Agricultural Development and Value Chain Enhancement Project (ADVANCE)

FY15 Annual Report

SUBMITTED TO:
Pearl Ackah
AOR, USAID/GHANA
P.O. Box 1630
Accra, Ghana
packah@usaid.gov

SUBMITTED BY:
ACDI/VOCA
Emmanuel Dormon
Chief of Party
P.O. Box KD 138
Accra, Ghana
edormon@acdivocaghana.org

WITH:
Association of Church Development Projects (ACDEP)
PAB Consult
TechnoServe

October 30, 2015
This report covers activities under USAID Cooperative Agreement No. AID-641-A-14-00001

Contents

Acronyms

ACAT	Advocacy Capacity Assessment Tool
ACDEP	Association of Church-Based Development
ADVANCE	Agricultural Development and Value Chain Enhancement
AEA	Agriculture Extension Agent
APO	Agricultural Production Officer
APPDF	Agriculture Private Public Dialogue Forum
APSP	Agricultural Policy Support Project
ASWG	Agriculture Sector Working Group
ATT	Agricultural Technology Transfer
BDS	Business Development Services
BUCOBANK	Builsa Community Bank
CBO	Community-Based Organization
CCC	Collaborative Circle of Chiefs of Party
CDO	Capacity Development Officer
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CoP	Chief of Party
CSA	Climate Smart Agriculture
DAIP	District Agricultural Investment Plan
DCA	Development Credit Authority
DCD	District Coordinating Director
DCE	District Chief Executive
DVCC	District Agricultural Value Chain Councils
EMCB	East Mamprusi Community Banks
EPA	Environmental Protection Agency
EU	European Union
FaaB	Farming as a Business
FARA	Forum for Agricultural Research in Africa
FBE	Farmer-Based Enterprise
FBO	Farmer-Based Organization
FDA	Food and Drugs Authority
FinGAP	Financing Ghanaian Agriculture Project
FI	Financial Institution
FTF	Feed the Future
FTFMS	Feed the Future Monitoring System
FY	Fiscal Year
GAABIC	Ghana Agricultural Associations Business & Information Centre
GAIDA	Ghana Agro Input Dealers Association
GAIP	Ghana Agricultural Insurance Pool
GAP	Good Agricultural Practice
GCAP	Ghana Commercial Agriculture Project
GCX	Ghana Commodity Exchange
GDA	Global Development Alliance

GGC	Ghana Grain Council
GIS	Geographic Information System
GPRTU	Ghana Private Road Transport Union
GPS	Global Positioning System
GSA	Ghana Standards Authority
ICOUR	Irrigation Company of the Upper Region
ICT	Information Communication Technology
IP	Implementing Partner
IITA	International Institute of Tropical Agriculture
JICA	Japan International Cooperation Agency
KML	Knowledge Management and Learning
M4	Membership, Marketing, Money, Management
METASIP	Medium Term Agriculture Sector Investment Plan
MMDA	Metropolitan Municipal and District Assemblies
MoFA	Ministry of Food and Agriculture
MoTI	Ministry of Trade and Industry
MoU	Memorandum of Understanding
(M)SME	(Medium) Small and Micro Enterprise
MWRS	Manual Warehouse Receipt Software
NASWG	Northern Agriculture Sector Working Group
NBSSI	National Board for Small Scale Industries
NF	Nucleus Farmer
NGO	Nongovernmental Organization
NPK	Nitrogen, Phosphorous, and Potash
NR	Northern Region
NRGP	Northern Rural Growth Program
NQI	National Quality Infrastructure
NSAICU	Northern Sector Agriculture Investment Coordination Unit
OB	Outgrower Business
OBM	Outgrower Business Management
OCAT	Organizational Capacity Assessment Tool
OG	Outgrower
P4P	Purchase for Progress
PCV	Peace Corps Volunteer
PEF	Private Enterprise Foundation
PERSUAP	Pesticide Evaluation Report and Safe Use Action Plan
PFI	Partner Financial Institution
PHH	Post-Harvest Handling
PPRSD	Plant Protection and Regulatory Services Directorate
RC	Regional Coordinator
RING	Resiliency in Northern Ghana
RSDH	Rice Sector Development Hub
RSSP	Rice Sector Support Project
SADA	Savannah Accelerated Development Authority

SAPO	South Agricultural Productivity Officer
SARI	Savanna Agricultural Research Institute
SEEDPAG	Seed Producers Association of Ghana
SEG	Small Equipment Grant
SfL	School for Life
SMFM	Sell More For More
SOW	Scope of Work
SSP	Spray Services providers
STTA	Short-Term Technical Assistance
SWOT	Strength, Weakness, Opportunity, and Threat analysis
TMO	Trade and Marketing Officer
TRAQUE	Trade-Related Assistance and Quality Enabling Programme
UDP	Urea Deep Placement
UDS	University for Development Studies
UER	Upper East Region
UWR	Upper West Region
USAID	United States Agency for International Development
VSLA	Village Savings and Loan Association
WATH	West Africa Trade Hub
WFP	World Food Programme
WRS	Warehouse Receipt System

Executive summary

This report presents the main achievements and key activities implemented by the USAID Agricultural Development and Value Chain Enhancement (ADVANCE) project during FY15. This year, ADVANCE reached out to 53,176 smallholder beneficiaries, 23,732 (44.63 percent) of whom were women, almost 97% of the project's target of 55,000 beneficiaries with 40 percent women. In addition, ADVANCE supported 487 private enterprises, producer organizations, trade and business associations, and community-based organizations (CBOs) through training, access to loans, and business development services.

The project trained a total of 36,618 individuals, 19,078 of whom were women, in agriculture and food security-related topics, including Good Agricultural Practices (GAPs), numeracy, "Sell More for More" (SMFM) targeted at farmer-based organizations (FBO), Farming as a Business (FaaB), and female leadership, among others. In total, 483 entities (private enterprises and others) and 48,612 individuals have applied improved technologies and practices during FY15 on 48,262 hectares of land.

During the year, a total of $1,259,942[1] (GHS 4,553,640) in cash loans were disbursed following successful facilitation undertaken by the project, exceeding the target of $800,000. In total, $1,033,466 of capital investments were made by project beneficiaries during FY15. The FY15 target was $800,000. In addition to capital investments, $828,503 worth of inputs were invested by Outgrower Businesses (OBs) into both their own farms and their outgrowers' (OG) farms.

The project facilitated more than 190 contracts between buyers and OBs during the year, estimated to cover at least 20,188 MT of maize, rice, and soybean.

The baseline surveys covering both the north and south operational areas of ADVANCE were completed during the FY, and the reports were submitted to USAID.

The project, in collaboration with other stakeholders, organized a pre-harvest event in October 2014 and a pre-season event in March 2015. Both events attracted over 800 participants each and were evaluated as "good" or "excellent" by the participants. Additionally, the project successfully celebrated the International Women's Day with sponsorship from the private sector; more than 300 individuals participated in this event.

Compared with the FY14 baseline sales values, there were incremental sales in FY15 valued at $11,426,774. Compared with the baseline gross margins, ADVANCE beneficiaries have more than doubled their gross margin during the 2014 agricultural season, reaching $734.50/ha for maize, $564/ha for rice, and $582.70/ha for soya. This is due to the assistance they received from the project during ADVANCE 1 and ADVANCE 2, as a majority of 2014 beneficiaries were also of ADVANCE 1 in 2013.

[1] Exchange rate used for FY15 indicator data is 3.614166667 $/GHS, average Bank of Ghana rate from Oct 1, 2014 to Sept 30, 2015

This has been a successful year for the project despite the uncertainty surrounding importation of hybrid maize seed into Ghana, erratic rainfall, and the government's delayed decision on fertilizer subsidies.

1 Introduction

This report presents the main achievements and key activities implemented by USAID ADVANCE during FY15. It is organized by sub-purpose and includes program component activities and the monitoring, evaluation, and learning, all of which contributed to the following intermediate results:

1. Increased agricultural productivity in targeted commodities
2. Increased market access and trade of targeted commodities
3. Strengthened capacity for advocacy and activity implementation

The report covers all the activities and achievements of all implementing organizations, with ACDI/VOCA serving as the prime contractor and sub-awardees ACDEP, PAB, and Technoserve. This FY is the first full year of the project: activities focused on completing remaining start-up tasks and deliverables, such as the baseline surveys, the M&E plan, and the Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP), and scaling up support to project beneficiaries.

2 Collaboration with Other Programs and MoFA

During FY15, the project actively collaborated with other programs and projects operating either in the same geographic locations or involved in the same commodity value chains. The sections below summarize the key or significant collaborations during the year.

2.1 Collaboration with Projects and Organizations

Agricultural technology transfer

In collaboration with the Agricultural Technology Transfer project (ATT), ADVANCE designed, tested, and finalized maize, rice, and soybean production protocols for training smallholder farmers. These protocols will be used by field officers from the two projects, the Ministry of Agriculture's Agriculture Extension Agents (AEAs), lead farmers, and any other project or organization working in the same commodities in northern Ghana.

Both projects also jointly set up six conservation-agriculture demonstration plots as part of their Climate Smart Agriculture (CSA) strategy and tested a minimum-tillage, planting, and fertilizer application implement. Three learning centers incorporating CSA will be established by the two teams in the coming year.

The pre-season event in March 2015 was co-organized with the ATT project and the Ghana Agro Input Dealers Association (GAIDA). The purpose was to facilitate networking between farmers, OBs, and inputs and services providers to enable them prepare adequately for the 2015 agricultural production season. There were technical presentations as well as exhibitions of small agriculture equipment, inputs, and tractors with their implements.

Concern Universal

The project worked with Concern Universal in the Kintampo North District to set up 10 Village Savings and Loans Associations (VSLA) for smallholder farmers to save and utilize the savings to purchase inputs at the start of the crop season. This collaboration will continue in the 2016 fiscal year.

Environmental Protection Agency

The Environmental Protection Agency (EPA), in conjunction with the Ministry of Food and Agriculture's Plant Protection and Regulatory Services Directorate (PPRSD), collaborated with ADVANCE to train project beneficiaries on the appropriate use and safe handling of agro-inputs during the reporting period.

N2Africa

A memorandum of understanding (MoU) was signed with the N2Africa project, which is implemented by the International Institute of Tropical Agriculture (IITA), to collaborate in promoting the use of inoculant for soybean production. N2Africa provided inoculants and collaborated in establishing 58 soybean demonstrations in the three northern regions. The country coordinator made several field visits to the soybean demonstration sites to interact with NFs and OGs.

Northern Agricultural Sector Working Group

The Northern Sector Agriculture Investment Coordination Unit (NSAICU), with support from MoFA, organizes the Northern Agricultural Sector Working Group (NASWG) meetings and workshops for stakeholders in the rice, soya, and maize value chains. The NASWG holds bi-monthly meetings for all development partners and nongovernmental organizations (NGO) working in the agricultural sector in northern Ghana. These meetings aim at promoting dialogue on implementation of the Savannah Accelerated Development Authority (SADA) accelerated agricultural modernization program. ADVANCE continues to participate actively in these meetings. This year, the members visited demonstration plots established by ADVANCE to learn more about technologies that the project is promoting.

Northern Rural Growth Program

This FY15 season, ADVANCE granted access to the project's 252 demonstration sites in North Ghana for beneficiaries of the Northern Rural Growth Program (NRGP) to use the sites for field days to train farmers. NRGP beneficiaries who used this facility are those being reached by the the Association of Church-Based Development (ACDEP), an ADVANCE project implementing partner.

Peace Corps

In the reporting period, ADVANCE began working with three Peace Corps Volunteers (PCV) who were placed in the Northern Region. One of the volunteers helped train 4H Club members in King's Village School in Botanga in vegetable production. The other volunteers were based in Tamale and served as media specialists to help capture ADVANCE's work in the field through photos and videos.

ADVANCE also trained six PCVs to become numeracy trainers in their communities.

Savanna Agricultural Research Institute

The Savanna Agricultural Research Institute (SARI) provided ADVANCE with cover-crop seeds for trials on conservation agriculture. Seeds harvested from the trials will be used to expand the area under cover cropping in 2016 as part the project's drive to promote conservation agriculture. ADVANCE staff also participated in the first stakeholder meeting of the Rice Sector Development Hub (RSDH) organized by SARI in Navrongo.

Sung Foundation

The project partnered with the Sung Foundation, a local non-government organization, to train seven groups of women to establish VSLAs. Working with the Gundaa Produce Company, the Sung Foundation helped the groups set up and operate their VSLAs.

Rice sector forum

ADVANCE is part of a committee that will organize a rice sector forum in the Northern Region in the coming year. The forum is expected to bring together all rice production stakeholders, including policymakers, and raise awareness of the National Rice Development Strategy to guide industry players.

University for Development Studies

The faculty of Agribusiness and Communication Sciences of the University for Development Studies (UDS) collaborated with the ADVANCE project to organize the first in a series of seminars dubbed "Entrepreneurship Seminars" for 400 students and lecturers. The seminar aimed at exposing agriculture graduates from the university to entrepreneurship opportunities along the soya, maize, and rice value chains through experience sharing by successful entrepreneurs. A number of ADVANCE beneficiaries, including individuals from God's Grace Farmers Association and Gundaa Produce Company, participated in the first seminar and respectively made presentations on "The experiences of a female nucleus farmer in the Northern Region" and "The Gundaa Produce Company: An aggregation and nucleus farmer business in Northern Region."

ADVANCE recruits UDS students as interns on a regular basis to undertake tasks related to record keeping, data collection and entry for the project's M&E system. In the reporting period, 35 students from the UDS Wa, Tamale, and Navorongo campuses were placed with selected ADVANCE OBs to help them capture relevant information about their businesses. The interns were trained to use the data capture software developed by the project and installed on laptops for the OBs.

World Food Programme

Twelve maize production OBs were linked to the World Food Programme (WFP) to explore the possibility of supplying maize through the Purchase for Progress (P4P) program. As a result, WFP signed 10 contracts with six OBs, including the Nyebu Bi Yoona Women's Processing Centre, to supply 469 MT of white maize and 122 MT of milled local rice at a price of GHS 1,480 ($399) and GHS 2,500 ($672) per

MT for maize and rice, respectively. OBs have delivered produce valued at GHS 690,920 or $185,731[2] to the WFP in partial fulfilment of the contracts, while the remaining will be delivered in due course.

2.2 Collaboration with MoFA

The project continues to engage actively with MoFA at the regional and district levels for various activities, especially productivity trainings for smallholder farmers. During the period, 61 of MoFA's AEAs were engaged in three regions and Kintampo North to train smallholder farmers on GAPs for maize, soya, and rice through the established crop demonstrations sites. This is almost a ratio of four AEAs per ADVANCE Agriculture Production Officer (APO), which increases the APO's outreach and ensures sustainability beyond the project's life. Standard crop production protocols developed by ADVANCE and partner agro-input firms have also been shared with MoFA district offices.

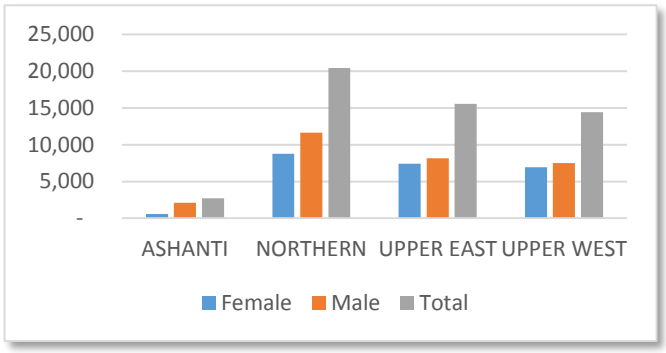
3 Key Results

This section presents the achievements with respect to key indicators during the current reporting period. The annual results are summarized in the Indicator Table in Annex 1.

3.1 Direct Project Beneficiaries

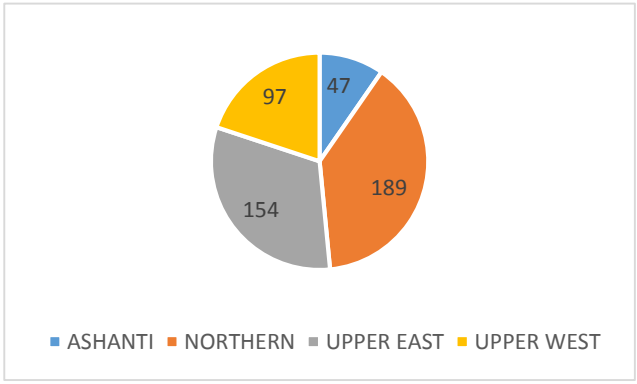
In FY15, USAID-ADVANCE benefitted 53,176 smallholders, 23,732 (44.63%) of them women, which exceeds the project's target of 50,000 beneficiaries with 40 percent women. Almost 42 percent of beneficiaries were enrolled in the project in FY14 (continuing beneficiaries), and 58% joined in 2015. Figure 1 shows the distribution of beneficiaries reached by regional office.

Figure 1: Distribution of smallholder beneficiaries by region



A total of 36,618 individuals, 19,078 of whom were women, were trained in agriculture and food security-related topics, including GAPs, numeracy, SMFM, FaaB, and female leadership, among others.

Figure 2: Entities supported by regional office



In addition, ADVANCE supported 487 private enterprises, producer organizations, trade and business associations, and CBOs through training, access to loans, and business development

[2] At the rate of $ 1 = GHS 3.72 (Bank of Ghana rate of September 30, 2015).

services. Most of them were from the Northern Region as shown in Figure 2.

3.2 Gross Margin

ADVANCE collects gross margin and technology application data in a two-phased survey. The first survey, conducted a few weeks after planting, is dedicated to demarcating farm areas; collecting inputs costs that have been incurred during and after planting; and recording technologies applied during that period. During this phase, an area is demarcated using the crop cut method from which yield data will be collected at harvest. The second phase is at harvest, and data collected include yield estimation by harvesting crops in the demarcated area and extrapolating; the remaining inputs costs incurred after the first phase of the survey; and technologies and practices that have been applied by farmers. The two phases follow the northern cropping season from June to November or December as well as the major season in the south from April to July or August.

3.2.1 Gross margin from 2014 crop season

ADVANCE completed the 2014 crop season gross margin survey on a randomly selected representative sample of smallholder beneficiaries in December 2014[3]. The gross margin values are presented in Table 1 and Figure 3. Gross margins for maize, rice, and soya were $734.50/ha, $564/ha, and $582.70/ha, respectively. The results show a significant difference across gender. Females had lower gross margins, especially in maize and rice, compared to the men. A critical study of Table 1 indicates that the lower gross margins obtained by women are due to lower yields, application of new technologies by fewer women – especially for rice, and higher production costs per hectare. An analysis of the accuracy[4] of plot area estimation by farmers showed that on average, women erred by 37 percent (compared with 5 percent for men) for maize, and by 80 percent (compared with 27 percent for men) for rice while the difference between men and women was minimal for soya. This likely explains the higher input costs for women, as farmers decide on the quantity of inputs to apply based on the estimated farm area.

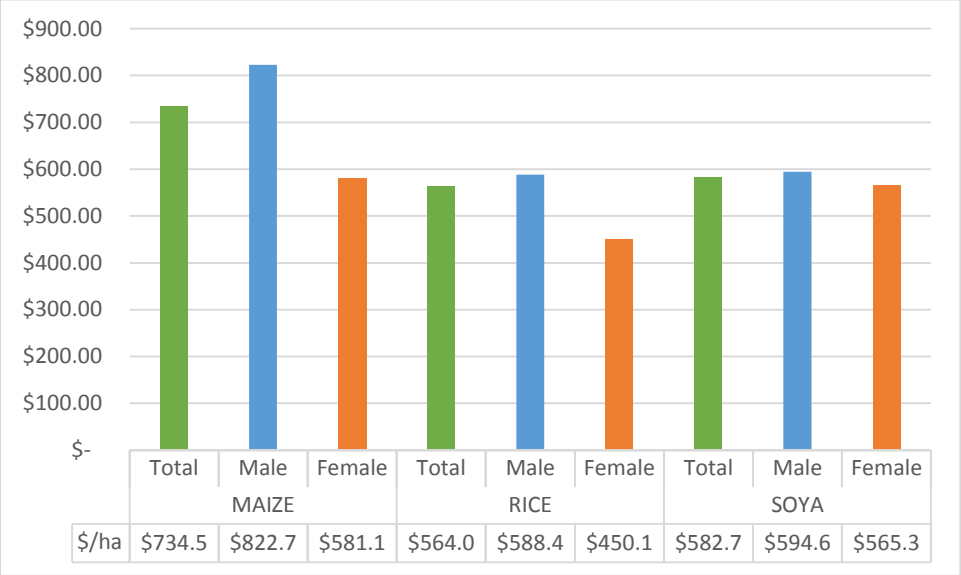
Table 1: Gross margin difference by sex

	Maize		Rice		Soya	
Sex	Male	Female	Male	Female	Male	Female
Gross margin ($/ha)	822.7	581.1	588.4	450.1	594.6	565.3
Yield (MT/ha)	3.58	3.18	3.04	2.82	1.65	1.49
Production costs $/ha	193.87	260.48	180.23	261.45	87.09	98.46
Percent of individuals applying improved technologies/practices	95%	99%	93%	89%	99%	90%

[3] Data was collected for the north as south activities only started in late FY14.

[4] Accuracy here was assessed by comparing the GPS-measured area with the farmer-estimated area.

Figure 3: Gross margin by commodity and sex ($/ha)



Compared with baseline figures for gross margins (see Table 2), ADVANCE beneficiaries have more than doubled their gross margins5 during the 2014 agricultural season. This can be attributed to the assistance they received from the project beginning with ADVANCE 1, since a majority of the 2014 beneficiaries were carried over from ADVANCE 1. The baseline values in Table 2 are from a population-based survey conducted by an independent consultancy firm in FY14 and are similar to ADVANCE I's baseline values.

Table 2: Yield and gross margin baseline values

	Male	Female	Total
Yield per hectare of maize (MT/ha)	1.39	1.31	1.38
Yield per hectare of rice (MT/ha)	1.71	1.39	1.61
Yield per hectare of soya (MT/ha)	0.94	0.71	0.89
Gross margins for maize ($/ha)	276	289	283
Gross margins for rice ($/ha)	259	249	254
Gross margins for soya ($/ha)	315	212	264

3.2.2 Gross margin from 2015 crop season

ADVANCE completed the gross margin survey for the FY15 season in the south, while only phase one was conducted for the north. Gross margin values in the south are presented in Table 3 below. Male beneficiaries had almost 23% higher gross margins than females, and this can be attributed to the lower yields and higher inputs costs for women. In the coming year, the project will design strategies and specific activities to address this situation.

[5] FY15 targets for this indicator are pending USAID approval.

Table 3: South gross margin for the 2015 major season

Gender	Gross Margin $/ha	Yield MT/ha	Input costs $/ha
Female	$258.78	2.16	$208.54
Male	$317.85	2.37	$199.11
Total	$296.90	2.30	$202.45

The gross margins obtained are higher than the baseline values collected in FY14 through a population-based survey (see Table 4). This illustrates the immediate impact of interventions implemented by ADVANCE in the south and confirms the superiority of the Pioneer hybrid maize seed, which led to significant increases in yields.

Table 4: Maize baseline values for the south, major season

	Male	Female	Total
Yield per hectare (MT/ha)	1.52	1.52	1.52
Gross margins ($/ha)	197.39	211.47	183.32

Hoping that the current unavailability of the seeds will be resolved soon, ADVANCE will ensure their application by a large number of farmers in the coming season and will especially target women.

3.3 Incremental Sales

About 79,234 MT of maize, rice, and soya produced in FY14 and valued at $22,277,101 was sold by smallholder project beneficiaries. Baseline values adjusted to the number for FY14 beneficiaries estimate that baseline sales would have been valued at $10,850,327, resulting in an estimated incremental sales value of $11,426,774[6] or an average of $308.65 per project beneficiary.

3.4 Application of Improved Technologies and Practices

As previously mentioned, technology application follows the agricultural season and is collected during the two phases of the gross margin survey. Therefore, application of technologies that happened during the 2014 season is reported in FY15, as per Feed the Future (FtF) guidelines. Hence, technology application figures presented for FY15 in this section are temporary data and must be used and interpreted with caution.

3.4.1 Application of technologies – 2014 crop season

A total of 36,452 farmers and other actors, 41.59% of whom are female, applied improved technologies and management practices in FY14. The significant application rate (over 96 percent) enabled the project to exceed the FY14 target of 14,000 beneficiaries applying improved technologies and management practices. The FY14 achievement also exceeds the FY15 target of 25,000, which was unexpected. Consequently, the project exceeded the 20,000 hectare target for land under improved

[6] FY15 targets for this indicator are pending USAID's approval

technologies by almost 170 percent. These indicators, in excess of annual targets, could be explained by the fact that about 60% of FY14 beneficiaries were also ADVANCE I beneficiaries from FY13. The project will revise these targets in the Feed the Future Monitoring System (FTFMS) database before the actual achievements for the year are entered.

FY14 data also indicates that the number of applied land-based technologies, including crop genetics, soil-related advances, pest management, water management, and climate adaptation and mitigation, significantly influence yields obtained for rice and soybeans (see Figures 4 and 5). Results from a similar analysis of data for maize was not conclusive and will be studied further.

Analysis of the FY14 survey data shows that gender significantly influences the application of certain technologies:

- *Maize: women are more likely to apply water management and Information and Communication Technologies (ICT), while men are more likely to apply climate mitigation*
- *Rice: women are more likely to apply water management, while men are more likely to apply Post Harvest Handling (PHH) techniques, and climate mitigation*
- *Soya: women are more likely to apply PHH, while men are more likely to apply crop genetics, soil related, and ICT*

*Figure 4: Rice yield by # of technologies**

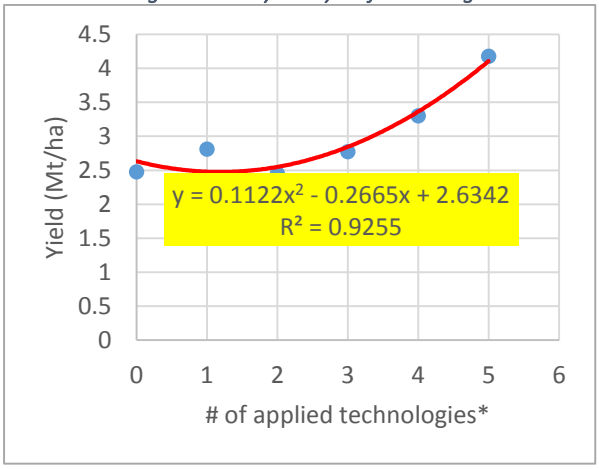
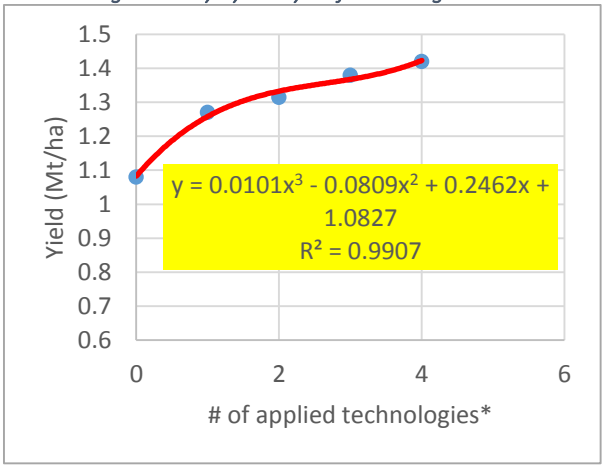


*Figure 5: Soya yield by # of technologies**



**Land based technologies (crop genetics, soil-related advances, pest management, water management, and climate adaptation and mitigation)*

In total, 190 private, for-profit enterprises, producer organizations, water user associations, women's groups, trade and business associations, and CBOs applied improved technologies and management practices in FY14.

