agriculture office | | | | 2011. May - now | |
| Mr. Genet Abera DA, Ada'a wareda agriculture office | | | Facilitation of SFS 2R | 2012. Feb - now | |
| Ms. Tsige Gabisa DA, Ada'a wareda agriculture office | | | | 2012. Feb - now | |
| Mr. Alemu Dhugo DA, Ada'a wareda agriculture office | | | | 2012. Feb - now | |
| Mr. Eshetu Nagawo Supervisor, Ada'a wareda agriculture office | Agronomist | | Facilitation of SFS 3R | 2012. Feb - now | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| | | | | | | |
|--|------------------|--|--|--|--------------------------|--|
| Mr. Firezar Mangistu Supervisor, Ada'a wareda agriculture office | Natural resource | | | | 2012. Feb – now | |
| Mrs. Workinesh Itafa Supervisor, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – now | |
| Mr. Aklilu Gebeyehu Supervisor, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – now | |
| Mr. Debebe Haile DA, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – now | |
| Mr. Desta Mulu DA, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – May | Resigned from his work |
| Mr. Deja Fufa DA, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – now | |
| Mr. Workineh Taye Supervisor, Ada'a wareda agriculture office | Plant science | | | | 2012. Feb – now | |
| Mr. Ketema Getachew Head of Extension Department, Lume wareda agriculture office | Agronomist | | | | 2011. May – now | |
| Ms. Aseftech Befekadu Expert, Lume wareda agriculture office | Plant science | | | | 2011. May – now | |
| Ms. Almaz Demmise Expert, Lume wareda agriculture office | Seed | | | | 2011. May – now | |
| Mr. Sewunet Aklilu Expert, Lume wareda agriculture office | | | | | 2012. Feb – now | |
| Mr. Mesfin Seyoum Expert, Lume wareda agriculture office | | | | | 2012. Feb – now | |
| Mr. Legesse Beyene DA, Lume wareda agriculture office | | | | | 2012. Feb – now | |
| Mr. Girma Tadesse DA, Lume wareda agriculture office | | | | | 2011. Aug. – now | |
| Mr. Sisay Girma DA, Lume wareda agriculture office | | | | | 2011. Aug – Feb. 2012 | Replaced by Mr. Hailu Melka |
| Ms. Gijite Desalegn DA, Lume wareda agriculture office | | | | | 2011. May – Aug. | Replaced by Mr. Girma Tadesse due to pregnancy |
| Ms. Tigist Taye DA, Lume wareda agriculture office | | | | | 2011. May – Aug. | Replaced by Mr. Sisay Girma due to governmental decision |
| Mr. Ararso Minalu | | | | | 2012. Feb – now | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSP

