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USAID Somalia Partnership for Economic Growth Project Quarterly Progress Report

January – March 2015 (Quarter II)

Partnership for Economic Growth (PEG)

FY 2015 Q11 PROGRESS REPORT

(01 JANUARY – 31 MARCH 2015)

Award No: AID-EEM-I-00-07-00009/AID-623-TO-I I-00001

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The authors' views expressed in this report do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Table of Contents

Contents

ACRONYMS AND ABBREVIATIONS	1
II. PEG EXECUTIVE SUMMARY	2
III. KEY NARRATIVE ACHIEVEMENTS	4
A. Partnership Fund Grants Activity	4
B. Somaliland Agriculture Activity	5
C. South Central Somalia Agriculture Activity	6
D. South Central Somalia Livestock Activity	8
E. Pilot wind farm at Hargeisa airport	8
IV. PROGRESS AGAINST TARGETS	10
V. PERFORMANCE MONITORING	29
VI. LESSONS LEARNED	29
VII. ENVIRONMENTAL MONITORING	30
VIII. PROGRESS ON LINKS TO OTHER ACTIVITIES	32
IX. PROGRESS ON LINKS TO HOST GOVERNMENT	32
X. PROGRESS ON GENDER STRATEGY	32
XI. SUSTAINABILITY	33
XII. UPCOMING REPORTING PERIOD'S WORK PLAN	33
XIII. FINANCIAL INFORMATION	33
XIV. ACTIVITY ADMINISTRATION	36
ANNEX I: SCHEDULE OF FUTURE EVENTS	37
ANNEX II: QUARTERLY AND ANNUAL ENVIRONMENTAL MITIGATION AND MONITORING REPORT (EMMR)	38
EMMR Part 1 of 3: Environmental Verification Form	38
EMMR Part 2 of 3: Mitigation Plan	39
EMMR part 3 of 3: Reporting Form	45
Certification	48
ANNEX III: LIST OF DELIVERABLE PRODUCTS	49

Acronyms and Abbreviations

ABIC	Agribusiness Incubation Centre
BOCAT	Business Organizational Capacity Assessment Tool
CBO	Community Based Organization
COP	Chief of Party
COR	Contracting Officer's Representative
DAI	Development Alternatives Incorporated
DAP	Diammonium Phosphate
DG	Director General
EG	Economic Growth
ERF	Environmental Review Form
EMMP	Environmental Mitigation and Monitoring Plan
FAO	Food & Agriculture Organization
FGS	Federal Government of Somalia
IEE	Initial Environmental Examination
IIP	Investing in People
LADCO	Livestock and Agro Drug Cooperative
MEO	Mission Environmental Officer
MLFR	Ministry of Livestock, Forestry and Range
MOA	Ministry of Agriculture
M&E	Monitoring and Evaluation
NGO	Non-governmental Organization
PEG	Partnership for Economic Growth
PERSUAP	Pesticide Evaluation Report and Safer Use Action Plan
PO	Purchase Order
PPP	Public-Private Partnership
SAGA	Somali Agriculture Girls' Association
SATG	Somali Agriculture Technical Group
STTA	Short Term Technical Assistance
SULD	Somali Umbrella for Livestock Development
TIS	Transition Initiatives for Stabilization

I. CONTEXT UPDATE

In Somaliland, the situation remains relatively calm in spite of continuing tensions in the Awdal region arising from the declaration of an autonomous state by Sultan Abibakar Elmi Wabar. Importantly, these tensions have not affected implementation of agricultural activities by PEG's Amoud University team.

In South Central Somalia, terrorist incidents in Mogadishu and elsewhere carried out by Al-Shabaab are on the rise. Incidents during the reporting period include the bombing at the Ministry of Higher Education, at the Hotel Makka Al-Mukaram, Syl Hotel and Central Hotel. In these incidents, more than 80 people (government officials and civilians) lost their lives. This is creating great anxiety for people in Mogadishu. In response to these recent attacks, the government is has erected road blocks in government offices and many strategic locations, thus making movement within Mogadishu and access to the government offices very difficult.

The previous Minister of Agriculture and Minister of Livestock, Forestry and Range were replaced in the cabinet reshuffle announced late last year. PEG had built particularly strong working relationships with both Ministers. The new ministers who replaced them have limited experience in agriculture and livestock. PEG will seek to engage directly with the ministers, while continuing to work with other ministry officials such as the Directors General.

There are many road blocks on the road between Afgoi and Aw-dhegle. Militia groups belonging to Abgal tribe are forcing people with or without goods to pay them in order to cross the road. PEG extension officers close to these villages (Mareerey, Raqeyle and Anole) reported that the tractor owners contracted by SATG to provide land preparation services faced difficulties working on the fields. This may result on the cancelation of the program in these villages.

The conflict between the pastoralists and agriculturalists is a never ending in South Central Somalia particularly during the dry season. In the reporting period, several incidents were observed as a result of grazing conflicts.

II. PEG EXECUTIVE SUMMARY

A. Key Narrative Achievements

In the reporting period of January – March 2015, PEG intensified in-kind procurement activities and technical support to grantees in Somaliland participating in the business matching funds program, the Partnership Fund. Procurement of livestock was concluded for two grantees whose grant agreements provided for purchase by PEG of sheep, goats and camels. The consulting firm contracted by PEG to provide business capacity training and grant implementation support continued to work individually and collectively with the grantees. Considerable effort was dedicated to ascertaining grantee cost-share and, regrettably, PEG had to cancel one of the 12 grants after establishing that the grantee was not in a position to meet the commitments they had signed to in the grant agreement. PEG team members visited poultry farms in Ethiopia to identify suppliers of day-old chicks and poultry feed. Among the procurement challenges encountered, many potential international suppliers, particularly from India, China and Kenya, were either unwilling or hesitant to commit to exports to Somaliland, and in many instances made demands for onerous upfront payments.

PEG supported a study tour by a 10-person delegation of farmers, extension agents and Amoud project management staff to the demonstration field days in South Central Somalia hosted by the Somali Agricultural Technical Group (SATG), PEG's implementing partner. The tour provided important lessons and inspiration for the Amoud delegation. During the reporting period, the

Amoud team continued to provide agricultural extension services and made preparations for seedlings production for the upcoming Gu season (Mar to June) of 2015. The team was gratified to witness the willingness and appreciation with which farmers made in-kind repayments from their harvest for seedlings distributed on loan for the previous Deyr season. The team was on course to collect upwards of \$12,000 from such repayments, an important harbinger for sustainability of the seedlings production initiative.

In South Central Somalia, PEG hosted another successful round of demonstration field days with more than 1,000 participants drawn from various sectors including the Ministry of Agriculture, Ministry of Livestock, Forestry and Range, farmers associations, NGOs, local authorities, university students, lead and contact farmers, agro-dealers, business community, media, youth and women's associations and professional groups. PEG concluded harvest of the Deyr season crop. Analysis of the harvest data revealed that the various technical interventions resulted in yield increases ranging from 54% to 297% for various methods. PEG continued with preparations for the Gu season. The season is set to be particularly demanding as the number of farmer beneficiaries will be significantly greater than in the two previous seasons: 211 lead farmers, 1,500 contact farmers that will receive micro-grants, and 15,000 second-tier contact farmers. With regard to livestock activities, PEG continued work with animal health campaigns, introduction of cold-chain technology to the Mogadishu milk catchment, and demonstrations of fodder crop production.

Following a consulting assignment by energy specialist Lawrence Mott in February, PEG made significant progress addressing the issues around the wind farm at Hargeisa International Airport. Mr. Mott's assessment and recommendations brought about a much-needed meeting of minds between various government and private sector stakeholders on the technical interventions required - at the wind farm, the airport and on the local grid - for the wind turbine generators to function optimally.

B. Quantitative Highlights

PEG continues to make good progress towards achievement of FY2015 and end of activity quantitative targets, as contained in PEG's approved monitoring and evaluation plan. This report contains a detailed summary table on performance against PEG's 16 indicators, as well as data tables for each specific indicator. There are five indicators that require an end-line survey that will be conducted in Quarter 3 and Quarter 4 of FY2015. There are also indicators that will be significantly impacted by the ramping up of grantee activity under the Partnership Fund.

C. Activity Administration

PEG did not experience any insurmountable management or operational challenges in the reporting period. PEG managed to find means to overcome security challenges in South Central Somalia and complications with the procurement process for Partnership Fund grantees in Somaliland.

D. Subsequent Reporting Period's Work Plan

In the upcoming reporting period, PEG will provide an update on progress with Gu season agriculture and livestock activities in both South Central Somalia and Mogadishu. This will include a briefing on management and M&E provisions for the ambitious plans of reaching a significantly higher number of farmers in South Central Somalia. PEG expects that most, if not all, Partnership Fund procurement activities will be at the significantly advanced stage of delivery/installation. The partnership with Amoud University will end in the coming quarter and PEG will have made good progress towards project close out.

III. KEY NARRATIVE ACHIEVEMENTS

A. Partnership Fund Grants Activity

The PEG grants team focused efforts in the reporting period on in-kind procurement activities on behalf of Partnership Fund grantees, following up with grantees on meeting their cost-share obligations, and working with CMP, the consultancy firm retained to provide business capacity training and grant implementation support to grantees.

In early January, CMP conducted a two-day group training session on the subject of accounting. Representatives from eight of the 11 grantees took advantage of the training and sent their accounting and finance staff to the sessions. The sessions served to hone accounting skills and presented participants with a good opportunity to reflect on the financial management aspect of their businesses.

Also in early January, PEG regretfully took the decision to cancel one of the 12 grants issued under the second round of the Partnership Fund. Barako Integrated Farm had been issued with an official cancellation notice in late December 2014. This followed persistent but unsuccessful efforts by the PEG grants team to verify cost-share contribution proposed by the grantee. Cost-share in this instance was particularly sensitive as it included land that the grantee was to purchase as the site for a modern poultry operation to be established with PEG's support. The decision to cancel was taken when it became evident that the grantee was not in a position to meet the cost-share requirements that the grantee had included in the grant proposal.

The PEG grants team posted several procurement advertisements in local newspaper publications, on the *somalijobs* website, and in the Daily Nation newspaper of Kenya. Items intended for purchase ranged from relatively straight-forward requirements such as livestock, day-old chicks and chicken feed, fishing boats and solar equipment, to more sophisticated goods and services such as grain and edible oils processing plants, industrial workshop equipment and a bottling plant.

The procurement of livestock for grantees Barqomaal Dairy Farm and Hodan Livestock Trading was accomplished relatively quickly with the purchase of camels and sheep and goats (shoats) from local livestock traders. Procurement of day-old chicks and poultry feed proved to be more challenging. The likely markets for these requirements were Yemen, Ethiopia and Kenya. Political events and an impending civil war in Yemen quickly ruled out that option. PEG was aware of the restrictive export regulations in Ethiopia, while geographical distance posed a logistical challenge to sourcing from Kenya. In February PEG's Grants and Procurement Manager/DCOP, Hirsi Farah, travelled to Addis Ababa accompanied by Kenyan-based poultry specialist/consultant, Charles Ming'ala. The purpose of the trip was to meet and assess potential suppliers of day-old chicks, chicken feed and vaccines, and explore means to address the challenges of export from Ethiopia, import into Somaliland and transportation. The pair visited several poultry farms in Nazaret and Debrezeit, an area located approximately 50 kms from Addis Ababa. The poultry consultant was impressed with the poultry and veterinary management practices at the farms and readily recommended sourcing from these potential suppliers. The suppliers proved quite eager to sell but, as expected, expressed concern about Ethiopian export restrictions. After much deliberation, a tentative arrangement was reached with one supplier, Safeway Poultry Ltd, who made a commitment to seek an export license from Ethiopian authorities, provided that PEG furnishes an official 'authorization to import' from the Ministry of Livestock in Somaliland.

Procurement activities intensified during the reporting period with vendor evaluations and negotiations with Kenyan and Indian suppliers taking place in late February and throughout March. Some of the hurdles that the PEG team encountered were the reluctance of potential Kenyan

suppliers to ship to Somaliland and the insistence of potential suppliers of industrial equipment from India on 100% upfront payments. To overcome these restrictions, PEG relied on greater involvement of the Kenya-based consultants and got involved in protracted and difficult negotiations with the Indian suppliers. PEG was quite relieved to overcome most of these issues and, with support from the DAI Home Office in Bethesda, to sign a good number of purchase orders by the end of the reporting period. PEG expects to conclude remaining procurement actions early in the subsequent quarter. PEG will also embark upon preparations for delivery of goods through working with relevant Somaliland government authorities for processing of import tax waivers and other required port clearance documentation.

B. Somaliland Agriculture Activity

In the reporting period, the team at Amoud University focused on three main activities: i) continuing extension services to farmers in the project sites of Amoud, Baki and Ruqi; ii) harvest of the 2014 Deyr season crop, and iii) preparations for seedling production for the 2015 Gu season.

In early January, PEG organized a study tour of a 10-person delegation from Amoud to participate in the farmer field days in South Central Somalia. The delegation comprised of farmers, extension workers, their supervisor, and members of the Amoud project management team. The purpose was to expose participating farmers and Amoud's technical team to the impressive farming interventions being championed in Afgoi, Aw-dhegle and Balad by PEG's implementing partner, the Somali Agricultural Technical Group (SATG). Following the visit, the Amoud delegation expressed much appreciation for the farming ethos in South Central Somalia which they found to be markedly different from that in Somaliland. They remarked admiringly about the sizes of farms, availability of water, high level of organization and the extensive involvement of women in farming activities. The delegation returned to Amoud re-invigorated and committed to spreading the technologies, innovations and lessons learned from the study tour. Immediately upon their return to Borama, the Amoud team convened briefing meetings with farmers at the three project sites to share their experience and enthusiasm.

With support from Amoud extension workers and their supervisors, farmers in the three sites continued to adopt the new seedlings production technology using germination trays and other good agricultural practices such as staking, row planting, plant spacing, crop rotation and compost application for soil fertility improvement. Extension workers continued to provide guidance and advisory services to farmers through group training sessions. To date, 90 such sessions have been conducted for lead and contact farmers. Each session consists of between 4-6 farmers and takes place in the farmers' fields. In addition to the good agricultural practices cited above, instruction also focuses on fertilizer application methods, pest and disease management practices, weed management and irrigation methods.

During the second quarter of FY2015, farmers began harvesting the lettuce, tomato and onion crop grown from seedlings distributed in the Deyr season in late 2014. The 2,500 seedling trays distributed to farmers in the Deyr season marked the second iteration of seedlings production using the germination tray technology. Earlier in the Gu season of 2014, 1,000 seedling trays were produced and distributed without charge to lead farmers to demonstrate the efficacy and advantages of the new method. This was done with the understanding among the farmers that there would be a charge for subsequent distribution of seedling trays in the Deyr season. When the Deyr season seedlings were distributed to farmers in October/November 2014, the Amoud team concluded written agreements with the farmers who undertook to make in-kind payments for the seedlings upon harvest. The agreements called for each tray of seedlings to be repaid with 10 kgs worth of produce of whichever kind. Thus during the reporting period, Amoud extension agents, in addition to providing technical assistance to farmers, assisted with harvesting and collecting in-kind repayments from the farmers. An initial report from the Amoud team indicates that 8,112kg of produce was collected and sold at the markets generating a revenue of \$4,200. A further \$3,100 is

yet to be collected from market traders and therefore sits under Amoud's accounts receivable, while a further \$5,000 worth of produce is yet to be collected from farmers. The total revenue, therefore, that the Amoud team expects to generate from the Deyr season seedlings is \$12,300. The Amoud team reports having been struck by how willing and appreciative the farmers were to participate in this arrangement. This, the team is confident, portends well for sustainability of the seedlings production initiative.