3.4.2 Application of technologies – 2014 crop season

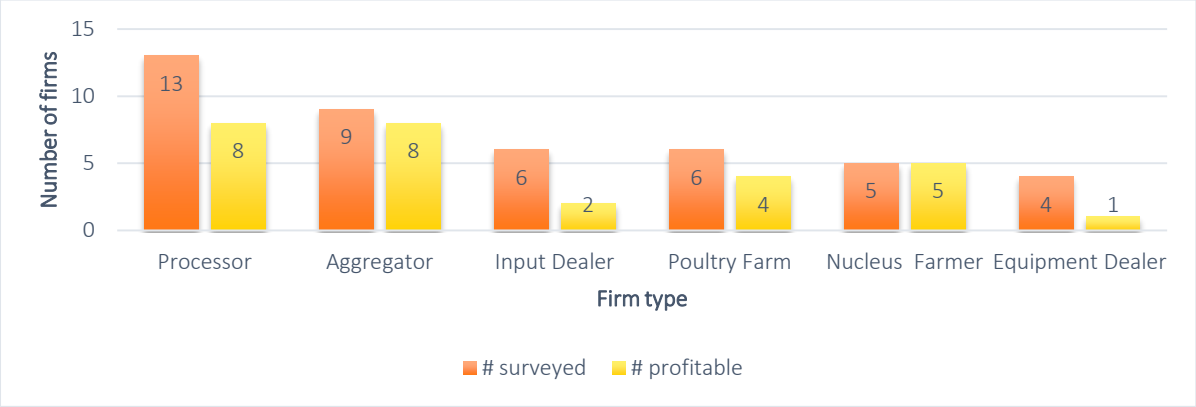
In FY15, a total of 483 private, for-profit enterprises, producer organizations, water user associations, women's groups, trade and business associations, and CBOs as well as 48,612 individuals applied improved technologies and management practices on 48,262 hectares of land. These figures are provisional as the 2015 agricultural season has not yet ended.

3.5 Number of Firms Operating More Profitably

A survey was conducted among 43 firms that received substantial support from the project to assess which firms are operating profitably in FY14. The firms included aggregators and processors that were linked to ADVANCE OBs and who had purchased produce from farmers and/or were assisted by the project in accessing finance. The survey also included equipment and input dealers that were trained by the project and/or made sales to ADVANCE farmers through project facilitation.

Of the number contacted, 35 firms responded to the survey. Eight firms did not want to disclose their financial information to the project. Among those who responded, 28 firms (80 percent) reported higher profits in 2014 compared to 2013.

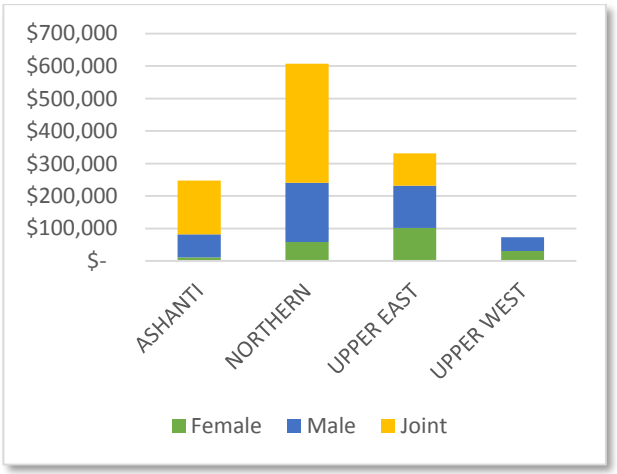
Figure 6: Number of firms surveyed and profitable by type



3.6 Value of Agricultural and Rural Loans and New Private Sector Investments

In FY15, the project continued to support beneficiaries to access loans from financial institutions to purchase production inputs and farm equipment. During the year, $1,259,942[7] (GHS 4,553,640) in cash loans were disbursed due to successful project facilitation, exceeding the FY target of $800,000. The number of requests for loans by project beneficiaries was greater than expected. In addition, OBs financed their contribution of 30 percent of the value of the tractors provided under the matching grant program with loans from financial institutions.

Figure 7: Value of agricultural and rural loans by regional office

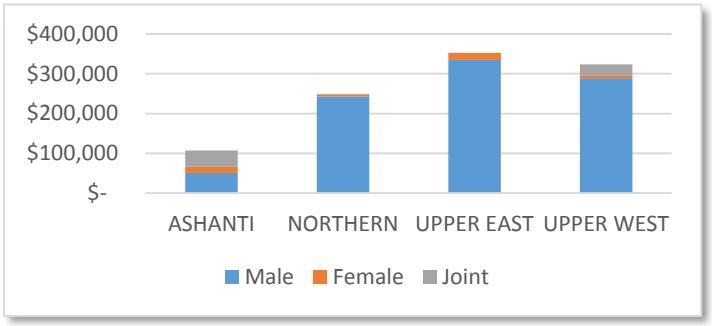


Project beneficiaries invested $1,033,466 in capital items during FY15, exceeding the FY15 target of $800,000. In addition, $828,503 worth of inputs for production were invested

[7] Exchange rate used for FY15 indicator data is 3.614166667 $/GHS, average Bank of Ghana rate from October 1, 2014, to September 30, 2015.

by OBs in their own farms and for their OGs' farms.

Figure 8: Capital investment by regional office



4 Progress with Technical Delivery

4.1 Sub-Purpose 1: Increased Agricultural Productivity in Targeted Commodities

4.1.1 Demonstration sites and GAP trainings

Actor-supported demonstration sites

Actor-supported demonstration sites are a major vehicle that ADVANCE uses to train farmers and showcase the effectiveness of improved technologies. While the target for the FY15 season is 230, a total of 252 demonstration sites were set up, including 126 for maize, 35 for rice, and 65 for soybean. Twenty-six of them were specifically set up to introduce climate smart agricultural practices. A total of 47 maize sites were dedicated to demonstrating the two Pioneer hybrid maize seed varieties; 30Y87 and 30F32. Table 5 shows the distribution of these demonstration sites by ADVANCE focus region and demonstration objective. They are currently at various stages of growth; a few are close to harvest.

Table 5: Demonstration site distribution by region and objective

Objective	NR	UER	UWR	Total
MAIZE				
Superiority of Maize Hybrids				
Pioneer (30Y87 & 30F32)	23	10	14	47
Pan53 & Pan12	4	6	4	14
Standard Improved Practices	27	22	16	65
Maize total	**54**	**38**	**34**	**126**
RICE				
Transplanting	8	4	4	16
Direct seeding	11	7	1	19
Sub-total	**19**	**11**	**5**	**35**
SOYA				
P-fertilizer and inoculant effect on yields	40	8	10	58
Effect of drilling on population and yields	1	4	2	7

Objective	NR	UER	UWR	Total
Sub-total	41	12	12	65
CSA (with maize)	9	10	7	26
GRAND TOTAL	123	71	58	252

Picture 1: Hybrid maize demonstration plot (L) vs. farmer's plot (R)

Picture 2: Transplanted rice demonstration plot

Picture 3: Soya demo plot

Picture 4: Ripped (L) vrs ploughed (R) demonstration plot

Demonstration plots offer an opportunity to create and reinforce linkages between farmers and input suppliers, who donate 100 percent of the production inputs for the demonstrations, and use them to promote their products. ADVANCE secured partnerships with 21 agribusiness firms, including input dealers, aggregators, and processors; two public institutions, IITA-N2 Africa and CSIR-CRI; and over 120 OBs, including NFs and established FBOs, that donated seeds, fertilizers, agrochemicals, and other resources needed for the successful establishment of the demonstration sites. YARA, for example, provided fertilizer for 100 maize and 30 rice demonstration sites, at an estimated cost of GHS 17,000 (approximately $4,570[8]). Dupont-Pioneer provided 110 kilograms of maize hybrid seeds, estimated at over GHS 5,200 (approximately $1,398). The land and the cost of land preparation was borne by the

[8] At the rate of $ 1= GHS 3.72 (Bank of Ghana rate of September 30, 2015).

cooperating farmers. Enhanced commitment and ownership of the process by OBs is seen as positive for sustainability.

As part of the partnerships, the larger firms in particular collaborated with the project to train farmers on GAPs and for monitoring the performance of the demonstrations. YARA and N2Africa signed MoUs to this effect with ADVANCE. To date YARA has participated in over 5 field days across the three regions of the north and N2Africa has joined ADVANCE on monitoring visits to ten demos in the Upper East Region (UER), and over 15 others in Northern and Upper West Region (UWR). These partners had the opportunity to interact directly with the farmer beneficiaries and build business relationships.

GAP trainings

Five GAPs and Post-Harvest Handling (PHH) trainings were designed for smallholder farmers. The first three trainings took place before the end of FY15. The remaining two are on-going and expected to last through the harvest period. Table 6 below summarizes the focus of each of the pre-season and crop season trainings.

Table 6: Expected Results of Planned Agricultural Trainings

#	Field Training	Type	Expected Outcome	Time
1	Overview of the production process	Theory/ Discussion	Farmers sensitized on the production process and practices that yield desirable results, how to plan and achieve them. This also covers target market identification and preparation of crop budgets.	Mar-Apr (before rains)
2	Land preparation and Planting	Theory/ Discussion	Farmers prompted on importance of timely quality land preparation and getting quality seeds, conducting germination tests, nursery management for rice and timely planting/transplanting	June (before rains)
3	Planting and Fertilizer Application	Field Practice	Knowledge and skills in right spacing, right types, quantities, timing and placement of fertilizers enhanced through demonstrations and hands on practice	July
4	Crop Management/ Maintenance	Field Practice	Skills in re-filling, proper weed management, water management, scouting for pests and diseases etc. enhanced through demonstrations and hands on practice	August
5	Harvest and PHH	Field Practice	Maturity dates, maturity indices, methods of harvesting, transportation & temporary storage, shelling/threshing, cleaning and treatment, bagging and ware housing/storing,	Oct-Nov

During FY15 period, a total 23,395 farmers (11,730 or 50.1 percent of whom were women) were trained on GAPs and post-harvest handling techniques.

ADVANCE, in collaboration with ATT, developed, tested, and finalized standard protocols for maize, rice and soya production and PHH. The protocols are contained in: i) lead farmer manuals (handbooks), ii) A2-sized farmer posters (one per crop) and iii) trainer/extension flip charts. These are meant for field training of farmers. Most of the material are ready for printing and distribution to Lead Farmers, MoFA AEAs, OBs, staff and other organizations and projects in north Ghana. The standardization with ATT and

other organizations such as SARI, MoFA and EPA is an important step to ensure consistency in messages conveyed to over 150,000 farmers by these projects and organisations.

These protocols are also serve as guides in providing technical content for the dissemination of GAPs through radio stations in the north as part of the project's Information Communication Technologies (ICT) outreach program.

4.1.2 ICT outreach for production technologies dissemination

The purpose of the overall ICT/outreach component is to use ICT tools to improve information flow and knowledge transfer among the value chain actors, leading to behaviour changes and increased adoption of improved technologies and practices. FY15 activities included i) SMS and voice messaging for weather forecasting, market information, and agronomic tips, ii) radio broadcasting and radio listening groups/clubs for information sharing on best agronomic practices, and iii) integration of mobile money payment systems. The key activities summarized below focus only on the tools for technology dissemination. The other activities (weather, price information, and mobile banking) are embedded in the sections on CSA, increased market access, and trade and business development services, respectively.

This year, the project partnered with Farm Radio International to train 25 radio stations in the three northern regions and ADVANCE South, to build their capacity in creating and broadcasting radio programs using drama. The main topics were 'farming is business', benefits of using improved seeds, timely planting and its advantages, plant spacing and its benefits, fertilizer application methods, safe pesticide usage, harvesting and post-harvest handling.

Technical discussions on radios were done based on the standard protocols and with the participation of experts from MoFA, SARI, Environmental Protection Agency (EPA), Yara Co. Ltd and Mechanical Lloyd (see Table 7 for the number of partner radio stations by region).

Table 7: Number of partner radio stations

REGION	# OF RADIO STATIONS
Northern Region / Kintampo North	11
Upper East	5
Upper West	6
GAMSAP	3
Total	25

The project contracted Esoko to provide agronomic tips to 93 OB beneficiaries. This year, 51 agronomic tips were sent out to advice recipients on weed control, land preparation, management of pest and diseases, fertilizer application, planting methods, harvesting, post-harvest management, seed viability

"Esoko's advice on fertilizer application aided me on how to apply fertilizers on my crops without harming them during the drought season", Sumailu Azizu, Banu, Upper West

Example of agronomic tips SMS, sent on September 14, 2015: *"Use traps or wheat flour mixed with Furadan as a bait to control rodents that destroy your maize farm".*

tests, seed treatment, and variety selection. Respondents of a small phone survey of the OBs showed that the tips helped them particularly on timely planting and application of fertilizers.

An MoU was signed with Grameen Foundation to undertake a pilot activity aimed at designing and testing the use of tablets and portable projectors for video based extension messages to train smallholder farmers. So far, 41 OBs from the south and their support staff have been trained by Grameen Foundation on the use of tablets and Pico projectors. It is expected that the OBs will use these tools to improve extension service delivery to their OGs and thus expand the number of OGs trained.

4.1.3 Climate smart agriculture

ADVANCE began implementing CSA interventions in FY15 and accomplished the following during the year:

- Exposure visits and training in conservation agriculture was organised for 16 Agricultural Production Officers (APOs) to enable them manage demonstrations plots and train farmers on the concepts.
- Research on the best equipment options was carried out, as a result, two rippers and two no-till planters were imported to facilitate the promotion of large-scale conservation agriculture practices by OBs, in their farms and for their OGs
- The project collaborated with John Deere Company/AFGRI to train operators from the regions and three APOs on the use of rippers and no-till planters
- Three trainings (one per region) were conducted through a short-term technical assistance by a cover crop expert on conservation agriculture for all APOs and Regional Coordinators (RCs)
- Six community-based cover crop demos have been set up (two per region) by the regional teams with technical assistance from a cover crop expert to build awareness of the damage caused by burning crop residues as against the benefit of using cover crops to accumulate organic matter and improve soil fertility, moisture conservation and improve soil structure
- A total of 26 quarter acre size demos were established to demonstrate the advantages of minimum disturbance to the soil by using rippers as opposed to conventional ploughing
- Four sites were identified as having potential to be developed into ***Climate Smart Learning Centres:*** Zoco Farms (Northern region), Asaki Farms (UER) and MacAdams (at Loggu) and Abu Moro (at Navawirie) both in the UWR. These are one-stop centres for general exposure and sensitization of farmers on climate smart principles and practices being worked on jointly with ATT. The centres will also serve for multiplication of seeds of various cover crops. Visiting farmers will also be exposed to equipment, various types of cover crops and may obtain seeds of recommended cover crops
- Consultations and sensitization were carried out with a number of OBs towards getting collaborators who will partner with ADVANCE to carry out three ***model farms*** for FY16. These

Picture 5: Setting the ripper with operators and farmer at Aramkoliga, UER

will be commercial scale demonstration farms showcasing the best practices of CSA. Motivated by the reduction in soil erosion and the reduction in fuel consumption, more than six farmers have committed to rip up to 50 acres of their farms next season

- A training on ***assembly and calibration of Ripper/Planter/Fertilizer Applicator*** in Tamale was jointly facilitated by ADVANCE and ATT in collaboration with Masara. The trainer was an experienced farmer and farm equipment manufacturer from Backsaver Company, South Africa
- A total of 4,390 beneficiaries received daily weather forecast to enable them plan their field operations more efficiently, avoid wasting inputs and environmental contamination, and reduce the risks with erratic and/or late rain falls

Picture 6: Michris, trainer from Backsaver shows trainees how to set up a planter

- Following the announcement by the Ghana Meteorological Service that the rainfall period for 2015 would be shorter, and from the long drought spell experienced in some parts of the project locations in 2014, eligible smallholder farmers were extensively sensitized on mitigating production risk by purchasing a crop insurance policy from the Ghana Agriculture Insurance Pool (GAIP). As a result, 109 drought index policies were purchased, valued at $ 2,688.

"When I receive a message, my children read and explain to me. I had a message which said there was going to be a heavy rain, I therefore decided not to apply weedicides to the weeds on my farm that day because the rains would wash them off. Truly, it rained heavily that day, and I am so glad I didn't ignore the message".Juiana Boakyewaa from Duayaw Nkwanta in the Brong Ahafo region, who cannot read nor write

4.1.4 Testing of new promising technologies

Picture 7: Ripping and fertilizing implement

ADVANCE tested new technologies and equipment during FY15. One of them is an implement that does ripping and fertilizing in one pass and planting in the second. Tests were done mostly on ripping but the implement has a big potential, especially in the case of OBs and OGs using certified seeds.

Minimum-tillage was also a new technology tested in the three northern regions on 30 demo plots. Initial results are extremely encouraging and ADVANCE has developed a strategy to scale up its uptake, given the potential to reduce erosion, mitigate the risk of climate change and boost fertility.

Other equipment tested was hand-planters for maize that guarantee optimum spacing between plants and depositing the seeds five cm deep into the soil. They seemed to be a very appropriate technology for women and ADVANCE plans to offer them through matching grants to women groups, and OBs who work with large numbers of women outgrowers. That will substantially reduce the workload of women in planting, and enable them increase their crop productivity and better manage their time.

Picture 8: Testing fertilizer applicators

For similar purpose, ADVANCE tested granular fertilizer applicators which also proved to be appropriate for women. These applicators are easy to operate and they deposit the right amount of fertilizer in every hill and at a standard depth of seven cm. The project has added this equipment to the list of equipment to grant for the next crop season and made a link between the manufacturer and a local distributor.

4.1.5 Improved access to inputs/equipment

This FY15, ADVANCE continued building effective linkages to improve smallholder farmers' access to inputs and equipment. Improved access leads to increased productivity. Six training workshops were conducted for tractor operators and their owners (two in each of the three northern regions) to enhance their capacity and knowledge to plough properly and efficiently.

Photo 1: A John Deere Tractor instructor taking participants through a session at Tumu

Three road shows dubbed "John Deere/AFGRI Day" were carried out by John Deere in the three regions to showcase their products to farmers.

Through these activities, 120 owners and 120 operators were reached to raise their awareness and capacity to use and maintain the tractors and accessories effectively and efficiently. The owners were included in the program with the aim of enhancing their appreciation and adherence to maintenance schedules. All 16 APOs as well as the three Regional Coordinators (RCs) were trained to enhance their capacity to backstop tractor services in the field beyond the training.

> *"In fact the training has been very useful. We did not know that most of the problems we have been experiencing on our tractors are caused by poor maintenance and operational skills. We will take the lessons with all seriousness to save our tractors from frequent break downs." Mr. Awal Abdul-Rahman, NF, Northern Region.*

In addition, 36 community input promotions were organized across the three regions during the period. These promos exposed the farmers to various types of inputs (seeds, fertilizers, herbicides, insecticides and personal protective equipment – PPEs) available on the market, how they are used and where and

at what prices they could get them. Farmers took advantage to buy some of the inputs during the promos. A total value of $ 21,287.62 worth of inputs was purchased through this activity. Dealers also established linkages with some of the communities by leaving their phone contacts, and in some cases identifying potential agents in these communities to work with.

During this FY

- A total value of USD 1,259,942 of input and equipment loans was accessed by OBs;
- A total inputs supply credit of USD 828,503 was facilitated for smallholder farmers;
- Capital and production support investments of value not less than USD 1,861,969 was made by OBs.

4.1.6 Outgrower business management

Outgrower business management training

ADVANCE has designed an Outgrower Business Management (OBM) curriculum to train nucleus farmers (NF), aggregators, and other value chain actors who are involved or intend to run OBs. The curriculum is designed to teach these actors how to plan and run OBs efficiently and profitably and covers eight modules, with a dedicated session for female OBs.

OBM modules

1. Understanding value chain concepts, end market trends and how to operate and compete effectively
2. Business planning and financial management
3. OG management
4. Marketing, contracts and contract negotiating
5. Demonstration farm management and OG extension services
6. Tractor operation and management
7. Post-harvest handling and storage
8. Women's entrepreneurship and leadership

The training sessions are run around the cropping calendar so that knowledge acquired is immediately useful to trainees. Each module takes two days and participants receive a certificate of competency on completion.

A total of 219 OBs, their managers, and support staff were trained during the reporting period.

Farmer mentorship

The farmer mentorship program is a capacity building activity, through which successful NFs are invited to mentor emerging NFs by coaching and advising them during visits facilitated by the project. In FY15, 10 successful NFs participated in mentoring 78 new or less successful NFs. For that purpose, 18 exchange visits were organized by the project, using the theme "seeing is believing".

In addition, ADVANCE facilitated three networking and peer mentorship meetings which involved 50 NFs and OB managers. The first OB network, based in the Tamale area, has been linked to the WFP's Purchase for Progress program to explore a joint supply contract.

Field management program

ADVANCE facilitated and motivated OBs to engage the services of field managers or agents who support the OBs in order to provide quality technical services to their OGs and expand their business. During FY15, 91 OBs, nearly double the original target of 50, recruited 136 field managers/agents. ADVANCE assisted the OBs in developing the capacities of their new staff and trained them on extension delivery.

John Dimah, an OB in UWR secured on his own, admission of his field manager to the Kumasi Institute of Tropical Agriculture for a certificated professional training

OB office program

A total of 51 OBs from the three regions in the north have been provided laptop computers with a sales and service provision tracker software installed, through the project's grants facility to enable them computerise their record keeping and have accurate data for decision making, and also for some of the projects' data needs. The 'Sales Tracker' is a software created by ADVANCE to enable the OBs keep track of all their financial transactions. The OBs were trained to use this software. In addition, 35 student interns from the University of Development Studies were engaged for six weeks and trained on this software to enable them provide further support to the OBs, until they became conversant with its use.

4.1.7 Business development services

In total, 18,491 OGs, OBs, and other value chain actors received business development services, including numeracy, FaaB, SMFM, record keeping, financial services trainings etc., in addition to the specific services mentioned below.

Business planning

During the reporting period, the project assisted 107 actors to develop their business plans, while 95 OBs, who had business plans developed in FY14, had theirs reviewed and updated to reflect current realities. Also, 56 OBs had the business diagnostic tool administered to them, pending preparation of their business plans.

The OBs are continuously encouraged to register and formalize their operations with the Registrar General's Department and the National Board for Small Scale Industries (NBSSI). A total of 29 OBs had their businesses registered during this reporting period.

In addition, 152 OBs had crop budgets developed and were taken through the cost-benefit scenarios with regards to in-kind lending of inputs and tractor services to their OGs.

Financial services

The project has identified new partner financial institutions who will support the actors with financing for inputs: Opportunity International in Kintampo area, Lawra Rural Bank and Multi Credit Savings and Loans Company, both in the Upper West Region.

Following the merger of Fidelity Bank and Pro Credit, FinGAP has trained the bank's staff on value chain financing to enable them understand and provide support to ADVANCE's beneficiaries.

The project also partnered with Fidelity Bank to train and sign up project beneficiaries to the Fidelity Smart Account. This is a savings account that is linked with the client's MTN mobile money account. The smart agents trained 100 farmers (Females – 14, Males – 86) including smallholders and NFs on the use of the Fidelity Smart Account in Bimbilla and Salaga in the Northern Region. A total of 29 farmers registered and opened accounts with the bank after the training. The accounts are being used for savings and business transactions. The Fidelity Smart Account initiative has created a platform for smallholder farmers to save and transact cashless business at any time.

Two rural banks (Builsa and Bonzali Rural Banks) were assisted to obtain funds from Ecobank to on-lend to project beneficiaries. The Builsa Rural Bank received GHS 1,000,000 or $ 268,817[9] while Bonzali is still in talks with Ecobank on collateral.

To further encourage savings among rural smallholder farmers, especially women, the project partnered with Sung Foundation and Concern Universal, in Northern Region in Kintampo North respectively, to train and set up 17 FBO savings and loans groups. This pilot will be expanded to 100 groups (25 per group) to benefit 2,500 OGs in the Northern Region. Process is also underway to establish 50 VSLAs each in Upper East and Upper West Regions, benefitting another 2,500 OGs, for a total of 5,000 beneficiaries across the north.

Cashless services

ADVANCE collaborated with MTN, Tigo and First Fidelity Bank to introduce mobile money and smart cards to its beneficiaries to ensure efficiency in their operations and help them reduce losses and risks associated with cash transactions. As a result, 15 NFs, one input dealer and 1,195 OGs were registered for MTN Mobile Money as shown in Table 8 below.

Table 8: Farmers Registered for MTN Mobile Money

Region	NFs/ Input Dealers	OGs	Male OGs	Female OGs
NR	5	312	240	72
UER	4	433	226	207
UWR	7	450	354	96
TOTALS	**16**	**1,195**	**820**	**375**

The volume of transactions amounted to GHS 190,331 (approx. $ 51,164), out of which 16.46 percent occurred in Northern Region, 78.18 percent in Upper West 5.36 percent in Upper East. In addition, Tigo Cash engaged one NF, Jabriel Issahaku, in Upper East for a pilot with 250 OGs on use of mobile money to send and receive cash, pay for agro inputs and receive payments from him for produce supplied.

"The benefits of the Fidelity Smart account are enormous especially the savings aspect, and easy access to money when needed. Through small deposits, I was able to keep GHS 150.00 on my account and through that I purchased one bag of top up fertilizer and improved seeds for my maize farm". Abudulai Tahiru, a 25-year-old farmer from Dimonayili, Bimbila in the Northern region.