| | | | | | | | |
|---|---------------|--|--|---|-------------------------------------|---------------------------|---|
| DA, Dendi wareda agriculture office | | | | Shiraishi & Dr. Masahiko Murakami (Seed control). | | 2011. May – now | |
| Mr. Mitiku Ojira | | | | | | | |
| DA, Dendi wareda agriculture office | | | | Mr. Kenichi Bamba (Extension system), | Facilitation of SFS 2R | 2011. May – now | |
| Ms. Abebech Shimerga | | | | Ms. Naoko Ogawa (Training management), and | | | |
| DA, Dendi wareda agriculture office | | | | Mr. Kenji Nakamura (PC/ Seed production monitoring) | | 2012. Feb – now | |
| Mr. Tasfaye Jabesa | | | | | | | |
| DA, Dendi wareda agriculture office | | | | | | 2012. Feb – now | |
| Ms. Tsehay Gutema | | | | | | | |
| DA, Dendi wareda agriculture office | | | | | | 2012. Feb – now | |
| Mr. Tasfaye Magarsa | | | | | | | |
| DA, Dendi wareda agriculture office | | | | | | 2012. Feb – now | |
| Ms. Zinash Geremew | | | | | | | |
| DA, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Yohanes Tujo | Plant science | | | | | | |
| DA, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Kedir Muhaba | Plant science | | | | | | |
| DA, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Workalemahu Gutema | Plant science | | | | | | |
| Supervisor, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Mamo Bekele | Plant science | | | | | | |
| Supervisor, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Dinberu Tadese | Plant science | | | | | | |
| Supervisor, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Galgala Bayisa | Plant science | | | | | | |
| Supervisor, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| Mr. Alemu Asifawu | Plant science | | | | | | |
| DA, Dendi wareda agriculture office | Plant science | | | | | 2012. Feb – now | |
| 3) Amhara Region | | | | | | | |
| Dr. Teshome Walle | | | | Dr. Kazuhiko Yagi (CA) | Project management in Amhara region | 2011. Mar – now | |
| Deputy Head of Amhara Regional Bureau of Agriculture | | | | | | | |
| Regional Project Director | | | | | | | |
| Mr. Tsegaye Tadesse | Extension | | | | | 2011. Mar – June 07, 2012 | Currently, Mr. Tsegaye is a Coordinator of EAPP |
| Head, Extension Department, Amhara Regional Bureau of Agriculture | | | | | | | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| | | | | | |
|---|--------|----------------------------|--|--------------------------------|--|
| Mr. Lanteyideru Tesfaye, Head, Extension Department, Regional Bureau of Agriculture | Amhara | Extension | Dr. Kazuhiko Yagi (CA) | June 8, 2012 –now | |
| Mr. Basaznew Mohammed Expert, Extension Department, Regional Bureau of Agriculture | Amhara | Crop production expert | Mr. Akio Taguchi (Extension material development), Ms. Eiri Kaku (Training Management), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2012 Mar- 20, 2012 | May Left for regional coordinator of ATA in 2011 |
| Regional Representative, Transformation Agency of Ethiopia, Amhara Regional Bureau of Agriculture | | | | | |
| Mr. Agidew Molla Expert, Extension Department, Regional Bureau of Agriculture | Amhara | Seed expert | Mr. Akio Taguchi (Extension material development), Ms. Eiri Kaku (Training Management), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2012 Mar –now | |
| Mr. Abebaw Adane Expert, Quarantine Department, Regional Bureau of Agriculture | Amhara | Seed Quality Inspector | Study visit on the wheat seed production and quality control in Hokkaido, Japan From 6 th to 18 th July 2012 | May 2012 –now | |
| Mr. Abebaw Negash Expert, Input and Supply Department, Amhara Regional Bureau of Agriculture | | Input & Supply Expert | | May 2012 –now | |
| Mr. Yeshiwas Alemnew Expert, Extension Department, Amhara Regional Bureau of Agriculture | | Crop production | | Sept. 2012 –now | |
| Mr. Solomon Kumelachew Expert, Extension Department, Amhara Regional Bureau of Agriculture | | Crop production | | May 2012 –now | |
| Mr. Yihune Tadesse Expert, West Gojam Zone Agriculture Department | | Extension Communication | Ms. Eiri Kaku (Training Management), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2012 Mar –now | |
| Mr. Nigatie Alemayehu Expert, West Gojam Zone Agriculture Department | | Seed Expert | | July 04, 2012 –May 03, 2013 | Promoted Seed Laboratory in Bahir Dar Amhara |
| Mr. Tadele Yimer | | Seed | | 2012 Mar–now | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| | | | | | | | | | |
|--|-------------------------|--|--|--|--|--|--|--|---|
| Expert, Yilmanadensa Wareda Agriculture Office | Multiplication Expert | | | | | | | | |
| Mr.Mulu Meselu Expert, Yilmanadensa Wareda Agriculture Office | Input and Supply Expert | | | | | | | | 2012 Mar –now |
| Mr. Shegie Getu Expert, Yilmanadensa Wareda Agriculture Office | Agronomist | | | | | | | | Decision by woreda BoA |
| Ms. Wubayehu Akalu Expert, Yilmanadensa Wareda Agriculture Office | Extension Expert | | | | | | | | Decision by woreda BoA |
| Mr.Baye Tilahun Expert, Yilmanadensa Wareda Agriculture Office | Agronomist | | | | | | | | 2012 Mar –now |