For the upcoming Gu season, the Amoud project team has been busy with preparations for production of 3,100 seedling trays. Preparatory activities included repairs to nursery sheds at the three sites of Amoud, Baki and Ruqi, sieving of soil, mixing with compost and filling the mixture into germination trays. Sowing of seeds in the trays and tending to seedlings germination will commence early in the third quarter (April – June 2015).

C. South Central Somalia Agriculture Activity

Through SATG, the implementing partner in South Central Somalia, PEG hosted demonstration field days in Afgoi from 27 December 2014 through 20 January 2015. The opening ceremony was officiated by then Minister of Agriculture, Mr. Abdi Ahmed Mohamed (Baffo), with attendance from various other stakeholders including the local authorities from Afgoi district. Presentations were made by various institutions (SATG, farmers association, lead/contact farmers currently enrolled in the program, students benefiting from the program, and community elders). A total of 1052 participants (617 in Afgoi and 435 in Aw-dhegle) attended the field days. The participants were from various sectors including the Ministries of Agriculture and Livestock, farmers associations, NGOs, local authorities, university students, lead and contact farmers, agro-dealers, business community, media, youth and women's associations and professional groups. The purpose of the field days was to disseminate the agriculture technologies to a wider audience. The field days generated considerable interest among the stakeholders. Among the new technologies displayed were drip irrigation, drought resilient crops (early maturing cowpea and mungbean varieties), fertility trials using both organic and inorganic fertilizers, crop protection practices, maize hybrid trials, various fodder species and good agriculture practices.

Harvesting of Deyr season field crops at the Agribusiness Incubation Center (ABIC), substations at Aw-dhegle and Balad, and the farms of lead and contact farmers started in early January and was completed in mid-February following which a thorough analysis of the yield data was conducted. Out of the total number of samples collected, a small number of farmers' plots were subsampled taking into consideration a confidence interval of 95% . The data were tabulated and given in the final seasonal report (listed in Annex III and provided as a separate attachment). Among the highlights: i) the package of technical assistance provided by PEG (good quality/treated seeds; proper land preparation; DAP application prior to planting; Urea application after planting; proper weeding and irrigation; and proper stem borer control) produced between 101% and 176% yield increase over farmers' own practice; ii) application of nitrogen at the rate of 150 kg/ha accounted for 291.6% yield increase compared to zero nitrogen application; iii) the trial of maize hybrid varieties at the ABIC and in Aw-dhegle produced a combined mean dry grain yield that was 53.8% higher than two local checks.

With the changes in the cabinet announced in December, SATG managed to hold consultation meetings with the new leadership at the Ministry of Agriculture and the Ministry of Livestock, Forestry and Range in the month of March. Officials at both ministries were updated on plans for the upcoming Gu season, and on the support provided previously with a variety of policy initiatives at both ministries.

In readiness for the upcoming Gu season, a program of community mobilization and sensitization was conducted with the farming communities in Afgoi, Awdhegle and Balad during the month of March. Plans for the Gu season call for engagement of a total of 1,500 contact farmers who will

receive micro-grants and who will each be mandated to train 10 other contact farmers. As such, the community mobilization efforts targeted registration of 750 contact farmers from Afgoi, 550 from Awdhegle and 450 from Balad. In a departure from previous practice, a rigorous registration procedure was introduced where the identity of every single beneficiary farmer is recorded along with a digital photo. This will enable the monitoring staff to follow up with the beneficiaries in all stages of the program and ensure that micro-grants are distributed to the true beneficiaries. Training of the newly-recruited farmers commenced in March and will continue in the subsequent quarter. The farmers were trained in such techniques as land preparation measures (ploughing, harrowing, furrowing and ridging), row planting and spacing between plants within a row, rate and methods of nitrogen application, good agriculture practices (timely planting, weeding and irrigation and proper pest control measures). In addition, the contact farmers were briefed on the selection criteria and responsibility of each party (PEG and the contact farmer). While PEG provides tractor hours and inputs (seed, DAP, urea, pesticides), the farmer will be responsible for land ploughing, sowing, irrigation weeding, harvesting and proper maintenance of the one Jibal (625 m²) of land on their farm that serves as a demonstration plot.

Another important step undertaken in preparation for the Gu season was procuring land preparation services. Contractual agreements were signed with tractor owners in Afgoi, Awdhegle and Balad to prepare the land in all three locations. Over 90 percent of the land preparation activities were completed in all three stations as well as the fields of lead and contact farmers. This was a major milestone as it is crucial to complete this activity before the start of the Gu rainy season (April 15). Land preparation after the rains have started would cause significant delays to timely program implementation as the mobility of tractors is severely impacted. Due to the erection of roadblocks at which illegal levies were demanded, land preparation in the villages of Sabid, Anole, Mareerey and Moordinle was put on hold. As a consequence, PEG extended activities to other villages not previously included in the program. These villages include: Balow, Aw-Halim, Jarran, Baqdad and Kurale of Afgoi district; Awdhegle village and Malable of Aw-dhegle district and Kurshale, Gololay, Muryaal and Daniga villages of Balad district.

Distribution of in-kind micro-grants to lead and contact farmers started in March and will continue in the next quarter. Most of the farmers received 1.25 kg of treated somtux maize seed and tractor hours for land preparation of one Jibaal for contact farmers and two Jibaals for lead farmers. The lead farmers are expected to cultivate two more Jibaals and apply the learned practices on their own. Procurement of DAP, urea and Bulldock insecticide is ongoing. While urea and Bulldock are readily available in the market, DAP is in shortage. The PEG procurement team in Mogadishu has managed to procure 175 sacks (50 kg each) of DAP of the total requirement of 500 sacks. As a result of the PEG intervention, the farmers in the Lower Shabelle region became aware of the importance of DAP in the crop production system, thus creating such demand for DAP that now shortages are occurring. One of PEG's strategy in this season is to train the agro-dealers on the importance of DAP, especially at planting time and impress upon them the market opportunity in having it readily available to the farmers.

In terms of media outreach, PEG contracted out the production of a number of documentaries on the agricultural interventions in South Central Somalia. The recordings included a trailer video, a three-part series on agricultural technology testing and transfer, and a separate piece focused on reviving the traditional agricultural knowledge. The trailer video was posted online on the websites of major media outlets such as Hiran and Markacadeey and was visited by over 5000 people. PEG is working to compress some of the footage into comprehensive and brief (approx. 4 mins) video clips that would be better suited to USAID communication needs.

Because of the significantly greater number of lead and contact farmers that PEG will be working with directly in the Gu season, there is a commensurate need for greater monitoring activities relative to the first two seasons. PEG will bolster the existing monitoring unit with new staff, volunteers, rented vehicles and motor bikes and digital cameras. The unit will consist of six members led by SATG M&E Officer Husni Abdurahim Muse and will operate from Afgoi with frequent visits to

all the villages of Afgoi, Awdhegle and Balad. The task includes verification and timely completion of planned activities such as planting, DAP application, urea application, proper weeding, irrigation and application of good agriculture practices.

D. South Central Somalia Livestock Activity

To improve the cold chain technology and improve the quality of raw milk in the Mogadishu milk value chain, PEG fabricated cold boxes for milk can storage between January and March. Early trials of the cold boxes demonstrated that the use of these cold boxes, in combination with ice blocks and milk cans, kept milk fresh for upwards of 36 hours (compared to only a few hours when, as per the prevailing practice, no cold chain is involved). The selected prototype was supplied to demo cooling hubs with milk traders at the target milk markets of Madiino and Seybiano for further testing. PEG embarked on fabrication of 24 additional units of the selected prototype to be distributed to more milk traders in order to test the technology with a significant number of participants. Based on the outcome of testing of milk cooling boxes by traders at Mogadishu's main milk markets in March/April 2015, local production of the most suitable size and design of cooling boxes will be up-scaled in May/June 2015 and cooling boxes availed to significant number of traders through micro-business grants.

In January 2015 the international livestock consultant analyzed preliminary data on testing of an initial set of 21 Mazzi milk cans imported from Kenya. The results indicated that these cans are not very suitable and have to be tested by a larger number of milk producers and traders before introducing cans on a large scale. As such, an additional 500 Mazzi milk cans were imported from Kenya and distributed to 157 milk producers for further testing. An alternative source for potentially more suitable and affordable quality milk cans was identified in India. Over the course of the subsequent quarter, PEG plans to test 500 of these alternative milk cans from India, compare the test results with those of the Mazzi milk cans, then make a determination on which milk can should be rolled out in the Mogadishu dairy sector.

The planned training for 15 livestock professionals and veterinarians on safe use of veterinary drugs was conducted in January 2015 at the SATG Mogadishu base. In February and March, the animal health intervention was finally carried out at 205 selected dairy farms. Impact analysis on milk yield was carried out in March and results condensed into clear extension messages for local milk producers and animal health service providers. They will become available in May 2015.

First and second fodder harvests using a fodder harvester were done in February and March 2015 by a commercial fodder producer (Mr. Haji Nasir) and the fodder fetched a good market price. Up-scaling of fodder production in the PEG region is ongoing since early 2015. It includes training on good practice for land preparation, planting, harvesting and storage of fodder. PEG is also providing farmers with seed, planting material (Napier cuttings) and other inputs (fertilizer). Introduction and demonstration of mechanized harvesting and simple processing (choppers) technology was conducted in the reporting period. Animal feeding trials to demonstrate the positive impact of supplementation with quality fodder on milk yield are planned for the 2015 Gu season.

E. Pilot wind farm at Hargeisa airport

An important activity that is a legacy from Phase I of PEG is the pilot wind farm at the Hargeisa international airport. PEG completed all technical work on the wind farm and handed it over to the Ministry of Energy and Minerals in June 2014 in a high-profile ceremony officiated by the country's president. The five 20 Kw wind turbine generators were meant to provide enough power to run the airport with the excess output sold on the local market through the electrical grid of Kaah Electric, the utility provider in the area. However, soon after the hand-over ceremony, the wind

turbines were switched off amid recriminations about excessive power surges and damaged equipment among the Ministry of Energy, the Ministry of Aviation and Kaah Electric. The wind farm was, inaccurately as it would later transpire, believed to be the cause of the problems.

Following extensive consultations between PEG and USAID on the one hand, and PEG and the stakeholders identified above on the other, PEG facilitated another technical assignment to Hargeisa by energy specialist Lawrence Mott in February. At the time of the hand-over in 2014, Mr. Mott had worked closely with all the parties to resolve outstanding technical issues and provide training to government and Kaah counterparts in preparing them for their role as the new custodians of the wind farm. Mr Mott had earned the trust and respect of all the parties that he worked with in 2014 and was viewed as a reliable arbiter and troubleshooter of the complications that arose thereafter. In addition to further training, Mr. Mott's mandate for the second assignment was to diagnose and recommend solutions for all the technical problems that had been encountered, going beyond the wind farm and assessing the electrical installations at the airport and on Kaah's grid.

In liaison with PEG and his technical contacts on the ground, Mr. Mott began working remotely on the assignment from his home base in Maine and upon arrival in Hargeisa, quickly set to work diagnosing the technical faults and confirming his findings. Mr. Mott held multiple formal and informal meetings to review findings, gain insight and provide an opportunity for the stakeholders to ask questions, discuss and accept the findings. As noted at the outset, the wind farm was the designated scapegoat, and to proceed with this site and others in Somaliland a full understanding of how to integrate renewables was the focus. The key meeting was with all parties at the table and including both ministers and lead staff. This kick off meeting created the buy in to work through the issues. The smaller meetings included; airport staff, Kaah Staff, Ministry of Energy staff and Ministry of Aviation. The Energy Specialist was able to accomplish the side meetings directly after initial support was set in motion.

The wind farm itself was not found to be the problem, rather the system it was trying to integrate with was not suitable for the wind turbine generator inverters to operate within. Mr. Mott noted that there was need to ascertain and rectify the cause of the voltage rises on the wind farm. However, the main problem was that the wind farm's significant generation overloaded the worn out and undersized infrastructure and created the problems with damaged equipment at the airport. In summary, Mr. Mott concluded that i) the airport circuits are not balanced and have significant delta between the phases; ii) the airport wiring and load control causes spikes/ steps changes within the system; iii) the wind farm inverters induce a small voltage rise which further exacerbates the phase imbalance and contributes to the overvoltage at the airport; iv) the utility generation voltage is high and variable (between 5 – 9%), and v) most significant is the failed interconnection point which induced overheating and terminal/component failure from being overloaded and worn out. Mr. Mott further noted that the wind farm, interconnection point and airport facilities suffer from a lack of monitoring, and ongoing upkeep. While attention is given to certain aspects, there was no obvious procedure in place to determine whether an issue existed and how it may be rectified. The wind farm was not getting the supervision it requires to stay ahead of issues, understand its operation in order to see, predict service needs, and potential failures.

In his final meetings with the various stakeholders, Mr. Mott provided detailed instructions for the various corrective actions to be undertaken by respective parties. These recommendations were to be communicated officially in Mr. Mott's trip report, which would form the basis for follow up and further review. Importantly, both ministers as well as the utility operator, expressed their unequivocal support to Mr. Mott's findings and recommendations. PEG will continue to monitor and work closely with these stakeholders and with Mr. Mott.

IV. PROGRESS AGAINST TARGETS

Table I below presents a summary of performance in the reporting period against all indicators in PEG's approved Monitoring and Evaluation Plan (M&EP). A series of data tables appearing thereafter in **Table 2** provide specific performance information for each individual indicator (Tables 2.1 – 2.16). There are no data for the program objective indicators PO1 A & B and PO2 A & B, as well as Indicator 1.1- *Average percent change in score on key areas of organization capacity amongst USG direct and indirect local implementing partners*, since such data will only be obtained following end-of-project surveys and an business organizational capacity assessment in Q3 and Q4 of FY2015. A discussion of performance against the rest of the indicators follows below.

Indicator 1.2 - *Number of days of technical assistance trade and investment environment provided to counterpart or stakeholder*. Though there are no data for the reporting period, PEG has already attained 80% of the end of activity target and is confident that the full target will be realized in Quarters 3 and 4.

Indicator 2.1 - *Percent change in volume/yield of agricultural products/commodities supported through PEG activities (kg)*. Results for this indicator are based on analysis of annualized yield data. Such data will be available after harvest for the Gu season of 2015 is completed in Quarter 4.

Indicator 2.2 - *Number Farmers and others who have applied new technologies or Management practices as a result of USG assistance*. Against a target of 1260 farmers for FY2015, PEG recorded 580 farmers in the reporting period as meeting criteria for this indicator. Performance to date reflects achievement of 79% of the end of activity target.

Indicator 3.1- *Number of individuals who have received USG supported short-term agricultural sector productivity or food security training*. 2074 farmers were trained in the reporting period resulting in the attainment of 50% of the FY2015 target. The number of farmers that have received such training in Phase II of PEG is 2,834 or 41% of the end of activity target. PEG will train significantly more farmers/beneficiaries in the Gu season of 2015 and is confident of reaching the end of activity target.

Indicator 3.2 - *Number of persons receiving new or better employment (including better self-employment) as a result of participation in USG-funded projects*. Four new staff were employed by the project in the reporting period to support monitoring and verification activities in South Central. As presently reported, performance under this indicator is significantly below FY2015 and end of activity targets. But that is because it does not yet include data on farmers in Somaliland and South Central Somalia who have received substantially higher yields (better self-employment) and additional employment opportunities that will be generated by grantees receiving support under the Partnership Fund in Somaliland. PEG is confident that the end of activity target of 2,200 will be realized by Quarter 4.

Indicator 3.3 - *Number of food security private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG*. PEG provided support to two organizations in South Central Somalia in the reporting period – the Livestock and Agro-Drug Cooperative (LADCO) and the Somalia Girls Agriculture Association (SAGA). Performance has already surpassed the for FY 2015 target but reflects 44% attainment of the end of activity target.

