

Mali Agriculture Value Enhancement Network (MAVEN)

Final Report

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LIST OF ACRONYMNS

ASEMA	Association of Seed Dealers in Mali
CAB Demeso	Conseil-Appui aux Initiatives de Base Demeso
CAECY	Caisse d'Epargne et de Credit de Yanfolila
EFAPW	Ecole de Formation Agro-pastorale de Wayerma
F2F	Farmer-to-Farmer
FTF	Feed the Future
FY	fiscal year
GRAT	Groupe de Recherches et d'Applications Techniques
GREFA	Groupe de Recherche d'Etude de Formation en Agriculture et Arboriculture (Agriculture and Arboriculture Research, Study, and Training Group)
ICRISAT	International Crops Research Institute for Semi-Arid Tropics
IICEM	Initiatives Intégrées pour la Croissance Economique au Mali (Integrated Initiatives for Economic Growth in Mali)
IER	Institute d'Economie Rurale
INSORMIL	INTernational SORghum and MILlet
IR	intermediate result
LOP	life of project
MAVEN	Mali Agricultural Value Chain Enhancement Program
PACR	Project d'Appui Communitaire Rurale
SOW	scope of work
TOT	training of trainers
USAID	United States Agency for International Development
UWP	Union of Women Processors

1. Introduction

The **Mali Agricultural Value Enhancement Network (MAVEN)** program, implemented by ACDI/VOCA and Winrock International, facilitated improvements in the Malian agriculture sector by addressing constraints and enhancing opportunities within select agricultural value chains through the use of short-term volunteer technical assistance. The MAVEN program objective was to facilitate agriculture sector growth through improved productivity and increased access to finance in targeted value chains. Program activities to support this objective included technical assistance to support improved production, post-harvest handling, processing, and marketing; improved business management skills of individual producers, producer groups, and agribusinesses; and increased access to quality inputs and finance.

MAVEN built on efforts of the West Africa Farmer-to-Farmer (F2F) program in Mali, which was focused on strengthening the staple foods and small ruminant livestock subsectors. MAVEN supported USAID/Mali's Feed the Future (FTF) Strategy by focusing activities on livestock (cattle and small ruminants) and staple crops (millet, sorghum, and rice). These efforts contributed to improving Mali's food security and overall economic growth.

2. Executive Summary

Over the life of project (LOP) (April 1, 2010 – September 30, 2013), MAVEN leveraged the expertise of 78 volunteers, who completed 1,479 days of service valued at \$678,590. Volunteers supported 67 host organizations – including farmers groups, women's groups, private enterprises, and agriculture training institutions. Through these efforts, MAVEN trained/assisted 5,872 (5,018 FTF) individuals (48% women) and benefitted 4,741 (4,381 FTF) households.

A summary of completed assignments in each subsector is included in **Table 1** below:

Table 1. Summary of Life-of-Project (LOP) Completed Volunteer Assignments

Subsector	Number of Assignments
<i>Feed the Future subsectors</i>	
Staple Foods	30
Cattle	11
Small Ruminants	13
<i>Other subsectors</i>	
Horticulture	10
Poultry	3
Fisheries	9
Cross-cutting (e.g. gender)	2
Total Volunteer Assignments	78

MAVEN assignments targeted activities related to increased production and profitability (producing more, selling more, selling at better price, better storage, processing and packaging techniques, less spoilage, etc.) and also improving financial services (strengthening rural financial institutions and increasing value in rural/agricultural loans), creating linkages among

stakeholders involved in selected value chains, and leveraging resources from other partners to promote sustainability.

Key accomplishments include:

- Introducing over 120 new or improved agricultural technologies or management practices to help farmers increase production, lower costs, increase sales, and sustainably manage natural resources.
- Facilitating access to loans and business development services for nearly 1,500 individuals and enterprises.
- Providing organizational development, leadership, and technical training to support 26 women-owned businesses and women's cooperatives, and to facilitate successful collaboration between women and men.
- Helping producers diversify livelihoods through the introduction of rice-fish farming, fish-poultry systems, and expanded horticulture and poultry production.
- Supporting increased food security and nutrition by strengthening producer groups and processors, and facilitating value chain linkages, for nutritious staple crops products, animal source foods, and fruits and vegetables.
- Building the capacity of agricultural education institutions and service providers, to ensure that today's farmers and future leaders have the support and training they need to be successful.
- Leveraging more than \$68,000 in cash and in-kind support from program hosts and partners, to support volunteer assignments.