| Mr.Daniel Abayneh Expert, Yilmanadensa Wareda Agriculture Office | Agronomist | | | | | | | | Decision by woreda BoA |
| Mr.Kibrit Limeneh Expert, Yilmanadensa Wareda Agriculture Office | Quarantine | | | | | | | | Assigned by the woreda BoA to another Department |
| Bereket Ayal Expert, Yilmanadensa Wareda Agriculture Office | Agronomist | | | | | | | | Promoted to Sugar Corporation of Ethiopia as of Apr.2013 |
| Mr.Firew Alemu Expert, Yilmanadensa Wareda Agriculture Office | Agronomist | | | | | | | | Decision by woreda BoA |
| Mr. Yaregale Mucheye DA, Yilmanadensa Wareda Agriculture Office | | | | | | | | | 2012 –Feb.2013 |
| Mr. Aegnehu Aychile DA, Yilmanadensa Wareda Agriculture Office | | | | | | | | | 2012 Mar –now |
| Mr.Yikeber Dinberu DA, Yilmanadensa Wareda Agriculture Office | | | | | | | | | 2012 Mar –now |
| Mr. Gete Sendek DA, Yilmanadensa Wareda Agriculture Office | | | | | | | | | 2012 Mar –July 04, 2012 |
| | | | | | | | | | Promoted to woreda Administrative Office as of July 2012 by Gov't |
| | | | | | | | | | Facilitation of SFS 2R |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| | | | | | | | |
|--|-------------|-------------------------------|--|--|---|---------------------------|---|
| DA, Yilmana Densa Wareda Agriculture Office | | | | | | 16, 2013 | of June 17, 2013. |
| Ms. Metaket Tsegaye Supervisor, Yilmana Densa Wareda Agriculture Office | | | | | | May 2013 –now | Assigned by the woreda BoA |
| Mr. Getinet Assefa Supervisor, Yilmana Densa Wareda Agriculture Office | | | | | | Mar 2013 –now | |
| Mr. Mengistu Tebabal Supervisor, Yilmana Densa Wareda Agriculture Office | | | | | | Mar 2013 –now | |
| Mr. Belayneh Ayalew DA, Yilmana Densa Wareda Agriculture Office | | | | | | Mar.2013 –May 15, 2013 | Promoted to another village in the woreda |
| Ms. Aitegeb Bayile DA, Yilmana Densa Wareda Agriculture Office | | | | | | Mar.2013 –May 15, 2013 | Promoted to another village in the woreda |
| Mr. Lakachew Ayele DA, Yilmana Densa Wareda Agriculture Office | | | | | | Mar.2013 –May 15, 2013 | Promoted to another village in the woreda |
| Mr. Alebel Guadie DA, Yilmana Densa Wareda Agriculture Office | | | | | | Mar.2013 –May 15, 2013 | Promoted to another village in the woreda |
| 4) SNNP Region | | | | | | | |
| Mr. Debebe Process Owner, Agricultural Input Supply Process, SNNP Regional Bureau of Agriculture Regional Project Director | | | | | Dr. Kazuhiko Yagi (CA) | 2012. Jan. 2 – now | Project management in SNNPR |
| Mr. Tilahun Worku Senior Expert, Agricultural Input Supply Process, SNNP Regional Bureau of Agriculture | Seed Expert | | | | Mr. Akio Taguchi (Extension material development), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2012. Jan. 2 – 2013. Aug. | Retired as of Aug. 2013 because of his age. |
| Mr. Tekle Bahiru Senior Expert, Agricultural Input Supply | Seed Expert | Study visit on the wheat seed | | | Mr. Kenji Nakamura (PC/ Seed production) | 2012. July.2 -now | Successor of Mr. Tilahun Worku |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| Process, SNNP Regional Bureau of Agriculture | production and quality control in Hokkaido, Japan From 6 th to 18 th July 2012 | extension material, and Trainer in the IT of SFS | extension material, and Trainer in the IT of SFS | extension material, and Trainer in the IT of SFS |
|---|--|---|--|---|
| Mr. Denku Getu Sodo wareda Agricultural office head | WBoA head | Project management in wareda level | 2013. Mar.2 - now | Mr. Zenebe Medu A successor of Mr. Zenebe Medu |
| Mr. Zenebe Medu Sodo wareda Agricultural office head | WBoA head | | 2012. Jan.2 - 2013 Apr. | Promoted to another area by the governmental decision |
| Mr. Manyazewal Agete Expert Gurage Zonal Marketing and cooperative office. | Experts | Implementation and monitoring of SFS | 2012. Jan.2 - now | |
| Mr. Kinfe Tsegaye, Expert, Gurage Zonal Department of Agriculture | Seed Multiplication Expert | | 2012. Jan. 2 - now | |
| Mr. Mira Mohammad Gurage Zonal Agricultural office | ZBoA head | Mr. Masaaki Shiraiishi & Dr. Masahiko Murakami (Seed quality control), Mr. Kenichi Bamba (Extension system), and Mr. Kenji Nakamura (PC/ Seed production monitoring) | 2012. Jan.2 - now | |
| Ms. Huliageresh Abebe Expert, Sodo wareda Agricultural office | Experts | | 2013. Mar.2 - now | Promoted to another area by the governmental decision |
| Mr. Dawit Lemma Supervisor, Sodo wareda Agricultural office | DA Supervisor | | 2012. July.2 - now | |
| Mr. Gosaye Kebede Supervisor, Sodo wareda Agricultural office | DA Supervisor | | 2012. July.2 - now | |
| Mr. Netsanet Yergalem Sodo wareda Agricultural office | DA | | 2012. July.2 - now | |
| Ms. Emebet Aseged Sodo wareda Agricultural office | DA | | 2012. July.2 - now | |
| Mr. Denbi Balcha Super., Sodo wareda agriculture office | DA supervisor | | 2013. Mar - now | |
| Mr. Shimeles Amare Super., Sodo wareda agriculture office | DA supervisor | | 2013. Mar - now | |
| Mr. Solomon Yelma DA, Sodo wareda agriculture office | DA | | 2013. Mar - now | |
| Mr. Moges Abay DA, Sodo wareda agriculture office | DA | | 2013. Mar - now | |
| Mr. Mulu Aboset DA, Sodo wareda | DA | | 2013. Mar. - now | |