Indicator 3.4 - *Number of technologies or management practices in one of the phases of development*. Four such technologies were deployed in the reporting period (best practices in fertilizer application, safe use of pesticides, irrigation practices, bookkeeping and accounting). Attainment for the fiscal year is at 74% of the fiscal year target and 87% of the end of activity target.

Indicator 3.5 - *Number of investment deals initiated or completed by project end, through the contribution of USG assistance.* Three of the 11 grantees participating in Phase II of the Partnership Fund program successfully obtained investment support from Shurako, a funding organization based in Washington but with an office in Hargeisa. Among its other activities, Shurako provides investment and loans to viable Somali businesses. The three PEG grantees are Ubale Poultry and Beekeeping Farm, Zakia Fishing Company and Golis Solar Energy. With an end of activity target of 7 investment deals, performance to date reflects attainment of 43% of the target.

Indicator 3.6 - *Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment).* PEG has consistently surpassed the target of 15% female participation in program activities throughout the implementation period. Specific numerator and denominator information is provided in performance data table 2.14.

Indicator 3.7. *Number of policy reforms/regulations/administrative procedures drafted and presented for public /stakeholder consultation to enhance sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance (FAF 4.4.1-33 – Dropped).* This indicator was dropped with USAID concurrence in FY2014 but USAID requested PEG not to delete it.

Indicator 3.8. *Number of Policies, Regulations, and Administrative Procedures in development, passed, or being implemented as a result of USG assistance (4.5.1-24).* This indicator was adopted in FY2014. The FY2015 and end of activity target of seven policies/regulations was attained in the first quarter of FY2015.

Table 1: Partnership for Economic Growth Indicators – Summary of Performance in 2nd Quarter FY 2015

Indicator	Baseline Year	Value	FY2015: Target	Actual Results				Achievement
				Q1	Q2	Q3	Q4	Total
PO 1 - A: Percent of respondents who state that economic conditions have improved. – Somaliland	FY 2012	59%	66%	N/A	N/A			N/A
PO 2 - A: Percent of respondents who state that security has improved. – Somaliland	FY 2012	82%	89%	N/A	N/A			N/A
PO 1 - B: Percent of respondents who state that economic conditions have improved. – SC	FY 2014	5%	11%	N/A	N/A			N/A
PO 2 - B: Percent of respondents who state that security has improved. - SC	FY 2014	15%	21%	N/A	N/A			N/A
1.1: Average percent change in score on key areas of organization capacity amongst USG direct and indirect local implementing partners.	FY 2014	0	25%	0	0			0
1.2: Number of days of technical assistance trade and investment environment provided to counterpart or stakeholder.	FY 2011	0	550	276	0			276
2.1: Percent change in volume/yield of agricultural products/commodities supported through PEG activities (kg)	FY 2011	0	100%	0	0			0
2.2: Number Farmers and others who have applied new technologies or Management practices as a result of USG assistance.	FY 2011	0	1260 (F=189)	456 (206F) (301Y)	580 (147F) (282Y)			1,036 (353F) (583Y)
3.1. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training.	FY 2011	0	5,000 (F=500)	410 (71F) (175Y)	2074 (598F) (747Y)			2484 (669F) (922Y)
3.2. Number of persons receiving new or better employment (including better self-employment) as a result of participation in USG-funded projects	FY 2011	0	1300 (F= 195)	16 (1F)	4M (0F) (3Y)			20 (1F)
3.3. Number of food security private enterprises, producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG.	FY 2011	0	10	9	2			11
3.4. Number of technologies or management practices in one of the phases of development	FY 2011	0	19	10	4			14
3.5. Number of investment deals initiated or completed by project end, through the contribution of USG assistance.	FY 2011	0	2	0	3			3
3.6. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment).	FY 2014	0	15%	31.5% 278/ 882	28.02% 745/ 2,658			28.89% 1,023/ 3,540
3.7. Number of policy reforms/regulations/administrative procedures drafted and presented for public /stakeholder consultation to enhance sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance (FAF 4.4.1-33)	FY 2011	0	2 (Indicator Dropped)	0	0			0
3.8. Number of Policies, Regulations, and Administrative Procedures in development, passed, or being implemented as a result of USG assistance (FAF.5.1-24)	2014	0	7	7	0			7

Table 2.1: Performance Data Table, Indicator POI – A, 2nd Quarter, FY2015

INDICATOR TITLE: POI-A: Percent of respondents who state that economic conditions have improved – Somaliland									
INDICATOR NUMBER: Custom									
UNIT: Percent of respondents.	DISAGGREGATE BY: Location, gender								
	Geographic Location		Activity Title		Date		W	M	Sub-total
	Somaliland		Baseline and endline economic growth surveys		Jan – Mar 2015		N/A		0
					Totals				0
Results: No results for this quarter. Results will be obtained when endline survey is conducted between Quarter 3 and 4 of FY 2015									

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target			
			Achieved		Target		Achieved		Target		Target		Target			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M		
Total	59%		N/A				N/A						66%		66%	
Gender*: Women (W), Men (M)																
Somaliland	59%		N/A				N/A						66%		66%	
South Central Somalia																

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.2: Performance Data Table, Indicator PO2 – A, 2nd Quarter, FY2015

INDICATOR TITLE: PO 2 - A: Percent of respondents who state that security has improved – Somaliland									
INDICATOR NUMBER: Custom									
UNIT: Percent of respondents.	DISAGGREGATE BY: Location, gender								
	Geographic Location		Activity Title		Date		W	M	Sub-total
	Somaliland		Baseline and endline economic growth surveys		Jan – Mar 2015		N/A		0
				Totals				0	
Results: No results for this quarter. Results will be obtained when endline survey is conducted between Quarter 3 and 4 of FY 2015									

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target			
			Achieved		Target		Achieved		Target		Target		Target			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M		
Total	82%		N/A				N/A						89%		89%	
Gender*: Women (W), Men (M)																
Somaliland	82%		N/A				N/A						89%		89%	
South Central Somalia																

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.3: Performance Data Table, Indicator POI – B, 2nd Quarter, FY2015

INDICATOR TITLE: POI-B: Percent of respondents who state that economic conditions have improved - South Central Somalia							
INDICATOR NUMBER: Custom							
UNIT: Percent of respondents.	DISAGGREGATE BY: Location, gender						
	Geographic Location	Activity Title		Date	W	M	Sub-total
	South Central Somalia	Baseline and endline economic growth surveys		Jan – Mar 2015	N/A		0
				Totals			
	Results: No results for this quarter. Results will be obtained when endline survey is conducted between Quarter 3 and 4 of FY 2015						

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target			
			Achieved		Target		Achieved		Target		Target		Target			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M		
Total	5%		N/A				N/A						11%		11%	
Gender*: Women (W), Men (M)																
Somaliland																
South Central Somalia	5%		N/A				N/A						11%		11%	

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.4: Performance Data Table, Indicator PO2 – B, 2nd Quarter, FY2015

INDICATOR TITLE: PO 2 - B: Percent of respondents who state that security has improved – South Central Somalia							
INDICATOR NUMBER: Custom							
UNIT: Percent of respondents.	DISAGGREGATE BY: Location, gender						
	Geographic Location	Activity Title		Date	W	M	Sub-total
	South Central Somalia	Baseline and endline economic growth surveys		Jan – Mar 2015	N/A		0
	Totals						0
Results: No results for this quarter. Results will be obtained when endline survey is conducted between Quarter 3 and 4 of FY 2015							

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target			
			Achieved		Target		Achieved		Target		Target		Target			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M		
Total	15%		N/A				N/A						21%		21%	
Gender*: Women (W), Men (M)																
Somaliland																
South Central Somalia	15%		N/A				N/A						21%		21%	

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.5: Performance Data Table, Indicator I.1, 2nd Quarter, FY2015

INDICATOR TITLE: I.1: Average percent change in score on key areas of organization capacity amongst USG direct and indirect local implementing partners								
INDICATOR NUMBER: Custom								
UNIT: Average percent change in score.	DISAGGREGATE BY: Type of organization, Location of organization, the 6 Business Organizational Capacity Assessment Tool (BOCAT) dimensions							
	<i>Geographic Location</i>	<i>Activity Title</i>			<i>Date</i>	<i>W</i>	<i>M</i>	<i>Sub-total</i>
	<i>Somaliland</i>	<i>Capacity building of targeted enterprises, including training, technical assistance, upgrading of equipment, etc.</i>			<i>Jan 1– Mar 31,2015</i>	<i>N/A</i>		
	<i>Totals</i>							
Results: No results for this quarter. Results will be obtained when second BOCAT assessment is conducted between Quarter 3 and 4 of FY 2015								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	15%		15%								25%		25%	
Gender*: Women (W), Men (M)														
<i>Somaliland</i>	15%		15%								25%		25%	
<i>South Central Somalia</i>														

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.6: Performance Data Table, Indicator I.2, 2nd Quarter, FY2015

INDICATOR TITLE: I.2. Number of days of technical assistance in trade and investment environment provided to counterparts or stakeholders							
INDICATOR NUMBER: FAF - 4.2.1-20							
UNIT: Number of days.	DISAGGREGATE BY: Expert's name; Gender; Topic/type of assistance (e.g., phyto-sanitary regulations)						
	Geographic Location	Activity Title		Date	W	M	Sub-total
	Somaliland			Jan 1 – Mar 31,2015	0		0
	South Central			Jan – Mar 2015			
				Totals	0		0
Results: No results to report this quarter							

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		794				0					550		1000
Gender*: Women (W), Men (M)														
Somaliland	0		794				0					550		794
South Central Somalia														

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.7: Performance Data Table, Indicator 2.1, 2nd Quarter, FY2015

INDICATOR TITLE: 2.1: Percent change in average volume/yield of agricultural products and commodities supported by USG activities								
INDICATOR NUMBER: Custom								
UNIT: Kg.	DISAGGREGATE BY: Location, Type of commodity/product							
	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland		Agriculture extension services, scaling up of new agricultural technologies and good agricultural practices, provision of micro-grants		Jan 1 – Mar 31,2015	N/A		N/A
	South Central Somalia				Jan 1 – Mar 31,2015	N/A		N/A
					Totals			
Results: Results for this indicator will be obtained when annualized yield data analysis is conducted between Quarters 3 and 4 of FY2015								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		0				0					100%		200%
Gender*: Women (W), Men (M)														
Somaliland	0		0				0					100%		200%
South Central Somalia	0		0				0					100%		200%

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.8: Performance Data Table, Indicator 2.2, 2nd Quarter, FY2015

INDICATOR TITLE: 2.2 Number of farmers and others who have applied new technologies or management practices as a result of USG assistance.								
INDICATOR NUMBER: FAF4.5.2-5								
UNIT: Number of Farmers and others.	DISAGGREGATE BY: Gender, Location, Type of person/innovation/technology							
	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland				Jan – Mar 2015	0	0	0
	South Central Somalia		Best practices in fertilizer application, safe use of pesticides, irrigation practices		Jan – Mar 2015	147	433	580
Totals					147	433	580	
Results: This indicator has a good performance as the figures below indicate.								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target			
			Achieved		Target		Achieved		Target		Target		Target			
	W	M	W	M	W	M	W	M	W	M	W	M	W	M		
Total	0	0	225	346			147	433					189	1071	198	1122
Gender*: Women (W), Men (M)	0	0														
Somaliland	0	0	4	63			0	0							198	1122
South Central Somalia	0	0	221	283			147	433								

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.9: Performance Data Table, Indicator 3.1, 2nd Quarter, FY2015

INDICATOR TITLE: 3.1: Number of individuals who have received USG supported short-term agricultural sector productivity or food security training						
INDICATOR NUMBER: FAF 4.5.2-7						
UNIT: Number of individuals.	DISAGGREGATE BY: Gender (# of M&F), Age, Topic of training (harvest technique, etc.), Location, Type of individual					
	Geographic Location	Activity Title	Date	W	M	Sub-total
	Somaliland	Training of farmers in Amoud and business grantees in Hargeisa	Jan – Mar 2015	48	433	481
	South Central Somalia	Training of farmers in Afgoi, Aw-dhegle and Balad; training of livestock owners and milk traders in Mogadishu	Jan – Mar 2015	550	1043	1593
<i>Totals</i>			598	1476	2074	

Results: This indicator has a good performance in this quarter as the figures in this quarter express.

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0	0	186	574			598	1476					500	4500	1050	5950
Gender*: Women (W), Men (M)	0	0														
Somaliland	0	0	11	34			48	433							59	467
South Central Somalia	0	0	175	540			550	1043							725	1583

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.10: Performance Data Table, Indicator 3.2, 2nd Quarter, FY2015

INDICATOR TITLE: 3.2: Number of persons receiving new or better employment (including better self-employment) as a result of participation in USG-funded projects.								
INDICATOR NUMBER: Custom								
UNIT: Number of persons receiving new or better employment.	DISAGGREGATE BY: Gender, Location, Type of employer (M/S/M/L enterprise, Government, University, etc.)							
	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland				Jan – Mar 2015	0	0	0
	South Central Somalia		New employees of the PEG project		Jan – Mar 2015	0	4	4
Totals					0	4	4	
Results:								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0	0	5	39			0	4					195	1105	330	1870
Gender*: Women (W), Men (M)	0	0														
Somaliland	0	0	0	0			0	0							330	1870
South Central Somalia	0	0	5	39			0	4								

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.11: Performance Data Table, Indicator 3.3, 2nd Quarter, FY2015

INDICATOR TITLE: 3.3. Number of food security private enterprises, producers organizations, water users associations, women’s groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance.							
INDICATOR NUMBER: FAF4.5.2-11							
UNIT: Number of organizations.	DISAGGREGATE BY: Location, Type of organization/association, Type of capacity building activity						
	Geographic Location	Activity Title		Date	W	M	Sub-total
	Somaliland			Jan – Mar 2015	0		0
	South Central Somalia	Livestock and Agro-Drug Cooperative (LADCO), Somalia Girls Agriculture Association (SAGA)		Jan – Mar 2015	2		2
<i>Totals</i>					2		2
Results: No results this quarter							

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
	Total	0		9				2							10	
Gender*: Women (W), Men (M)	0		0													
Somaliland	0		9				0									9
South Central Somalia	0		0				2									2

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.12: Performance Data Table, Indicator 3.4, 2nd Quarter, FY2015

INDICATOR TITLE: 3.4. Number of technologies or management practices in development phases of research, field testing or made available for transfer of development as a result of USG assistance.						
INDICATOR NUMBER: Custom						
UNIT: Number of technologies or management practices.	DISAGGREGATE BY: Type of technology/management practice; Location; Phase (for PEG, this will always be Phase II)					
	Geographic Location	Activity Title	Date	W	M	Sub-total
	Somaliland	Bookkeeping and accounting	Jan – Mar 2015		1	1
	South Central Somalia	Best practices in fertilizer application, safe use of pesticides, irrigation practices	Jan – Mar 2015		3	3
				Totals		4

Results:

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		29				4							19		38
Gender*: Women (W), Men (M)	0		0													
Somaliland	0		16				1							19		38
South Central Somalia	0		13				3									

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.13: Performance Data Table, Indicator 3.5, 2nd Quarter, FY2015

INDICATOR TITLE: 3.5. Number of investment deals initiated or completed by project end, through the contribution of USG assistance								
INDICATOR NUMBER: Custom								
UNIT: Number of investment deals.	DISAGGREGATE BY: Type of investor/type of investment, Location, Sector, Amount (USD), Initiated/Completed							
	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland		Ubale Poultry and Beekeeping Farm, Zakia Fishing Company and Golis Solar Energy received investment support from Shurako		Jan – Mar 2015	3		3
	South Central				Jan – Mar 2015	0		0
					Totals	3		3

Results:

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15		Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		0		3						2		7	
Gender*: Women (W), Men (M)														
Somaliland	0		0		3						2		7	
South Central Somalia	0		0		0									

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.14: Performance Data Table, Indicator 3.6, 2nd Quarter, FY2015

INDICATOR TITLE: 3.6. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)								
INDICATOR NUMBER: (FAF GNDR-2).								
UNIT: Proportion of female participants.	DISAGGREGATE BY: Gender, Location, Type of employer (M/S/M/L enterprise, Government, University, etc.)							
	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland		Female participants in all program activities		Jan – Mar 2015	48	433	481 (10%)
	South Central Somalia				Jan – Mar 2015	697	1480	2177(32%)
Totals					745	1913	2658 (28.02%)	

Results:

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
	Total	0	0	439 (31.9%)	936 (68.07%)			745 (28.02%)	1913 (71.98%)							15%
Gender*: Women (W), Men (M)	0	0														
Somaliland	0	0	38	74			48	433						15%	15%	
South Central Somalia	0	0	401	862			697	1480								

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.15: Performance Data Table, Indicator 3.7, 2nd Quarter, FY2015

INDICATOR TITLE: 3.7. Number of policy reforms/regulations/administrative procedures drafted and presented for public /stakeholder consultation to enhance sector governance and/or facilitate private sector participation and competitive markets as a result of USG assistance								
INDICATOR NUMBER: 4.4.1-33 – Indicator dropped in FY2014 with USAID concurrence								
UNIT:	DISAGGREGATE BY: Type of reform (policy, regulation, procedures), Sector (e.g. Agriculture), Type of consultation (workshops, public hearing, etc.)							
Number of policy reforms/regulations.	Geographic Location		Activity Title		Date	W	M	Sub-total
	Somaliland		Indicator dropped					N/A
	South Central							N/A
					Totals			N/A
Results: Indicator dropped in FY2014 with USAID concurrence.								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		N/A												N/A	
Gender*: Women (W), Men (M)	0		N/A													
Somaliland	0		N/A												N/A	
South Central Somalia	0		N/A												N/A	

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

Table 2.16: Performance Data Table, Indicator 3.8, 2nd Quarter, FY2015

INDICATOR TITLE: 3.8. Number of Policies, Regulations, and Administrative Procedures in development, passed, or being implemented as a result of USG assistance								
INDICATOR NUMBER: 4.5.1-24								
UNIT: Number of policies, regulations and administrative procedures.	DISAGGREGATE BY: Stage 1: Analyzed. Stage 2: Drafted and presented for public/stakeholder consultation. Stage 3: Presented for legislation/decree. Stage 4: Passed/approved. Stage 5: Passed and implementation has begun							
	Geographic Location	Activity Title			Date	W	M	Sub-total
	Somaliland				Jan – Mar 2015			
	South Central Somalia				Jan – Mar 2015			
						Totals		
Results: Indicator targets were met in Quarter 1, FY2015								

Additional Criteria If other criteria are important, add lines for setting targets and tracking	Baseline		Results Achieved Prior Periods		This Reporting Period 31/Mar/15				Reporting Period 30/Jun/15		Reporting Period 30/Sep/15		FY 2015 Target		End of Activity Target	
			Achieved		Target		Achieved		Target		Target		Target		Target	
	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M
Total	0		7				0							7		7
Gender*: Women (W), Men (M)																
Somaliland	0		0				0									
South Central Somalia	0		7				0							7		7

* For indicators that cannot be disaggregated by gender, simply combine “M” and “W” columns.

V. PERFORMANCE MONITORING

In early March, Mr. Abdikarim Hassan joined the PEG team as the new Monitoring and Evaluation Officer based in the SATG office in Mogadishu. Mr. Hassan will support and complement the SATG monitoring and evaluation team comprised of an M&E Officer and his assistant. Because of the nature of their work, the SATG M&E team spends a lot of time in the field in Afgoi, Aw-dhegle and Balad. Mr. Hassan will, therefore, play a key role in consolidating the M&E efforts at the Mogadishu office. PEG's Hargeisa-based Monitoring, Evaluation and Learning (ME&L) Specialist, Mr. Mubarak Abdi, spent a week in Mogadishu with Mr. Hassan soon after his recruitment in order to offer training and orientation on PEG's M&E protocols and data collection tools. Soon after the training, Mr. Hassan accompanied the SATG M&E team to field activities in the three locations. PEG will continue to monitor and support the M&E efforts in South Central Somalia through routine visits to Mogadishu by the Chief of Party and the ME&L Specialist, as well as visits by Mr. Hassan to the Hargeisa office.

PEG will enroll a significantly higher number of beneficiaries in the GU season of 2015 (211 lead farmers, 1500 contact farmers receiving micro-grants and 15000 second tier contact farmers). For this reason, PEG will further strengthen the M&E team in South Central by recruiting six additional extension workers (bringing the total to 37), implementing a thorough beneficiaries register, complete with digital photos, and enhancing mobility of the teams through use of rental vehicles and motor bikes.

During the reporting period, PEG began work with the Third Party Monitoring (TPM) firms engaged under the USAID/SPSS program. PEG worked with Eagle Consulting and Pinnacle Research Management Consultants (PRMC) in South Central Somalia, and with Soradi in Somaliland. PEG provided information and documentation requested by the TPMs, as well as support with reaching beneficiaries selected for interviews.

VI. LESSONS LEARNED

In order to scale up agricultural activities in South Central Somalia using new technologies, it is critical to have a sufficient number of properly trained extension workers, and an effective monitoring and verification process. Through such means, it is possible to weed out gate-keepers and ghost beneficiaries.

There is scope among commercial fodder farmers in South Central for deployment of heavy farm equipment, particularly for harvesting. Harvest demonstrations using a mechanical cutter, sorter and bailer, all of which were privately procured by one of the farmers (Mr. Haji Nasir), attracted considerable interest.

Security in South Central Somalia remains a major concern. Incidents of terrorist attacks were particularly pronounced in the reporting period. Immediate impact on the PEG program has been from illegal checkpoints erected along the roads into Afgoi, Aw-dhegle and Balad which are used by unauthorized staff (thugs) to extortion payments from motorists and other road users. As in the last season, PEG has had to abandon program activities in some villages where contracted tractor owners could not get past these checkpoints.

Local manufacture of dairy equipment (milk cans, milk scoops), although highly desirable from a sustainability perspective, faces severe constraints due to lack of local competition which leads to exaggerated pricing (milk cans) and also to poor quality of local manufacture (milk scoops).

Timing of on-farm livestock interventions in South Central Somalia proved very difficult. This was due to general insecurity in South Somalia, and the rain and pasture situation triggering migrations of most dairy animals into areas inaccessible to project staff.

VII. ENVIRONMENTAL MONITORING

PEG's Environmental Mitigation and Monitoring Plan (EMMP) continues to provide the framework for environmental compliance activities. The EMMP includes quarterly and annual reporting requirements as outlined in the USAID Initial Environmental Examination (IEE) covering environmental risk for all Investing in People (IIP) and Economic Growth (EG) Program Activities in Somalia from FY 2010-FY 2015.

A summary of the all project activities requiring effective environmental review is provided in **Table 3** below and further detailed in the full Environmental Mitigation and Management Report (EMMR) in **Annex II** of this report. All project direct assistance activities as well as individual grants were first screened for environmental impacts and then evaluated to define appropriate mitigation measures. Activity-specific mitigation measures are included in grant agreements and subcontracts. Direct responsibility for implementing the mitigation measures normally rests with the grantee or subcontractor. PEG personnel regularly review, inspect and monitor the defined mitigation.

Environmental Review Forms (ERFs) for PEG'S agriculture extension activities were approved by the COR and MEO in July 2014. These activities are now under implementation. The two South Central ERFs are supplemented with a Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP). PEG submitted a revised version of the PERSUAP to USAID for review and approval in Quarter I of FY2015. Additionally, ERFs for the second cycle of Partnership Fund Grant activities were approved by USAID in July 2014.

A snapshot of the status of each activity is listed below in **Table 3** and the full EMMR (as required by the project IEE) is presented in Annex II to this report.

Table 3: PEG Environmental Compliance Overview

Activities (Completed, On-going, and Planned)		Environmental Compliance Actions		
#	Activity Description	Initial screening and ERF completed?	Mitigation Required?	Current Status
Partnership Value Chain Activities				
1	Agriculture Subactivity	Yes	Yes	Activity Complete.
2	Business Enabling Environment Subactivity	Yes	No	Activity Complete.
3	Somaliland Livestock Subactivity	Yes	Yes	Activity Complete.
4	Puntland Livestock Subactivity	Yes	Yes	Activity Complete.
5	Energy Subactivity	Yes	Yes	Activity Complete.
6	Puntland Business Subactivity	Yes	No	Activity Complete.
Partnership Grant Fund – Cycle I				
7	International Livestock Raising Grant	Yes	Yes	Grant Complete.
8	Afjireh Energy Grant	Yes	Yes	Grant Complete.
9	Red Sea Fishing and Shrimp Grant	Yes	Yes	Grant Complete.
10	Muliyo Salt Grant	Yes	Yes	Grant Complete.
11	GETCO Seafood Processing Grant	Yes	Yes	Grant Complete.
12	Shaqodoon Youth Job Training Grant	Yes	No	Grant Complete.
13	Transparent Solutions Grant	Yes	No	Grant Complete.
14	Togdheer Women Trade Assn Grant	Yes	Yes	Grant Complete.
15	Al Hussein Farms Grant	Yes	Yes	Grant Complete.
16	Dheerman Trading Grant	Yes	No	Grant Complete.
17	Tayo Energy Grant	Yes	Yes	Grant Complete.
18	Horumar Camel Dairy Farm Grant	Yes	Yes	Grant Complete.
19	KAABA Financial Services Grant	Yes	No	Grant Complete.
Partnership Value Chain Activities – Extension				
20	Somaliland Agriculture Extension Subactivity	Yes	Yes	Activity ongoing.
21	South Central Agriculture Subactivity	Yes	Yes*	Activity ongoing
22	South Central Livestock Subactivity	Yes	Yes*	Activity ongoing
Partnership Grant Fund – Cycle 2 – Planned				
23	Golis Renewable Energy Service Center Grant	Yes	Yes	Activity ongoing
24	Mandar Food’s Edible Cooking Oil Grant	Yes	Yes	Activity ongoing
25	Ubale Poultry and Bee Farm Grant	Yes	Yes	Activity ongoing
26	Barako Integrated Farm Grant	Yes	Yes	Activity ongoing
27	BarqoMaal Dairy Farm Grant	Yes	Yes	Activity ongoing

28	Rahiiq Frankincense and Myrrh Export Grant	Yes	Yes	Activity ongoing
29	Zakia Fishing Grant	Yes	Yes	Activity ongoing
30	Salaahudin Grain Processing Grant	Yes	Yes	Activity ongoing
31	Horn Renewable Energy – Business Opportunities for Local Systems Grant	Yes	Yes	Activity ongoing
32	Aideed Farm Irrigated Horticulture Grant	Yes	Yes	Activity ongoing
33	Modern Sesame Oil Growing Grant	Yes	Yes	Activity ongoing
34	Hodan Livestock Trading Grant	Yes	Yes	Activity ongoing

*These activities also require a PERSUAP in order to extend activities beyond the first growing season.

VIII. PROGRESS ON LINKS TO OTHER ACTIVITIES

The PEG program in South Central has established strong linkages with various local and international academic institutions. These include Benadir University, Plasma University, Jazeera University and City University. PEG has made presentations at these institutions, while students from Benadir University are active volunteers and participants in program activities. The PEG program has also established working relationships with institutions such as the Somali Resilience Program (SomRep), Adeso, ACTED, Solidarite International and FAO Somalia.

IX. PROGRESS ON LINKS TO HOST GOVERNMENT

In Somaliland, PEG continues to work closely with the Ministry of Energy and Minerals and with the Ministry of Civil Aviation to resolve matters related to the wind farm, the Hargeisa airport's electrical infrastructure and the local electrical grid. The ministers heading these two ministries have been active participants in meetings with PEG, the energy specialist and other stakeholders.

In South Central Somalia, PEG continues to enjoy a healthy working relationship with both the Ministry of Agriculture and the Ministry of Livestock Forestry and Range. PEG is working to establish direct contacts with the new ministers appointed recently to head these ministries (Minister Ahmed Hassan Gaboobe and Minister Said Hussein Eidd, respectively.) Beyond the ministers, PEG continues to work closely with other government officials in these ministries such as Deputy Ministers, the Directors General and the Directors of Crop Production and Crop Protection Departments. PEG has also cultivated strong relationships with District Commissioners.

X. PROGRESS ON GENDER STRATEGY

As is evident from the section on performance indicators in this report, PEG has consistently surpassed the 15% target for the proportion of female participants in the program. In South Central Somalia,

The Somali Agriculture Girls Association (SAGA) is still actively engaged in field activities. The 12 women milk traders from Trepiano and Wadajir Market are also still actively engaged in livestock activities. The two cold boxes manufactured by PEG in January 2015 were placed under the care of the

12 trained female milk traders at the three main Mogadishu milk markets. Of the lead and contact farmers enrolled in the program for the Gu season, the proportion of female beneficiaries is over 30%.

XI. SUSTAINABILITY

As reported previously, PEG’s implementing partner in South Central Somalia, SATG, is working on a number of initiatives designed to advance activity sustainability. These include seed production at the ABIC and provision of technical services to various local and international institutions. In the reporting period, SATG submitted a proposal for funding to establish a banana tissue culture lab to a separate donor-funded program and is confident of a positive outcome.

At Amoud University in Somaliland, the positive reception by farmers and their willingness to pay is indicative of good prospects for the sustainability of seedlings production using the germination trays method.

XII. UPCOMING REPORTING PERIOD’S WORK PLAN

There are no anticipated deviations to PEG’s approved Annual Work Plan in the upcoming reporting period, save for the two activities below. Detailed information on these was provided in the previous quarterly report.

Table 4: Deviations to Approved Work Plan

Planned Activities	Revised Status	Explanations for Deviations
Not in Annual Work Plan	Continuing work at the wind farm at Hargeisa International Airport and support to the Ministry of Energy and Ministry of Civil Aviation	With USAID consent, PEG is supporting the two ministries to resolve technical problems that arose post hand-over in 2014. Most of these lie beyond the geographical confines of the wind farm.
2 No. windmills for Baki and Ruqi under Amoud University’s work plan	Cancelled	Concern over counterpart’s capacity to manage this initiative

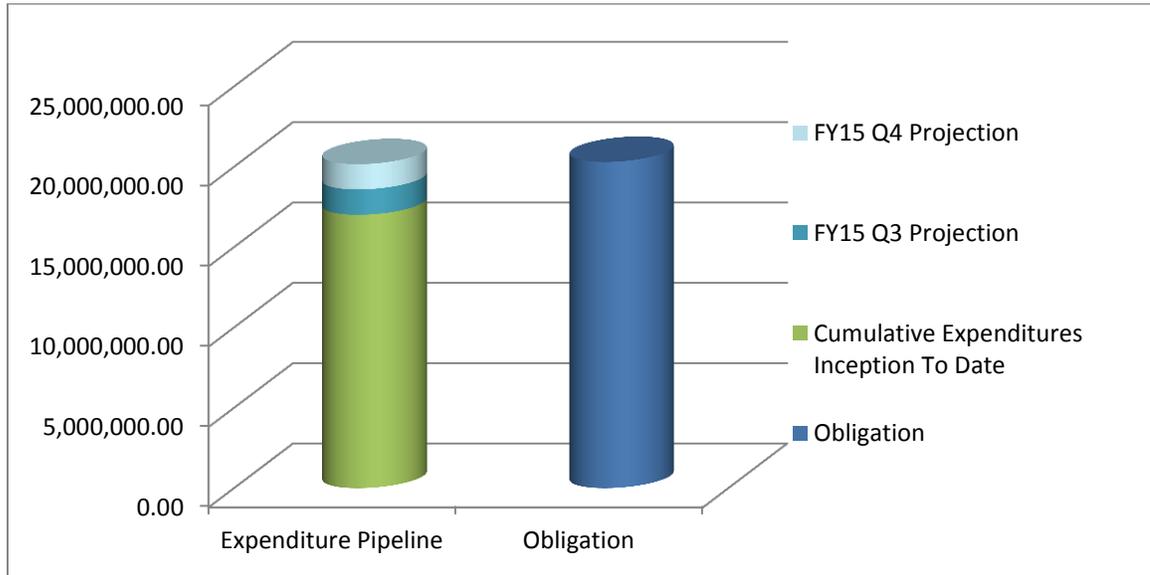
XIII. FINANCIAL INFORMATION

The level of disbursements in support of project implementation (as distinct from administration) continued to increase in Quarter 2. Expenditures were consistent with projections and there were no unexpected costs. In the reporting period, PEG made good progress with procurement activities for all in-kind contributions to grantees under the Partnership Fund. Disbursements for livestock purchases were completed on behalf of two grantees (Hodan Livestock and Barqomaal Dairy Farm). PEG’s

cumulative obligation and expenditures through Quarter 2, as well as expenditure projections for the next two quarters, are represented in **Chart 1** and **Table 5** below.