"The mobile money platform has given me a lot of benefits in my business operations. When I sold my five bags of soya to Muyo farms at GHS 120 per bag, totalling GHS 600, I did not receive cash. He loaded the money on my mobile wallet and this has helped me to keep the money and prevented me from spending lavishly on funerals, drinking and other social gatherings. I was able to keep money on my wallet to purchase fertilizer worth GHS 310 for an acre of soya during the 2015 cropping season, I am very happy to pay wards school fees at far away Atebubu in the Brong Ahafo region and other places and also receive remittance from my children in the urban centers." Neidow Waja, a 53-year old farmer from Jilima, Saboba in the Northern Region.

[9] At the rate of $ 1= GHS 3.72 (Bank of Ghana rate of September 30, 2015)

The project also collaborated with First Fidelity Bank to train 100 smallholders and NFs (Females – 14, Males – 86) on the use of First Fidelity Smart Account in Bimbilla and Salaga in the Northern Region. A total of 27 farmers registered and opened accounts with the bank after the training for savings and business transactions. A total of 19 OGs transacted business amounting GHS 1,789 ($ 481) for purchasing improved seeds and fertilizers.

Input dealer business development program

A total of 62 input dealers were trained on technical and business skills. This was done in collaboration with ATT who trained the actors on the technicalities of handling agro inputs and first aid, while ADVANCE trained them on understanding the agro business concept and how to operate profitably. The business curriculum covered the following topics:

1. Understanding the agro business idea
2. The role of agro dealers in the value chain
3. Marketing
4. Stock management
5. Recordkeeping
6. Costing and pricing
7. Financial planning

> *'If I had received this information earlier, I never would have stocked up on weedicides in September when farmers were getting ready to harvest. Now my small working capital is locked up till June, when farmers will need weedicide again. Thank you, madam, for opening my eyes'*. Yamba Yelimangli, input dealer in Yendi.

This training program took two days after which participants were followed up for further business support and mentorship based on the action plans developed.

4.1.8 Pre-season event

The Pre-Season Agribusiness Forum took place in Tamale in March 2015 with over 800 people participating, of which 345 were ADVANCE beneficiaries in northern Ghana made up of 163 NFs, six lead farmers, 36 FBOs, four aggregators, seven processors, 16 input dealers, nine financial institutions, four equipment dealers, and 14 representatives of IT companies such as TIGO, MTN, and Esoko. In addition, 50 individuals, including 41 OBs from the south, took part in the event. The USAID ATT project led the organization of the event, with the active collaboration of ADVANCE and MoFA, which focused on pre-season priorities including access to inputs, equipment, finance, messaging services, and crop insurance, among others.

> *"In fact, this pre-season has helped me a lot. I met Sinapi Aba, which has expressed interest to support my farmers' production loans this forthcoming season, so I will meet them tomorrow, March 31, 2015, for further discussion in Wa."*– OB John Mulnye

ADVANCE and ATT hosted a stand to sensitize participants on concerns and activities under CSA. Pioneer also hosted a booth to create more awareness of the Pioneer hybrid maize varieties.

Picture 10: Press conference showing ATT's acting COP answering questions

Picture 9: Exhibition time with participants examining some seed varieties

4.2 Sub-Purpose 2: Increased Market Access and Trade of Targeted Commodities

4.2.1 Pre-harvest event

The Fourth Annual Northern Ghana Pre-Harvest Agribusiness Forum was held in Tamale on October 23, 2014, under the theme "Connect and Collaborate to Succeed." The event was hosted by the Ghana Grains Council (GGC) with support from ADVANCE.

The event attracted 863 registered participants including farmers, buyers, processors, transporters, input dealers, farm machinery dealers, and financial institutions. It provided a platform for commodity buyers and producers to establish business relationships and discuss contracts for the 2014 harvest of maize, rice, and soybean. The GGC worked with ADVANCE to mobilize GHS 21,500 cash from 10 private sector sponsors for the event.

Evaluation of the Pre-Harvest Event

Highlights of an evaluation conducted by a team from UDS involving 350 respondents produced the following results:

- 44 percent of participants were first-time attendees
- 38 percent of participants rated the event "excellent"; 50 percent rated it as "good"
- The exhibition was the primary selling point, followed by networking then meetings
- 49 percent of participants transacted business during the event
- 100 percent of participants want the event to be organized again

4.2.2 Market linkage development

New buyers identified

Forty-one new buyers were identified and profiled during the reporting period (see Table 9). Three of these buyers (Basa Agro of Tamale, Seed Share Logistics of Accra, and Kanyiti Farms of Obuasi) were

further engaged on trade missions and subsequently signed contracts with farmers in the north for maize and soybean and in the south for maize.

Table 9: List of new buyers identified

Type of Firm	Region of Origin							
	Ashanti	Brong-Ahafo	Central	G. Accra	Northern	Upper East	Western	Total
Aggregator	7	3		2	6	1		19
Poultry Farm	3	4			3			10
Processor (Feed Mill)				1				1
Processor Foods	1	1			1			3
Processor (Rice Mill)	4		1				2	7
Processor Soybean	1							1
Total	16	8	1	3	10	1	2	41

The estimated annual purchase requirements for these new buyers is 100,760, 10,700 and 23,650 metric tons of maize, soybean, and paddy rice respectively.

Trade missions

In order to strengthen market linkages, ADVANCE facilitates visits for interested buyers from the south to meet OBs in the three northern regions. A total of 25 buyer trade missions were facilitated for 17 buyers and OBs during the reporting period. As a result, open-ended purchase and sale contracts were made between the buyers and OBs as mentioned in the contract section below. The expectation is that these new buyer-OB relationships will evolve over time to the point that buyer's will provide input and financing support to OBs in mutually beneficial OG schemes.

Contracts

A total of 191 contracts were facilitated between buyers and OBs during the year, estimated to cover 20,188 MT of maize, rice, and soybean. The value of closed and OG contracts is estimated at GHS 3,344,855 ($899,155)[10]. Table 10 below details these contracts by type.

Table 10: Facilitated contracts

Type of Contract	Number of Contracts	Quantity (MT)	Value (GHS)
Closed	14	983	1,371,720
Outgrower	38	2,605	1,973,135
Purchase and Sale Agreement	139	16,600	***
Total	191	20,188	3,344,855

*** *Value is yet to be determined*

Closed contracts are definitive and bind purchase and supply agreements between buyers and farmers for the exchange of a specified quantity of produce at a specified price within a specified period.

[10] At the rate of $ 1= GHS 3.72 (Bank of Ghana rate of September 30, 2015).

Outgrower contracts are purchase and supply agreements where the buyer provides input credit to the farmer in the form of ploughing services, seed, fertilizer, etc. In exchange, the farmer pays back with a specified quantity of produce at the time of harvest.

Purchase and supply agreements are non-binding contracts between buyers and farmers with key terms like quantities, price, and delivery period to be agreed between the parties at a later date. These contracts have been a key feature of the trade missions facilitated during the year where the buyer, and especially the farmer, do not want to commit to a definitive price at the initial meeting. These contracts are eventually finalized and executed by the parties at a later date.

Based on ADVANCE's model, when OBs receive contracts from buyers, they source the produce from their own farms and from their OGs, thus, contributing to increased sales by the OGs, as illustrated by the quotes below.

"*Sales were done in the comfort of my home without cost of transport to the market. I was paid cash after weighing, unlike market women who will have to take the produce on credit and pay by installments. Abiayiga also bought my maize using a scale, and I got surpluses from my bags, which gave me more money than selling it at the market."* Anpan Adeenze is a smallholder farmer based in Suwarisa in Biulsa North District in the Upper East Region and was linked to Samuel Abiayiga, a NF in Sandema. He sold two MT of maize worth GHS 2,000 to Abiayiga as part of the supply of 14.2 MT of maize in June 2015 to the NF's buyer New Age Mills, an animal feed processor based in Accra.

"I sold my maize in bulk to G. Bosomtwe through John Dimah who paid immediately after the supply. I was able to conveniently use the money to buy building materials like roofing sheets for my construction project. Selling in bits to market women and aggregators would not have brought me the bulk money and so I could not have invested in my construction project the way I did." Sulemani Badukun is a smallholder farmer based in Kunkorgu in the Sissala West District in the Upper West Region, linked to John Dimah, a NF in Gwollu. Badukun sold 10 MT of maize worth GHS 7,400 as part of Dimah's supply of 952.5 MT to G. Bosomtwe Ventures, a soy processor based in Kumasi that also trades in maize. All three actors were linked to each other through the ADVANCE project.

Key market development

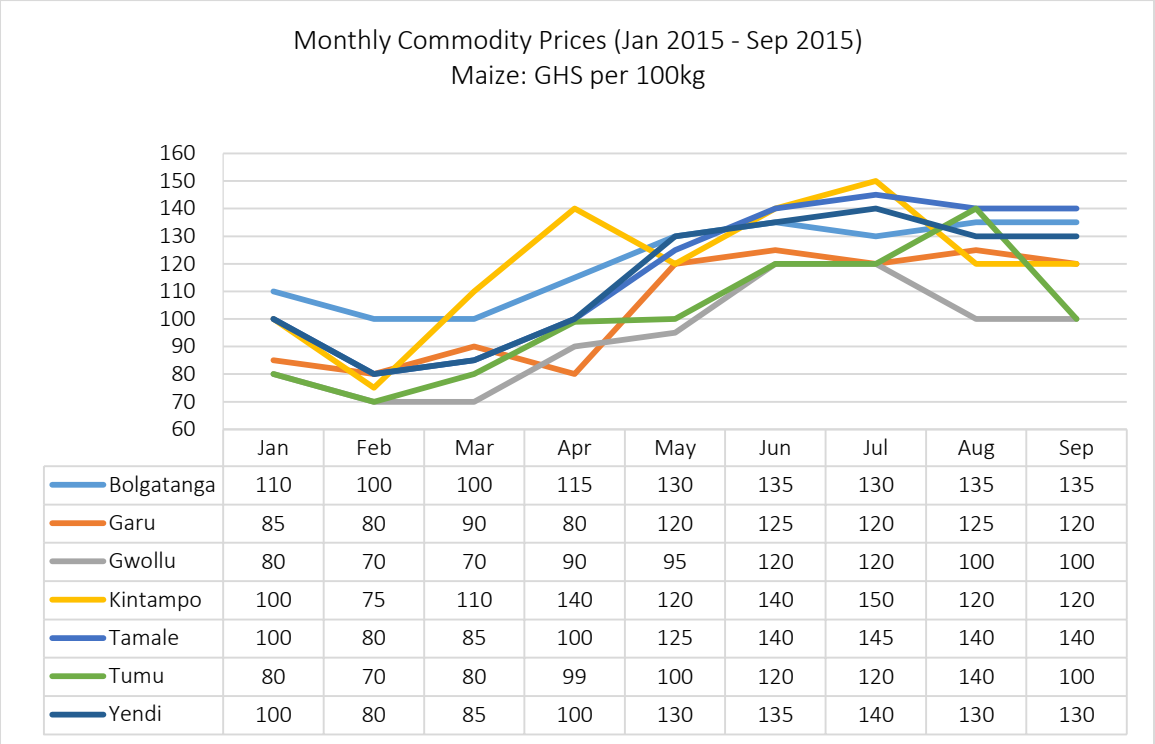
ADVANCE regularly monitors commodity prices in key markets in north Ghana and Kintampo North. These are used to inform contract negotiations between the OBs and the buyers.

Maize

In line with historical trends, maize prices declined to their lowest point in February 2015 and then rose gradually to peak in July 2015 (see Figure 9). They began to decline in September 2015. The maize harvest in the north, which begins in December, adds up to the major season harvest in the south around the same period. This increases maize supplies and hence depresses prices from December until the end of February when prices begin to rise due to reduction in stocks on the market. Prices decline in July 2015 because farmers typically offload maize stocks onto the market to sell and raise cash to finance the minor season crop in the south and the main crop in the north. Some industrial buyers of maize shifted their demand from local sources to imports on account of lower prices of imported maize.

While 100 kilograms of locally produced maize sold between GHS 115 and GHS 120, imported maize sold between GHS 100 and GHS 108 between April and June 2015. The countries of origin of imported maize included Togo, Russia, and the United States.

Figure 9: Maize prices in north Ghana markets



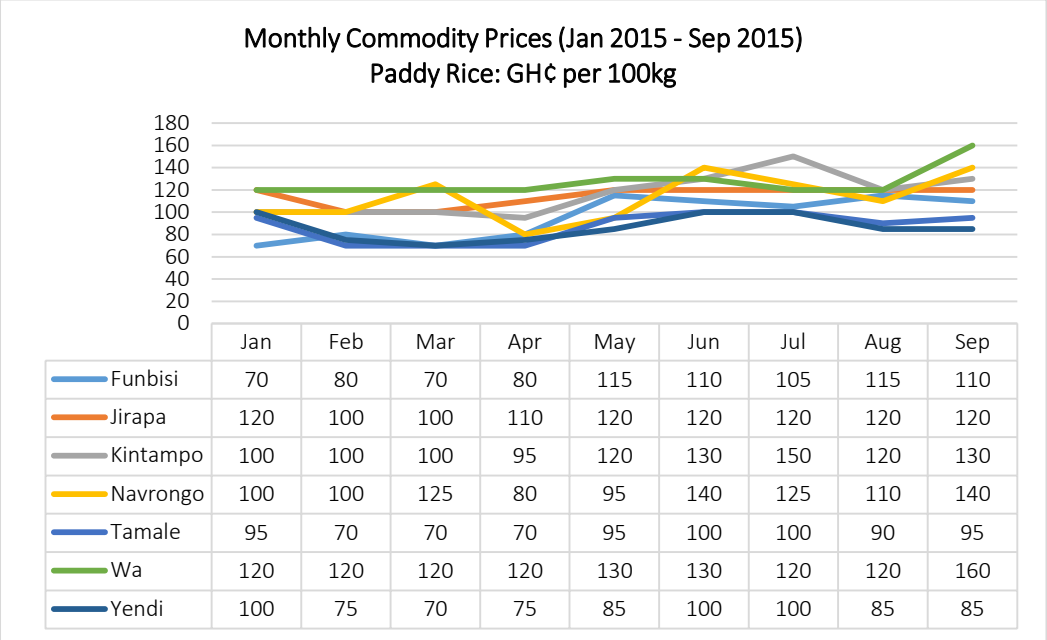
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Bolgatanga	110	100	100	115	130	135	130	135	135
Garu	85	80	90	80	120	125	120	125	120
Gwollu	80	70	70	90	95	120	120	100	100
Kintampo	100	75	110	140	120	140	150	120	120
Tamale	100	80	85	100	125	140	145	140	140
Tumu	80	70	80	99	100	120	120	140	100
Yendi	100	80	85	100	130	135	140	130	130

Source: ADVANCE market monitoring

Paddy rice

Paddy prices increased during the year, primarily because of low supplies on the market (see Figure 10). There was no dry season production in irrigated areas like ICOUR in Navrongo. Farmers also held on to their stocks in anticipation of higher prices thereby driving prices further upwards. Rice millers based in the south, especially in the Ashanti region, shifted their focus from the north to the south because of the low moisture content of the northern paddy beginning in February. Nevertheless, northern millers continued buying the product, as a majority of them parboil before milling and therefore do not have moisture as a limitation.

Figure 10: Paddy rice prices in north Ghana markets



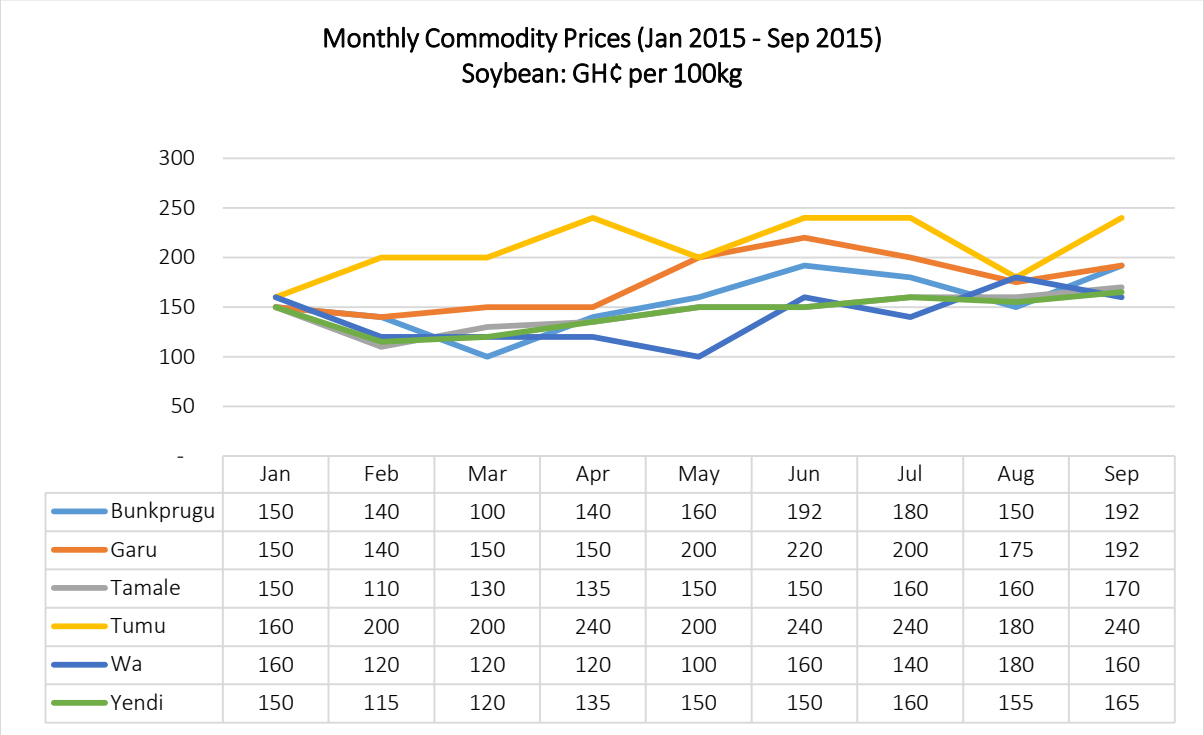
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Funbisi	70	80	70	80	115	110	105	115	110
Jirapa	120	100	100	110	120	120	120	120	120
Kintampo	100	100	100	95	120	130	150	120	130
Navrongo	100	100	125	80	95	140	125	110	140
Tamale	95	70	70	70	95	100	100	90	95
Wa	120	120	120	120	130	130	120	120	160
Yendi	100	75	70	75	85	100	100	85	85

Source: ADVANCE market monitoring

Soybean

The 2015 calendar year began with a slowdown in soybean demand from processors as a result of the ban on the importation of day-old chicks from Europe on account of avian flu. This affected demand from the poultry sector for soybean cake. The ban was lifted in mid-March 2015. Soybean prices declined for most markets from January 2015 until April 2015 when it began to rise (see Figure 11). This was due to renewed demand by soybean processors in anticipation of demand from poultry farms, after the ban on importation of day-old chicks was lifted. Notwithstanding the depreciation of the Ghana cedi, imported soymeal sold at a slightly lower price (6 to 8 percent lower) on the market compared to locally produced soymeal. Local processors faced high prices for soybean grain as well as increased energy costs arising from the reliance on generators for electricity. Farmers also held on to their soybean stocks in anticipation of higher prices. This sustained a steady increase in soybean prices until September 2015.

Figure 11: Soybean prices in north Ghana markets



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Bunkprugu	150	140	100	140	160	192	180	150	192
Garu	150	140	150	150	200	220	200	175	192
Tamale	150	110	130	135	150	150	160	160	170
Tumu	160	200	200	240	200	240	240	180	240
Wa	160	120	120	120	100	160	140	180	160
Yendi	150	115	120	135	150	150	160	155	165

Source: ADVANCE market monitoring

4.2.3 Lead firm competitiveness

Business assessment

The project assessed 31 buyer firms to identify areas where they may need technical assistance beyond supply chain linkages to farmers. The principal needs that emerged were finance, development of outgrower schemes, and improvement of business processes.

Figure 12: Number of assessed firms by type and region

Type of Firm	Ashanti	Brong-Ahafo	Western	Greater Accra	Total
Aggregator	2	1			3
Poultry Farm	9	4			13
Processor Foods	5			1	6
Processor Rice Miller	3		2		5
Processor Soybean	3			1	4
Total	**22**	**5**	**2**	**2**	**31**

Technical assistance to buyer firms

The project provided technical assistance to 11 firms during the year (see Table 11).

Table 11: Technical assistance provided to firms

No.	Firms	Source	Type of Assistance	Status
1.	Premium Foods, foods processor, Ashanti	STTA Consultant	Design of a nucleus estate outgrower scheme in the Central Gonja district of the Northern Region	Completed
		ADVANCE	Expansion of outgrower scheme in the Upper West and Upper East regions	Ongoing
2.	Akati Farms & Trading Company, poultry farm, Ashanti	ADVANCE	Upgrade and expansion of existing maize outgrower scheme in the Upper West region	Ongoing
3.	Yedent Agro Group, foods processor, Brong-Ahafo	STTA Consultant	Development of brand strategy and action plan covering maize/soy foods for retail markets	Ongoing
4.	Naawin Enterprise, rice miller, Ashanti	STTA Consultant	Improvement in factory floor and storage management	Ongoing
		ADVANCE	Resolution of bookkeeping issues	Ongoing
5.	ANS Mills, rice miller, Ashanti	ADVANCE	Development of OG relationships with rice farmer group in the Kpandai district of the Northern region	Ongoing
6.	Vester Oil Mills, soybean processor, Ashanti	ADVANCE	Development of sales distribution channel to Dormaa Ahenkro poultry farmers and others	Ongoing
7.	B. M. Unity Farms, poultry farm, Brong Ahafo	ADVANCE	Facilitation of working capital finance	Ongoing
8.	G. Bosomtwe Ventures, poultry farm, maize aggregator and soybean processor, Ashanti	ADVANCE	Development of maize outgrower scheme in Upper West region	Ongoing
		ADVANCE	Facilitation of capital expenditure and working capital finance	Completed
9.	Oseboba, foods processor (start-up), Greater Accra	ADVANCE	Facilitation of equipment and working capital finance	Ongoing
10.	Inter-Grow, soybean processor, Greater Accra	ADVANCE	Facilitation of working capital finance	Ongoing
11.	Hawa Rice Milling Enterprise	ADVANCE	Development of OG relationships with rice farmer group in the Kpandai district of the Northern region	Ongoing

4.2.4 Trade association support

Ghana Grains Council

The Ghana Grains Council concluded activities under the first year's grant received from ADVANCE on April 30, 2015, and was given a two-month, no-cost extension to operate until June 30, 2015. A second year grant agreement for $350,000 was executed on July 2, 2015, for 12 months ending on June 30, 2016. The first and second year grants have the following objectives:

1. Enhance grains market development by scaling up grain actors' participation in the GGC Warehouse Receipt System (WRS) to trade in graded grains
2. Optimize benefits derived by GGC members by ensuring that services meet their needs
3. Influence policies through advocacy on major issues that limit the efficiency of the grains sector.

Market access initiatives and warehouse receipts program

During the reporting period, the GGC certified six warehouses with a total storage capacity of 30,000 MT. This brings the total number of certified warehouses to 11 with a combined storage capacity of 54,600 MT at the end of September 2015. The Savanna Farmers Marketing Company issued two receipts for 250 MT soybeans valued at GHS 480,000, or approximately $129,032[11], while Premium Foods and Wienco Ghana Ltd., issued receipts for 15,177 MT of white and yellow maize valued at GHS 18.35 million, or approximately $4.93 million. Ghana-origin and imported maize constituted 23 percent and 77 percent of these commodities, respectively. The GGC is receipting imported maize to prepare it for trading on the commodity exchange. The GGC and the WFP signed a MoU to facilitate the procurement of white maize by WFP from smallholder farmers via the WRS at GGC-approved warehouses.

In June 2015, the GGC signed a MoU with the Ghana Commodity Exchange (GCX) project outlining various areas of collaboration between the two parties. The areas include membership, board representation, WRS regulations, market intelligence services, and advocacy. GGC has since been working with the GCX to review the draft GCX membership types and categories. Under the new partnership arrangement with the GCX project, GGC will play a key role in assisting technical staff of GCX to plan and implement sensitization programs for key stakeholders of the Exchange.

In January 2015, the GGC hired an international consultant to study and design a WRS risk management strategy to guide operations. The consultant submitted his report, and the Technical Committee of the GGC Board gave feedback on the document and other outputs from that consultancy.

During the year, GGC developed handbooks covering national standards on maize, rice, and soybean to facilitate trade using standards. The handbooks have been submitted to the Ghana Standards Authority (GSA) for review before publication. The development of pictorials for rice and soybean are in progress and will be completed when existing GSA standards for soybean (GSA 1039: 2013) and milled rice (GSA 765: 2015 Draft), which are currently under review, are finalized.

Members' benefits and diversified service delivery

During the year, GGC reorganized the existing membership categorization into four tiers: Platinum, Diamond, Gold, and Bronze. A total of 36 new members were registered, including one Diamond, three Gold, and 32 Bronze members. This brings total membership to 88 at the end of September 2015. The majority of new members are from the southern maize production belt (Kintampo, Atebubu, Ejura and Techiman). A new member value proposition kit was published as a promotional tool to attract new

[11] At the rate of $ 1= GHS 3.72 (Bank of Ghana rate of September 30, 2015)

members. An internal marketing and communications guideline was also prepared to raise general brand awareness of GGC across Ghana.

Seventy-five grain actors, who are existing and prospective members in the Northern Region, participated in a half-day forum held in Tamale in March 2015 after the pre-season event. The forum updated existing members on developments with the WHRS and also provided information to prospective members.

Picture 11: WRS sensitization meeting

More than 728 maize actors from 36 farmer groups and 10 poultry farms/feed mills in the Brong Ahafo, Eastern, and Ashanti regions received information on WRS. Also, in partnership with ADVANCE, the GGC hosted the fourth pre-harvest event in Tamale on October 23, 2014.

Ghana Rice Inter-Professional Body (GRIB)

During the year, ADVANCE worked with GRIB on the following activities:

1. Designed a training program for GRIB rice actors (commercial farmers, aggregators, and rice millers) on national rice standards. GRIB will work in collaboration with the GSA, Food and Drugs Authority (FDA), and GGC to conduct the training. The standards are intended to guide actors in the local rice industry on accepted quality standards, proper grading, packaging, and labelling.
2. Collaborated in the formation of the Rice Advocacy Council (RAC), which is hosted by GRIB as an advocacy platform for the rice industry in Ghana. The council was established in November 2014. ADVANCE staff participated in council meetings to provide perspectives on the rice industry and also contribute to the development of an advocacy agenda.
3. Technical support for the planning and organization of the second annual Ghana National Rice Festival scheduled for November 13-15 in Accra. The launch for the event was held on October 1, 2015.