Table 1.2. List of Counterparts (C/Ps) assigned to QSPP

| | | | | | | | | | |
|---|--------------------|--|--|--|--|--|--|--|--|
| agriculture office | | | | | | | | | |
| Mr. Tadele Tekle | DA | | | | | | | | 2013. Mar - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Adane Seme | DA | | | | | | | | 2013. Mar - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Tolesa Geda DA, Sodo wareda agriculture office | DA | | | | | | | | 2013. Mar - now |
| Mr. Getahun Shito | DA | | | | | | | | 2013. Mar. - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Sisay Zeryehun | DA | | | | | | | | 2013. Mar - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Yedres Gizaw | DA | | | | | | | | 2013. Mar - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Mereha Chanyalew | DA | | | | | | | | 2013. Mar - now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Belayneh Hailu | Seed Expert | | | | | | | | 2012. Jan. 2 - now |
| Expert, Sodo wareda agricultural office | | | | | | | | | |
| Mr. Nuri Isa | Agronomist | | | | | | | | 2012. Jan. 2 - now |
| Expert, Sodo wareda agricultural office | | | | | | | | | |
| Mr. Kefiegne Eliala | Cooperative Expert | | | | | | | | 2012. Jan. 2 - now |
| Expert, Sodo wareda agricultural office | | | | | | | | | |
| Mr. Aklilu Tesfaye | | | | | | | | | 2012. Feb.-now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Belayneh Yilima | | | | | | | | | 2012. Feb.-now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Bahiru Takele | | | | | | | | | 2012. Feb.-now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Ms. Shitu Wendimagegn | | | | | | | | | 2012. Feb.-now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| Mr. Yalew Lema | | | | | | | | | 2012. Feb.-now |
| DA, Sodo wareda agriculture office | | | | | | | | | |
| 5) DebreZeit Agricultural Research Center, EIAR | | | | | | | | | |
| Dr. Mekasha Chichaybelu, | Entomology | | | | | | | | 2011. Nov. - 2012. Jul. |
| Center Director, DebreZeit Agricultural Research Center (DZARC), EIAR | | | | | | | | | DZARC was clearly acknowledged as a C/P of QSPP on 3 rd JCC meeting |
| Dr. Asnake Fikiru | | | | | | | | | 2012. Jul. - now |
| | | | | | | | | | meeting concerning |

Annex 8 List of Trainings and Workshops held under the Project in Ethiopia

| SN | Workshop/ Training Title | Date | Participants | | | | Venue | Report / Publication | Remarks |
|--------------------|--|----------------------|---|----|---|-----|-------------------------------|-------------------------------------|--|
| | | | Organization | M | F | TTL | | | |
| 1) JFY 2010 | | | | | | | | | |
| 1 | 1st Seed Seminar Seed for Farmers "variety, quality, and biodiversity" | August 12, 2010 | Researchers, WB, SE | | | 30 | EIAR HQs | NON (Reported by FRGIJ project) | FRGIJ-QSPP Collaboration Seminar |
| 2 | An Introduction to QSPP | August 17, 2010 | Researchers from DZARC | 15 | 0 | 15 | DZARC | An Introduction to QSPP (ppt) | W/S by QSPP |
| 3 | Field Day in Lume | October 4, 2010 | Wareda expert, DA, and Farmer | | | 45 | Lume, Oromia | Nil | Field Day by Lume wareda |
| 4 | Proceedings of the QSPP for Ada'a | October 18, 2010 | Wareda expert, DA, Farmers from Ada'a | 32 | 4 | 36 | Model farm in DZARC | News Letter No 1 | W/S by QSPP |
| 5 | 1st JCC (Joint Coordinating Committee) Meeting | October 28, 2010 | JCC members | 11 | 2 | 13 | Air Force Club, Debre zeit | News Letter No 1, MM | JCC by QSPP |
| 6 | Proceedings of the QSPP for Lume | October 29, 2010 | Wareda expert, DA, Farmers from Lume | 30 | 4 | 34 | Model farm in DZARC | News Letter No 1, MM | W/S by QSPP |
| 7 | Field Day in Dendi | November 11, 2010 | Wareda (Agri, Admin) Farmers, DA | | | 52 | Dendi, Oromia | MM (20101111) | Field Day by Dendi Wareda |
| 8 | Operation and Maintenance of post harvest machinery, Problem Tree Analysis | November 25-26, 2010 | DA, Cooperative and Researcher from the target 5 | 15 | 0 | 15 | Model farm in DZARC | Proceedings News Letter No 3 | W/S / Training by QSPP |
| 9 | Consultation Work Shop | March 11, 2011 | C/Ps from MoA, Regional BoARDS, and JICA Ethiopia | 4 | 1 | 5 | JICA Ethiopia office | MM, News Letter No 5 (on making) | W/S by QSPP |
| 10 | Proceedings of QSPP on Mar 2011 | March 14, 2011 | Researchers from DZARC, model farm | 5 | 0 | 5 | DZARC | Proceedings, MM | W/S by QSPP |

NB

Field Day of No 3 and 7 are organized by the each wareda agricultural office independently. The seed farming field of the project promotion sites are observed, and shown to the participants. Particularly treatment field (seed dressing) was highly highlighted by the participants.