Cash Flow Report and Financial Projections (Pipeline Burn-Rate)

Chart 1: Obligations vs. Current and Projected Expenditures



T.E.C:	\$20,989,232
Cumulative Obligation:	\$19,585,324
Cumulative Expenditure:	\$17,015,232

Obligation	FY15 2nd Quarter Actual Expenditures Jan-Mar 2015	Cumulative Expenditures Inception to Date	FY153rd Quarter Projected Expenditures Apr-Jun 2015	FY15 4th Quarter Projected Expenditures Jul-Sep 2014	Obligation
19,585,324	1,147,748	17,015,232	1,575,000	1,575,000	19,585,324

Labor	183,137	7,505,739	510,000	510,000	Labor
Travel, Transport, Per Diem	33,052	1,044,601	70,000	70,000	Travel, Transport, Per Diem
Other Direct Costs	121,970	4,967,631	245,000	245,000	Other Direct Costs
Grants Under Contract	395,235	1,944,136	600,000	600,000	Grants Under Contract
Subcontracts	15,693	819,155	100,000	100,000	Subcontracts
G&A	19,289	733,970	50,000	50,000	G&A

Budget Notes

Labor	Labor costs have been consistent with projections.
Travel, Transport, Per Diem	Travel expenses have been consistent with projections.
Other Direct Costs	Expenditures on ODCs have been and are expected to remain consistent.
Grants Under Contract	In Q3 FY2015, the project expects to sign a third and final fixed obligation grant for the implementation of agriculture and livestock activities in South Central Somalia. Late in Q1, the Grants Team advertised solicitations for the approved sub-grants under the Partnership Fund Round 2. In Q2, the Grants Team assessed the proposals received from suppliers. Also in Q2, the Grants Team assessed the proposals received from various suppliers and in Q3, most equipment will be purchased and processed for payment.
Subcontracts	The Partnership presently has two subcontracts, one with SATG that provides for operations support to activities in South Central Somalia, and the other with PRS for security services in Hargeisa. Additional subcontracts are not anticipated at this point.
G&A	Calculated as per Award conditions.

Table 6: New Sub-Award Details

Total amount in the approved budget for sub-awards:	\$2,820,000
Total amount sub-awarded to date:	\$1,686,457 (\$865,200 [SATG FOGI & 2] + \$821,257 [Partnership Fund Round 2])

XIV. ACTIVITY ADMINISTRATION

A. Constraints and Critical Issues

In South Central Somalia, PEG continues to implement project activities in spite of the challenging security and political situation. Part of the reason for this is the strong linkages that PEG has cultivated with various community and government stakeholders. While there is no guarantee that these efforts will shield PEG from terrorist and other threats, they have been quite effective so far and PEG will continue to nurture these relationships.

In Somaliland, PEG has faced challenges with a handful of Partnership Fund grantees that may have overstated their level of cost share for matching business grants. This has raised questions for the level of support that PEG can realistically provide. PEG has also experienced challenges with international suppliers who are hesitant or unwilling to ship to Somaliland, or who make demands for onerous upfront payments.

B. Personnel

During the reporting period, PEG replaced the Monitoring and Evaluation Officer in the Mogadishu office, and the Information Technology Officer based in Hargeisa.

C. Changes in the Project

There are no changes in the project anticipated at this point.

D. Contract, Award or Cooperative Agreement Modifications and Amendments

There were no contract modifications or amendments issued in the reporting period. PEG expects to submit a request for budget re-alignment early in the upcoming Quarter.

Annex I: Schedule of Future Events

Date	Location*	Activity
Apr – Jun 2015	ABIC (Afgoi), Aw-dhegleh and Balad substations and farmers' fields, South Central Somalia	Implementation of 2015 Gu season agriculture and livestock activities per approved Fixed Obligation Grant
Apr –June 2015	Hargeisa	Continuing procurement actions for PEG's in-kind contributions under the Partnership Fund
5 Jan – Mar/Apr 2015	Hargeisa	Procurement actions for PEG's in-kind contributions under the Partnership Fund
8-12 Apr 2015	Borama, Baki & Ruqi	Demonstration field days – 1 st of 3
10-13 May 2015	Borama, Baki & Ruqi	Demonstration field days – 2 nd of 3

Annex II: Quarterly and Annual Environmental Mitigation and Monitoring Report (EMMR)

EMMR Part I of 3: Environmental Verification Form

Name of Prime Implementing Organization: **DAI**
 Geographic location of USAID-funded activities
 (Province, District): **Somaliland, South central Somalia**
 Name of Sub-awardee Organization (if this EMMR is for
 a sub): **N/A**
 Date of Screening: **9 April 2015**

Funding Period for this award: **FY2011 - FY2015**
 Current FY Resource Levels: FY _____
 This report prepared by:
 Name: **Mubarak Abdi** Date: **16 April 2015**
 Date of Previous EMMR for this organization:
31 January 2015 (if any)

Indicate which activities your organization is implementing under IIP and EG funding.

Key Elements of Program/Activities Implemented		Yes	No
1	<ul style="list-style-type: none"> • Education, Technical Assistance, or Training • Analysis, Studies, Academic or Research Workshops and Meetings • Document and Information Transfers • Programs involving health care, or family planning services except where directly affecting the environment • Studies, projects or programs intended to develop the capability of recipient countries and organizations to engage in development planning 	✓	
2	Procurement, Storage, Management and Disposal of Public Health Commodities		✓
3	Generation, storage, handling and disposal of hazardous and highly hazardous medical waste		✓
4	Small-Scale construction or rehabilitation of hospitals, clinics, laboratories, VCT or training centers		✓
5	Small-Scale Water and Sanitation		✓
6	Small-Scale agricultural activities, including but not limited to small crop production, drip irrigation, aquaculture, horticulture, poultry and small livestock, and dairy production Includes Livestock Activities.	✓	
7	Use of pesticides	✓	
8	Other activities that are not covered by the above categories. Includes Round 2 Partnership Grant Activities	✓	

EMMR Part 2 of 3: Mitigation Plan

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
1. Education, technical assistance, training, etc.	No environmental impacts anticipated as a result of these activities. However, Guidelines shown in Section 4, Table 3 of the IEE are observed.	N/A	N/A	N/A	N/A	N/A
2. Public Health Commodities	N/A	N/A	N/A	N/A	N/A	N/A
3. Medical waste	N/A	N/A	N/A	N/A	N/A	N/A
4. Small-Scale Construction	N/A	N/A	N/A	N/A	N/A	N/A
5. Small-Scale WatSan	N/A	N/A	N/A	N/A	N/A	N/A
6. Small-Scale Agriculture	See below.	See below.	See below.	See below.	See below.	See below.
Somaliland Agriculture Activity Extension						
	Farmers trained in seedling production on the demonstration plots misuse pesticides on their own farms and cause harm to people, animals or the	Include training on safe pesticide use during on-site training and through extension services. Choose least toxic agrochemicals using requirements set in EMMP Train in safe use actions	Project Agricultural Specialist Project M&E Officer	Training events and persons trained on safe pesticide use. Training materials	Review of Grant Agreements Review of materials Training Reports	Every six months.

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
	environment.	Train farmers on selecting resistant varieties Train Farmers on natural pesticides practices to avoid use of chemical pesticides.		developed and produced.		
	There is a loss of biodiversity or negative impact on local flora and fauna from project activities.	Train farmers on integrated management practices and the benefits of crop rotations, intercropping and integrated management practices Train Farmers on Natural pesticides practices to avoid use of chemical pesticides. Train farmers on proper use of organic matter	Project Agricultural Specialist Project M&E Officer	Training events and persons trained on efficient irrigation techniques. Training materials developed and produced	Review of materials Training Reports	Every 6 months
South Central Somalia Agriculture Activity						
	Improperly stored, transported, measured, used and disposed of chemicals or reagents in the soils laboratory cause negative impacts to human health and/or the surroundings.	Include training for laboratory staff on chemical and reagent storage, transport, containment, safety, measurement, use, emergency/spill procedures and proper disposal.	Project M&E Officer	Training events and persons trained on soil conservation and integrated management techniques. Training materials developed and produced.	Review of materials Training Reports	Every 6 months
	Project activities result in negative impacts on agricultural land and/or soil problems.	Include farmer training for soil conservation and integrated soils management techniques.	Project M&E Officer	Training events and persons trained on soil conservation and	Review of materials Training Reports	Every 6 months

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
				integrated management techniques. Training materials developed and produced.		
	Project activities result in or exacerbate water scarcity or water quality issues.	Include farmer training for efficient irrigation techniques to reduce competing water demands and increase crop productivity.	Project M&E Officer	Training events and persons trained on efficient irrigation techniques. Training materials developed and produced.	Review of materials Training Reports	Every 6 months
	Irrigation activities result in health impacts from waterborne diseases and vectors.	Train farmers about proper water management and vector reduction techniques. Raise awareness among farmers through extension agents regarding farm-level sanitation.	Project M&E Officer	Training events and persons trained on water management and vector reduction techniques. Training materials developed and produced.	Review of materials Training Reports	Every 6 months
	Project activities result in soil erosion or other degradation.	Train farmers on best management practices to lower risks of soil erosion. Best practices include crop rotation, use of improved seeds,	Project M&E Officer	Training events and persons trained on best management practices.	Review of materials Training Reports	Every 6 months

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
		intercropping, proper plant spacing, improved irrigation efficiency, use of manure and compost, etc.		Training materials developed and produced.		
	There is a loss of biodiversity or negative impact on local flora and fauna from project activities.	<p>Train farmers on integrated management practices and the benefits of crop spacing, crop rotations, intercropping and integrated management practices</p> <p>Train Farmers on Natural pesticides practices to avoid use of chemical pesticides.</p> <p>Train farmers on proper use of organic matter</p>	Project M&E Officer	<p>Training events and persons trained on integrated management practices.</p> <p>Training materials developed and produced.</p>	Review of materials Training Reports	Every 6 months
	Farmers trained at the demonstration plots misuse pesticides on their own farms and cause harm to people, animals or the environment.	<p>Include training on safe pesticide use during on-site training and extension services.</p> <p>Choose least toxic agrochemicals using requirements set in EMMP</p> <p>Train in safe use actions</p> <p>Limit use of the pesticides to small plots</p> <p>Train farmers on sowing Proper time of crops to reduce pest/disease affects and selecting resistant varieties</p>	Project M&E Officer	<p>Training events and persons trained on safe pesticide use.</p> <p>Training materials developed and produced.</p>	Review of materials Training Reports	Every 6 months
	Farmers trained by extension staff misuse pesticides on their own	Include training on safe pesticide use and good agricultural management practices through	Project M&E Officer	Training events and persons trained on safe pesticide	Review of materials Training	Every 6 months

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
	farms or use poor management techniques and cause harm to people, animals or the environment.	extension services. Training on good business management techniques through extension services. Training on post harvest management techniques (packaging, transportation and marketing practices)		use and good practices. Training materials developed and produced.	Reports	
South Central Somalia Livestock Activity						
	Failure to observe best practices for import, handling, storage, and use of veterinary medicines result in a threat to health and safety of extension agents and/or farmers and pastoralists.	Extension agents and farmers/pastoralists will be trained in best practices for sourcing, handling, storage and use of veterinary medicines.	Project M&E Officer	Number of training days, training materials developed including manuals, number of people trained.	Review of materials Training Reports	Quarterly
	Potential release of veterinary medicines to the food chain, soil and/or surface water, public health and safety risks from unauthorized access to vet medicines by untrained extension agents and improper handling and use of medicines	To minimize the potential for accidental releases of veterinary medicines, extension agents and farmers/pastoralists will be trained in best practices for handling, storage and use of veterinary medicines with emphasis on observance of veterinary drug withdrawal periods in milk.	Project M&E Officer	Number of training days, training materials developed including manuals, number of people trained.	Review of materials Training Reports	Quarterly
	Use of expired, off-brand or inappropriately stored veterinary medicines	Multiple trainings, workshops and inspections will be conducted for supply chain actors to ensure that	Project M&E Officer	Number of training days, training materials	Review of materials Training	Quarterly

Category of Activity from Section 5 of IIP and EG IEE	Describe specific environmental threats of your organization's activities (based on analysis in Section 3 of IIP and EG IEE)	Description of Mitigation Measures for these activities as required in Section 5 of IIP and EG IEE	Who is responsible for monitoring	Monitoring Indicator	Monitoring Method	Frequency of Monitoring
	further sickens livestock.	appropriate medicines are stocked, sold and used. Wholesalers will be trained, spot-checked and inspected to ensure that appropriate medicines are available and sold; extension agents will be trained to ensure the safe use of these medicines.		developed including manuals, number of Ministry technical staff, wholesalers, suppliers, importers, livestock professionals and extension agents trained.	Reports	
	Potential release of veterinary medicines into the human food chain and to soil and or/surface water and/or public health and safety risks resulting from improper medicine container disposal.	Wholesalers, suppliers, importers, livestock professionals, extension agents will be trained on proper and appropriate disposal of medicine containers to reduce the potential for release into the human food chain and to the environment.	Project M&E Officer	Number of training days, training materials developed including manuals, number of wholesalers, suppliers, importers, livestock professionals, extension agents trained.	Review of materials Training Reports	Quarterly
7. Pesticides	N/A	N/A	N/A	N/A	N/A	N/A
8. Grant Activities	N/A	N/A	N/A	N/A	N/A	N/A

EMMR part 3 of 3: Reporting Form

List each Mitigation Measure from column 3 in the EMMR Mitigation Plan (EMMR Part 3 of 3)	Status of Mitigation Measures	List any outstanding issues relating to required conditions	Remarks
<p>Train farmers on safe pesticide use, including.</p> <ul style="list-style-type: none"> • Choose least toxic agrochemicals using requirements set in EMMP • Train in safe use actions • Train farmers on selecting resistant varieties • Train Farmers on natural pesticides practices to avoid use of chemical pesticides. (<i>Agriculture Activity Extension</i>) <p>Train farmers on integrated management practices and the benefits of crop rotations, intercropping and integrated management practices. (<i>Agriculture Activity Extension</i>)</p> <p>Train Farmers on Natural pesticides practices to avoid use of chemical pesticides. (<i>Agriculture Activity Extension</i>)</p> <p>Train farmers on proper use of organic matter. (<i>Agriculture Activity Extension</i>)</p>	<p>Training conducted in South Central Somalia</p>	<p>No outstanding issues at this time.</p>	<p>Training objectives attained</p>
<p>Laboratory staff trained on chemical and reagent storage, transport, containment, safety, measurement, use, emergency/spill procedures and proper disposal. (<i>South Central Somalia Agriculture Activity</i>)</p> <p>Farmers trained on soil conservation and integrated soils management techniques. (<i>South Central Somalia Agriculture Activity</i>)</p> <p>Farmers trained on efficient irrigation techniques to reduce competing water</p>	<p>Not applicable. No lab staff involved.</p> <p>Training conducted.</p>	<p>No outstanding issues at this time.</p> <p>No outstanding issues at this time.</p>	