Assessment of Trade Associations

The project conducted capacity assessments for the following trade associations to identify areas that they may need support and collaboration with ADVANCE:

- Upper East and Upper West Regional branches of GAIDA, Seed Producers Association of Ghana (SEEDPAG), and the Ghana Private Road Transport Union (Cargo wing)
- The Northern Region branch of Ghana Agricultural Associations Business & Information Centre (GAABIC)
- Ghana National Association of Poultry Farmers (GNAPF)
- Techiman Maize Traders Association

Following the assessment, the project identified areas to focus on in the coming year.

4.2.5 North Ghana rice milling

Upgrade and expansion of rice mills in the north

The project is working with two rice mills in the Upper East Region for expansion and upgrade during the year. Work progress is summarized in Table 12 below.

Table 12: Progress on firms identified for milling expansion and upgrade

Firms	Location	Existing Processing Capacity (MT/h)	Milling Upgrade Needs	Status at the end of September 2015
Sambey Enterprise	Bolgatanga, Upper East Region	0.13	New and bigger capacity mill with components	The procurement process for the acquisition of the mill was initiated
Procom Company	Bolgatanga, Upper East Region	0.60	Acquisition of color sorter	Completion of the concept note and grant application

In the Northern Region, four rice millers where shortlisted for further assessment, including collection and review of historical processing levels, to justify an upgrade: i) Tiyumba Women's Rice Milling Centre; ii) Nyebu Bi Yoona Women's Processing Centre; iii) Wunti Food Company; and iv) Bendirsung Agro Production and Processing Company.

The WFP expressed interest in procuring milled rice from three of the aforementioned mills in the Northern Region and visited them to assess capacity. A key requirement that has emerged is the need for the mills to color-sort and separate good grain from bad.

4.2.6 Regional/cross-border trade and transport

Regional/cross-border trade

During the year, there seemed to be active cross-border trade of maize and soybean with Burkina Faso and Togo. In the Upper East Region, maize and soybean flowed into the Bolgatanga market from Burkina Faso on market days. The opposite occurred in the Zebila market with maize flowing out into Burkina Faso. Traders from Burkina Faso were the prime movers of this trade. In the Upper West Region, farmers in the Sissala East and Sissala West districts sold soybean to Burkinabe buyers/processors. Togolese traders also bought soybean from the Garu-Tempane and Bunkpurugu-Yunyoo districts in the Upper East Region, and Chereponi District in the Northern Region. Due to the informal nature of this trade, actual volumes and commodities traded are difficult to estimate.

In FY16, ADVANCE intends to explore ways to assist OBs to scale up and formalize these cross-border trading relationships.

Collaboration with Ghana Private Road Transport Union (GPRTU) Cargo

Improved Access to Haulage Services

At the invitation of ADVANCE, eight cargo transporters representing the Bolga, Tamale, Wa, Techiman and Ejura branches of GPRTU Cargo attended the pre-harvest event in Tamale in October 2014. This enabled them to link up with various project beneficiaries who require their services. For the same purpose, some buyers, as part of ADVANCE trade missions to the north and south production zones, visited local GPRTU branches to discuss transport arrangements for their commodities.

> The list of GPRTU contacts and fare chart enabled a NF, Muyo Farms of Saboba, to access information on transport haulage opportunities from Saboba to Kumasi from the GPRTU branch in Saboba. The information enabled him to time the delivery of a soybean consignment to a buyer in Kumasi to coincide with a returning cargo vehicle thereby saving 50 percent of the transport cost of hiring a vehicle from Yendi to Kumasi to convey the consignment.

ADVANCE field offices in Tamale, Wa, and Bolga worked with the respective regional branches of GPRTU to develop a transport fare chart from 47 locations in their operational zone to nine destinations in Southern Ghana. The charts were shared with OBs and commodity buyers, and are updated when transport fares change. The collaboration with GPRTU Cargo has resulted in lower haulage charges from the north to the south arising from increased use of back haulage trucks returning from deliveries to the north or Burkina Faso.

Advocacy on Road Governance

In August 2015, ADVANCE mobilized the branches of GPRTU Cargo in Tema and Bolga to participate in the Road Governance Caravan along the Tema-Paga Corridor, initiated by Borderless Alliance under the USAID West Africa Trade Hub (WATH) project.

In the Upper East Region, five GPRTU Cargo representatives drawn from Paga, Bolga, and Garu were accompanied by ADVANCE to attend a one-day stakeholders' open forum on trade facilitation and road governance at the Paga border post on August 11, 2015. Participants and resource persons at the forum were drawn from transporters, the Ghana Police Service, the Ghana Revenue Authority (Customs Division), the Ghana Immigration Service, the Ghana Shippers Authority, and the media. The forum was also attended by the Upper West regional coordinating director and the district chief executive for Kassena Nankana West. The key issues addressed at the forum included the following:

1. Disparities in axle load policy between Ghana and neighboring Francophone countries (61 MT compared to 68 MT, respectively)
2. Penalty charges for overstay of transit goods cleared at the Tema port beyond the seven-day transit period through Ghana to neighboring countries
3. Police harassment and extortions

In the Northern Region, ADVANCE mobilized two representatives of the regional branch of GPRTU to attend a forum in Tamale to deliberate on transportation barriers to West African regional economic integration with a particular focus on the Techiman-Paga road corridor. Subjects addressed included informal road barriers, road harassment, and excessive delays by the police and other stakeholders.

4.2.7 Price information to OB and SHF

In the reporting period, 93 OBs and 21,081 OGs, including 16,041 men and 5,040 women, received weekly SMS messages that informed them of the prices of their commodities in different markets in Ghana (see Table 13). This improved access to price information enabled beneficiaries to negotiate better deals with their buyers, gave them opportunities to sell in other markets where prices were higher, and allowed them to discover new markets.

Table 13: Regional distribution of farmers receiving market information

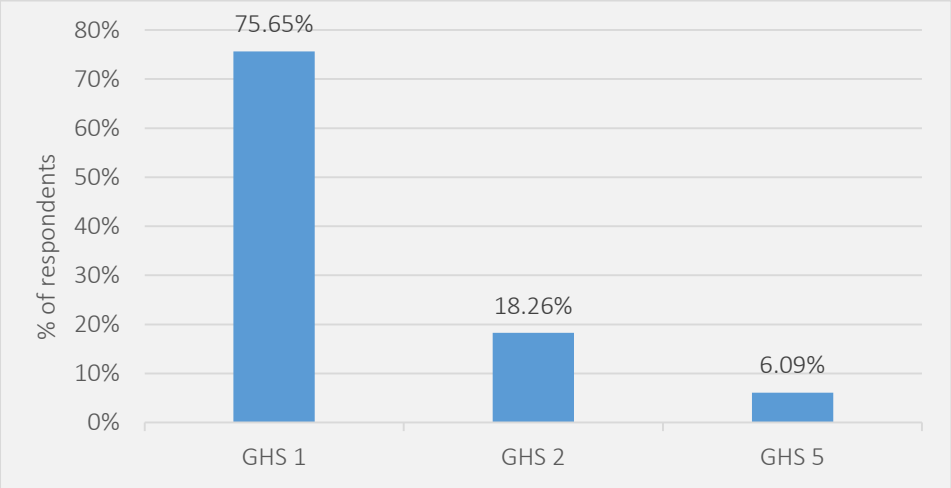
REGION	# OF OB BENEFICIARIES	# OF OG BENEFICIARIES
Upper East	18	6,346
Upper West	18	4,899
Northern/Kintampo North	31	7,770
ADVANCE South	26	2,066
TOTAL	93	21,081

In order to assess if and how farmers use and benefit from price information, a survey was carried out with 167 smallholder farmers randomly selected from the list of farmers who received the service. The survey produced the following results:

1. 59 percent of respondents read the messages themselves
2. 74 percent understood the messages, which includes 91 percent of respondents who can read
3. 61 percent (74 percent of those who understand) reported using the messages
4. 84 percent of those who used the messages reported being satisfied by them
5. 47 percent of respondents (72 percent of those who used them) indicated that they increased their sales thanks to the price information
6. 53 percent reported increasing their income, this is 95 percent of those who increased sales, and 76 percent of those who used the messages
7. 60 percent reported discovering new markets, which includes 82 percent of farmers who used the messages and 87 percent of those who increased sales
8. 81 percent of respondents indicated that they would like to continue benefitting from the SMS service, which is are 92 percent of those who used the service
9. 77 percent would subscribe (93 percent of those who used the service) for GHS 1.39 on average per week

ADVANCE and Esoko will use the findings to better target the FY16 beneficiaries of this service and improve its quality. A better system to monitor service delivery quality will be designed for use.

Figure 13: Desired amount of weekly subscription fee



4.2.8 Community-based market systems strengthened

Under this subcomponent, the main activity planned and implemented this year is the SMFM training.

The SMFM-Zambia version of the training manual developed by ACDI/VOCA was reviewed and adapted to fit the Ghana context. In addition, several ADVANCE staff members went through self-assessed orientation training to be able to act as trainers at the regional level. A training-of-trainers program was conducted jointly in each regional office by ADVANCE staff. In total, 29 trainers were trained. These trainers had very good experience in community training and mastered the local language of the selected areas. The training focused on imparting skills and techniques to enable them to transfer knowledge at the community level.

As a result, 1,256 FBO members, 60 percent of whom were females, were trained in SMFM in 60 communities.

Region	# Communities	# Trainers	Targeted FBO	Actual # FBOs	Male	Female	Total
Upper East	12	7	20	20	61	124	185
Upper West	20	7	30	31	91	200	291
Northern	28	15	50	57	430	350	780
TOTAL	**60**	**29**	**100**	**108**	**582**	**674**	**1,256**

Outcomes of SMFM trainings:

- FBO members now keep various records of their business activities both on an individual as well as a group basis.
- A total of 31 FBOs established demonstration sites during the cropping season to serve as learning centers for their members.
- Aduabia Women's Group in Nyangnia in the Kasena Nankena West has set up an office after the training to begin the process of transforming to a farmer-based enterprise (FBE). The same group also increased their membership dues from GHS 1.50 to GHS 2.00 per week.

- Nine FBOs in the Northern Region have established group farms as a means of raising revenue for the groups and also serve as a starting point for group activities.
- Women in some FBO groups are now more assertive and accepting leadership roles.
- Unlike previously, the Funsi Women Farmers planned their farming activities before the start of the season.
- One FBO in Bullu linked their group with other actors to acquire production inputs.
- Naafaa Handi Women's Group have also benefitted from AEA services as they invited an AEA to teach them about good farming practices to increase their yields.
- Jawia Farmers Association is going into partnership with a buyer in Accra and are demanding that a contract document be prepared before the start of the partnership, which is something they would not have done in the past.

Picture 12: SMFM participants on their way to the training center

A testimony from a beneficiary

One participant from the SMFM training in Kulfuo shared that "they have never attended a training such as SMFM… it is more practical and the follow-ups will obviously put them on their toes to perform."

4.3 Sub-Purpose 3: Strengthened Capacity for Advocacy

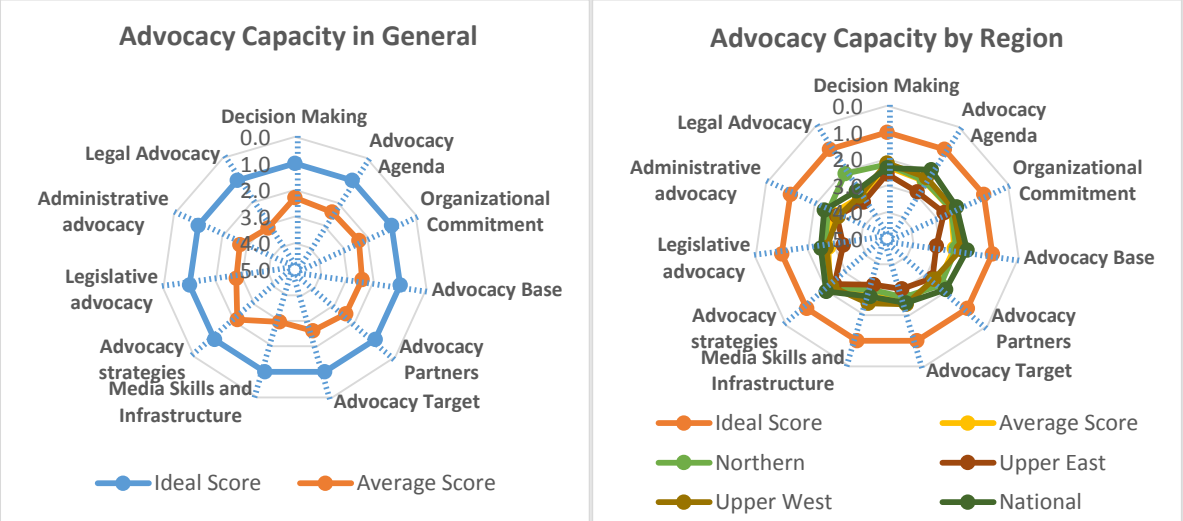
4.3.1 Advocacy group development

Policy advocacy capacity assessment

The advocacy capacity assessment of value chain actors that started in 2014 was completed in the first quarter of 2015. The Alliance for Justice's Advocacy Capacity Assessment Tool (ACAT) was adapted to meet local context and used for the assessment. The assessment is based on nine key areas of advocacy and was administered to senior management. Each area contains a number of qualitative statements to assess, in detail, organizations' strengths and weaknesses. Respondents answered questions about their organization's skills, knowledge, and resources for running effective advocacy programs.

The assessment showed significant advocacy capacity gaps in all the advocacy areas assessed across regions. The results show that organizations at the national level have the lowest capacity gaps and that organizations in the Upper East Region have the highest capacity gaps. All regions are weak in media skills, legislative, and administrative advocacy. A snapshot of the survey results is presented in Figure 14 below.

Figure 14: Average advocacy capacity score of surveyed organizations



Source: ADVANCE ACAT survey, 2014

A final assessment report and a summary report have been completed with a capacity development framework. The assessment instrument was also shared with the Agricultural Policy Support Project (APSP), which used it to assess potential grantees.

Farmer forums with FBOs

In an effort to build the capacity of local actors to tackle policy and advocacy issues at the district level, a series of farmer forums were held with a number of FBOs across the three northern regions. The main objective of these forums was to introduce FBOs to policy and advocacy concepts with the long-term goal of building their capacity to effectively advocate for an improved agricultural business environment at the local level. The forums identified policy issues affecting FBOs and discussed challenges, strengths, and opportunities for FBOs to engage and advocate at the grassroots level. A total of 52 forums were organized across ten districts, and 1,055 people participated, of whom 56.4 percent were female (see Table 14).

Table 14: Participants at farmer forums

Region	Number of FBOs	Number of Participants		
		Male	Female	Total
Northern	23	282	211	493
Upper West	17	132	140	272
Upper East	12	74	216	290
Total	**52**	**488**	**567**	**1,055**

District agricultural policy forums

In order to equip advocacy groups with the relevant knowledge and understanding of agricultural policy issues, agricultural policy education and sensitization forums were organized in Northern, Upper East, and Upper West Regions. The purpose of the policy forums was to educate participants about the Food and Agriculture Sector Development Policy (FASDEP II) and the Medium Term Agriculture Sector

Investment Plan (METASIP). This was to enable actors to participate effectively in the implementation and monitoring of agricultural policies at the local level. It also sought to create awareness about the district agricultural investment plans (DAIP) to be developed by select district assemblies.

A total of 1,050 participants attended the sixteen forums, and women accounted for 23 percent of participants. The low level of female participation was due to the low number of women holding leadership and administrative positions in FBOs and in district assemblies. All forums were organized in collaboration with district agricultural departments, and eight out of the forums were jointly held with APSP.

Table 15: Participation in the district agricultural policy forums

Type of Organization	Northern	Upper east	Upper west	Grand total		
				Male	Female	TOTAL
Farmers/FBOs	115	233	255	413	186	599
District agriculture department staff	8	36	58	80	18	98
CSOs/NSAs	22	47	42	97	19	116
Assembly staff	13	62	57	121	24	145
Assembly members	20	31	13	57	8	65
Media	3	15	5	20	4	24
Traditional leaders	0	3	0	3	0	3
TOTAL	181	427	430	791	259	1,050

At each district forum, participants agreed on major advocacy action points, and these action points are being monitored. In some districts, radio stations called the district chief executives and/or the district agricultural officers to hear their responses to the issues raised at the forums. The Ghana News Agency also reported on the forums at www.ghananewsagency.org/science/stakeholders-in-kassena-nankana-hold-agriculture-policy-forum-87945.

4.3.2 Advocacy capacity for national organizations strengthened

GGC advocacy to influence policies

During the reporting period, ADVANCE supported the GGC to hold four media events on advocacy to promote local rice production and marketing. The events included two television interviews (TV3 and Crystal TV) and a news story in Business & Financial Times. To enhance the visibility and credibility of GGC, a media message was developed and published congratulating farmers on Farmers' Day.

The GGC has requested that the GSA establish national standards for fertilizer for cereal crops in Ghana. The GGC was also awarded a six-month project, which will run from July until December 2015, by the Business Sector Advocacy Challenge Fund to study and make recommendations on how to address grain pricing policies in Ghana.

GGC became a member of the Ghana Innovation Platform for Aflatoxin Management hosted by the Forum for Agricultural Research in Africa (FARA) and also participated in a one-day stakeholders' workshop on the subject. The platform will focus on reducing aflatoxin in maize and groundnuts.

During the reporting period, the GGC submitted a list of six warehouses with a total storage capacity of 12,500 MT to the European Union (EU)-funded Trade Related Assistance and Quality Enabling (TRAQUE) Programme with the Ministry of Trade and Industry (MoTI) for consideration and technical support. The TRAQUE Programme is aimed at improving the national quality infrastructure (NQI) through technical support to both public and private sectors. In all, 15 selected warehouses will be supported with warehouse equipment and lab apparatus for sampling, grading, and analysis of aflatoxin.

Finally, GGC pursued discussions with the Ghana Commercial Agriculture Project (GCAP) to integrate their newly constructed warehouses into the Warehouse Receipts Program. Additionally, GCAP funded a training program for all stakeholders on warehouse receipting and handling of grains with GGC as the resource organization.

4.3.3 District assembly plans for agricultural development

ADVANCE is supporting the metropolitan, municipal, and district assemblies (MMDA) to tackle constraints that inhibit investments in agribusinesses in their districts. To accomplish this, ADVANCE is assisting MMDAs to document and market the agricultural potentials of their districts to local and international investors. ADVANCE engaged 15 MMDAs to discuss the need for a local agricultural Investment plan and to determine what support ADVANCE could offer to MMDAs to develop it. All 15 districts indicated interest, and 14 MMDAs signed MoUs with ADVANCE to develop their DAIPs.

Picture 13: With the Builsa North district team

Two MMDAs (Kasena Nankana Municipal and Sisiala East District Assembly) were supported in the first pilot. Both established a three-member committee to coordinate the development of the plan and drafts of the two plans completed. They exhibited the draft plans at this year's pre-harvest conference at Tamale. An additional 12 plans will be developed in the coming year and will incorporate lessons learned from the first two plans.

Table 16: District engagement in developing DAIPs

No.	DISTRICT	Engaged in developing DAIPs	Signed MoU	Districts developing DAIPs
1	Wa West	√	√	×
2	Lawra	√	√	×
3	Jirapa	√	√	×
4	Lanbusie	√	×	×
5	Sawla-Tuna-Kalba	√	√	×
6	Nadowli	√	√	×
7	Wa East	√	√	×
8	Sissala East	√	√	√
9	Builsa North	√	√	×
10	Builsa South	√	√	×
11	Kasena Nankana Municipal	√	√	√

No.	DISTRICT	Engaged in developing DAIPs	Signed MoU	Districts developing DAIPs
12	Bawku West	√	√	×
13	Guru-Tempane	√	√	×
14	East Mamprusi	√	√	×
15	Bunkpurugu Yunyoo	√	√	×
Total		15	14	2

4.3.4 Capacity development for program implementation

In order to develop the capacity of beneficiaries to run their farming operations as businesses and keep accurate records, ADVANCE trained over 10,000 smallholder farmers on FaaB and numeracy. In the coming year, ADVANCE will begin capacity development of local partners and stakeholders with a series of trainings on managing USAID awards, and will conduct an assessment of organizational capacities using the OCA followed by an action plan to address any weaknesses.

Farming as a Business (FaaB)

FaaB is a well-designed and proven curriculum developed by ACDI/VOCA to train smallholder farmers to build their capacities and change their orientation on farming. FaaB focuses on how farming, like any other business, should aim to maximize profit. A volunteer was engaged by the USAID Farmer to Farmer project, which is led by ACDI/VOCA, to train trainers to conduct the FaaB training at the community level. In all, 12,245 smallholders and FBO members were trained, 54.8 percent of whom were women (see Table 17 below).

Picture 14: FaaB training of trainers participants

Table 17: FaaB participants by region

Sub Office	Female	Male	Total
ASHANTI	95	281	376
NORTHERN	2,570	2,026	4,596
UPPER EAST	1,711	1,015	2,726
UPPER WEST	2,333	2,214	4,547
Total	**6,709**	**5,536**	**12,245**

The trainings produced the following results:

- The smallholders who benefitted from the training now keep records of their activities and costs such as ploughing, seed, fertilizers, etc., to enable them to understand the true cost of production before determining the price at which to sell their produce.
- Most of them also looked for certified seed sellers to purchase their seeds and also know the date of planting and have planted in rows.

- Some smallholder farmers planned to enter into contract agreements with their NFs and other actors before production started.

Numeracy training

Numeracy training was organized for smallholder farmers in all project areas to increase their capacity to make simple mathematical calculations and be able to better negotiate prices based on records of their costs and other activities. This activity targeted mostly women but a number of men also participated. A total of 7,491 smallholders, 72.7 percent of whom are women, were trained in 112 communities across the three northern regions.

Table 18: Numeracy training participants

Sub Office	Female	Male	Total
NORTHERN	2,079	1,205	3,284
UPPER EAST	1,535	457	1,992
UPPER WEST	1,835	380	2,215
Total	**5,449**	**2,042**	**7,491**

Numeracy training produced the following results:

- Learners in five communities, including Tampola, Kapania, Gaani, Kworania, and Janania in Navrongo, asked the trainer to continue numeracy lessons at their own cost because they appreciate the importance of numeracy in their daily activities.
- Beneficiaries of numeracy training now operate their own village savings and loan scheme with ease as they can identify numerals on their own.
- Smallholder farmers, especially women who benefited from numeracy training, are able to assist their children in learning about numeracy.

Picture 15: Participant demonstrating how to write numerals

- Through the numeracy training, beneficiaries are able to determine whether their children are performing well or not in school.
- Beneficiaries now know the different currency notes and coins, which is helping them in their businesses.

GGC organizational development in preparation for USAID Forward

The Executive Committee of GGC appointed Dr. Godwin Ansah as the new managing director, and he assumed office on October 1, 2014. In addition, the preparation of a GCC policy and procedures manual covering procurement, human resources, finance, and communications began in December 2014 under an STTA directly funded by ADVANCE. The assignment is expected to be completed at the end of October 2015.

4.3.5 Capacity development for FBEs

The process of transforming 100 FBOs into FBEs started in earnest with many activities, including SMFM, as stated above, and the following complementary activities: FBOs hosting demonstration sites; linking FBOs to actors such as input dealers, aggregators, etc.; and FBOs operating VSLAs. As a result:

- Thirty-eight FBOs hosted demonstration sites as means of learning good agronomic practices that would be adopted by their farms.
- Twenty-four FBOs established group farms to raise revenue for their groups.
- Sixty-five FBOs are at different levels of establishing VSLAs across project areas.
- The project linked 19 FBOs with input dealers/firms such as WIENCO, Wumpuni, and 18th April to help them access production inputs and establish good relations between FBOs and firms.

4.4 ADVANCE South

ADVANCE operates in the south of Ghana as a result of the Global Development Alliance (GDA) between USAID and Dupont Pioneer. The objective is to achieve the following results:

1. Increased productivity of maize through increased adoption of hybrid maize seed, GAPs, and improved technologies; and improved input supply chain
2. Improved PHH practices
3. Increased market linkages with end buyers

ADVANCE in the south is expected to reach 13,000 smallholder farmers in the maize belt of Ashanti, Brong Ahafo, and part of the Eastern Region by the end of the project. Activities in this reporting period have been constrained by unpredictable rainfall and availability of seed, which have created some challenges for implementation.

4.4.1 Increased agricultural productivity in targeted commodities

Demonstration plots and GAP trainings

During the reporting period, the project set up the following demonstration sites: i) 113 plots during the minor cropping season (July 2014 to January 2015), ii) 88 during the major cropping season (March 2015 to August 2015); and iii) 112 plots in the minor cropping season (July 2015 to January 2016). This brings the total number of demonstration plots to 313. Through these demonstrations, farmers and other community members have the chance to make visual assessments of the performance of Pioneer hybrids against their usual, farmer-saved as well as what they purchased.

Picture 16: Harvests from the same, (5metre X 5metre square), areas for Farmers own seed, (left) and Pioneer 30Y87 hybrid, (right)

Preliminary analysis of yields obtained from the 2015 major season demonstration sites show an average

increase of 96 percent for the Pioneer hybrids over the farmers' usual seeds. Over 80 percent of the demonstration plots recorded yield increments of at least 50 percent, and none of the farmers' usual seed types outperformed either of the hybrids.

Prior to the start of the 2015 minor season, two agronomists from Pioneer trained OBs and project agronomists. They also reviewed the progress/issues of the past demonstration sites and revised the existing production protocols to include the use of the most commonly available fertilizers on the market. A total of 476 beneficiaries were trained on planting; basal fertilizer application; weekly field inspection for early detection and correction of common nutrition-related issues; pests; and disease situations. In addition, 376 benefitted from the farming as a business training.

Financial institutions in support of hybrid seed trials and application

A total of $247,941 of loans was provided by three financial institutions to OB-leaders and their OGs. Loans were tied to willingness to use Pioneer hybrid 30Y87 in order to improve the ability to repay the loans. These efforts enabled OBs and their OGs to try at least one acre of the Pioneer hybrid maize on their own.

The project made special efforts to take top officials of banks to the demonstration sites to observe the performance of hybrid seeds. Seven field visits with ECOBANK (Sunyani), Sinapi Aba (Techiman, Atebubu, and Sunyani), Opportunity International (Sunyani), and the Brong-Ahafo Catholic Cooperative Society Limited were organized during the reporting period. Bank officials also visited off-takers and processing facilities to assure themselves of the viability of investments they sponsored.

Business development services

During the reporting period, ADVANCE supported 507 OGs and OBs through business development services. Thanks to the project's assistance, 12 OBs developed business plans; 11 OBs went through a business diagnostic as a first step in developing business plans; 30 crop budgets were developed; and 23 OBs received support to design financial plans. In addition, the project conducted training on how to access the various financial products of financial institutions; implement FaaB; understand analysis of margins from crop production enterprises; and make and use crop budgets.