| SN | Workshop/ Training Title | Date | Participants | | | | Venue | Report / Publication | Remarks |
|--------------------|--|-----------------------|---|----|---|-----|---|---|---|
| | | | Organization | M | F | TTL | | | |
| 2) JFY 2011 | | | | | | | | | |
| 1 | Jinma Study Visit | May 3-5, 2011 | C/Ps (MoA, Oromia, Zone, and Wareda) | 8 | 1 | 9 | Jinma (JICA Berete Gera PFMP phaseII) | Report on Jinma Study visit | |
| 2 | 1st Training of Facilitators (ToF) for 1R SFS | May 23 - June 2, 2011 | Experts from Zone, Wareda, and DAs | 21 | 7 | 28 | Air Force Club, Debre zeit | Report on 1st ToF FFS Facilitation manual | |
| 3 | 1st Technical Training for 1R SFS | June 3-6, 2011 | Experts from Zone, Wareda, and DAs | 21 | 7 | 28 | Air Force Club, Debre zeit | Report on 1st ToT | |
| 4 | 2nd JCC (Joint Coordinating Committee) Meeting | August 3, 2011 | C/Ps and JCC members | 21 | 4 | 25 | Queen Sheba hotel, Addis Ababa | Minutes of the 2nd JCC meeting | The number of participants incl organizer (QSPP) |
| 5 | 2nd Technical Training for 1R SFS | August 6-10, 2011 | Experts from Zone, Wareda, and DAs | 18 | 6 | 24 | Pyramid hotel, Debre zeit | Report on 2nd ToT | |
| 6 | 1st Workshop for Extension Material Development | September 14-15, 2011 | C/Ps (Oromia Regional Experts) | 2 | 0 | 2 | Field, and Pyramid hotel, Debre zeit | Report on workshop on extension material development | |
| 7 | 2nd Training of Facilitators (ToF) Backstopping | October 11 - 12, 2011 | Experts from Zone, Wareda, and DAs | 17 | 6 | 23 | Air Force Club, Debre zeit | Report on 2nd ToF Group dynamics manual | |
| 8 | 3rd Technical Training for 1R SFS | October 13 - 14, 2011 | Experts from Zone, Wareda, and DAs | 17 | 6 | 23 | Air Force Club, Debre zeit | Report on 3rd ToT | |
| 9 | 1st SFS Group Exchange Visit | October 22 - 23, 2011 | Experts from Zone, Wareda, and DAs | | | 300 | Each village | | 1 village 30SFS members x 3 SFS/ wareda + officers (approx 10persons) 100 persons x 3 waredas = 300 persons |
| 10 | Training on field inspection | November 2 - 3, 2011 | Experts from Zone, Wareda, and DAs, Officer from Seed Lab | 16 | 5 | 21 | Daama hotel, Mojo | Report on training on field inspection | |
| 11 | 3rd JCC (Joint Coordinating Committee) Meeting | November 4, 2011 | C/Ps and JCC members | 19 | 6 | 25 | Queen Sheba hotel, Addis Ababa | Minutes of the 3rd JCC meeting | The number of participants incl organizer (QSPP) |
| 12 | 4th Technical Training for 1R SFS | November 15-18, 2011 | Experts from Zone, Wareda, and DAs | 18 | 5 | 23 | Pyramid hotel, Debre zeit | Report on 4th ToT | |
| 13 | Training on fabrication of Row Seeder | November 9-22, 2011 | C/P of MoA, Researcher from MARC, Engineer from local blacksmith, carpenters etc | 11 | 0 | 11 | Abe Industry Engineering PLC, Adama | Manual on fabrication of row seeder Report of Japanese experts | |

| | | | | | | | | | |
|----|---|-----------------------------|--|----|---|-----|---|---|--|
| 14 | Training on fabrication of Winnower | November 23-26, 2011 | Researcher from MARC, Engineer from local blacksmith, carpenters etc. | 8 | 0 | 8 | Abe Industry Engineering PLC, Adama | Manual on fabrication of winnower Report of Japanese experts | |
| 15 | 2nd SFS Group Exchange Visit | December 4 and 10, 2011 | Experts from Zone, Wareda, and DAs | | | 300 | Each village | | 1 village 30SFS members x 3 SFS/ wareda + officers (approx 10persons) 100 persons x 3 waredas = 300 persons |
| 16 | Training on Laboratory test | December 6-7, 2011 | Experts from Zone, Wareda, and DAs, Officer from Seed Lab. | | | 11 | Assela Seed Laboratory, Assela | Report of Japanese experts | |
| 17 | Workshop on O&M of machineries (Thresher / Cleaner) | December 27-29, 2011 | DAs and officers from Coops/ union | 13 | 7 | 20 | MY-Media Engineering | Report of O&M training for Thresher and Cleaner | |
| 18 | Wrap Up Workshop of 1R SFS | January 4-5, 2012 | Experts from Zone, Wareda, and DAs | 18 | 5 | 23 | Pyramid hotel Debre zeit | Report on Wrap up workshop | |
| 19 | Graduation Ceremony of 1R SFS | January 12, 2012 | MoA, Experts from Region, Zone, Wareda, DAs, and farmers, etc. | | | 292 | Desaglen hotel, Addis Ababa | Report on SFS Graduation Ceremony | 258 from Farmers, 25 from Wareda incl DA, 3 from Region, 1 from MoA, 6 from JICA or other project |
| 20 | 3rd Seed Seminar | February 24, 2012 | Researchers and officers from MoA, Regional BoA, University etc. | 23 | 2 | 25 | EIAR HQs, Addis Ababa | Minutes of the 3rd Seed Seminar | Co-organized by FRGII project and QSPP |
| 21 | Sensitization Workshop for the 2R SFS | February 20- March 1, 2012 | C/Ps from MoA, Oromia, Amhara and SNNP (Each Region, Zone, and Wareda level) | 16 | 1 | 17 | Amhara BoA (Bahir Dar), Lewi Garden (Hawasa), Queen Sheba Hotel (Addis Ababa) | Minutes of Sensitization WS in Amhara, Minutes of Sensitization WS in SNNP, Minutes of Sensitization WS in Oromia | In Amhara 11 In SNNP 9 In Oromia 6 |
| 22 | 1st ToF for 2R SFS in Oromia and SNNP | February 27 - March 8, 2012 | Experts from Region, Zone, Wareda, and DAs in Oromia & SNNP | 17 | 6 | 23 | Pyramid hotel Debre zeit | Minutes on 1st ToF for Oromia and SNNP SFS ToF Workshop Report | |