List each Mitigation Measure from column 3 in the EMMR Mitigation Plan (EMMR Part 3 of 3)	Status of Mitigation Measures	List any outstanding issues relating to required conditions	Remarks
<p>demands and increase crop productivity. (South Central Somalia Agriculture Activity)</p> <p>Farmers trained about proper water management and vector reduction techniques. (South Central Somalia Agriculture Activity)</p> <p>Raise awareness among farmers through extension agents regarding farm-level sanitation. (South Central Somalia Agriculture Activity)</p> <p>Farmers trained in best management practices to lower risks of soil erosion. Best practices include crop rotation, use of improved seeds, intercropping, proper plant spacing, improved irrigation efficiency, use of manure and compost, etc. (South Central Somalia Agriculture Activity)</p> <p>Farmers trained on proper use of organic matter. (South Central Somalia Agriculture Activity)</p> <p>Include training on safe pesticide use during on-site training and extension services.</p> <ul style="list-style-type: none"> • Use of natural pesticide practices to avoid use of chemical pesticides. • Choose least toxic agrochemicals using requirements set in EMMP. • Train in safe use actions • Limit use of the pesticides to small plots • Train farmers on sowing Proper time of 	<p>Training conducted</p> <p>On-going activity.</p> <p>Done. Training in crop rotation and plant spacing conducted.</p> <p>Training conducted.</p> <p>Training conducted. Activities implemented in compliance with PERSUAP.</p>	<p>No outstanding issues at this time.</p>	

List each Mitigation Measure from column 3 in the EMMR Mitigation Plan (EMMR Part 3 of 3)	Status of Mitigation Measures	List any outstanding issues relating to required conditions	Remarks
<p>crops to reduce pest/disease affects and selecting resistant varieties (<i>South Central Somalia Agriculture Activity</i>)</p> <p>Train farmers on good business management techniques through extension services. (<i>South Central Somalia Agriculture Activity</i>)</p> <p>Training farmers on post harvest management techniques (packaging, transportation and marketing practices) (<i>South Central Somalia Agriculture Activity</i>)</p>	<p>Training conducted.</p> <p>Training conducted.</p>	<p>No outstanding issues at this time.</p> <p>No outstanding issues at this time.</p>	
<p>Train extension agents and farmers/pastoralists in best practices for sourcing, handling, storage and use of veterinary medicines with emphasis on observance of veterinary drug withdrawal periods in milk. (<i>South Central Somalia Livestock Activity</i>)</p> <p>Conduct training and inspections for supply chain actors to ensure that appropriate medicines are stocked, sold and used. (<i>South Central Somalia Livestock Activity</i>)</p> <p>Train wholesalers, suppliers, importers, livestock professionals, extension agents on proper and appropriate disposal of medicine containers to reduce the potential for release into the human food chain and to the environment. (<i>South Central Somalia Livestock Activity</i>)</p>	<p>Training conducted.</p> <p>Training conducted.</p> <p>Pending.</p>	<p>No outstanding issues at this time</p> <p>No outstanding issues at this time.</p> <p>No outstanding issues at this time.</p>	<p>SATG Livestock team conducted all environmental mitigation trainings to support the implementation of EMMP.</p>

Certification

I certify the completeness and the accuracy of the mitigation and monitoring plan described above for which I am responsible and its compliance with the IIP and EG IEE:

Signature
Njuru Nganga
Program Manager, Partnership for Economic Growth
DAI

Date
4 May 2015

**BELOW THIS LINE FOR USAID USE ONLY
USAID/EA/LPC/Somalia Clearance of EMMR:**

Contracting Officer's Representative: _____ Date: _____
Marybeth McKeever

Mission Environmental Officer: _____ Date: _____

As appropriate: REA, BEO [depending on nature of activity, which potentially may require an EA]

Note: if clearance is denied, comments must be provided to applicant.

Annex III: List of Deliverable Products

1. SATG Season 2 Final Report/Yield Data Analysis Report
2. Documentary (4-part) on agricultural activities in South Central
3. Documentary on agricultural activities in Somaliland



Somali Agriculture Technical Group

Hope for the future

AGRICULTURAL MILESTONE 6 SEASON 2 FINAL REPORT

Activities during Deyr season 2014/2015

March 2015

Somali Agricultural Technical Group
Mogadishu, Somalia

CONTENTS

I	Summary of activities	3
1.0	CIMMYT MAIZE HYBRID VARIETIES TRIAL	3
2.0	MAIZE FERTILIZER TRIALS	7
2.1	Effect of different rates of nitrogen application on dry grain yield of maize variety SOMTUX at ABIC in Afgoi during Deyr season 2014/2015	7
2.2	Effect of different rates of nitrogen application on dry grain yield of maize variety SOMTUX in Awdeghele during Deyr season 2014/2015	8
3.0	MAIZE DEMONSTRATION PLOTS	10
3.1	Effect of four methods of nitrogen application at two rates and two methods of DAP basal application on dry grain yield of maize variety SOMTUX at ABIC in Afgoi during Deyr season 2014/2015	10
3.2	Effect of four methods of nitrogen application at two rates and two methods of DAP basal application on dry grain yield of maize variety SOMTUX in Awdeghele during Deyr season 2014/2015	12
3.3	Grain yield of maize variety SOMTUX grown in contact and lead farmers demonstration plots using SATG technical package(s) and farmers own practice in Afgoi during Deyr season 2014/2015	13
3.4	Grain yield of maize variety SOMTUX grown in farmers demonstration plots using SATG technical package(s) and farmers own practice in seven villages in Afgoi during Deyr season 2014/2015	15
4.0	LEGUMES DEMONSTRATION PLOTS	16
4.1	Mean dry grain yield (kg/ha) of Filsan mungbean, local mungbean, Ken Kunde and local red cowpea in Awdeghele during Deyr season 2014/2015	16
4.2	Mean dry grain yield (kg/ha) of Filsan mungbean, local mungbean, Ken Kunde and local red cowpea at four different spacing in Awdeghele during Deyr season 2014/2015	17
4.3	Mean dry grain yield (kg/ha) of local red cowpea at four different spacing in Awdeghele during Deyr season 2014/2015	17
5.0	SESAME DEMONSTRATION PLOTS	18
5.1	Mean dry grain yield (kg/ha) of local sesame and Homeira sesame variety at different row spacing in Awdeghele during Deyr season 2014/2015	18
II	Lesson learned	19
III	Recommendation for season 3	19

I. Summary of activities

- 1) Season two data and analysis and interpretation
- 2) Lessons Learned from season 2
- 3) Recommendations for Season 3
- 4) Seed and SPS policies and regulations

I. Season two data Analysis and interpretation

1.0 CIMMYT MAIZE HYBRID VARIETIES TRIAL AT ABIC IN AFGOI AND IN AWDEGHELE DURING DEYR SEASON 2014/2015

The trial was sited at the Agri-Business Incubation Centre (ABIC) in Afgoi and at its substation in Awdhegle. Eighteen CIMMYT maize hybrid varieties and two local checks were evaluated for yield performance. They were planted at both sites on October 14, 2014 in three blocks each measuring 25 m². Spacing was 25 cm between plants and 75 cm between rows with one plant per hill. Each site had 60 plots. A randomized complete block design with three replications was used.

Fields at the two sites were subjected to the same treatments: a) DAP application (200 kg/ha) broadcast at sowing and urea (150 kg/ha) 50% applied at 45 days after planting and the rest at the flowering stage; b) irrigation made six times during the crop cycle; c) weeding done three times in the crop cycle; d) stem borer control with Achook 0.15 EC (azadiractin) and/or Bulldock 0.05 GR (beta-cyfluthrin); and e) harvesting on the same day.

Maize was harvested on January 15, 2015 at the two sites. Harvest area was 7.5 m² comprising 40 maize plants in the middle rows of the plots. Grains were removed from the cobs, dried under the sun to about 12% moisture content and weighed.

Table 1 depicts mean dry grain yield of the 20 test maize varieties in Afgoi and Awdhegle during the Deyr season 2014/2015. In both trial sites, CIMMYT maize hybrids with exception of CZH 1233 in Afgoi and CZH 1221 in Awdhegle, yielded more than the two local checks. The top three CIMMYT maize hybrids in Afgoi were CZH132074, CZH1113 and CZH131016 with mean dry grain yields of 8000, 7467 and 7333 kg/ha, respectively. The mean dry grain yields of the local checks SOMTUX and JIFGADUUD were 5333 and 5067 kg/ha, respectively. In Awdhegle, the top three CIMMYT maize hybrids included CZH131008, CZH132066 and CZH131016 with mean dry grain yields of 7378, 6933 and 6711 kg/ha, respectively. JIFGADUUD and SOMTUX yielded 4267 and 3822 kg/ha, respectively. Table 1 also shows that maize yields despite of variety differences were higher in Afgoi than in Awdhegle for

unknown reasons. The latter will be investigated in the follow-up field trials in GU season 2015.

Table 1: Mean dry grain yield (kg/ha) and ranking of CIMMYT maize hybrid varieties at ABIC in Afgoi and in Awdhegle during Deyr season 2014/2015

Variety	Afgoi Mean dry grain yield (kg/ha)	Ranking	Variety	Awdhegle Mean dry grain yield (kg/ha)	Ranking
CZH132074	8,000	1	CZH131008	7,378	1
CZH1113	7,467	2	CZH132066	6,933	2
CZH131016	7,333	3	CZH131016	6,711	3
CZH132046	7,289	4	CZH132044	6,667	4
CZH132068	7,289	4	CZH132074	6,489	5
CZH131001	7,111	5	CZH131001	6,400	6
CZH132066	7,022	6	CZH132068	6,000	7
CZH132067	6,844	7	CZH1233	6,000	7
CZH131008	6,756	8	SC513	5,822	8
CZH131003	6,622	9	CZH0337	5,689	9
CZH132044	6,578	10	CZH131014	5,644	10
CZH132043	6,489	11	CZH132043	5,556	11
SC513	6,400	12	CZH131003	5,422	12
CZH131014	6,311	13	CZH132067	5,422	12
CZH0337	5,778	14	CZH1113	5,067	13
CZH1221	5,689	15	CZH131002	4,889	14
CZH131002	5,600	16	CZH132046	4,889	14
CHECK-1 (SUMTUX)	5,333	17	CHECK-2 (JIFGADUUD)	4,267	15
CZH1233	5,244	18	CZH1221	3,911	16
CHECK-2 (JIFGADUUD)	5,067	19	CHECK-1 (SUMTUX)	3,822	17
Mean dry grain yield per site	6,511			5,649	

Table 2: Combined mean dry grain yield (kg/ha) and ranking of CIMMYT maize hybrid varieties at ABIC in Afgoi and Awdhegle during Deyr season 2014/2015

Variety	ABIC Afgoi/Awdhegle Combined mean dry grain yield (kg/ha)	Ranking
CZH132074	7,244	1
CZH131008	7,067	2
CZH131016	7,022	3
CZH132066	6,978	4
CZH131001	6,756	5
CZH132068	6,644	6
CZH132044	6,622	7
CZH1113	6,267	8
CZH132067	6,133	9
SC513	6,111	10
CZH132046	6,089	11
CZH131003	6,022	12
CZH132043	6,022	12
CZH131014	5,978	13
CZH0337	5,733	14
CZH1233	5,622	15
CZH131002	5,244	16
CZH1221	4,800	17
CHECK-2 (JIFGADUUD)	4,667	18
CHECK-1 (SOMTUX)	4,578	19

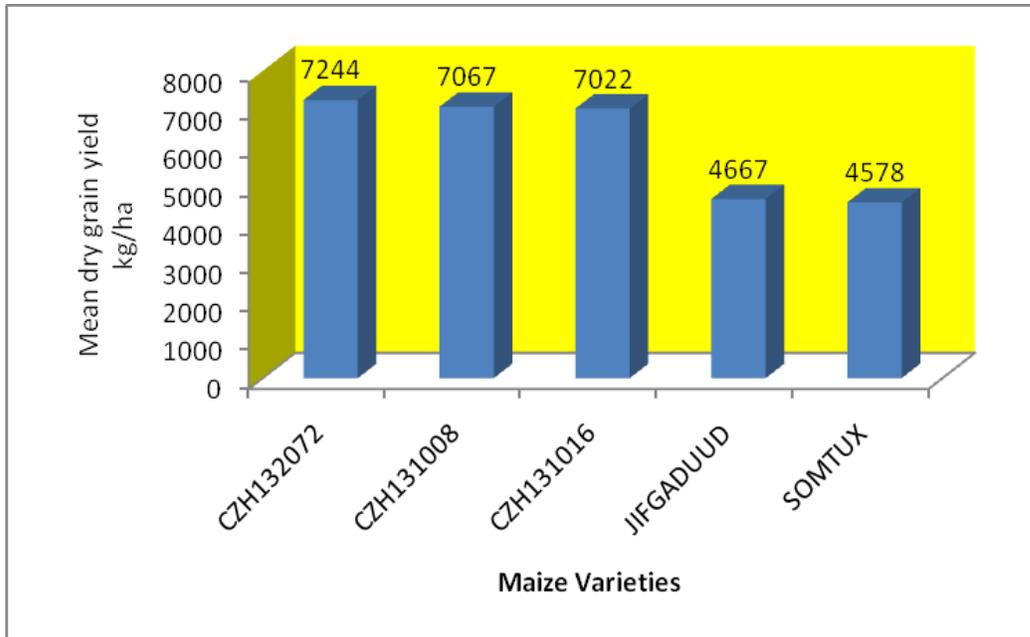


Figure 1: Comparative combined mean dry grain yields of the top three CIMMYT maize hybrids and two local varieties at ABIC in Afgoi and Awdheghe during Deyr season 2014/2015

Table 2 gives the overall picture of yield differences within and between CIMMYT maize hybrids and the local checks JIFGADUUD and SOMTUX when mean yields obtained from Afgoi and Awdheghe were combined. Figure 1 illustrates the overall top three high yielders were CZH132074, CZH131008 and CZH131016 producing 7244, 7067 and 7022 kg/ha, respectively. The least producers included JIFGADUUD and SOMTUX at 4667 and 4578 kg/ha, respectively. *The combined mean dry grain yield of the top three CIMMYT maize hybrids was 53.8% higher than the two local checks. This constitutes a huge monetary benefit to small-scale maize farmers who adopt the CIMMYT hybrids and good production practices used in the trials. This trial will be repeated during the long rains in 2015, and also the cost of production will be determined.*

2.0 MAIZE FERTILIZER TRIALS

2.1 Effect of different rates of nitrogen application on dry grain yield of maize variety SOMTUX at ABIC in Afgoi during Deyr season 2014/2015

Nitrogen fertilizer rate trial was conducted at the Agri-Business Incubation Centre (ABIC) in Afgoi during the Deyr season 2014/2015 with the aim of identifying the optimum rate of fertilizer in maize. Local maize variety SOMTUX was used in the trial. Nitrogen based fertilizer applied was urea which contains 46%nitrogen. There were eight fertilizer rates comprising zero, 25, 50, 75, 100, 125, 150 and 175 kg N/ha. They were replicated three times in a randomized complete block design. Plot size was 37.5 m² consisting of five rows of 10 m each with a between row spacing of 0.75 m. Plant spacing within a row was 0.25 m at one plant per hill. DAP at the rate of 200 kg/ha was applied in the hills at planting. The trial was planted on October 20, 2014 and harvested on January 27, 2015. Harvest area was 22.5 m² consisting of three middle rows in each plot. Harvested cobs were sun-dried, grains removed and weighed.