OB investment

In addition to $107,473 of capital investments made by seven OBs into their supply chains, six OB-leaders also invested $24,247 to purchase fertilizers and agrochemicals for their OGs.

Most of the capital investments was used to purchase tractors, which enabled them to plough an additional 800 acres for 459 OGs in the 2015 minor season crop.

OB-leader Daniel Asomaning acquired a Global Positioning System (GPS) handset worth GHS 800 to measure the acreage of his own farms and that of his OGs. He acquired the equipment after seeing it demonstrated at one of the trainings organized by the project. The use of the tool to calculate the exact amount of fertilizer and seed needs for farms, and particularly its potential to end the incessant dispute over plowed areas and related charge between tractor service providers and farmers in his area, were his key motivations.

Mitigating production risk

Twenty-nine OBs and/or their representatives attended a training on the drought-index insurance offered by GAIP and the use of mobile phones to access tips and information from the Esoko platform. The training was meant to expose participants to these products to enable them to reduce some of the risks associated with climate change. Following that training, 2,066 farmers received weekly SMS-based price information on maize from key markets, and 28 OBs received weather and agricultural tips.

George Yeboah said he was never mindful of when to apply his fertilizer and how to space his crops on his farm. However, upon receiving the Esoko agricultural tips, he followed all the instructions, and he realized that his crops are doing very well and look very healthy, fresh, and green.

Joseph Addai and his colleagues in Techiman took out a loan from Opportunity International but struggled to repay as sales dropped. Upon receiving an SMS from Esoko that maize in Ashaiman market was being sold at $560/MT, they contacted a poultry farmer who accepted to buy 600 MT of their maize at $500/MT. The poultry farmer has become a regular buyer for Joseph and his partners, and they were able to repay their loan and make a profit.

4.4.2 Improved input supply chain

During the reporting period, Dizengoff imported 24 MT of Pioneer 30Y87 seed, enough to cultivate 3,200 acres of land. The seed was sold out between March and mid-May 2015. The sales were made through 15 OBs to cover 794 acres for 430 smallholder farmers. The sale of seed, however, slowed down following difficulties in importing the seed.

Picture 17: OB-leader Samuel Kusi poses with his OGs during the sale of Pioneer hybrid seed

Over 44 OBs in the south participated in the ADVANCE pre-season event, during which they had the opportunity to interact with various input dealers for maize and other crops. More than 13 manual planters brought to the exhibition were bought by participants from the south.

5 Program Support

5.1 Gender Program

The ADVANCE gender program focuses on empowerment, access to resources such as land and credit, information for effective decision making, and leadership.

5.1.1 Women empowerment

ADVANCE surveyed 1,354 women beneficiaries to assess their current situation based upon a simplified version of the domains used in measuring women's empowerment under the Feed the Future program. Figure 15 shows the regional distribution of those surveyed.

The survey focused on production, resources, income, and leadership domains and identified a number of elements relevant to ADVANCE's activities.

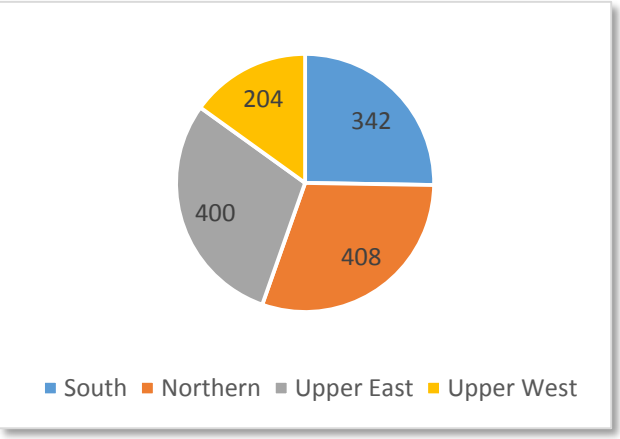


Figure 15: Distribution of surveyed women by region

Production

Table 19 shows the proportion of women who personally make decisions regarding their production activities. It indicates that at least three quarters of the women make decisions themselves, with the highest percentage being decisions on the type of crops to grow and the lowest on the inputs to buy.

Table 19: Proportion of women making decision on their ag production

Decisions on	%
Agricultural production	75%
Type of crops to grow	78%
Which inputs to buy	72%
When to take or who should take crops to market	77%

Answers to the decision questions were converted into scores, with: 1, as not at all; 2, as to a small extent; 3, as to some extent; and 4, as to a high extent. An average of the four production decision scores was calculated for each woman. Assuming those with an average score of at least 3 are empowered, then Table 20 below indicates that the Upper West has the highest proportion of empowered women, while women in the Northern Region are the least empowered.

Table 20: Empowerment in production

Region	% of empowered	Average score
Northern	17%	2.26
Upper East	55%	3.40
Upper West	46%	3.01
South	48%	3.26

Resources

Table 21 below shows who owns and uses the assets in the households[12]. The table indicates that except for hoes, in most cases, men own the assets. This is true especially for motorcycles, power tillers, rotary weeders, donkey carts, reapers, tractors, and traction animals. Most women do have access to the assets. For example, even if only 25 percent of the women own land, 96 percent of them have access. Women have access to donkey carts, hoes, knapsack sprayers, land, tarpaulins, and warehouses but, have less access to the use of power tillers, rotary weeders and motorcycles.

Table 21: Ownership of assets

	Ownership		Usage	
Asset	Women or both	Men only	Women or both	Men only
Bicycle	23%	77%	71%	29%
Donkey cart	16%	84%	88%	12%
Hoes	64%	36%	96%	4%
Knapsack sprayer "Solo"	27%	73%	84%	16%
Land	25%	75%	96%	4%
Motorcycle	9%	91%	50%	50%
Ox Cart	38%	63%	70%	30%
Power tiller	5%	95%	37%	63%
Reapers	20%	80%	63%	38%
Rotary weeder	6%	94%	40%	60%
Tarpaulin	54%	46%	94%	6%
Thresher	31%	69%	75%	25%
Traction animals	18%	82%	78%	22%
Tractor	17%	83%	73%	27%
Warehouse to store	45%	55%	98%	2%

Table 22 below shows the number of assets women use, which on average is around three. There is not much difference in asset usage across regions except in the South where the number of assets used is almost four.

Table 22: Average number of assets used by women

Region	Average # of assets
Northern	3.49
Upper East	3.20
Upper West	3.24
Southern	3.80
Total	**3.45**

[12] The denominators of the percentages in the ownership and usage columns are the numbers of households that own or use the asset, not the total number of households. For example,. the 71 percent under the women or both usage column for bicycle means that among the households that use bicycles, in 71 percent of cases, women or both women and men use, and in 29 percent of cases, only the men use the bicycles.

As seen in Table 23 below, only one third of the surveyed women has access to project grants, NGO funds, mobile money, microcredit, rural banks, input credit, susu and village savings groups. The project will continue its efforts to increase women's access to finance in FY16.

Table 23: Proportion of women having access to finance

Source	Percent
Input credit	32%
Microcredit	32%
Mobile money	32%
NGO	34%
Project grants	34%
Rural banks	29%
Susu	30%
Village saving and loan groups	32%

Income

Table 24 below presents the proportion of women who reported having inputs into some or all decisions regarding the use of income jointly acquired. It shows that women are more involved in income use decisions when it comes to health matters, their personal development, children's education or career development, and agriculture. They are less involved when decisions are about acquisition of property, investment, livestock or the number of children to have.

Table 24: Proportion of women involved in decisions on use of income

Use of income for	%
Acquisition of property	62%
Agriculture	74%
Children's career development	74%
Education of children	74%
Health matters	78%
Investment	62%
Livestock	62%
Number of children to have	64%
Woman's personal development	84%

Answers to the income use decision questions were converted into scores, with 1 as no input, 2 as inputs into very few decisions, 3 as inputs into some decisions, and 4 as inputs into all decisions. Average of the nine income-related decision scores was calculated for each woman. Assuming that those having an average score of at least 3 are empowered, the results in Table 25 show that the Upper East has the highest proportion of women empowered and the highest average score, while women in Northern region are the least empowered. Interestingly, women in the Upper West are more empowered in regards to production decisions than in use of income decisions.

Table 25: Empowerment in decision over income use

Region	% of empowered	Average score
Northern	17%	2.23
Upper East	84%	3.39
Upper West	41%	2.80
South	80%	3.27

Leadership

Table 26 below shows that the north Ghana has a high proportion of women beneficiaries that are members or leaders of groups while the southern part has much less. When compared to the previous tables, these findings mean that there is currently no direct relationship between being members of groups and empowerment in decision making regarding use of income or production decisions.

Table 26: Proportion of women members and leaders of groups

Region	% members	% leaders
Northern	77%	25%
Upper East	79%	19%
Upper West	75%	25%
South	39%	9%
Total	68%	19%

5.1.2 Women's access to land

Gender and land sensitization meetings were organized in Lawra, Tuna, Nyariga and Kazufa attracting 164 people of which 62 were females. Participants in these events included traditional leaders, landlords, NFs and their representatives as well as female OGs. During these programs, NFs who had positive experiences working with women shared their experiences and tried to convince participants to be more gender responsive.

Abdul Rahaman Mohammed, a NF in Kongo in the Garu-Tempane district, convinced local chiefs and opinion leaders to release land for 100 women to cultivate rice in the 2015 cropping season. Amidu Kala, an OB in Fatchu, released five acres of productive lands to five women. Margerate Tabla, a woman farmer at Bussie,had 10 acres of her deceased husband's lands released to her by her husband's family after also showing she was capable of managing a 10 acre farm.

In addition, all four gender and land sensitisation meetings organised during the reporting period included advocacy concepts, thus increasing awareness of the need to speak-out on issues of concern to farmers. Participants at these forums included traditional leaders, women's leaders, leaders of OG groups, chief executives of various districts, district assembly staff, assembly members, executives of FBOs, input dealers, tractor service providers, MoFa staff, district value chain committee (DVCC) executives, and the media among other stakeholders.

5.1.3 OBM and women's leadership and entrepreneurship

During the year, a total of 23,732 project beneficiaries were women, representing 44.63 percent of total beneficiaries and exceeding the 40 percent target. In addition to the benefits mentioned below, these women have improved access to tractor services and inputs offered by NFs as a result of being

part of the outgrower schemes. Forty-six percent of those who received such services from OBs are women.

Female NFs

The project identified four female NFs during the reporting period, bringing the total number of female NFs in the program to 10. These NFs have benefited from the OBM trainings.

The project undertook a qualitative study to better understand the constraints women face in setting up OBs and to identify strategies to support women interested in running OBs. The main recommendations from the study are summarized below:

1. Prioritize areas where women's empowerment projects have been implemented
2. Prioritize rice and soya as they are more "women-friendly"
3. Conduct sensitization activities/campaigns promoting women's rights and make a strong business case for working with women
4. Showcase successful women NFs as well male NFs with female OGs
5. Continue capacity building activities
6. Adapt session duration and language to the audience's capacities
7. Collaborate with other projects/entities
8. Continue supporting women's groups (training, purchase of assets, etc.)

Improve women's capacities

A module specifically targeting female NFs and aggregators was designed and incorporated into the regular OBM training curriculum which all OBs receive.

Another workshop on leadership and entrepreneurship development that specifically targeting women was organised for 496 female NFs, female lead farmers, and aggregators. Participants were sensitized on the basic entrepreneurial and leadership skills required to successfully lead and manage an OG business.

During the reporting period, four women rice processors from Aframso, Ejura and Adeambra in the Ashanti Region invested in the supply of four MT of Jasmine 85 Seed worth GHS 10,948 (US $2,943) for 238 smallholder farmers in Lonto North, Lonto South, Bulakope, Kabeso, Jalai and Vuvukope in the Kpandai district of Northern Region. The processors were repaid in-kind and they also bought the remaining paddy from the smallholders.

A total of 117 women were also sensitized on agricultural policies in Ghana, while 674 were trained in SMFM, 6,709 in FaaB, and 5,449 on numeracy skills. Following the FaaB training, some FBO groups who were male dominated started membership mobilization to bring in more women.

In Gindabour, one of the numeracy training participants indicated that her motivation for participating in the numeracy class was to improve her math skills in order to function more effectively in her daily life and in business. She also mentioned wanting to improve her ability to read the weighing scale to measure produce, keeping records of her investment, and other business transactions.

"We didn't see the need to save as a group, but after the FaaB training we have each started contributing GHS 1 every two weeks. It is our hope that these contributions will help us to take care of our children," said Amoi Kwesi Grace of Tumbo, Saboba.

The project promoted women-led demo sites as well, and nine women NF and lead farmers hosted crop demonstrations on soybean, maize and rice fields during the year. The demos were well managed and had high participation by farmers during field trainings. Through the establishment of these demonstrations, women gained a practical understanding of the investments required to improve their yields and the quality of their produce.

Diare women rice farmers:

"In the past, what we knew was the broadcast method for rice planting. This approach is wasteful as we use more seeds and harvest less. With the broadcast method, weeds over grow the rice. It is difficult to hand pick weeds from the rice, so weeds end up competing with rice for nutrients resulting in low yield".

"The transplanting method might initially be time consuming and labor intensive because of the amount of time required to nurse and transplant. But the time spent in the initial process is compensated for in subsequent stages. We will also plan to provide communal labor for our members".

Under the grants program, four women's groups invested in 20 tarpaulins, three shellers, two bullock ploughs, donkey carts, and a weighing scale. Three female OBs also each acquired one new John Deere tractor. They indicated that they were now able to access ploughing services more timely because they have control and decision-making power on the use of the equipment. They also mentioned being able to plough or provide transport services to both male and female farmers when they finished working on their own farms.

5.1.4 Women VSLAs and access to financial services

The project has continued to progress in facilitating women's and men's investment in their livelihoods through Village Savings and Loans Associations (VSLAs). During the reporting period, ADVANCE held networking and sensitization sessions with partners and target beneficiaries. Data on locations where VSLAs existed was shared by partners and the project team mapped out locations with VSLA in the regions where ADVANCE could intervene.

Seventeen groups of about 425 members, mainly women, from the Northern Region and Kintampo North district were trained with support from Sung Foundation and Concern Universal. Participants were taken through group dynamics, drafting and adoption of a constitution, savings, borrowing, repayment, and share out at the end of each cycle. Each group received a VSLA box, membership cards and relevant documents to facilitate their operations. The groups have saved up to a total of GHS

29,113 (approximately $7,826[13]) with a total of GHS 1,810 (approximately $487) taken as a loan for the purchase of inputs (fertilizer, weedicide and seed) for minor season production in the Kintampo North district.

> *"Through my participation in the Village Savings and Loans Association (VSLA), which was introduced by ADVANCE, I have benefited a lot. If I want to talk about the benefits it might take the whole day but, very remarkable is the fact that as a woman it has been difficult for me to own more than 1 acre of land due to input challenges. However, through my participation in the VSLA, I was able to secure GHS 320 (approximately $86) in addition to my own savings which enabled me to purchase 5 bags of NPK and 2 bags of ammonia. Because of this money I have been able to increase my land size from my previous 1 acre to 2 ½ acres of maize. Though the rains have not been good this year you can see my crops are still looking healthy. I am not expecting less than 30 maxi bags from this farm. I thank God and ADVANCE for this intervention."* Akosua Kewa of Cheranda, Kintampo

In addition, Sinapi Aba Trust approved an input credit loan for $30,813.47 for 306 women smallholder farmers in Diare and Nabogu working with the Busaka Agribusiness Centre in the Savelugu/Nanton district in the Northern Region. The loan will cover supply of seeds, ploughing, fertilizer and agrochemicals to cultivate 130 acres of soya, maize and rice. The women will also invest 50 percent of the loan in aggregating produce to improve the livelihoods of 130 households with more than 650 children and also to diversify the risk associated with the loan repayment.

5.1.5 Women's access to information and communication technologies

To aid the process of increasing women's access to information, ADVANCE organized a gender sensitization training for 21 radio station staff. This training led to the development of plans that were sensitive to the information needs of women and children along the value chains. Consequently, topics incorporated into the plans include: land access for women, celebrating women by hosting women on special shows on international days and rural women's day, and protecting women and children from dangerous chemicals, etc. More than 217 listenership clubs, largely made-up of female members, were also established.

The project also raised awareness among women that even simple and cheap mobile phones are useful business tools of which to invest. As a result (as mentioned in section3), 839 women received daily weather information and/or weekly marketing information through their mobile phones. Access to this information was promoted through women's groups and radio jingles.

[13] At the rate of $ 1= GHS 3.72 (Bank of Ghana rate of September 30, 2015)

5.1.6 International Women's Day

This year's International Women's Day (IWD) was celebrated in Binaba in the Upper East Region. The theme for the day –*Women: making it happen in agriculture* –was adopted from the global theme. Chief Moses Abare and the Binaba Women's Association hosted the program. The event attracted about 300 people, approximately two thirds were smallholder women. Other dignitaries from the District Assembly and MoFA also attended.

Picture 18: Cooking competition in Binaba

The day was used to highlight the contributions and celebrate the successes of women along the value chain. In line with the theme, the event was used to raise awareness on what women were already doing and to draw attention to the challenges faced by women who want to increase their production. Chief of Binaba, Moses Abare, recommitted himself to supporting women "to make it happen in agriculture". The women were inspired most by the experiences shared by Hajia Teni, a female NF from Pwalugu, and Janet Ali, a women's group leader from Nakolo. The event was sponsored by private sector companies including MTN and a local input dealer.

NF John Mulnye, seeing the benefits of celebrating IWD in the past, organized 200 women OGs from five communities to celebrate the day. The programme was focused on raising awareness on the importance of women's access to land and why men should support their wives and other female community members to access land for productive activities.

5.2 Environment Support

The project activities under this component focused on ensuring the compliance of project activities with Title 22 of the Code of Federal Regulation, Part 216 and improving agrochemical management and demo plots among smallholder farmers and agrochemical dealers.

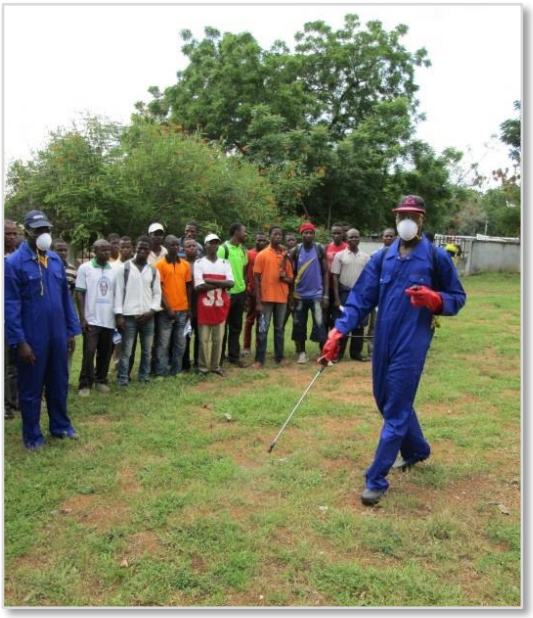
5.2.1 General environmental compliance

PERSUAP update and implementation

In line with the requirements of regulation 216 – Part 216.3, the project completed and submitted a Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP) to USAID. A total of 21 active ingredients effective for the control of field and storage pests in maize, rice, and soya, are recommended for use by project beneficiaries. These ingredients are made of eight insecticides, two fungicides, and 11 herbicides. Ten safer-use actions have been identified.

As a first step to implementing the PERSUAP, the project's APOs were trained on how to train and advice farmers. As a result, 9,567 smallholder farmers (of which 53 percent were female) were trained in safe agrochemical handling and application as part of GAP trainings.

Pesticide use monitoring was conducted for 224 farmers who hosted demos. The purpose of the monitoring exercise was to determine the extent to which farmers have adopted safe pesticide use practices. The outcomes will inform training topics recommended in the next PERSUAP review and will identify farmers' training needs.



Picture 19: MOFA official demonstrating how to pace when spraying with glyphosate

Environmental review of grant applications

Thirteen tractor grant applications were reviewed. Except for the applicants' own farms, the plot sizes to be ploughed for OGs are small (approximately one hectare each). Runoff effects are not expected to be significant. Most of the farms to be ploughed were not located close to major rivers where siltation could be a concern. The following are a summary of mitigation actions recommended for the various tractor grant applicants:

a) Ensure tractor operators receive appropriate training and are licensed before operating the tractor.
b) Where a farm is located on a slope, ploughing should be done across the slope.
c) Farms that are located near streams (distance of 20 meters or less) should maintain a vegetation strip of at least five meters to minimize runoff into the stream.

One grant application was reviewed for the Tamale Presbyterian Senior High School 4-H Club. To safeguard the environment and the health of students, the following mitigation actions were recommended.

(i) Storing manures for at least two weeks to reduce pathogen load
(ii) Use of appropriate personal protective equipment such as knee boots, hand gloves, nose masks, and overall dresses while handling animal waste
(iii) Maintain grass strips around the garden fence and in between beds
(iv) Only approved active ingredients from the ADVANCE approved PERSUAP list should be used
(v) Pesticide application done early in the morning leaving a buffer of at least five meters to the fence of the garden
(vi) ADVANCE Environmental Specialist will supervise pesticide application
(vii) No student shall take part in pesticide application

The last grant application review was for the Ghana Agriculture Insurance Pool (GAIP). GAIP sought to conduct farmer sensitization training and education in its operational areas, and to expand its

marketing centers in Northern Ghana. The environmental screening for these activities indicated a very low environmental risk potential. Therefore no mitigation actions were required.

Training of spray service providers

This year, 121 Spray Service Providers (SSP) were trained on various topics, including:

- General policies on pesticides in Ghana
- Pesticides handling
- Effects of pesticides on health
- Hazard levels of pesticides
- Label advice
- Purchasing and transportation of pesticides
- Storage of pesticides
- Calibration
- Preparation and application
- After application
- Containers and obsolete products
- First aid
- Uses of pesticides
- Uses of personal protective equipment

5.2.2 Improving agrochemical management

Development of outreach contents

Three radio jingles were made with the aim of educating farmers on safe use of pesticides, proper disposal of pesticide containers, and protection of women and children during pesticide application. The three jingles were developed in various local languages and aired on eight radio stations. It is expected that they will greatly influence farmers' attitudes towards pesticide application and will reduce environmental contamination and human poisoning.

Also, in collaboration with ATT, training materials were developed on safe pesticide use, storage, transportation, and application. There were 13 specific topics. These training materials have been used in collaboration with the EPA and MoFA to train farmers, input dealers and spray service providers.

Figure 16: Safety system contents

Improving safety in agrochemical shops

Safety assessments were conducted for 10 agrochemical shops and safety management systems developed with them. The contents of each safety system revolved around the general themes shown in Figure 16.

5.2.3 Smallholder farmer adaptation and resilience to climate change

A core aspect of our approach to CSA is to promote the use of cover crops to improve soil structure, minimise nutrient loss due to erosion, and to improve soil organic matter content. In addition to the CSA activities mentioned in section 5.1.3., ADVANCE developed an anti-bushfire radio jingle in seven local languages and aired them on eight radio stations. The anti-bushfire message targeted farmers, game and honey hunters, and cigarette smokers and warned everyone who used fire to be cautious and to prevent fires from getting out of control.

5.2.4 Climate smart and water management

Check dam study

Check dams are relatively small reservoirs constructed across a water-course by creating a barrier that impounds water. In Ghana, check dams are classified as small reservoirs and dugouts. Dams generally serve the primary purpose of retaining water for various uses including: irrigation, human consumption, fish farming, and watering of livestock, etc. They also help in suppressing floods and reducing erosion. Small dams may be created from gravel pits during road construction, and are often found along highways.

In order to better understand the state of dams and how they might contribute to the objectives of ADVANCE especially during the off-season, 69 dams were assessed to determine the volume of water they hold, current uses with particular emphasis on the amount and nature of irrigation practices. Six dams were recommended for improvements: two in the Upper West, three in the Upper East and one in the Northern Region. The specific recommendations include: fencing of irrigated area, fixing dam valves, and dredging. These recommendations will be reassessed before action is taken in the coming year.

Mole boundary community study

Mole National Park is the largest and most developed national park in Ghana, and is famous for its elephants. It's primarily located in West and North Gonja Districts. There are 33 boundary communities that are all within five kilometers of the park boundary line. Locating farms so near protected areas creates environmental concerns.

Picture 20: Meeting with the Mole Park management team

ADVANCE conducted an assessment on the best way to work with boundary communities to encourage commercial activities that would protect the park's natural resources. The study, which combined community and institutional consultations, analyzed opportunities for ADVANCE to engage the communities based on: agricultural production, market access, capacity development, and environmental considerations. Communities were classified into three groups: eastern corridor, western corridor, and southern boundary. The study concluded that a possible entry point would be in the eastern corridor based on ease of access and presence of aggregators in some key communities. A key environmental consideration is to determine a minimum distance from the park boundary for locating farms to reduce impact on biodiversity conservation, and also minimise the incidence of crop raiding by wild animals from the park.

5.3 Grants Program

This year, the project committed $353,621 to the procurement of agricultural equipment for project beneficiaries. An additional $312,485 was used to procure tractors and accessories for 13 NFs under a matching grant scheme.

Innovation and Investment Incentive Grants (I-3)

ADVANCE supported 13 NFs with tractors and agricultural equipment to aid in timely land preparation for their OGs. The project paid 70 percent of the cost of the tractors up front, with the beneficiaries paying the remaining 30 percent.

ADVANCE has pursued an innovative strategy that builds NFs into effective businesses to meet market requirements for the three commodity value chains. Good record keeping and financial management systems have been identified as major constraints to most OBs in Ghana. To address these constraints, ADVANCE has procured and distributed 60 laptops and printers to selected NFs, together with custom software for tracking services and sales.

Table 27: Summary of distributions

Equipment Type	Northern Region	Upper East Region	Upper West Region	South Regions	Total
Tractor and implements	4	3	3	3	**13**
Laptop and printer	18	16	17	9	**60**

Radio sets for Listenership Clubs

To facilitate information dissemination, 1,000 radio sets were procured for distribution to more than 200 listenership clubs, comprised mostly of women.

Small Equipment Grants (SEG)

The Small Equipment Grant (SEG) scheme is being used by the project to fast-track access to simple, low-cost, but effective agricultural technologies and equipment for farmers to aid in production and harvesting. Under this scheme, farmers are supported through a cost share module to procure various equipment by paying only 30 percent of the equipment cost and the project paying the remaining 70 percent. The type of equipment, number of beneficiaries, and value of the equipment purchased during the year is outlined Table 28 below.