| SN | Workshop/ Training Title | Date | Participants | | | | Venue | Report / Publication | Remarks |
|--------------------|--|------------------------|--|----|---|-----|----------------------------|---|----------------------------------|
| | | | Organization | M | F | TTL | | | |
| 3) JFY 2012 | | | | | | | | | |
| 1 | Seminar on Agricultural Mechanization on Tef Production | April 6, 2012 | Researchers from EIAR, ATA, Private Seed Company, Engineering | 18 | 1 | 19 | DZARC, EIAR | Report of Japanese expert | |
| 2 | 1st ToF for 2R SFS in Amhara | April 16-20, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 14 | 1 | 15 | Ethio Star Hotel Bahir Dar | Report on 1st ToF document | |
| 3 | FRG Concept Seminar | April 23, 2012 | Researchers from DZARC, HARC | 19 | 3 | 22 | DZARC, EIAR | Meeting minutes | |
| 4 | Workshop for Extension Material Development | April 24, 2012 | C/Ps (3 regional experts) | 7 | 0 | 7 | Wassamar Hotel Addis Ababa | Report on extension material development workshop | |
| 5 | 1st Technical Training for SFS 2R in Oromia | May 16-19, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 27 | 8 | 35 | Pyramid Hotel | Report on 1st TT document | |
| 6 | 1st Technical Training for SFS 2R in SNNP | May 20-23, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in SNNP | 29 | 2 | 31 | Rediet hotel | Report on 1st TT document | |
| 7 | 1st Technical Training for SFS 2R in Amhara | May 25-27, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 19 | 3 | 22 | Semmerland hotel | Report on 1st TT document | |
| 8 | Forum for collaboration research between the QSPP & the DZARC | mid of May 2012 | Researchers from DZARC, HARC, and reviewers | 16 | 4 | 20 | DZARC, EIAR | Meeting minutes | |
| 9 | 4th JCC (Joint Coordinating Committee) Meeting and Mid-term Review Meeting | May 30, 2012 | C/Ps, JCC member | 28 | 3 | 31 | Desalegne Hotel | Minute on 4th JCC meeting documents | with the Mid-term review mission |
| 10 | 2nd Technical Training for SFS 2R in Oromia | June 29 - July 1, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 24 | 8 | 32 | Rozmery Hotel Debre zeit | Report on 2nd TT in Oromia | |