Table 3: Effect of different application rates of nitrogen on dry grain yield (kg/ha) of maize variety SOMTUX at ABIC in Afgoi during Deyr season 2014/2015.

Fertilizer rates (N kg/ha)	Mean dry grain yield (kg/ha)
Zero	1,067
25	2,519
50	3,289
75	3,467
100	3,556
125	3,289
150	4,178
175	4,207

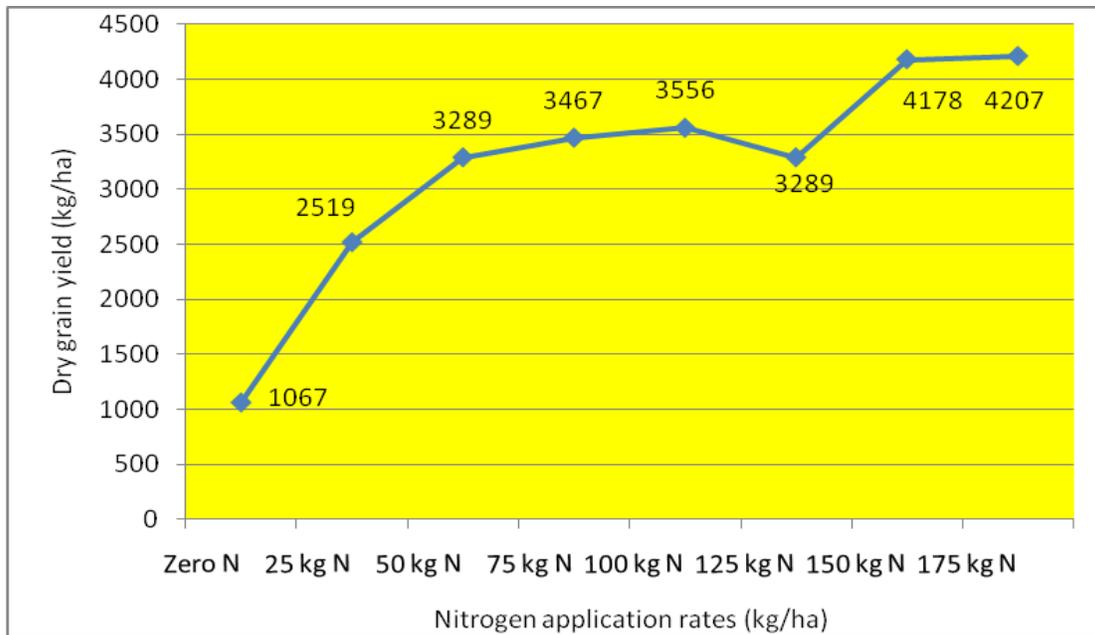


Figure 2: Mean dry grain yields of maize variety SOMTUX under different rates of application of nitrogen at ABIC in Afgoi during Deyr season 2014/2015

The dry grain yield per hectare at different nitrogen rates is shown in Table 3 and Figure 2. Yield data depicted in Figure 2 indicated that the optimum rate for nitrogen application in Afgoi was 150 kg/ha. Below this rate, there was a significant dry grain yield loss and above it, there was no significant economic gain. There was a yield difference of 3,111 kg between the zero nitrogen and 150 kg nitrogen application rate. *This accounted for 291.6% yield increase.*

2.2 Effect of different application rates of nitrogen on dry grain yield of maize variety SOMTUX in Awdheghe during Deyr season 2014/2015

It was planted on October 17, 2014 and harvested on February 8, 2015. The field practices and planting arrangement were the same to the nitrogen rate trial conducted at the ABIC in Afgoi during Deyr season 2014/2015. This field trial was not replicated.

The dry grain yield per hectare at different nitrogen rates is given in Table 3 and Figure 2. Results indicated that the maximum dry grain yield was obtained at nitrogen application rate of 175 kg/ha. However, the yield difference between the zero nitrogen and 175 kg/ha was 1,433 kg accounting for 49.4% far less than in Afgoi. This is probably due to high level of animal manure applied prior to planting in Awdheghe.

Table 4: Effect of different application rates of nitrogen on dry grain yield (kg/ha) of maize variety SOMTUX in Awdheghe during Deyr season 2014/2015.

Fertilizer rates (N kg/ha)	Mean dry grain yield (kg/ha)
Zero	2,900
25	1,800
50	2,667
75	3,000
100	3,833
125	3,633
150	3,033
175	4,333

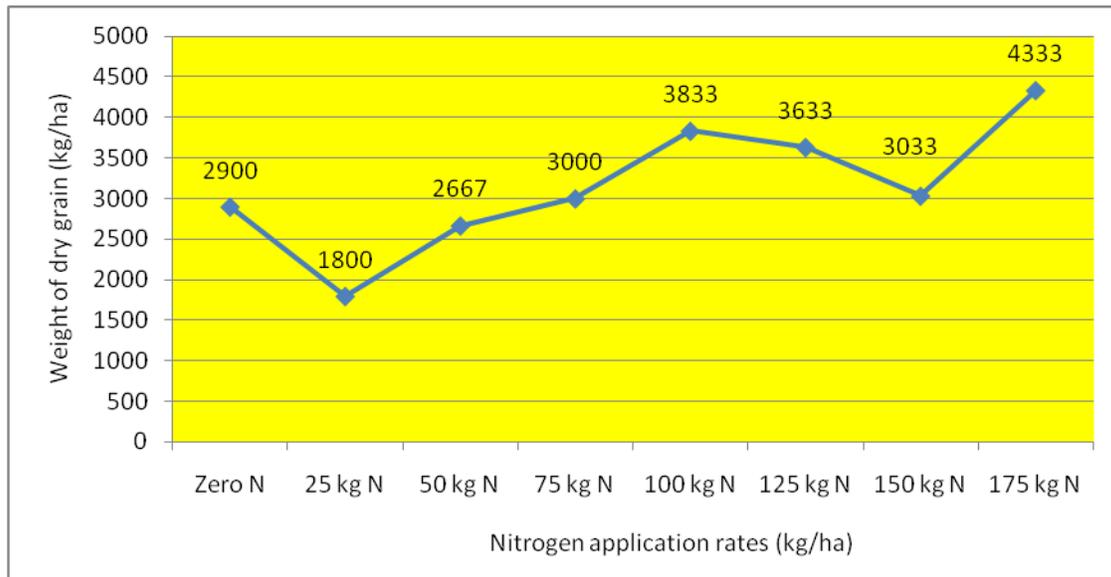


Figure 3: Dry grain yields of maize variety SOMTUX under different application rates of nitrogen in Awdheghe during Deyr season 2014/2015

3.0 MAIZE DEMONSTRATION PLOTS

3.1 Effect of four methods of fertilizer application at two nitrogen rates and two methods of DAP basal application on dry grain yield of maize variety SOMTUX at ABIC in Afgoi during Deyr season 2014/2015.

DAP and Urea were used in the field demonstrations. DAP was applied at the rate of 200 kg/ha as a basal application: a) in planting hills; and b) broadcast during field harrowing prior to planting. Nitrogen was placed in planting hills, rows and broadcast in the field at the rate of 75 and 100 kg/ha. The demo-fields were weeded and surface irrigated three times during the crop cycle. Stem borer control was done by application of either Achook 0.15 EC (azadiractin) or Bulldock 0.05 GR (beta-cyfluthrin). Harvest area was 22.5 m². The field was sown on October 17, 2014 and harvested on February 8, 2015. Mean dry grain yields under various DAP and nitrogen application methods are given in Table 5.

Table 5: Mean dry grain yield (kg/ha) of maize variety SOMTUX under four methods of nitrogen application and two methods of DAP application at ABIC in Afgoi during Deyr season 2014/2015

Fertilizer application method	DAP placed in planting hills (200 kg/ha)		DAP broadcast prior to planting (200 kg/ha)	
	75 kg N/ha	100 kg N/ha	75 kg N/ha	100 kg N/ha
Control	1,067	2,578	3,644	2,887
Row	3,733	4,000	4,888	3,200
Hill	4,000	4,177	4,177	3,555
Broadcast	3,644	3,911	3,377	3,111
Mean	3,111	3,667	4,022	3,188

Where DAP was applied in the planting hills, the highest yield was obtained at 100 kg N/ha in hill placement. There was no yield difference between hill and row placements for both 75 kg N and 100 kg N/ha rates (Table 5; Figure 4). However, where DAP was broadcast prior to planting, nitrogen application rate of 75 kg N/ha in row placement method produced the highest grain yield (Table 5; Figure 5).

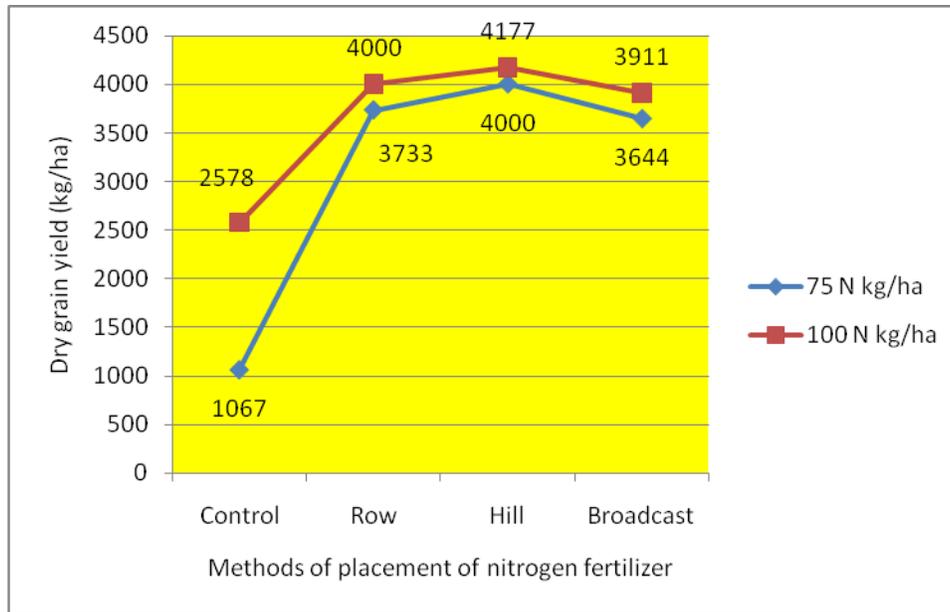


Figure 4: Mean dry grain yield (kg/ha) of maize variety SOMTUX under different methods and rates of nitrogen application with a basal application of DAP placed in planting hills (ABIC, Afgoi, Deyr season 2014/2015).

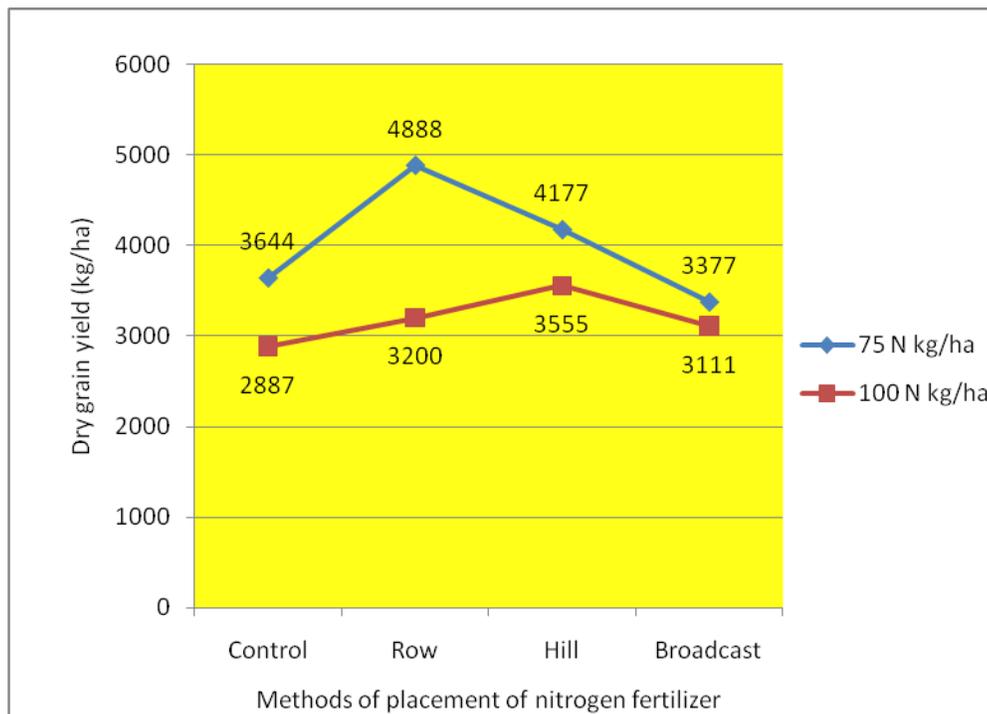


Figure 5: Mean dry grain yield (kg/ha) of maize variety SOMTUX under different methods and rates of nitrogen application with a basal broadcast application of DAP prior to planting (ABIC, Afgoi, Deyr season 2014/2015).

Overall, higher yields were produced when basal DAP application was broadcast. The highest mean dry grain yield was 4,888 kg/ha obtained where DAP was broadcast prior to planting at nitrogen application rate of 75 kg N/ha using row placement method (Table 5; Figure 5). This accounts for 30.9% yield increase over the same nitrogen application rate and placement method where DAP was placed in planting hills.

3.2 Effect of four methods of fertilizer application at two nitrogen rates and one method of DAP basal application on dry grain yield of maize variety SOMTUX in Awdegehele during Deyr season 2014/2015.

This demonstration field was similarly designed as 3.1 in Afgoi. However, there was only one basal application of DAP and that was broadcast prior to sowing. Sowing and harvest dates were the same as in Afgoi. Harvest area was 30 m². Mean dry grain yield from the various nitrogen placement methods and rates are depicted in Table 6.

Table 6: Mean dry grain yield (kg/ha) of maize variety SOMTUX under four methods of nitrogen application and one method of DAP basal application in Awdegehele during Deyr season 2014/2015

Fertilizer application method	DAP broadcast prior to planting (200 kg/ha)	
	75 kg N/ha	100 kg N/ha
Control	3,333	3,667
Row	4,133	3,533
Hill	4,133	4,600
Broadcast	4,633	3,500
Mean	4,058	3,825

Mean dry grain yields were slightly higher at nitrogen application rate of 75 kg N/ha compared with 100 kg N/ha (Table 6; Figure 6). The highest mean dry grain yield was 4,633 kg/ha obtained at nitrogen application rate of 75 kg N/ha using broadcast placement method (Table 6; Figure 6). This accounts for 39.0% yield increase over the control at same nitrogen application rate.