Table 28: Small equipment grants provided

Type of Equipment	# Beneficiaries	# Equipment Awarded	ACDIVOCA Contribution	Grantee Leverage	Total Value (GHS)	Total Value ($)
Multi-purpose shellers/threshers	56	56	573,370	245,030	819,100	227,528
Tarpaulins	102	230	136,850	58,650	195,500	54,306
Power tillers	2	2	25,200	10,800	36,000	10,000
Reapers	1	1	3,780	1,620	5,400	1,500
Complete ploughs	5	5	28,853	12,151	41,004	11,390
Laptops and printers	60	60	168,532	N/A	168,532	46,814,44
Planters	1	1	5,250	2,250	7,500	2,083
Total	227	355	941,835	330,501	1,273,036	306,807

Local Partnership Grants (LPG)

The Ghana Agricultural Insurance Pool (GAIP) continued to run its program to increase the sale of drought-indexed insurance by its marketing officers with support from this project. The project obligated $60,000 for this activity for a year.

The project continued to support the Ghana Grains Council (GGC) to ensure the continuous success of the WRS program. The GGC's implementation strategy is to scale up aggregator/OG models that incentivize smallholder upgrading by: strengthening vertical linkages between buyers (aggregators) and suppliers (OGs); developing the capacity of aggregators to provide financial, post-harvest and capacity building services; and ensuring incentives for upgrading all along the chain. This is expected to increase incomes for value chain actors, including smallholder farmers. Upgrading will include the adoption of grades and standards, expanded certification of a large number of warehouses, further development of the warehouse receipt system, and other forms of value chain finance. A grant of $350,000 has been approved for GGC's activities for the year starting from July 1, 2015.

5.4 Public Relations and Communications

The Public Relations & Communications (PR&C) group continued to ensure visibility of the ADVANCE Project and USAID, and highlighted the project's activities, progress, impact and successes.

Bi-weekly bullets

During the reporting period, 39 informational bi-weekly bullets were submitted to USAID. The bullets outlined USAID/ADVANCE's key activities, results, and when possible, impact.

Success stories

Eleven "Telling our Story" and personal interest stories were submitted to USAID during the year.

The following four of the 11 stories have been published on the ACDI/VOCA website:

- Greater Access to Land for Women Farmers in Ghana
- Weather Apps Gives Farmers in Ghana Timely Information
- New Technology turns Mobile Phone into Mobile Wallet in Ghana
- Scaling up Private Sector Investment in Value Chains in Ghana

Link to the stories:

- http://www.acdivoca.org/site/ID/success-ghana-weather-app-gives-farmers-in-ghana-timely-information
- http://acdivoca.org/our-programs/success-story/greater-access-land-women-farmers-ghana
- http://acdivoca.org/our-programs/success-story/advance-ii-promotes-mobile-money-convenient-safe-financial-option-farmers.
- http://acdivoca.org/resources/newsroom/news/scaling-private-sector-investment-value-chains-ghana.

Quarterly newsletter

Four quarterly newsletters illustrating USAID/ADVANCE's continued support and impact were published and distributed in both electronic and printed form to more than 1,000 people including partners, clients and actors involved in the project.

N2Africa shared the June 2015 edition of the ADVANCE Newsletter in the N2Africa Podcaster 31. Link to the story:
http://www.n2Africa.org/sites/n2Africa.org/files/images/images/advancejune2015newsletter.pdf

Building up project photo database

The project involves taking and storing high quality photos by trained staff as well as a Peace Corp Volunteer assigned to the project. Four out of 30 photos submitted to ACDI/VOCA's 8th Annual Photo Contest held in March 2015 won awards including: the grand prize, 1st runner up, and two honorable mentions. All photos showed the project in action and demonstrated the project's activities and impact in the field. The link to the winning photos is at:

Picture 21: Winning photo

http://acdivoca.org/resources/newsroom/news/photo-contest-2015

ACDI/VOCA used three of our project photos in the 2014 Annual Report; including one on the report's cover page.

Building public awareness

ADVANCE involved the media (electronic and print) at some project activities to raise public awareness of its project support, progress, accomplishments and impacts. Media coverage for some of the activities are listed below:

- A story on the USAID/ADVANCE GAMSAP promotional event held in Kumasi published at: http://thebftonline.com/content/%E2%80%98support-efforts-combat-food-security-threat%E2%80%99
- A story on the USAID/ADVANCE – GAMSAP promotional event in the Wednesday, 18 – Thursday, 19, March 2015 editions of the Business & Financial Times page 29 (See attachment)
- A story on the USAID/ADVANCE – GAMSAP promotional event in the Tuesday, March 10, 2015 edition of the Daily Graphic page 3 (see attachment).
- A story on the celebration of the International Women's Day in the Wednesday, March 18, 2015 edition of the Daily Graphic page 13 (see attachment).
- A story on the Fifth Annual Northern Ghana Pre-season Networking and Planning Forum published at :
    - m.peacefmonline.com/pages/news/social/201504/237458.php
    - www.youtube.com/watch?v=aRtq_qcCDXA
- A story on a field day held by the project at Kobeda and Nsoatre in the Brong Ahafo Region was published at:

http://www.ghanaweb.com/GhanaHomePage/business/artikel.php?ID=361568&comment=0#top

- The story's print version was published in the Monday, June 8, 2015 edition of the Business & Financial Times page 3 (See attachment)

- A story on "13,000 farmers to benefit from Yara and USAID/ADVANCE Partnership" was published in the following newspapers:

  i. Business & Financial Times, August 5, 2015, page 7
  ii. Ghanaian Times, August 5, 2015, page 27
  iii. Daily Graphic, August 10, page 45
  iv. The Finder Newspaper, August 11, 2015, page 4
  v. The Ghanaian Times, Friday October 2, 2015, page 27

Links to electronic publications:

Publication: Joy Fm - Date: 6th August, 2015
Link: http://www.myjoyonline.com/business/2015/August-6th/farmers-to-benefit-from-yara-and-usaidadvance-partnership.php

Publication: Ghanaian Times Online - Date: 6th August, 2015
Link: http://www.ghanaiantimes.com.gh/farmers-to-benefit-from-yara-usaid-partnership

Publication: Ghana News Agency - Date: 6th August, 2015
Link: www.ghananewsagency.org/economics/farmers-to-benefit-from-yara-usaid-partnership-92839#.VcPlogLL-Oc.gmail

Publication: Rite FM - Date: 6th August, 2015
Link: http://ritefmonline.org/farmers-to-benefit-from-yara-and-usaidadvance-partnership

Publication: News Ghana - Date: 6th August, 2015
Link: http://newsghana.com.gh/13000-farmers-to-benefit-from-yara-and-usaidadvance-partnership/
http://www.ghanaweb.com/GhanaHomePage/regional/Smallholder-farmers-schooled-on-fertilizer-application-385333

Videos: Three video productions on the "Pre-harvest event", "Connecting farmers to markets" and "Smallholder female farmers from Yaro accessing credit" have been developed depicting project work and achievements.

6 Monitoring, Evaluation, and Learning

This FY15, ADVANCE focused on the rolling out of new databases, finalizing the baseline surveys, conducting annual surveys and launching the learning research activities. In addition, the project successfully went through its first data quality assessment by the USAID project Monitoring and Evaluation Technical Support Services (METSS). Routine activities such as profiling, data collection and verification were ongoing as well.

Knowledge management and learning (KML)

Picture 22: KML forum in Upper West Region

Since the setup of the regional knowledge management and learning (KM&L) system in the latter part of the second quarter of fiscal year 201515, one KM&L topic per region has been selected by the field team. For the Northern Region the topic was, n "Reasons contributing to very low or near non-existence of female smallholder and NFs", while the Upper West Region chose the topic, "How does the absence of weighing scales affect aggregator profits and farmer losses during produce sales?" The findings were presented to the staff during the annual planning meeting in Tamale and to the regional stakeholders and partners in September. The findings were also presented to 36 participants from other stakeholder organizations in two separate regional forums in Northern and Upper West Regions. The participating organizations in the Northern Region included: WFP, ACDEP, Agricultural Sector Working Group, Mennonite Economic Development Associates, radio stations, MoFA, ATT, and OBs. Smallholder farmers participated in the Upper West forum.

The participants appreciated the results and called for more collaboration and efforts to share the findings of the learning activities.

The Upper West Region assessment showed that on average, maize female farmers lose 17 percent of sales by not using scales estimated at GHS 204 ($54)/ MT sold), while males lose 12 percent of sales amount valued GHS 144 ($38). For soy, female farmers lose 16 percent or GHS 326/MT ($86) while males lose 10.3 percent or GHS 206/MT ($54). Surprisingly, rice farmers gain by not using scales: females gain 5 percent and males gain 1.75 percent.

As part of the learning exercise, the area data collected during the FY14 gross margin survey was analysed to assess the feasibility of using a correcting factor on farmers' reports of their farm sizes, rather than undertaking the full mapping exercise. The findings clearly show that:

- Farmers' estimates of area are inaccurate for the project's beneficiaries as outlined in Table 29 below.
- It is impossible to get a precise correction factor.
- ADVANCE will have to continue using GPS to determine the size of farms for the gross margin survey.
- Educate farmers to use the rope and compass method to measure area as an alternative. Area is a key factor for determining optimal inputs to apply on the farm, for calculating yields, and for optimizing gross margin

Table 29: Percentage of difference between GPS and farmers' estimates of farm area

Crop	Female	Male	Total
Maize	36.93%	5.11%	19.59%
Rice	80.24%	26.56%	49.31%
Soy	12.70%	9.57%	11.04%
Grand Total	42.20%	14.68%	27.04%

Another learning activity conducted this year was the analysis of the 1960-2014 rainfall data and its impact on yield. The findings are summarized under Section 7 of this report.

ADVANCE is collaborating with the Grameen Foundation to conduct a qualitative study on the, "Behaviour change of smallholder farmers towards the application of improved technologies." Ideas42, Grameen's partner for this activity, visited the farms and farmers as well as OBs in the north and south and collected data in September. The report from this study is expected in early 2016.

Data quality assessment

The project went through a Data Quality Assessment (DQA) by USAID/Monitoring and Evaluation Technical Support Services between May 28 and June 6, 2015. Selected indicators included: gross margins, training data, loans, and private sector investment. The DQA team visited several OBs to assess the level of record keeping, the processes, and the relationships between OBs and smallholders. The DQA team expressed satisfaction with the quality of the project's data and the achievements. The team made recommendations to further improve the monitoring and evaluation system during their debriefing. The project team has since begun implementing the recommendations while awaiting the final DQA report from the USAID/METSS.

Picture 23: DQA team interacting with NFs in Janga (NRR)

Data verification

During FY15, three data verification exercises were conducted at the four regional project offices. The exercises ensured that uniformity, consistency, and adequacy of project data existed in all offices while adhering to the ADVANCE data quality strategy. The databases being run by ADVANCE allow regular data verification between the office in Accra and sub-offices as well as within sub-offices in real time.

Annual survey on gross margin and application of technology

Collection and analysis of the gross margin data of 1,200 smallholder farmers for the FY14 production season was completed during the first quarter of FY15. Results of profitability and the hectare under improved technology of beneficiary maize, rice and soy farmers for FY14 are available and stated in this report.

Picture 24: Enumerator demarcating a soy farm

During the last quarters of this year, the project conducted the FY15 gross margin survey on a representative sample of 3,200 maize, rice and soy smallholder farmers, 800 of which are from the south zone. The annual survey collects data on production costs, technologies applied, and yield of direct smallholder farmer beneficiaries among others. The data is used to compute a farmer's gross margin and to determine the extent to which improved technologies influence yield. The sample was randomly selected at 95 percent confidence and used a 5 percent margin of error with a 10 percent non-response rate. The exercise, which is conducted in two phases (farm mapping and yield estimation), started in June for the south and in August for the north due to the variation in production seasons. Both phases have been completed in the south, while the north will start the second phase in November to collect yield data. The survey also collected information on four parameters used to compute the women empowerment in agriculture index (production, income, resources and leadership) among female-sampled farmers. The findings on the gender parameters will help assess the extent to which female beneficiaries are being empowered.

Baseline

The final reports of the ADVANCE northern Ghana and the south baseline surveys were concluded and shared with USAID. Based on the findings from both studies, the project submitted a request for approval to USAID of the revision of some indicators in the draft M&E plan submitted earlier.

Databases

The project uses three interlinked databases to store, analyze, and share data: a Microsoft SharePoint database, a Data Capture Interface (DCI), and Sales Tracker that were developed specifically for ADVANCE and its beneficiaries. The DCI uses smart cards for storage and fast entry of data, and allows unique identification of each beneficiary. All three databases were finalized and rolled out during the year. All staff involved in data management were trained on their use. To date, the project has enrolled and distributed over 42,000 smart cards to smallholder beneficiaries to enable us to track the services and training that they receive as a result of the project's interventions.

Capacity building

The ADVANCE project collected large volumes of data in FY15 which included: farmer profiling data, investment data, gender, gross margin, and data from several other special studies across project areas with the help of interns and enumerators. In view of the volumes and time constraints, ADVANCE trained over 115 undergraduate and graduate students on questionnaire administration, GPS handling, use of moisture meters, harvesting and estimation of yield, the OB sales tracker management system, and use of the database capture software. Several in-house trainings were conducted for staff on the usage of the new database (DCI) and on the monitoring and evaluation system in general.

During the year, 57 OBs and their field managers as well as 25 agribusiness students from the University for Development Studies were trained on the use of the NFs sales management system developed by the project. These students acquired knowledge, skills, and experience that provided them with other job opportunities in ADVANCE and elsewhere.

In addition, five members of the ADVANCE M&E team participated in a two-day training workshop organized by USAID/METSS in July, which gave the team the platform to share best practices among the FTF projects. Also, the M&E Coordinator served as a resource person in a two-day training program on the gross margin survey and crop cut procedures for the ATT M&E team.

Profiling

Profiling of beneficiaries is the first key information collected about any farmer before any intervention or service is provided. In FY15, the project collaborated with new and existing OBs to profile 45,415 new smallholder farmers (of whom 48 percent are women) who expressed interest in joining the program. To date, the project has profiled 82,535 smallholders (out of which 45 percent are female), 283 NFs, 72 aggregators, 32 input dealers, and five processors.

Table 30: Number of smallholders profiled to date

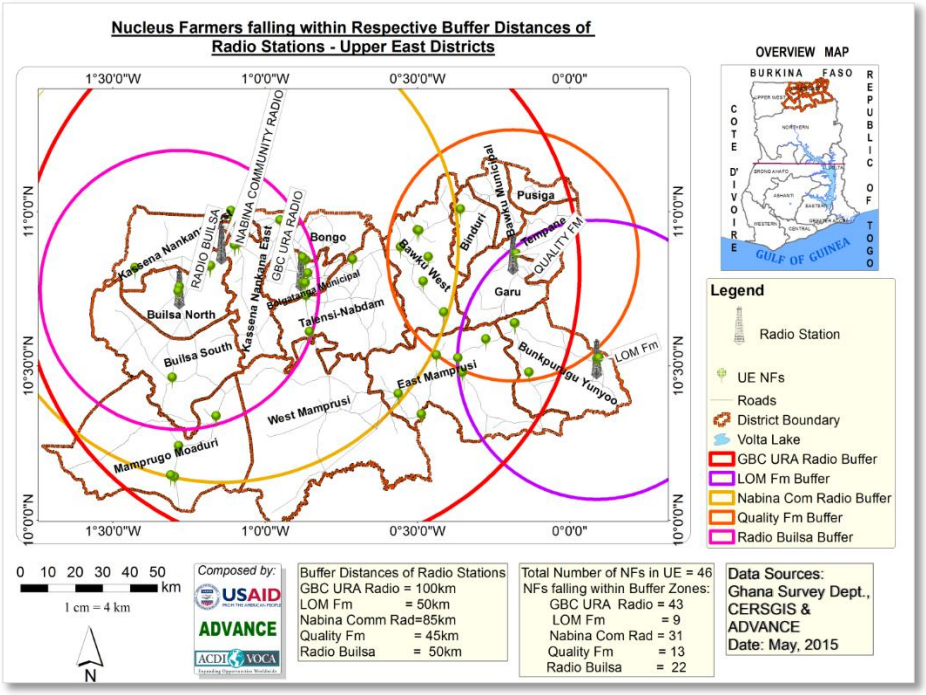
Office	Female	Male	Total
Ashanti	1,457	4,091	5,548
Northern	13,082	18,459	31,541
Upper East	11,018	11,376	22,394
Upper West	11,563	11,489	23,052
Total	**37,120**	**45,415**	**82,535**

Geographic Information System (GIS)

During FY15, 80 maps were produced for the team and partners. They helped the team to accomplish the following activities:

1. Choose the locations of demonstration plots and consider enhanced agronomic interventions for those that fell in “moderately suitable”, “marginally suitable” or “unsuitable” soil classifications
2. Locate where to set up listenership clubs with the radio listenership maps that showed the OBs and communities outside the reach of the radio stations
3. Implement the gross margin surveys: the base maps produced and given to all the enumerators and field team allowed them to self-locate
4. Conduct the check dam surveys and locate areas that could be suitable for irrigation

Figure 17: Map of partner radio stations in Upper East



In addition, 30 members of staff and 73 enumerators were trained on the use of GPS to record coordinates and demarcate and measure farm sizes for the gross margin survey exercise.

7 Challenges

7.1 Suspension of Provision of Hybrid Seeds by Pioneer

The project promotes the use of Pioneer hybrid seeds which has the potential to significantly increase farmers' yields. This strategy is primarily implemented through collaboration with DuPont Pioneer, which co-finances that component of the project through a GDA with USAID. The training and sensitization activities resulted in an increased demand for the hybrid seeds by farmers. In the South, more than 5,000 farmers are interested in and demanding these seeds. However, Pioneer and its local agent, Dizengoff, have not been able/authorized to continue importing the seeds into Ghana because of the local seed laws and regulations.

Consequently, the country has run out of stock of Pioneer hybrid seeds and the project is unable to meet the farmers' demand. This may harm the adoption of hybrid seeds by the farmers and negatively impact their yields. It may also affect the reputation of the project with its beneficiaries and partners.

To address this issue, several high level meetings have been held between Pioneer, Dizengoff, USAID and MoFA. ADVANCE hopes this issue will be solved by the end of this year and seeds made available to the farmers by early next year for the cropping seasons.

7.2 Late Decision on Fertilizer Subsidy

The national fertilizer subsidy program is a policy intervention introduced by the government in 2009, to enhance food production and food security in Ghana. Under the subsidy each farmer is entitled to three bags of fertilizer per acre and a maximum of 15 bags (to cover five acres) as recommended by MoFA, and is to be distributed through a voucher system.

In March 2015, the Minister of Agriculture announced a 21 percent subsidy on fertilizer. However, the subsidy was not implemented in a timely manner. This created uncertainty and may have influenced farmers' decisions on both the quantity and timing of fertilizer purchase, which ultimately could undermine their yield.

As a temporary measure, ADVANCE used the pertaining market price of fertilizer in determining the real cost of production for maize and rice in developing crop budgets for the farmers. This way, they were prepared for the zero subsidy scenario and have likely acted accordingly.

7.3 Erratic Rainfall

This year, the rainfall was more erratic than in previous years. The rains came late in the South, delaying the start of the major crop season by several weeks. This significantly impacted the maize crop and will certainly affect the smallholder's gross margins. Similarly, the rainy season started late in the North, with likely the same consequences. To mitigate the resulting uncertainty, the project promotes the purchase of agricultural insurance. In addition, subscriptions of beneficiaries to the Ignitia and Esoko weather information SMS platforms were promoted.

An analysis of the rainfall data over the last four decades shows changes in the annual rainfall quantity. The most significant changes are in the monthly rainfall patterns over the years, making it more unpredictable from one month to the other.

Figure 18: Annual rainfall in the north

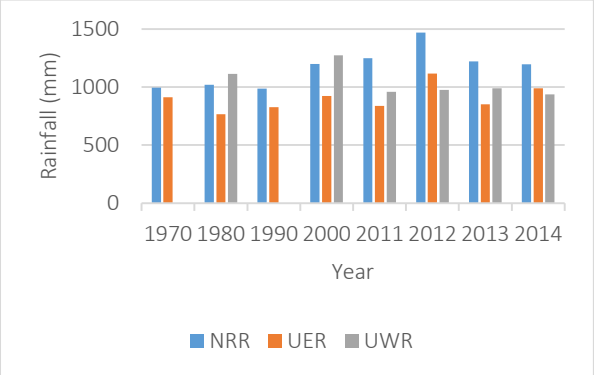


Figure 19: Annual rainfall in the south

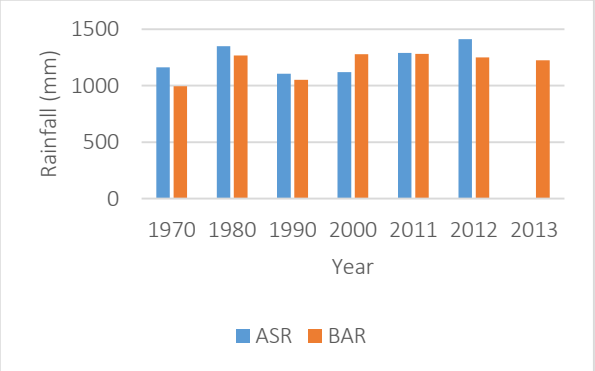


Figure 20: Monthly rainfall over the years - north

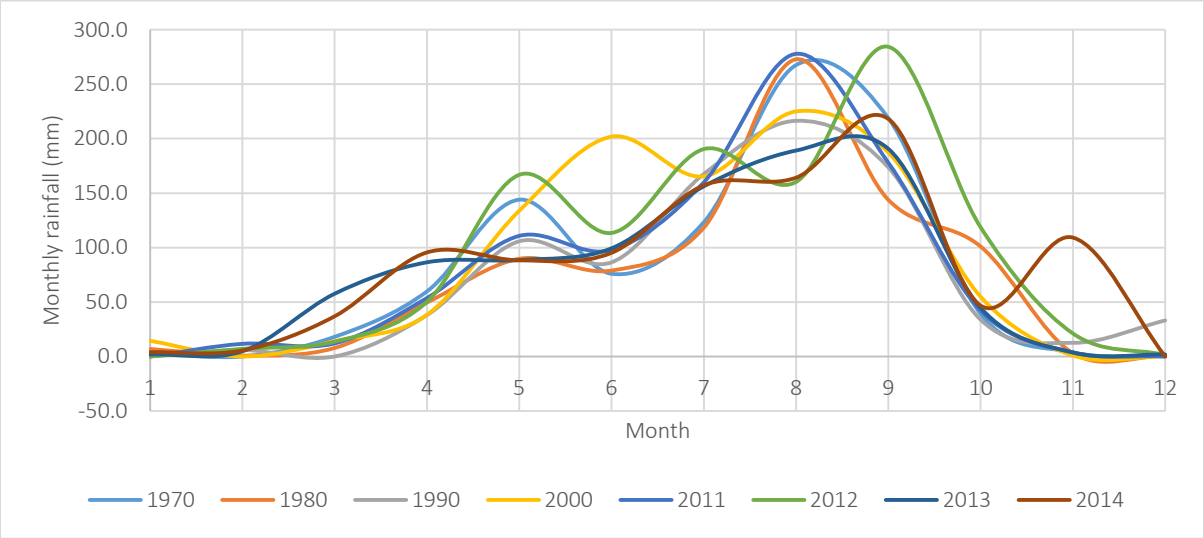
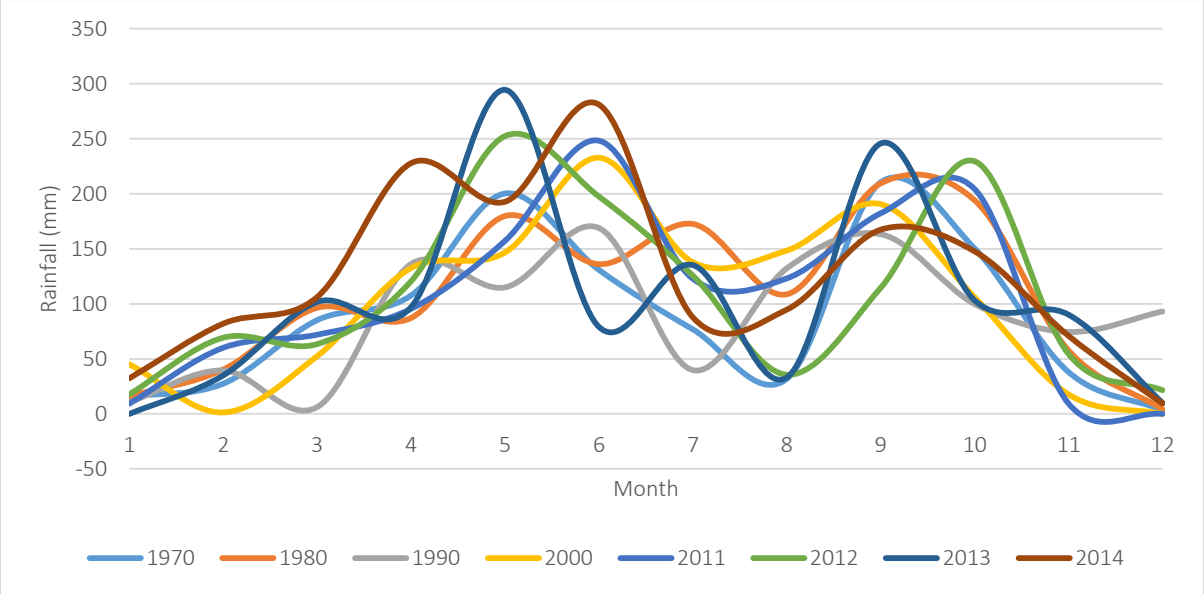


Figure 21: Monthly rainfall data - south



The analysis also indicates a strong correlation between rainfall and maize and rice production. For example, a simple modeling of the Northern Region rice yield in MT/ha from MoFA (y), using the average monthly rainfall during the rice season (x) as independent variable gives an equation of y = 0.0045x + 1.4253, valid at more than 94 percent, showing the importance of the influence of rainfall on the yields. The project will conduct further analysis to determine the differences between the north and south, and for the various crops as well. The findings will be used to design strategies that can minimize the impact of such uncontrollable factors.