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|----|--|-------------------------------|--|-----|----|-----|---|------------------------------|---|
| 11 | 2nd Technical Training for SFS 2R in Amhara | June 30 - July 1, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 16 | 4 | 20 | Homeland Hotel, Bahir Dar | Report on 2nd TT in Amhara | |
| 12 | 2nd Technical Training for SFS 2R in SNNP | July 3-5, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in SNNP | 15 | 2 | 17 | Rediet Butajira Hotel | Report on 2nd TT in SNNP | |
| 13 | 3rd Technical Training for SFS 2R in Oromia | August 3-5, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 23 | 9 | 32 | Pyramid hotel, Debre zeit | Report on 3rd TT in Oromia | |
| 14 | 3rd Technical Training for SFS 2R in Amhara | August 10-12, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 16 | 4 | 20 | Homeland Hotel | Report on 3rd TT document | |
| 15 | 3rd Technical Training for SFS 2R in SNNP | August 17-19, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in SNNP | 15 | 2 | 17 | Butajira Caf Hotel | Report on 3rd TT | |
| 16 | 2nd Training of Facilitators (ToF) / Backstopping for SFS 2R in SNNP | August 22-25, 2012 | C/Ps (Expert from region, zone, wareda and DA) in SNNP & Master trainer from Kenya | 21 | 8 | 29 | Sodo woreda, SNNP | Report on 2nd ToF in SNNP | |
| 17 | Quality control of seed | September 4, 2012 | Woreda experts & DAs | 24 | 8 | 32 | Pyramid Hotel, Bishoftu | Report of Japanese expert | |
| 18 | 2nd Training of Facilitators (ToF) / Backstopping for SFS 2R in Amhara | September 21-23, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 13 | 1 | 14 | Af five kebele SFS (Goshiye, Debere Mewi, Kililit, Abika & Sengegna villages) | | |
| 19 | 2nd Training of Facilitators (ToF) / Backstopping for SFS 2R in Oromia | September 24-30, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 10 | 2 | 12 | in Oromia region 3 district or woreda | Minute on 2nd ToF documents | |
| 20 | 1st SFS Group Exchange visit in Oromia | October 7, 2012 | Wareda expert, DA, and Farmer | | | 504 | Ada.a, Lume & Dendi Woreda | Report on SFS Group exchange | 1 village: 32SFS members +1 DA x 5 SFS/ wareda + 3 Experts from each woreda |
| 21 | 4th Technical Training for SFS 2R in SNNP | October 10-12, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in SNNP | 24 | 3 | 27 | Yimer hotel, Bu | Report on 4th TT documents | |
| 22 | 1st SFS Group Exchange visit in Amhara | October 14, 2012 | SFS members, Woreda experts & DAs | 106 | 43 | 149 | Kililit Village | Report on SFS Group exchange | |
| 23 | 1st SFS Group Exchange visit in SNNP | October 14, 2012 | Wareda expert, DA, and Farmer | | | 137 | Sodo woreda, SNNP | Report on SFS Group exchange | 1 village: 32SFS members +1 DA x 4 SFS/ wareda + 5 Experts =137 |
| 24 | 4th Technical Training for SFS 2R in Oromia | October 12-14, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 26 | 9 | 35 | Ethiopia hotel, Ambo | Report on 4th ToF in Oromia | |
| 25 | 4th Technical Training for SFS 2R in Amhara | October 19-21, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 28 | 2 | 30 | Yilmana Densa Woreda Administration Office Conference Hall in Yilmanadensa | Report on 4th TT documents | |
| 26 | 2nd SFS Group Exchange visit | November 3-4, 2012 | Wareda expert, DA, and Farmer | | | 504 | Ada.a, Lume & Dendi Woreda | Report on SFS Group exchange | 1 village: 32SFS members +1 DA x 5 SFS/ wareda + 3 Experts from each woreda |
| 27 | 5th Technical Training for SFS 2R in Oromia | November 16-18, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Oromia | 25 | 9 | 34 | DZARC, EIAR | Minute on 5th TT in Oromia | |
| 28 | 2nd SFS Group Exchange visit in Amhara | November 18, 2012 | SFS members, woreda experts & DAs | 21 | 3 | 24 | Abika village | Report on SFS Group exchange | |
| 30 | 5th Technical Training for SFS 2R in Amhara | November 23-25, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in Amhara | 26 | 2 | 28 | Yilmana Densa Woreda Administration Office Conference Hall in Yilmanadensa | Minute on 5th TT in Amhara | |
| 31 | 5th Technical Training for SFS 2R in SNNP | November 29- December 1, 2012 | C/Ps (Expert from region, zone, wareda, DA supervisor, and DA) in SNNP | 20 | 2 | 22 | Tabor Oda hotel | Report on 5th TT in SNNP | |
| 32 | SFS Machinery Group Exchange | December, 2012 | Wareda expert, DA, and Farmer | | | 504 | Ada.a, Lume & Dendi Woreda | Report on SFS Group exchange | 1 village: 32SFS members +1 DA x 5 SFS/ wareda + 3 Experts from each woreda |

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|----|--|---------------------|--|-----|----|-----|--|---|--|
| 33 | Training for laboratory test and basic computer skill | December 4-21, 2012 | Inspectors of Walkite Seed laboratory, IT department of MoA, and experts from five woreda agricultural offices | 16 | 4 | 20 | Yejoka hotel, Walkite Seed Laboratory & IT department of MoA | | |
| 34 | 5th JCC (Joint Coordinating Committee) Meeting | December 12, 2012 | C/Ps & JCC members | 36 | 4 | 40 | Abebeche Hotel in Ambo | Minutes on 5th JCC | |
| 35 | Wrap up WS of 2R SFS in SNNP | December 23, 2012 | C/Ps (Expert from region, zone, woreda, DA supervisor, and DA) in SNNP | 23 | 2 | 25 | Tabor Oda hotel | Report on Wrap up WS | |
| 36 | Wrap up WS of 2R SFS in Amhara | December 25, 2012 | C/Ps (Expert from region, zone, woreda, DA supervisor, and DA) in Amhara | 21 | 2 | 23 | Adet Research Center | Report on Wrap up WS | |
| 37 | Wrap up WS of 2R SFS in Oromia | December 29, 2012 | C/Ps (Expert from region, zone, woreda, DA supervisor, and DA) in Oromia | 30 | 10 | 40 | Rosemary hotel | Report on Wrap up WS | |
| 38 | Graduation Ceremony for 2R SFS in Lume Woreda, Oromia | January 13, 2013 | SFS graduates, DA, DA supervisors, experts from woreda, zone, and region, and guests from JICA and other organizations concerned | 108 | 46 | 154 | Daema Hotel, Mojo | Report on SFS Graduation Ceremony | 154 farmers graduated from 5 kebele |
| 39 | Graduation Ceremony for 2R SFS in Sodo Woreda, SNNP | January 13, 2013 | SFS graduates, DA, DA supervisors, experts from woreda, zone, and region, and guests from JICA and other organizations concerned | 70 | 56 | 126 | Bui Administration Hall | Report on SFS Graduation Ceremony | 126 farmers graduated |
| 40 | Planning meeting of 3R SFS in SNNPR | January 20, 2013 | Core C/Ps (Region, Zone, and Woreda) in SNNP region | 6 | 0 | 6 | Meeting room, Sodo woreda agricultural office | Report on 3R SFS Planning Meeting in SNNP | |
| 41 | Graduation Ceremony for 2R SFS in Dnedi Woreda, Oromia | January 27, 2013 | SFS graduates, DA, DA supervisors, experts from woreda, zone, and region, and guests from JICA and other organizations concerned | 168 | 42 | 210 | Ethiopian Road Authority Hall, Dendi | Report on SFS Graduation Ceremony | 124 farmers graduated & 86 invited guests for graduation ceremony from C/Ps & other organization |
| 42 | Graduation Ceremony for 2R SFS in Yilmanadensa, Amhara | January 27, 2013 | SFS graduates, DA, DA supervisors, experts from woreda, zone, and region, and guests from JICA and other organizations concerned | 173 | 46 | 219 | Yilmana Densa Woreda Administration Office Conference Hall in Yilmanadensa | Report on SFS Graduation Ceremony | 149 graduated SFS members from 5 village & 70 guests from C/Ps and other organization |
| 43 | Graduation Ceremony for 2R SFS in Ada'a Woreda, Oromia | February 2, 2013 | SFS graduates, DA, DA supervisors, experts from woreda, zone, and region, and guests from JICA and other organizations concerned | | | 205 | Air Force Officers Club, Debre zeit | Report on SFS Graduation Ceremony | 155 graduated farmers & 50 guests invited from C/P & other organization |
| 44 | Planning meeting of 3R SFS in Oromia | February 8, 2013 | Core C/Ps (Region, Zone, and Woreda) in Oromia region | 8 | 0 | 8 | Meeting room, Oromia regional bureau of agriculture | Report on 3R SFS Planning Meeting in Oromia | |
| 45 | Planning meeting of SFS 3R in Amhara | February 10, 2013 | Core C/Ps (Region, Zone, and Woreda) in Amhara region | 8 | 1 | 9 | Meeting room, Amhara regional bureau of agriculture | Report on 3R SFS Planning Meeting in Amhara | |
| 46 | Training of Facilitators (ToF) for SFS 3R in all three regions (Oromia, Amhara, and SNNPR) | March 8 - 17, 2013 | DAs, DA supervisors, and experts of five woredas in three regions | 45 | 10 | 55 | MAYA Hotel, Adama | Report on ToF for 3R SFS of QSPP | |