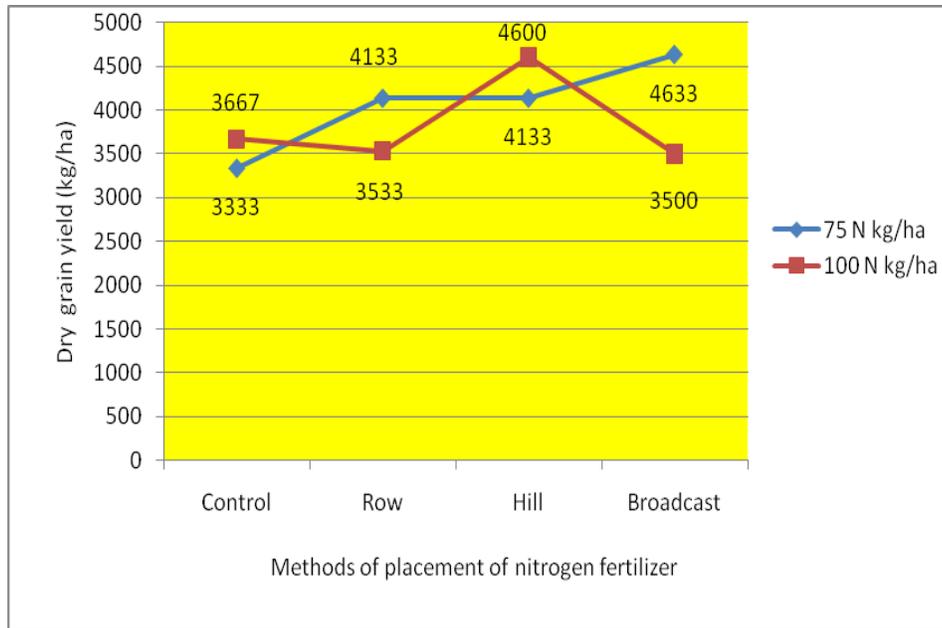


Figure 6: Mean dry grain yield (kg/ha) of maize variety SOMTUX under different methods and rates of nitrogen application with a basal broadcast application of DAP prior to planting (Awdegehele, Deyr season 2014/2015)

3.3 Grain yield of maize variety SOMTUX grown in contact and lead farmers demonstration plots using SATG technical package(s) and farmers own practice in Afgoi during Deyr season 2014/2015

Size of a demonstration plot was 625 m² (1 jibaal.) Harvest area consisted of four random samples each of 3 m² from one demonstration plot. Number of contact and lead farmers who participated in the maize demonstration is given in Table 7. Likewise depicted in Table 7 is information on the number of plots of each type of farmer and crop production practices used. Production methods included SATG technical package and farmers' own practices. SATG technical package include the use of a) treated seed, b) land preparation (harrowing, farrowing and banding, c) application of DAP (broadcast method prior to planting), d) application of urea 45 days after planting, and e) application of stem borer control measures. Grain yield data of the demonstration are shown in Table 8 and Figure 8.

The highest and lowest yield was attained by lead farmers 1-JIB and contact farmers using own practices, respectively. *The SATG technical package(s) produced 101-176% more yield than the farmers' own practice (Table 8).*

Table 7: Number of contact and lead farmers and their respective number of plots (jibaals) using different production practices in the maize demonstration in Afgoi during Deyr season 2014/2015

Type of farmer	Number of farmers	Number of jibaals (JIB)	Production practices
Lead farmers	40	4	SATG technical package
Lead farmers	35	1	SATG technical package
Contact farmers	200	1	SATG technical package
Contact farmers	100	1	Farmers' own practices

Table 8: Mean dry grain yield (kg/ha) of maize variety SOMTUX produced by contact and lead farmers using different production practices in demonstration plots in Afgoi during Deyr season 2014/2015

Type of farmer	Production practices	Mean dry grain yield (kg/ha)
Lead farmers 4-JIB	SATG technical package	3,396
Lead farmers 1-JIB	SATG technical package	4,611
Contact farmers	SATG technical package	3,358
Contact farmers	Farmers' own practices	1,668

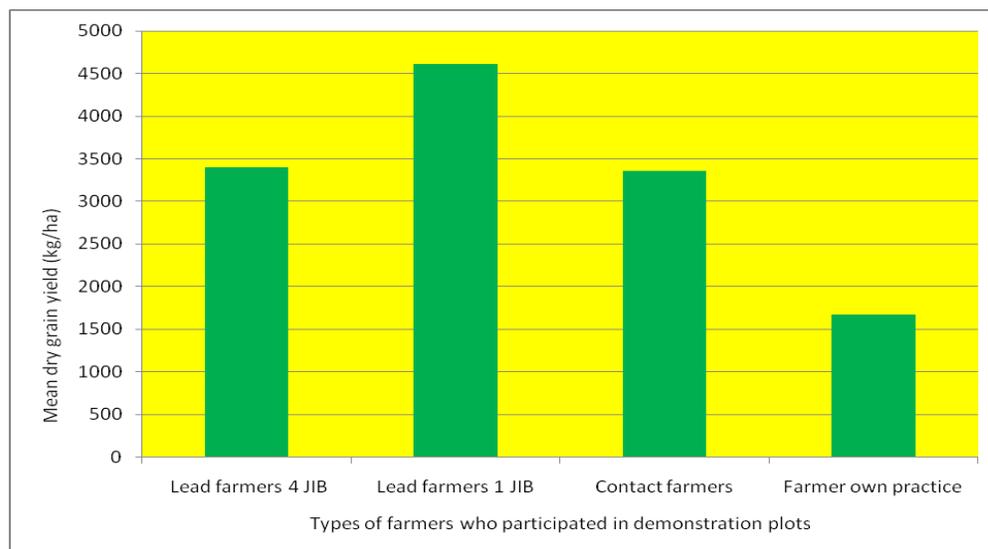


Figure 7: Mean dry grain yield (kg/ha) of maize variety SOMTUX produced by contact and lead farmers using different production practices in demonstration plots in Afgoi during Deyr season 2014/2015

3.4 Grain yield of maize variety SOMTUX grown in farmers demonstration plots using SATG technical package(s) and farmers own practice in seven villages in Afgoi during Deyr season 2014/2015

The design of this maize demonstration is similar to (3.3). Seven villages participated in the field demonstration. Each village had four demonstration plots comprising 16 sampling units each of 3 m² which adopted SATG technical package(s), and four sampling units of the same size using farmers' own practices. The yield results of this village level demonstration are shown in Tables 9 and illustrated in Figures 8, 9 and 10,

Table 9: Mean, maximum and minimum dry grain yield (kg/ha) of maize variety SOMTUX grown in demonstration plots using SATG technical package(s) and farmers' own practice in seven villages in Afgoi during Deyr season 2014/2015

Village	SATG technical package(s) (kg/ha)			Farmers' own practice (kg/ha)		
	Mean	Maximum	Minimum	Mean	Maximum	Minimum
Anoole	3,344	5,667	1,667?	1,125	1,333	667
Marerey	3,422	6,000	1,667?	1,333	2,333	667
Mordiile	3,563	5,000	1,667?	2,583	3,333	2,000
Sabiid	3,182	5,000	1,667?	1,792	3,000	1,000
Balbaley/ Shukurc	2,515	5,667	667?	1,171	3,333	267
Buxow	3,438	6,333	1,000	2,117	5,000	667
Jambalul	3,920	8,000	1,667?	1,542	3,000	333
Mean of means	3,341			1,666		

SATG technical package(s) produced 101% more yield than farmers' own practice based on the difference between the means of the two production practices (Table 9). The highest and lowest grain yield in the demonstration were recorded in Jumbulul and Balbaley/ Shukurow, respectively (Figures 9 and 10).

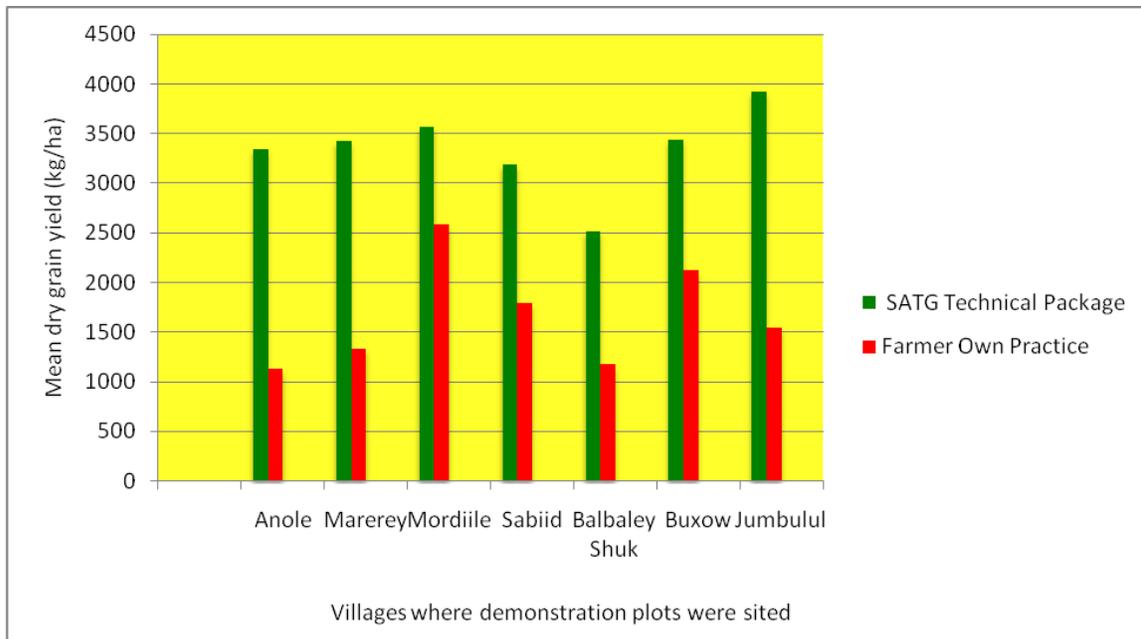


Figure 8: Mean dry grain yield (kg/ha) of maize variety SOMTUX grown in demonstration plots using SATG technical package(s) and farmers’ own practice in seven villages in Afgoi during Deyr season 2014/2015

4.0 LEGUMES DEMONSTRATION PLOTS

4.1 Mean dry grain yield (kg/ha) of Filsan mungbean, local mungbean, Ken Kunde and local red cowpea in Awdeghele during Deyr season 2014/2015

The demonstration plot was planted with Filsan mungbean, local mungbean, Ken Kunde and local red cowpea on October 19, 2014 and harvested on January 6, 2015. Spacing of Filsan mungbean, local mungbean, Ken Kunde and local red cowpea was 0.20 x 0.75 m, 0.25 x 0.75 m, 0.25 x 0.75 m and 1.0 x 1.5 m, respectively. Plot size of each variety was 75 m². The middle four rows in the demonstration plots were harvested and yield recorded. Mean dry grain yield data are given in Table 10 and illustrated in Figure 11.

Filsan mungbean and Ken Kunde were the highest producers at 1,100 and 1,133 kg/ha and the local red cowpea yielded least(622 kg/ha) (Figure 11).

Table 10: Mean dry grain yield (kg/ha) of Filsan and local mungbean, Ken Kunde and local cowpea in Awdeghele during Deyr season 2014/2015

Variety	Spacing (m)	Mean dry grain yield (kg/ha)
Mungbean		
Filsan mungbean	0.20 x 0.75	1,100
Local mungbean	0.25 x 0.75	900
Cowpea		
Ken Kunde	0.25 x 0.75	1,133
Local red	1.0 x 0.75	622

4.2 Mean dry grain yield (kg/ha) of Filsan mungbean, local mungbean and Ken Kunde planted at four different spacing in Awdheghe during Deyr season 2014/2015

Design of the demonstration plot was similar to 4.1. However, each variety was evaluated at 0.2 x 0.75, 0.25 x 0.75, 0.30 x 0.75 and 0.35 x 0.75 m spacing. Mean dry grain yield data are given in Table 11 and illustrated in Figure 12.

Filsan mungbean, Ken Kunde and the local mungbean yielded highest at 0.25 x 0.75, 0.30 x 0.75 and 0.35 x 0.75 m spacing, respectively. These three spacing are recommended for the three respective varieties.

Table 11: Mean dry grain yield (kg/ha) of Filsan mungbean, local mungbean and Ken Kunde planted at four different spacing in Awdheghe during Deyr season 2014/2015

Spacing (m)	Mean dry grain yield (Kg/ha)	
	Filsan mungbean	Local mungbean
0.20 x 0.75	1,200	667
0.25 x 0.75	1,244	1,067
0.30 x 0.75	1,067	711
0.35 x 0.75	844	1,111

4.3 Mean dry grain yield (kg/ha) of local red cowpea at four different spacing in Awdegehele during Deyr season 2014/2015

The demonstration plot was sown on October 26, 2014 and harvested on January 5, 2015. Each plot measured 75 m². Crop spacing was 0.5 x 1.5, 0.75 x 1.5, 1.0 x 1.5 and 1.25 x 1.5 m. Harvest was taken from the four centre rows. Harvest area was 38 m². Yield data under the various spacing are shown in Table 9 and Figure 9. The highest

yield was 1,974 at 1.25 x 1.5 m and the lowest was 1,237 kg/ha at 0.50 x 1.5 m spacing (Table 12; Figure 13).

Table 12: Mean dry grain yield (kg/ha) of local red cowpea and Ken Kunde at four different plant spacing in Awdegehele during Deyr season 2014/2015

Spacing (m)	Mean dry grain yield (kg/ha)	
	Local red	Ken Kunde
0.50 x 1.5	1,237	1,111
0.75 x 1.5	1,289	933
1.0 x 1.5	1,763	1,244
1.25 x 1.5	1,974	489

5.0 SESAME DEMONSTRATION PLOTS

5.1 Mean dry grain yield (kg/ha) of local sesame variety and Homeira sesame variety at different row spacing in Awdegehele during Deyr season 2014/2015

Yield data for the local sesame variety and Homeira variety at four row spacing are given in Table 13 and Figure 14. The local sesame variety yielded highest (560 kg/ha) at 0.40 x 0.50 m spacing. Likewise, Homeira sesame variety produced the highest yield (600 kg/ha) at the same spacing of 0.40 x 0.50 m. The local sesame variety performed better considering the overall mean dry grain yield across the four row spacing. The demonstration needs to be repeated over several seasons in different areas to obtain a clear picture of the yield trends of the sesame varieties under test.

Table 13: Mean dry grain yield (kg/ha) of local sesame variety and Homeira sesame variety at different row spacing in Awdegehele during Deyr season 2014/2015

Spacing (m)	Mean dry grain yield (kg/ha)	
	Local sesame	Homeira sesame
0.40 x 0.40	500	350
0.40 x 0.50	560	600
0.40 x 0.60	417	500
0.40 x 0.70	457	343
Mean	484	448

II. Lesson Learned

- a) The application of the new technology introduced by SATG resulted in a significant yield increase in all the trials and demonstration plots both at the stations and farmers field. For maize producers in Somalia, the yield level can be increased over 50% if the following the recommendations are used: a) use of good quality seed (preferably use of treated seed); b) proper land preparation; c) DAP application prior to planting; d) Urea application after planting; e) proper weeding and irrigation, and f) proper stem borer control.
- b) Hybrid seed varieties introduced from CIMMYT produced at least 30% more yield than locally grown varieties.
- c) Filsan mungbean and Ken Kunde cowpea mature at least 10 days earlier than locally grown varieties. These varieties can mitigate the recurrent drought frequently occurring in Somalia
- d) The fertility trials revealed that the optimum rates for DAP and Urea are 150kg/ha and 75 kg/ha, respectively
- e) The five forages introduced (Sudan Grass, Rhodes Grass, Napier Grass, Dolichos and Alfaalfa) showed promising results. There is a lot of interest among commercial farmers to grow forages.
- f) There are no differences in yield between the two sesame varieties Humeira and Local

III. Recommendations for Season 3

- a) Recruitment of new contact farmers from Afgoi, Aw-dhegle and Balad while still keeping the lead farmers. The lead farmers will take the role of supervising the contact farmers
- b) Training of the new contact farmers on good agriculture practices
- c) Prepare recommendations on crop production practices for the crops and practices tested at the ABIC and substations. To be used by the farmers and extension workers
- d) Identify five to ten progressive farmers for forage commercial production
- e) Conduct and wrap up workshop to share the results with the stakeholders
- f) Follow up on the SPS policies and regulations with the ministry of agriculture.