Annex 1: Indicator table

Indicator Source	Indicator Type	Indicator/Disaggregation	FY15 Target	FY15 Actuals	% FY Achievement	Comments
CI	OP1	Number of direct project beneficiaries	50,000	53,176	106.35%	
		Male	30,000	29,444		
		Female	20,000	23,732		
FTF	OP2	Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	400	487	121.75%	ADVANCE could support more input retailers than planned due to the collaboration with ATT. The project was compelled to support more OBs than planned to reach the targeted number of smallholder farmers as the average OG/OB was lower than expected
FTF	OP3	Number of individuals who have received USG supported short-term agricultural sector productivity or food security trainings	30,000	36,618	122.06%	More individuals were trained to catch up with last year' shortfall
		Male		17,540		
		Female		19,078		
FTF	OP4	Value of agricultural and rural loans	$800,000	$ 1,259,942.00	157.49%	Requests for loans by the project beneficiaries were more than expected. In addition, beneficiaries of matching grants funded heir 30% contributions through loans
		Male		$ 426,116		
		Female		$ 202,200		
		Joint		$ 631,625		

Indicator Source	Indicator Type	Indicator/Disaggregation	FY15 Target	FY15 Actuals	% FY Achievement	Comments
FTF	OP5	Value of new private sector investment in agricultural sector or value chain (US$)	$800,000.00	$ 1,033,466	129.18%	Investment was mainly to fund tractors and other machinery. More farmers than expected, among those who did not benefit from the tractor grant, decided to purchase tractors
FTF	OP6	Number of MSME including farmers receiving USG assistance to access loans	20,000	13,061	65.31%	Due to late decision by the Government on the fertilizer subsidy, the number of OGs the OBS give input credit to has diminished
FTF	OC1	Gross margins per hectare for selected crops US Dollar under marketing arrangements fostered by the activity (USD/ha)				This year maize price significantly increased, soyabean price also increased to some extent. In addition, a vast majority of FY14 beneficiaries (from which data has been collected) was carried over from ADVANCE 1. Almost all beneficiaries applied one or more improved technologies and practices, leading to a better yield, thus the higher gross margin
		Maize - Male	333	822.70	247.06%	
		Maize - Female	348	581.11	166.98%	
		Rice - Male	454	588.43	129.61%	
		Rice - Female	437	450.16	103.01%	
		Soy - Male	411	594.65	144.68%	
		Soy - Female	277	565.39	204.11%	
FTF	OC2	Number of hectares under improved technologies or management practices as a result of USG assistance	20,000	33,943	170%	From 2014 crop season. A vast majority of FY14 beneficiaries (from which data has been collected) was carried over from ADVANCE 1
FTF	OC3	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	25,000	36,452	145.81%	A vast majority of FY14 beneficiaries (from which data has been collected) was carried over from ADVANCE 1
		Male		21,290		
		Female		15,162		

Indicator Source	Indicator Type	Indicator/Disaggregation	FY15 Target	FY15 Actuals	% FY Achievement	Comments
FTF	OC4	Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) that applied new technologies or management practices as a result of USG assistance	150	483		As more OBs and input dealers than expected were trained and assisted, more of them applied one or more improved technologies and management practices
FTF	OC5	Value of incremental sales (collected at farm-level) attributed to FTF implementation	$6,780,000	11,426,774	169%	Maize price has significantly increased, in addition, maize quantity sold per farmer has almost doubled compared with baseline. For rice and soy, though quantity sold per farmer was significantly higher (especially for soy), average sales price was also significantly lower (especially for rice)
		Maize	$2,240,000	$10,664,952		
		Rice	$2,940,000	($40,072)		
		Soy	$1,600,000	$801,894		
FTF	OC6	Number of firms (excluding farms) or Civil Society Organizations (CSOs) engaged in agricultural and food security-related manufacturing and services now operating more profitably (at or above cost) because of USG assistance	30	28	93.33%	FY14 data. FY15 will be submitted in FY16 due to the unavailability of firms' financial data before April 2016
CI	OC8	Number of organizations/ enterprises identified as high potential for future awards	4		0.00%	Activities towards this indicator will start in FY16
CI	OP8	Number of organizations/ enterprises receiving capacity building support against key milestones	9		0.00%	Activities towards this indicator will start in FY16
F	OP9	Number of awards made directly to local organizations by USAID	4	0	0.00%	Activities towards this indicator will start in FY16

Indicator Source	Indicator Type	Indicator/Disaggregation	FY15 Target	FY15 Actuals	% FY Achievement	Comments
FTF	OP10	Number of Rural Households benefiting directly from USG interventions	25,000	48,050	192.20%	Unlike expected, the project targeted in average one person per households, which allowed it to get a better outreach
FTF	OP11	Number of vulnerable households benefitting directly from USG interventions	20,000	41,723	208.62%	Unlike expected, the project targeted in average one person per households, which allowed it to get a better outreach
FTF	OP12	Number of members of producer organizations and community based organizations receiving USG assistance	4,000	6,041	151.03%	This is due to the overachievement of the training target
FTF	OP13	Number of MSMEs including farmers, receiving Business Development Services as result of USG assistance	20,000	18,467	92.46%	

Annex 2: Success stories and case studies

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Input Credit Model Helps Increase Yield

A nucleus farmer studying the Nucleus Farmer Model that helps them provide agricultural services to smallholder farmers

Photo credit: Lauren Bell, Peace Volunteer assigned to

"All the smallholder farmers repaid their credit in full. That helped me greatly to repay the credit I accessed from Sinapi Aba Savings and Loans. I wish to extend this to many more of my smallholder farmers in other communities and I encourage other nucleus farmers to adopt this model. Thanks to USAID/ADVANCE for introducing the input credit model," said Alhaji Hussein Muhib, Outgrower Business Manager

The USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) project implemented by ACDI/VOCA and a consortium of partners – TechnoServe, Pab Consult and Association of Church Development Projects (ACDEP). The project is increasing agricultural productivity, market access and trade, and creating an enabling environment of the maize, rice and soybean value chains in northern and southern Ghana and benefiting 113,000 smallholders.

Improving yield requires that farmers have access to quality inputs such as improved seeds, fertilizer and other agro-chemicals in addition to adopting good agronomic practices. Limited access to quality agricultural inputs poses significant challenges to smallholder farmers in northern and southern Ghana who lack adequate capital to finance their production activities, resulting in low crop yields. To tackle this challenge, USAID/ADVANCE developed an input credit model to help large commercial farmers or Outgrower Business owners to provide needed agricultural inputs to smallholder farmers to improve yield.

The model starts with the project facilitating market linkages between the Outgrower Business (OB) owners and buyers. With his access to market, the OB owner finds it convenient to invest in his smallholder farmers from whom he can get the quantity and quality of produce needed for the end buyer. The investment involves providing his smallholder farmers on credit ploughing services, seed and fertilizer who repay him in cash or with produce at harvest. In case the OB owner requires credit for that purpose, the project facilitates the process by working with him to get the necessary documentation to access credit.

Through the model, OB owner, Alhaji Hussein Muhib, supported 108 of his smallholder farmers (75 males and 33 females) with soybean seed and fertilizer valued at GH₵20,000 (approx. USD5,405) accessed from Sinapi Aba Savings and Loans - to cultivate 43.2 hectares of soybean. With the adoption of good agronomic practices, the farmers increased their yield from an average of 0.5 mt/ha to 2.0 mt/ha representing 400% increase and higher than the national average of 1.3 mt/ha. "*Previously I used to get 0.5 mt/ha on my soybean farm. But as Alhaji supported me with seed and fertilizer, and trained me on good agronomic practices, my yield increased to 2.0 mt. With the current price at GH₵150.00 (approx. USD40) per 0.1mt, I am worth GH₵2,700 (USD730) after repaying my input credit of GH₵300 (approx. USD81). I have been farming for the past five years, I never knew there was fertilizer for soybean that could give high yields. My children will surely get new school uniforms*," said Sanatu Abdulai, farmer, Shellilanyili, Northern Region.

In the end, the OB owner satisfies the buyer by meeting the demand, with the quantity and quality produce from his smallholder farmers through his input investment in them.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Internship Program Provides University Students Valuable Work Experience

Some interns during one of their trainings

Photo credit: Adam Aronow Peace Corps Volunteer with the ADVANCE Project, Tamale

"I got the chance to gain real-world experience of the theoretical training I have had over the past years at the university. For example, as an agribusiness student, I learned income statements in school through imaginary figures and using templates. But during the internship with the ADVANCE project I had the opportunity of collecting and inputting real figures in preparing income statements for the nucleus farmers. I now have a professional outlook of myself and therefore I approach issues with a business focus. I am very grateful to the project," stated Ebenezer Ofori, a final year UDS agribusiness student.

Recently, it has been tough finding a job, especially when the job seeker has little real-world experience. Starting one's career with an internship can be the route to job experience.

The ACDI/VOCA-implemented USAID/ADVANCE project helps students at the University of Development Studies (UDS) in northern and southern Ghana gain experience through internships. The project provides work-study opportunities for students to apply their academic knowledge, which helps them enhance and/or develop new skills.

For the past five years, more than 100 students from UDS campuses in the three northern regions have interned with the project. The interns engaged in various assignments ranging from data collection and entry to assisting project beneficiaries with their farming operations.

Of his internship, 22-year-old Twum Barima says, "*The most beneficial part of my internship was being able to apply what I have learnt in the classroom to the actual field work and having a positive impact on people's lives. I am now convinced that I chose the right career path in the field of development work. I have mastered my experience in administrative procedures and computer skills, especially Microsoft Excel during data transcription into the computer. It was great to learn how people function within the organization and how they are well-knitted as a team to ensure efficiency. Above all, I have cultivated meaningful relationships with many project stakeholders and employees in the USAID/ADVANCE project.*" All interns engaged to date by the project have similar stories about the valuable, hands-on experiences they gained during their internships.

At the start of their internship, the project provides an orientation for the student-interns and trains them on the various tasks to be assigned. Usually, interns assigned to support nucleus farmers are trained in record keeping, tracking sales and farm budget, inventory management, input investment, and production records. They spend an average of six weeks with each nucleus farmer.

Not only do the interns gain valuable work experience, they also receive monthly allowances from USAID/ADVANCE to meet some financial obligations. "*In addition to gaining knowledge in the procedures of determining crop yield, gross margin, and profiling of farmers, the monthly allowances I earned helped me a lot to meet my basic needs as a young woman*," said Rafiatu Abdul-Rahman.

"*USAID/ADVANCE has the capacity to meet both human and financial needs of the individual and the country as a whole*," the students remarked during their review of the internship.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

CASE STUDY

Scaling up Private-Sector Investment in Maize, Rice and Soybean Value Chains

A DuPont Pioneer and Yara supported demonstration site in the Northern Region

Photo credit: ADVANCE Project, Tamale Office

"USAID/ADVANCE has taught us how to get quality fertilizer for our farms and also stop broadcasting seed which affect yields. I thank USAID/ADVANCE and Yara for introducing the fertilizer which will help us increase our yield, said Tuohatu Abubakari, maize farmer, Tibung.

The USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) project is led by ACDI/VOCA and implemented by a consortium of partners – TchnoServe, Pab Consult and Association of Church Projects (ACDEP). The project is supporting the scaling up of private-sector investment and involvement in the maize, rice and soybean value chains to achieve a greater degree of food security in northern and southern Ghana. The project is working with and encouraging private-sector players to directly engage maize, rice and soybean value chain actors for increased production.

Access to input such as seed and fertilizer is a significant challenge facing farmers in northern and southern Ghana. For this reason, USAID/ADVANCE is making efforts to ensure that such input are brought closer to its targeted 113,000 farmers to enable them access and apply the inputs appropriately to improve yields.

In the 2015 production season, two major private sector firms provided seeds and fertilizer to support the establishment of 130 demonstration sites across Northern Ghana.

Yara Ltd., a leading fertilizer supplier, invested GHS17,000.00 (approx.. USD4,570) worth of its YaraMila Actyva and Amidas fertilizer whiles DuPont-Pioneer provided 110 kg of hybrid seed (Pioneer 30Y87 & 30F32) estimated at over GHS5,200 (approx.. USD1,398). The two private sector partners went further to collaborate with USAID/ADVANCE to train 13,000 farmers on good agronomic practices as well as monitor the performance of the demonstration sites.

"*Previously, we used other fertilizer that did not ensure high yield so most of us were discouraged from cultivating the following year. The introduction of the YaraMila Actyva fertilizer has helped improve the maize quality. I look forward to harvesting good yields. I encourage other farmers to use the fertilizer so they can get more yields to improve their livelihood*," said Adamu Abdul Rahman, a farmer, Ticheli.

According to Yara Ltd.'s Commercial Manager, Sergio Godoy, the partnership with USAID/ADVANCE is to help smallholder farmers increase yields. "*Famers have concerns that fall within the remit of what we do and as good corporate citizens, not only do we feel obliged to help their cause but we are also hopeful that through initiative like this, we can change the fortunes of the rural farmers*," says Godoy.

Through this partnership, private sector firms have the opportunity to promote their products to farmers, increase sales and receive feedback to improve product design and distribution, establishing links to new customers in rural areas.

By encouraging such private sector engagement to invest in the maize, rice and soybean value chains, USAID is supporting an increased and sustainable value chain development.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Female Smallholder Farmer Succeeds Thanks to USAID/ADVANCE

Photo credit: ADVANCE Wa Office
Margaret in one of the plowed fields she supervised to be used as a demonstration plot

"Because of the yield I made in 2014 with the support of USAID/ADVANCE, my late husband's family has allotted me five acres to add to the five acres I already have and they are willing to add more land if only I am willing to accept it," testifies Margaret Tabla, a smallholder farmer in Bussie, in Ghana's Upper West Region.

Margaret Tabla, a 45-year-old widow and mother of six, is an outgrower farmer working with Outgrower Business [OB] Manager Augustine Sandow Ambotima. Margaret cultivates five acres of maize and three acres of soybeans. She started working with the first phase of ADVANCE project in 2012 and has since continued with the project's second phase.

Prior to joining ADVANCE, she recorded very low yields—an average of 0.1 MT/acre of soybean and 0.3 MT/acre of maize. The low yields were due to the poor agricultural practices she employed such as using farmers' saved seed, planting haphazardly, inappropriately applying fertilizer and other agro chemicals, among others. Margaret did not know about good agricultural practices.

With program support and training on good agricultural practices (row planting, use of certified seed, appropriate fertilizer, and the application of other chemicals); post-harvest handling; record keeping; numeracy; farming as a business; Sell More for More, and a women's leadership program, among others, Margaret has been empowered and now sees farming as a business. Her successes thanks to USAID/ADVANCE interventions including the following:

- In 2014, she increased her acreage from three to five acres of maize, which led to a corresponding increase in yield of 0.3 MT/acre to 1.04 MT/acre, earning her an income of GHS 5,200 ($1,330).
- Because of her adoption of good agricultural and other practices, Ghana's Ministry of Food and Agriculture deemed her the best female farmer in maize and soybean at the district level. As her award, she received a bicycle, wellington boots, a certificate of merit, and a machete. Margaret no longer has to walk long distances from her community to others to educate farmers on the need to adopt good agricultural and other practices in their farming activities; she covers the distances with her well-deserved bicycle.
- Margaret also serves as a resource on radio programs that educate farmers on good agricultural and other practices.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

Margaret's achievements have been recognized by OB Manager Ambotima, who is mentoring her to become an Associate Nucleus Farmer and ultimately, a Nucleus Farmer. Augustine has entrusted Margaret with many responsibilities: She now supervises the formation and education of farmer groups, provides extension services to Ambotima's other outgrowers, supervises the activities of the OB's tractor operators as well as monitors and supervises the operations of the Village Savings and Loan scheme that includes 82 groups in 11 communities. The Village Savings and Loan concept allows smallholder farmers to save together and then take small loans from the savings, thereby providing simple savings and loan facilities to make up for the limited access to formal financial services in such communities.

"Margaret has worked so well and hard that now I assign her to represent me at meetings and perform a lot of my duties as a nucleus farmer for me," says Ambotima. Margaret's good work has also been recognized in the Bussie community. The opinion leaders, including the community

USAID | GHANA
FROM THE AMERICAN PEOPLE

CASE STUDY

Helping Farmers Overcome Climate Change Threat

A demonstration on the use of a ripper - one of the climate smart interventions that prevents soil depletion

Photo credit: ADVANCE Project, Tamale Office

"I had a message which said there was going to be a heavy rain, I therefore decided not to apply weedicides to the weeds on my farm that day because the rains would wash them off. Truly, it rained heavily that day, and I am so glad I didn't ignore the message." - Juliana Boakyewaa from Duayaw Nkwanta in the Brong Ahafo Region,

The USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) project, implemented by ACDI/VOCA, is supporting the scaling up of the maize, rice and soybean value chains to achieve a greater degree of food security in northern and southern Ghana and benefiting 113,000 smallholder farmers. The project is achieving this through increased agricultural productivity, market access and trade and an enabling environment.

Climate change is one of the challenges to improving farmers' production. To address this, USAID is implementing some interventions to help farmers adjust to climate change and at the same time improve yields. The interventions include training on minimum tillage and cover crop techniques, promoting early maturing seed varieties, and subscription to daily weather forecast.

Considering the fragility of soils in Northern Ghana, the minimum tillage technique prevents depletion of the soil's fertility. USAID/ADVANCE acquired two rippers and two no-till planters as land preparation options for farmers. The project collaborated with John Deere/AFGRI to train operators and staff on the use of the equipment. Thirty demonstrations plots were set up to show 2,192 farmers the advantages of using a ripper in ploughing and a no-till planter that disturb the soil minimally as opposed to conventional ploughing and planting respectively.

In addition, six community-based cover crop demonstration plots were set up across the three northern regions with technical assistance of a cover crop expert to make 172 farmers aware of the benefits of using cover crops to accumulate organic matter.

Another project intervention is the use of early-maturing local maize varieties which are adaptable to lower rainfall and increased drought. The varieties include "Abontem" with 75-80 maturing days; "Omakwa", 90 days; and Pioneer 30Y87 matures within 95-100 days. Using these varieties reduces the risk of loss in case of reduced rainfall.

Further, with project support, almost 5,000 farmers are accessing daily weather forecast which is helping them determine the likelihood and intensity of rains in planning their farming activities. This means that the farmers are avoiding wasting agricultural inputs, and reducing their risk due to erratic and/or late rain fall.

The USAID-funded ADVANCE and Agriculture Technology Transfer (ATT) Projects have collaborated to set up four training centres to help farmers learn more about the various climate-smart farming practices and try out appropriate equipment.

By project close in 2018, 20,690 farmers will be reached with climate-smart agriculture. The project is monitoring how farmers' increased adoption of its practices improve yields and bring about economic benefits.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Strengthening Women Farmer Groups to Improve Productivity

Photo credit: Adam Aronow, Peace Corps Volunteer with the ADVANCE Project
One of the 17 groups of the Diare Women's Group

"Previously, we feared to go closer to the bank so we never made any attempt to get a bank account. We kept our money under our beds," Mariama Sumani, Diare Women's Group member.

"Thanks to the numeracy training we received from USAID/ ADVANCE, our hands have become flexible, we can now write with ease," says Ayisha Memunatu, another group member.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

Having come from a situation in which they worked hard on their farms but got low yields, the women of the Diare Women's Group (526 members in 17 groups) will be forever grateful to USAID/ADVANCE. The women have been empowered to farm better, manage their families well, and meet their community responsibilities. As such, the women have won the admiration of their husbands and, for women in this part of the world, this means a lot to them.

For 10 years, the women had been cultivating an average of one acre of maize, soybean, and rice using traditional planting methods that involve, in the case of maize and soybean, poking small holes with sticks and putting the seeds in by hand, while rice planting was done by broadcasting. These traditional practices resulted in low yields: an average of 0.3 MT/acre for rice and maize and 0.2 MT/acre for soybean.

In 2014, USAID/ADVANCE discovered the women and profiled them. The project then trained them to bring their capacity to a level at which they can improve their farming activities and increase their income. The training included good agricultural practices, numeracy, the Sell More for More initiative developed by ACDI/VOCA, Farming as a Business, and women's leadership skills. Through these trainings, the women have learned how to plant in rows, use improved seed, apply fertilizer and other agro chemicals appropriately, adopt post-harvest practices to ensure the quality of their grains, negotiate prices for their produce, and keep proper records of their farming activities.

As part of its efforts to encourage savings among farmers to serve as investments for subsequent production seasons, USAID/ADVANCE linked the women to a financial institution working with the project—Sinapi Aba Savings and Loan (SASL)—at which all of the women have opened savings accounts. Together, they have saved a total of GHS 25,780 ($6,594.26) in the last seven months. SASL trained the women on how to manage credit and repayment schedules. The group members also contribute a minimum of GHS 1.50 ($0.38) as weekly dues, which they keep with the group's treasurer to help them meet their social obligations.

With project support, the women of the group have accessed credit (an agricultural loan) valued at GHS 125,000 ($31,971.29) to pay for plowing services and inputs such as fertilizer and seed for the upcoming 2015 production season as well as the aggregation of maize, rice, and soybean for sale for extra income. The women are excited to access the credit because they always had a perception that one needs to be literate in order to approach a bank for credit.

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Female Processor Adopts Quality Standards Thanks to USAID

"With USAID support, I now attach much [more] importance to product quality. This makes my product more attractive," says Meri Abdul Rahman.

Photo credit: Adam Aronow, Peace Corps Volunteer with the ADVANCE Project

Meri Abdul Rahman Iddrisu from Tamale in Ghana's northern Region is a nucleus farmer and rice processor. She has been processing rice for the past ten years. While growing up, her mother sold rice and she later took over the trade. She had no idea what it meant to maintain quality produce until she started working with the USAID ADVANCE Project in 2014.

As a nucleus farmer, Meri works with over 400 smallholder farmers to whom she provides fertilizer. To ensure an increase in yield and quality grains, ADVANCE trained Meri and her smallholder farmers on good agricultural and post-harvest handling practices. The project also outfitted her with three tarpaulins. Tarpaulins are a small equipment grant that serve as a threshing floor to keep produce clean from stones and other foreign particles. The project also trained Meri on record keeping and business plan development to operate efficiently. With support from the project's business service staff, a business plan has been developed for her.

As part of project's efforts to improve farming operations and increase income, USAID ADVANCE trained Meri's smallholder farmers on how to sell more products to increase their income.

In October 2014, Meri had the opportunity to participate in an agricultural forum held in Tamale where she exhibited her produce to over 800 participants. At the event she got the idea to repackage her product into 5 kg, 25 kg, and 50 kg bags so it would attract potential buyers.

"For what USAID/ADVANCE has done for my business to grow, it is only God who will reward them. I thank them so much," says Meri Abdul Rahman Iddrisu.

With project support, Meri is receiving market price information from Esoko that otherwise would not have been available to her and her farmers. This helps them determine the appropriate price for their produce. In addition, she receives daily weather information from Ignitia Weather Ltd., which she shares with her farmers. Thanks to the weather updates, Meri and her farmers are not worried about the delays in rains this year. *"We are not worried that the rains will not come this year because Ignitia has not sent us any message to that effect. We are still expecting the rains,"* reports Meri.

Due to her attention to and adoption of quality standards, USAID ADVANCE has linked her to the World Food Programme's Purchase for Progress (P4P) Program to supply 50 MT of milled rice and 20 MT of white maize that will earn her an income of GHS 155,000.

USAID ADVANCE is also working with Meri to upgrade her rice mill that currently operates at a capacity of 0.5 MT /hour. The upgrade will increase her production capacity to 1 MT/hour. A 0.1 MT capacity de-stoner will be attached to the mill to remove foreign particles from the grains.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

CASE STUDY

Reaching More Smallholder Farmers Through Nucleus Farmer Mentorship

Photo credit: Lauren Bell, Peace Corps Volunteer with the ADVANCE Project

A Nucleus farmer and mentees during one of the training sessions

"I feel proud to mentor four people to become Associate Nucleus Farmers. I see myself as a settler farmer. In the future when I am not here, I can be happy that it is through me that these people have become Nucleus Farmers. I look forward to mentoring more people depending on my capacity," says Augustine Sandow.

USAID ADVANCE is reaching 100,000 smallholder farmers through nucleus (commercial) farmers who have the capacity to invest in the maize, rice, and soybean value chains. Over the past five years, the Nucleus Farmer model has successfully reached more than 40,000 smallholder farmers with plowing services, improved seed, fertilizer, and small equipment grants such as donkey carts, ploughs, planters, dibblers, tillers, reapers, shellers, tarpaulins, and threshers.

As part of its efforts to reach more smallholder farmers, USAID/ADVANCE has introduced the Nucleus Farmers Mentorship concept through which experienced Nucleus Farmers mentor lead and community farmers who, in turn, become Associate Nucleus Farmers and, ultimately, Nucleus Farmers.

To date, 287 Nucleus Farmers are reaching out to 78,613 outgrowers (smallholder farmers) in 79 districts in six regions. Nine Nucleus Farmers have led mentoring sessions for 22 Associate Nucleus Farmers. One such Associate Nucleus Farmer is Issah Abubakari from Nanton in the Northern Region who is being mentored to become a Nucleus Farmer by Muhib Hussein, owner of Kharma Farms.

Issah has been working with Mr. Hussein for the past six years during which time Mr. Hussein provided Issah the opportunity to monitor the farming activities of his outgrowers, coordinate the setup of demonstration plots to teach outgrowers about good agronomic practices, follow up on repayment from the outgrowers for services rendered to them by Mr. Hussein, and to register new outgrowers.

Performing these tasks for six years has prepared Issah for the role of Associate Nucleus Farmer. He started working with 151 outgrowers in 2014 when USAID/ADVANCE discovered and profiled him. Within one year, he has increased his outrgrower base to 412 (305 males, 107 females) cultivating 774 acres of soybean. To enable him to operate efficiently, the project has trained him on good agricultural practices, post-harvest handling, as well as proper application of fertilizer and other agro-chemicals. Issah receives daily weather updates that he shares with his outgrowers to guide their farming activities.

In October 2014 and March 2015, on the project's invitation, Issah attended two agricultural forums in Tamale in the Northern Region, where he met over 800 value chain actors with whom he networked and established market linkages. Additionally, the project is helping Issah put together the appropriate documentation to enable him to access credit from a financial institution partnering with the project, Sinapi Aba Savings and Loans, to purchase a tractor to provide timely plowing services to his outgrowers.

.

Augustine Ambotimah Sandow of Nadowli Kaleo in the Upper West Region is one of the nucleus farmers engaged in the mentorship program. He is mentoring four of his outgrowers, including a woman who have shown significant progress in their farming operations.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Ghanaian Farmers Adopt Climate Smart Approaches

Photo credit: Lauren Bell, Peace Corp Volunteer

A farmer receives an Ignitia weather forecast on his phone indicating the likelihood of rain and the intensity of the rain.

"The Ignitia weather alerts is helping us farmers to plan our farming activities well especially in using our chemicals and other inputs well. Every day the farmers in the community come to ask me if my people have any news on the weather," said Mahama Amadu, Maize Lead Farmer at Yong.

Farmers in northern Ghana depend heavily on rainfall for crop cultivation. Changing rainfall patterns as a result of climate change makes it difficult for farmers to plan their farming activities. Smallholder farmers in northern Ghana are major food producers for the country, and have been experiencing less rainfall in recent years. These farmers have limited access to irrigation equipment, and depend mostly on rain-fed agriculture; therefore reliable weather information is important to plan their farming activities.