| SN | Workshop/ Training Title | Date | Participants | | | Venue | Report / Publication | Remarks | | |
|--------------------|--|-----------------|--|----|----|-------|----------------------|--|--------------------------------------|--|
| | | | Organization | M | F | | | | TTL | |
| 4) JFY 2013 | | | | | | | | | | |
| 1 | 1st TT (Technical Training) for SFS3R in Oromia | May 17-19, 2013 | DAs, supervisors, and experts of Ada'a, Lume, and Dendi wareda in Oromia | DA | 35 | 10 | 45 | Yerer Farmers Union in Debre Zeit | Report on 1st TT of 3R SFS in Oromia | |
| 2 | 1st TT (Technical Training) for SFS3R in Amhara | May 24-26, 2013 | DAs, supervisors, and experts of Yilmanadensa wareda in Amhara | DA | 17 | 3 | 20 | Yilmana Densa Woreda Administration Office Conference Hall in Yilmanadensa | Report on 1st TT of 3R SFS in Amhara | |
| 3 | 1st TT (Technical Training) for SFS3R in SNNP | May 26-28, 2013 | DAs, supervisors, and experts of Sodo in SNNP | DA | 23 | 3 | 26 | Tabor Oda Hotel in Bui | Report on 1st TT of 3R SFS in SNNP | |
| 4 | Followup workshop for fabrication of row seeder | late July 2013 | DAs, supervisors, and experts of Ada'a, Lume, and Dendi wareda in Oromia | DA | | | | Workshop in a private manufacturer in Sodo, SNNP | | |
| 5 | 2nd TT (Technical Training) for SFS3R in Oromia | late July 2013 | DAs, supervisors, and experts of Ada'a, Lume, and Dendi wareda in Oromia | DA | | | | | | |
| 6 | 2nd TT (Technical Training) for SFS3R in Amhara | late July 2013 | DAs, supervisors, and experts of Yilmanadensa wareda in Amhara | DA | | | | | | |
| 7 | 2nd TT (Technical Training) for SFS3R in SNNP | late July 2013 | DAs, supervisors, and experts of Sodo in SNNP | DA | | | | | | |
| 8 | 6th JCC (Joint Coordinating Committee) Meeting and TFM (Terminal Evaluation Meeting) | August 15, 2013 | JCC members and mission team | | | | | | | |

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MINUTES OF MEETING
ON
TERMINAL EVALUATION
ON
QUALITY SEED PROMOTION PROJECT FOR SMALLHOLDER FARMERS

The Joint Terminal Evaluation Team (hereinafter referred to as “the Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) and headed by Mr. Kimiaki JIN and Mr. HiragoFeleke, reviewed the achievements of the Quality Seed Promotion Project for Smallholder Farmers (hereinafter referred to as “the Project”) from 13th to 26th August, 2013.

After 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 “the JCC”).

The JCC discussed the major issues pointed out in the Report, and agreed on the matters referred to in the document attached hereto.

Butajira, 26th August, 2013



Mr. Kimiaki JIN
Chief Representative
Japan International Cooperation Agency
Ethiopia Office



Dr. Dagnachew Beyene
Director, Extension Directorate
Ministry of Agriculture