USAID's Agricultural Development and Value Chain Enhancement (ADVANCE II), implemented by ACDI/VOCA, is working with weather forecasting applications, specifically Ignitia Weather Limited, to provide daily weather alerts on mobile phones to 2,500 project beneficiaries in 2014. The text messages give a forecast for that day and the next day, indicating the likelihood and intensity of rain. The service, which has tested well for accuracy since its start-up in 2013, helps farmers to plan their daily farming activities based on the weather information received. With daily weather alerts, farmers are able to avoid fertilizer and pesticide losses related poor timing of application.

"*If there is a forecast from Ignitia that it will rain, I don't go and spray my field because I will waste the chemical. It will not be effective if I spray and it rains immediately*," said Fuseini Issah, maize farmer in Gushegu.

The project, in collaboration with Ignitia, trained 194 nucleus farmers, community leaders and lead farmers. Some lead farmers help to interpret and understand the weather symbols in the daily text messages received. The symbols indicate chances of heavy rain, low rain, and no rain. Some lead farmers are now serving as volunteer weather agents in their communities, helping to announce daily weather alerts to farmers who are not subscribed to the program.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

CASE STUDY

Strengthening Female Farmer to Succeed

Photo credit: Jamil W. Zangwio, ADVANCE II, Wa Office

Hajia in the field she prepared for the competitive maize production demonstration at Dasima in collaboration with USAID/ADVANCE II and MoFA

"ADVANCE has helped me to track all my expenses and income making me wiser in my business decisions. My Junior High School son has helped me record my tractor services this plowing seasons. With the trainings I have received from USAID/ADVANCE, I am looking at increasing my outgrowers to 500 and especially improve the quality of their produce," said Hajia Fulera.

For the past eight months USAID/ADVANCE II has been working with 57 year old Hajia Fulera as a nucleus farmers. Constrained by poor access to resources, women in the northern part of Ghana do not usually emerge as nucleus farmers. Therefore, when Hajia showed up as one, the project readily accepted her especially as the project is always seeking out women to participateat higher levels in the value chain and make them models for other women. The project is so far impressed with her can-do attitude. Hajia cultivates 40 acres of maize. She owns two tractors, two shellers and two storage facilities with a total capacity of about 100 metric tons.

Five years ago, Hajia decided to break the socio-cultural barrier existing in Northern Ghana to become a nucleus farmer to help other smallholder farmers increase their income. She provides plowing services to all 272 outgrowers with whom she works. With USAID/ADVANCE II support, Hajia has added improved seed and agro chemicals to the services she provides her outgrowers. The project has trained her on outgrower business management, post-harvest handling and interpreting weather information which she receives daily from Ignitia Weather Gh. Ltd The project also assisted her to develop an annual farm budget which is helping her cost her services and operate more profitably, in a more business-like manner, and supporting her with university student interns who are assisting her maintain good records.

To ensure that her outgrowers learn and adopt appropriate technologies and agronomic practices to increase yield, Hajia partnered with the project and established a maize demonstration plot at Dasima. One hundred and eighty seven of her outgrowers (130 males and 57 females) participated in the demonstration to learn proper land preparation, how to conduct a germination test, planting at appropriate spacing and timely fertilizer application at recommended rates, weed control with recommended weedicides and post-harvest handling practices. Yields obtained on the demonstration sites was 2.5 metric tons per acre compared to 0.5 metric ton per acre realized from farmers' practices. With her adoption to good agricultural practices on her own farm, Hajia obtained 1.8 mt/per acre of maize; previously she got 0.5 mt per acre.

Hajia is hardworking and eager to learn and adopt innovations that will expand her business and increase her efficiency. USAID/ADVANCE II will continue to seek out entrepreneurial women like Hajia in northern Ghana and promote her success to inspire other women working in the maize, rice and soybean value chains.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

PHOTO & CAPTION

Link to Credit Leads to Stronger Business

"This trend has become a source of worry to me as a nucleus farmer as my desire to provide this service [in a] timely [manner] to my outgrowers increasingly posed a challenge," said Muhib

Alhaji Hussein Muhib is committed to growing his business, Kharma Farms Enterprise, in northern Ghana. But for him, it is also personal. He feels a deep commitment to the outgrower farmers who rely on him for tractor services and other inputs.

That is why 2013 was a hard year for him and his close to 900 registered outgrowers. Because Muhib did not have enough tractors, 231 of his outgrowers had to hand-prepare their land, instead of receiving plowing services.

.

During the 2014 launch of the USAID-funded Agricultural Development and Value Chain Enhancement II (ADVANCE II) project, Muhib was linked to the much-needed financial services. The project helped Muhib develop an operational budget, conduct a cost-benefit analysis of his outgrower business operations, and facilitate a formal supply contract with an end market.

With his strengthened business portfolio, Muhib approached Sinapi Aba Savings and Loan and was approved for a GHC 130,000 loan (about $40,000). Muhib used the loan to purchase two John Deere tractors.

With the addition of these tractors, Muhib was able to plow a total of 2,270 acres, an almost 90 percent increase from last year. Additionally, he added more than 500 outgrowers to his business, all of which received plowing services. He expects his numbers will continue to grow.

The additional tractors have not only been a relief to Muhib but to his outgrowers as well. As a result of the increase in acres plowed, farmers can look forward to increased harvest and incomes, which will lead to an improved standard of living and reduction in poverty in Tibali.

USAID/ADVANCE II is building the capacity of nucleus farmers such as Muhib to enable them effectively manage an expanded business service operation that profitably assists outgrowers in their farming activities..

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Private Sector Firms Support Farmers' Technology Adoption

Photo credit: Godfred Nyamekye, ADVANCE II, Tamale Office

An Agricultural Extension Agent of the Ministry of Food and Agriculture educating farmers on good agricultural practices at Gbulung, Northern Region

"This year, the field activities have been very good promotion for sales especially in the Upper East Region. Sales are likely to be more than doubled due to farmers' exposure through the demonstrations, input promotions, farmers' sales days and radio sales promotions," said Roland Quaye, Wienco.

Year after year, Northern Ghana farmers continue to reuse their seeds, even with decreasing results. Improved varieties of seeds have become available, allowing farmers to have as much as a four-fold increase in yield. However, access to these certified or improved seeds, fertilizer and pesticides remains the largest constraint for farmers to improve their yields and increase their profits.

To increase the supply of improved seed – especially in Northern Ghana - USAID's Agricultural Development and Value Chain Enhancement project (ADVANCE II) partnered with 18 private sectors firms and Ghana's Ministry of Food and Agriculture and provided training in good agricultural practices to 13,609 farmers (7,285 males and 6,294 females) through 180 demonstration sites. The private sector firms including Wienco, Dizengoff WA, Chemico, Pioneer Hi-Bred, Yara Ghana Ltd., Heritage Seeds, Lexborg Ltd., Meridian Agric Services, Simple Prince Company Ltd., Antika Enterprise and N2 Africa/SARI contributed seed, fertilizer, herbicides and inoculants. By contributing these inputs, the private sector firms promoted their products to the farmers, increased sales and received feedback for improved product design and distribution. Making available the inputs to farmers led to the sale of 172.8 mt of seed, 31,714 bags of fertilizer and 21,124 litres of other agro chemicals valued at GHC₵4,670,787.00.

To ensure that their outgrowers learn and adopt appropriate technologies and/or management practices, 80 nucleus farmers joined in the private sector support. The farmers provided land, land preparation services and contributed herbicides and weedicides to manage the demonstration plots.

Through this private sector support, yields obtained on the demonstration sites for maize, rice and soybean were 2.9 mt/ha, 4.4 mt/ha and 2.9 mt/ha respectively far above the latest national average yield of 1.72 mt/ha, 2.64 mt/ha and 1.64/ha respectively according to MoFA SRID.

With this kind of knowledge acquired at the demo sites during the training and field days, should farmers adopt the new technologies and management practices, they have the potential to increase their yields from an average of 1.5 to 2.6 mt/ha, 2.5 to 4.2 mt/ha and 0.98 to 2.0 mt/ha for maize, rice and soybean respectively, and subsequently their incomes. The collaboration has also created awareness and demand for seed, fertilizer, herbicides and inoculants among smallholder farmers.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Reaching Farmers with Mechanization for Increased Production

Photo credit: USAID/ADVANCE Project

Supporting farmers with small equipment grant such as this maize sheller in operation is helping to improve productivity and product quality.

"We invested GH₵4,650 as our 30 percent leverage payment to acquire a multi-crop sheller and was able to make 11.7 mt in-kind payment of maize worth GH₵13,635 in one season from providing timely post-harvest mechanization to 300 smallholder outgrowers. The enterprise recovered the total investment in the sheller and made a profit of GH₵8,985. Post-harvest mechanization has added another revenue stream to our outgrower business," said Abu Jambedu, Field Operations Manager, Asaki Farms.

Limited access to farm machinery, even small equipment such as planters, reapers, shellers, and threshers, poses a significant challenge to farmers in the northern part of Ghana. From planting to harvesting to processing, everything is done manually. Traditional methods of planting maize and soybean, for instance, involve poking small holes with sticks and putting the seed in by hand, which is time consuming and labor and cost intensive. Harvesting goes through similar drudgery process: the common method is to use a sickle or knife to cut the plant by hand, which takes several days. Shelling and threshing is also done by hand on the ground and results in poorer quality grain that has stones and other foreign material. Agricultural mechanization, no doubt, is critical to increasing farmers' productivity.

USAID/ADVANCE implemented by ACDI/VOCA is reaching farmers in northern Ghana with small equipment grants to address the challenge of limited access to mechanization. USAID/ADVANCE provides grant for the purchase of various farm equipment. In the last five months, USAID/ADVANCE has reached 173 direct beneficiaries with 303 pieces of small equipment grants including multi-purpose shellers/threshers, tarpaulins, weighing scales, bullock/tractor plows, reapers, planters, and power tiller valued at more than US$290,000. This upgrade in technology allows farmers to produce the volumes, quality, and standards required by the end market.

Poverty in Northern Ghana is high, and most smallholder farmers cannot afford the full cost of equipment. To lessen their financial burden, beneficiaries only paid 30 percent of the cost of the equipment while USAID/ADVANCE bore the remaining 70 percent.

The small equipment grant is serving as a great source of support to outgrower businesses by strengthening their ability to provide services to their outgrowers, increasing yield, improving product quality, and reducing post-harvest losses.

"This equipment (rice reaper) is good. If we had it sometime in the past, we would have saved a lot of rice from bush fires and post-harvest losses," Issah Haruna, lead farmer, Busaka Agribusiness Center, Diare.

USAID/ADVANCE is encouraging its beneficiaries to continue to take advantage of the matching grant to purchase equipment that will help them improve productivity and product quality.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Nucleus Farmer Supports Women Farmers to Increase Income

Photo credit: Lauren Bell, Peace Corp Volunteer with ADVANCE Tamale Office

Some of Richard Akoka's women outgrowers harvesting rice

A lot of women in Northern Ghana do not have equal access to resources as men and this tends to put them in a disadvantage position. USAID/ADVANCE II, as part of its activities, is encouraging equitable access to resources by all genders, especially for women smallholders to improve their yields, incomes and livelihood of their families. In response to that, 45 year old Richard Akoka from Navrongo is supporting 382 women smallholders to increase their income. Richard is one of few male nucleus farmers working with a lot of women smallholders in Northern Ghana. Women form almost 70 percent of his outgrower base (558 ougrowers) whom he supports with ploughing service, certified seed and fertilizer on credit to cultivate 400 acres of rice. *"I always desire to support as many women as possible by ploughing for them to reduce the tedious nature of land preparation with hoes*," says Richard Akoka.

To support USAID/ADVANCE II activities of increasing productivity and enhancing economic livelihood of beneficiaries, Richard has invested in training and other interventions to help the women increase yields and income. In 2013 and 2014, Richard hosted five demonstration plots to teach his outgrowers and other farmers good agricultural practices he learnt from USAID/ADVANCE II: use of certified seed, how to plant in row, right application of fertilizer and other agro-chemicals, post-harvest handling and a technique for rice cultivation for higher profit – System of Rice Intensification. In addition, the women received small post-harvest equipment – tarpaulins (tarpaulins serve as a threshing floor to improve product quality and post-harvest losses) that enabled them supply good quality produce to Richard for the end market – Premium Foods Ltd, a major processor in Ghana, as well as other medium scale processors – Ejura Women Rice Processors and Lauratu & Co.

"Richard taught us how to use certified seeds and plant in rows and this has increased our yields from 1.5 mt/acre to 2.5 mt/acre. The tarpaulins we received from him helped us to improve the quality of our rice and we had good price for the rice," says Atogitiba Amala, leader of the women outgrowers.

To show their successes when they adopted the SRI technique and other good practices, the women outgrowers hosted two demonstration plots in 2013 as an opportunity for other farmers to learn good agricultural practices to increase their yields. Following the demonstration, 78 of participating farmers adopted the SRI technique and are increasing yields from 1.5 mt/acre to 2.5 mt/acre.

As part of encouraging and supporting outgrower businesses such as nucleus farmer Richard to offer better and improved services to outgrowers, USAID/ADVANCE II business services staff are helping Richard to develop crop and enterprise budgets. With this intervention, Richard has a better understanding of how to cost his production activities per crop; know the real cost of providing services (ploughing, input credit, shelling and threshing) to his outgrowers and how to charge them reasonably and profitably.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Scaling up Rice Production – The Akpabe FBO Story

Photo credit: Lauren Bell, Peace Corp Volunteer with the ADVANCE Project

Some members of the FBO transplanting rice. The proximity of their farms to the Volta Lake is advantageous to all-year rice cultivation.

"Previously rice were harvested and packed in the community without buyers and the few buyers offer very low prices. The market linkage was a big relief for us because they were buying the paddy rice in the community at a price twice the previous price. It has really been helpful" Rose Biuw, member of the Akpabe FBO.

The Akpabe farmer-based organization (FBO) is made up of 400 farmers cultivating an acre each of rice near Volta Lake in the Northern Region. The group's proximity to the lake is quite advantageous, allowing all-year rice cultivation.

However, since its formation about 10 years ago, the group has faced a series of challenges: the group was not well organized, they lacked knowledge in good agricultural practices, farming was virtually done manually and they had no targeted market.

USAID/ADVANCE builds the capacity of smallholder farmers and farmer-based organizations such as Akpabe FBO to increase the scale and efficiency of their farm business with improved production and post-harvest handling practices. The project facilitates farmers' access to improved seed varieties and quality input, mechanization services, extension services, and end markets.

USAID/ADVANCE trained the Akpabe group members on good agricultural practices such as use of improved seed, right row planting and spacing, appropriate application of fertilizer and other chemicals, post-harvest handling practices, and how to negotiate for better prices for their produce. The project supported them with a matching grant to purchase tarpaulins under the project's small equipment grant. The tarpaulin serves as a threshing floor that prevents grain from coming into contact with the ground, stones, and other foreign material.

In addition, the project, in collaboration with J. K. Technology, a private sector vendor, introduced and demonstrated to the group the use of a one-operator power rice reaper. The reaper takes less than two hours to harvest an acre field, which usually takes a week when done manually. The group is making arrangements to take advantage of the project's matching grant to purchase the equipment. Above all, the project linked them to buyers in southern Ghana.

With their adoption to the good agricultural practices learned from USAID/ADVANCE, the group increased their yield from 1.2 mt to 1.9 mt. In the 2014 harvesting season, the group sold a total of 107.8 mt of paddy rice valued at GH₵76,400. Previously, the average quantity they could sell was 74 mt valued at GH₵4,810.

Now there is an increased demand for the group's paddy rice. Members have increased their acreage to 1.5 acres. Two hundred new members have also joined the group.

Over the next five years, USAID/ADVANCE will reach 113,000 maize, rice, and soybean farmers in the Northern, Upper East, Upper West, Ashanti, and Brong Ahafo Regions of Ghana through public and private sector partners.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

USAID Support Helps Woman Improve Business

Photo credit: Lauren Bell, Peace Corp Volunteer with the ADVANCE Project

Victoria Asaaro has every right to be happy because thanks to USAID/ADVANCE support she has seen improvement in her business.

Victoria Asaaro from Binaba in the Upper East wears many hats: lead farmer cultivating two acres of maize, the only female among four input dealers in Binaba, leader of a 75-member women's group, treasurer of the Input Dealers Association, and mother of four. Victoria has been dealing in fertilizer and other agrochemicals for the past 14 years. Although she did not have any formal training in extension services, in her small way, she helped her fellow female smallholder farmers in their farming.

Victoria acknowledges that coming into contact with USAID/ ADVANCE project since 2011 has brought her business to the next level. USAID/ADVANCE project staff trained her and other farmers on good agricultural practices such as row planting, use of improved seed, appropriate fertilizer and other chemical application, post-harvest handling, record keeping and more. This training has helped her see farming as a business. In 2014, she held a demonstration plot to teach her group members the good agricultural practices she learned from USAID/ADVANCE. In addition to the training, USAID/ADVANCE has supported her and the group with four donkey plows and three donkey carts.

"*ADVANCE has been very helpful to us. We had difficulty accessing plows. Our fields were always plowed after the men's fields were attended to which was a source of worry to us because our fields were plowed late. Now we do not have to depend on the men to plow for us. They now depend on us for our plows*," says Victoria.

The plows are generating extra income for the group. They plow for other smallholder farmers in surrounding communities whom they charge GH₵30.00 per acre. In the 2014 planting season, 18 acres of field belonging to 15 smallholder female farmers were plowed bringing the group an income of GH₵540. Beyond that, the donkey carts help them transport produce from the farm to the market and also carry water to homes for a fee.

"*Thanks to ADVANCE now we can plough at the right time, plant at the right time, harvest at the right time, and sell at the right time and at the price*," says Victoria.

Victoria credits ADVANCE for the increase in income in the sale of polypropylene storage sacks. USAID/ADVANCE invited and linked her to an equipment supplier at an agricultural forum held in Tamale in the Northern Region in October 2014 called the "*4th Annual Pre-harvest Agribusiness Forum.*" The event brought together maize, rice, and soybean value chain actors to interact, establish market linkages, and enhance overall efficiency in their industries.

Victoria followed up the linkage with the supplier—ZeroFly Ltd, located in southern Ghana—and she is now purchasing the sacks for the smallholder farmers in Binaba to store their grains. The easiest part of the transaction is that since USAID/ADVANCE facilitated the linkage, the supplier did not demand payment upfront for the first supply of 100 sacks in December 2014. Per every bag sold at GH₵7.50, she made a profit of GH₵2.50.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

Victoria's input business is also doing well. Due to the cordial relationship she has with input agents in Bawku in the Upper East Region, the agents supply her with bags of fertilizer and other chemicals, which she sells and repays later. In 2014, she was supplied with 3,500 bags of fertilizer and 40 boxes of agrochemicals (containing 12 1-liter bottles), which she sold within three months and repaid the agents. *"Because of these arrangements with the suppliers, I don't need to go to the bank for credit,"* says Victoria.

Victoria is making arrangement to access the project's grant to purchase a "motor king" – a three-cycled farm truck used mostly in the northern part of Ghana – that will help convey members of her women's group to lands distant from their communities where they can access more acres to farm. These women are looking at increasing their acreage from an average of one acre to two or more

USAID | GHANA
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Facilitating Women's Access to Fertile Land closer their Homes

Photo credit: Lauren Bell, Peace Corps Volunteer with ADVANCE II, Tamale Office

John Mulnye explaining row spacing method to some of his women outgrowers.

"After the training, I decided to give two acres of land closer home to my wife for her maize farm. Now I realize she gets home early from farm to prepare my evening meals and takes care of our two children when they return from school," said Mark Adams, outgrower in Tuna.

For several women farmers in Northern Ghana, access to farmland close to their homes is quite challenging. They usually receive lands that are far from their homes. And often the journey is made on foot with their babies stuck at their backs and carrying their farm implements. Besides, land distant from the home makes it difficult for the women to manage both the farm and care for their families as well.

To facilitate women's access to land closer to their homes, USAID's Agricultural Development and Value Chain Enhancement project (ADVANCE II) is using the project's established nucleus farmer – outgrower structures in communities to leverage and facilitate access to land by working through the traditional chief and sub-chief structures. One of the nucleus farmers with whom USAID/ADVANCE works to achieve this is john Mulnye. More than two years ago, USAID/ADVANCE I started working with John Mulnye in Gindabour, a community in the Sawla-Tuna-Kalba District in the Upper West Region. John works with 800 out growers - 650 females and 150 males and desires to see his women smallholder farmers getting access to productive resources as men especially in land closer to their homes to enable them farm and take of care of their household chores as well.

USAID/ADVANCE I and John established a demonstration plot in the community with private sector support to introduce technology to 75 of John's smallholder farmers and train them on good agricultural practices. Fifteen women out of the 75 smallholder farmers who participated in the training adopted the good agricultural practices they learned. As a result, their yields improved from an average of 0.4 metric tons per acre to an average of 1.4 metric tons per acre.

John took advantage of the women's yield increase to emphasize women's access to productive land close to their homes. Therefore, in May 2014, USAID/ADVANCE II in collaboration with John and Women in Agriculture Department (WIAD) of the Ministry of Food and Agriculture held a one-day training for 51 smallholder farmers (33 males and 18 females) on the importance of women accessing fertile land close to their homes. Resource persons from WIAD explained that close proximity of land will ensure a better upbringing of children since their daily activities can be better monitored as well as timely food preparation for them.

Following the above interventions, 15 smallholder women farmers have gained access to 21 acres of productive land closer to their homes and are adopting good agricultural practices on the farms.

USAID/ADVANCE II continues to sensitize and pursue equitable access to resources by all genders, especially women smallholders to increase productivity, income and wellbeing of their families as a whole.

Telling Our Story
U.S. Agency for International Development
Washington, DC 20523-1000
http://stories.usaid.gov

Annex 3: List of sponsor actors of FY15 demo sites

	Private Company	Type(s) of Inputs
1	18th April	Weedicides
2	Aframso Rice Aggregating Group	Rice seed
3	Agholisi Farms	Obatanpa seed
4	ANS Ent.	Rice seed
5	Antika Co. Ltd	Maize seed, fertilizers
6	Asaki Farms	Mamaba seed
7	CSRI-CRI*	Seed
8	Daniel Amoako	Fertilizers
9	Deborah Enterprise	Fertilizer
10	DuPont Pioneer/GAMSAP	Maize seed
11	Effah Lawrence	Maize seed
12	Ernest Kwao Agyei	Fertilizers
13	Heritage Seeds	Seed for Maize & Soybean
14	IITA-N2 Africa	Soybean Inoculant
15	Rainbow Agrochemicals	Herbicides
16	Ribufa Ent	Rice seed
17	Simple Prince	Herbicides ,
18	SKY 3 Agrochemicals	Seed maize, Herbicides
19	Stepwise Ent	Herbicides, fertilizers
20	Timothy Agrochemicals	Glyphosate
21	Wienco Ghana	Maize & Rice seeds and Herbicides
22	YARA Ghana	Fertilizers for maize & rice

** A Public institution with a commercial unit*

Annex 4: Trade mission participants list

Name of Buyer (and Region of Origin)	No of Participating OBs***	Geographic Coverage of OBs	Commodity
Ashanti			
ANS Milling Ent.	3	Upper West	Paddy
Asamoa and Yamoa Farms	9	South	Maize
G. Bosomtwe Ventures	14	Upper West, South	Maize, Soybean
Kanyiti Farms	12	South	Maize
Premium Foods Limited	33	Upper West, Upper East, Northern	Maize
United Edibles Limited	16	Northern	Soybean
Brong Ahafo			
B. M. Unity Farms	16	South	Maize
Ibrahim Tanko Enterprise	17	Northern	Maize
Royal Golden Eggs Poultry and Livestock	5	South	Maize
Yedent Agro Group	1	Upper East	Soybean
Greater Accra			
New Age Feed Mill	9	Upper West, Upper East	Maize
Seed Share Logistics	41	Upper West, Upper East Northern, South	Maize
Northern			
Nyebu Bi Yoona Women's Processing Center	2	Northern	Paddy
Someb Enterprise / Sanatu Someb Abdul	2	Northern	Paddy, Maize
Tiyomba Women's Rice Processing Center	8	Northern	Paddy
Basa Agro	4	Northern	Maize
Upper East			
Haruna Dakwei	2	Upper East	Maize
Grand Total	**194**		

Annex 4: List of STTAs

Consultancy	Date started	Date Completed	Remarks
Assist GGC develop a Policy and Procedures Manual covering Procurement, Finance, Human Resources and Communication in preparation for USAID Forward	December 1, 2014	To be completed by the end of October 2015	A draft report has been submitted by the consultant and reviewed by GGC. It is being finalized by the consultant.
Assist Premium Foods Ltd (a Kumasi based foods processing firm) develop an efficient farming (Production) system support the planned expansion of its processing factory and trading businesses	December 8, 2014	Completed in June 2015	
Develop a holistic WRS Viability Plan for GGC and workable financial safeguard systems	January 5, 2015	To be completed at the end of October 2015	A draft report has been submitted by the consultant. GGC has reviewed the report and given feedback to the consultant for it to be finalized.
Assist Naawin Enterprise, a rice miller based in Kononga to improve factory floor and storage management	July 2015	To be completed by the end of October 2015	
Develop Brand Strategy and Action Plan for Yedent Agro Limited, a maize/soybean foods processor based in Sunyani	September 2015	To be completed by end of December 2015	

Annex 5: List of maps produced

- 2014 ADVANCE South Demo Sites Map
- District map of Ghana for GGC
- 2014 Regional Actor Maps – 17 (FBOs-3, Radio Stations-3, Financial Institutions-3, Input Dealers-3, Nucleus Farmers-3, Processors-1, Aggregators-1)
- Irrigation Dam maps – 3
- 2014 Soil – Crop Yield Maps- 9 (3 for each region)
- ASI Selected Value Chain maps – 1
- Proposed Demo Point maps for ADVANCE North - 3
- 2014 – Regional Crop – Demo Farmer Population Maps – 9
- ADVANCE South 2015 – proposed demo sites map – 1
- Nucleus Farmer – Crop maps – 3
- 2015 Proposed Soil – Crop Demo Maps for ADVANCE North – 9
- ADVANCE South SAPO – OB Location Map – 1
- ADVANCE South 2015 Actual Demo Map – 1
- 2015 Soil – Crop Actual Demo Maps – 9
- Crop Demo Sites Disaggregated by APOs – 3
- Base maps of check dam locations for conducting the check-dam surveys for the Northern, Upper East and Upper West Regions - 3
- A map for the Policy and Advocacy team showing districts visited during their DAIPs consultation meetings -1
- A rice production map for the ADVANCE districts for 2014, and a rice cultivable area map from MoFA for comparison -1
- 2014 crop yield overlying soil-crop suitability relative to population density maps – 3
- 2014 MoFA estimate production and yield maps of rice, maize and soy in districts above the 8^{th} parallel. – 2