Despite challenges due to political instability and a program realignment, MAVEN still succeeded to field more than the targeted number of volunteers (78 against the target of 75).

3. Project Objectives & Intermediate Results (IRs)

MAVEN pursued its objective to facilitate agriculture sector growth through improved productivity and increased access to finance in targeted value chains through the following intermediate results:

IR 1: Improved Agricultural Sector Productivity

- Sub-IR 1.1. Enhanced human and institutional capacity development for increased sustainable agriculture sector productivity
- Sub-IR 1.2. Enhanced technology development, dissemination, management, and innovation

IR 2: Expanding Markets and Trade

- Sub-IR 2.4. Improved access to business development and sound and affordable financial and risk management services

The underlying strategy for the MAVEN program was to raise productivity for Mali's producers in a way that supports farmer access to markets or end-use processors, strengthens targeted value chains for long-term sustainability, and enhances food security through increased smallholder incomes and increased home consumption.

4. Activities Undertaken to Achieve Program Objectives

MAVEN activities centered around fielding volunteer technical experts from the U.S. to provide high quality, demand-driven technical assistance and training to local (“host”) organizations and beneficiaries in each of the target subsectors. To promote sustainability and wider impacts, MAVEN engaged a wide range of stakeholders and invited extension agents and service providers to participate in volunteer assignments.

Following discussions with USAID/Mali in FY12, ACDI/VOCA and Winrock realigned the program to support the USAID/Mali Feed the Future strategy, which includes the targeted subsectors of livestock (cattle & small ruminants) and staple crops (rice, millet, sorghum) in selected communes of Sikasso and Mopti. New scopes of work (SOW) were designed to reflect these new priorities starting in FY12.

A. Feed the Future Activities

Staple Foods

Significant opportunities exist for staple foods in Mali; the country possesses large areas suitable for dry land agriculture and demonstrates significant potential for irrigated agriculture in the Niger delta. Both the Government of Mali’s national plan for investment in the agriculture sector (PNIP-SA) and the USAID/Mali FTF strategy prioritize investments in sorghum, millet, and rice. There is significant donor investment in the subsector (primarily supporting irrigation, market access and participation, and rural microfinance), though the majority of donor investment was temporarily suspended following the coup, and many current programs and proposed activities are still pending. MAVEN has collaborated with and supported USAID and other donor efforts in these areas.

Thirty volunteers provided training/assistance to 2,452 beneficiaries (83% women) in the staple foods subsector (including sorghum, millet, rice, and maize). MAVEN made a targeted effort to work with women’s group and women entrepreneurs, and as a result, women comprised a large majority of beneficiaries in this sector, representing 41% of persons assisted. Technical assistance focused on production, input supply, post-harvest processing and value addition, and organizational development, thus enabling improvements across the entire value chain.

The USAID-funded Initiatives Intégrées pour la Croissance Economique au Mali (IICEM) program, along with Groupe de Recherche d’Etude de Formation en Agriculture et Arboriculture (GREFA), were important collaborators on MAVEN assignments in the staple crops subsector. IICEM and GREFA provided logistical support and some cost sharing (e.g., coverage of meals for trainees) to support MAVEN efforts, and played an active role in follow up support to MAVEN hosts and beneficiaries. Technical agents from IICEM and GREFA participated in TOT during volunteer assignments, to strengthen their capacity on key topics. These agents then played a role in disseminating information and new technologies and management practices to

larger groups of farmers. MAVEN also collaborated with INSORMIL and GRAT (Groupe de Recherches et d'Applications Techniques) on one assignment each.

Volunteers worked with several farmers' groups to increase production of sorghum and millet, providing training and technical assistance to address constraints such as pest and disease contamination. Volunteers introduced several new and improved technologies and management



Volunteer Stephen Fordham working with members of the Loutana Women Rice Growers Cooperative

practices related to seed selection and retention, crop management, and appropriate use of pesticides and fertilizer. As a result, farmers have improved soil quality, adopted new varieties, and increased yields.

Volunteers also supported hosts such as Faso Kaba Seed Company and the Association of Input Suppliers of Bougouni to improve the quality and availability of inputs for staple food producers, a major constraint in this subsector. Support to Faso Kaba on seed treatment and cleaning, packaging, hybrid seed development, and improved business practices has contributed to the company's significant

growth in the last two years and the introduction of new hybrid cereal seed (sorghum and maize). Thousands of rural households are now benefitting from these improvements. These efforts also strengthened capacity of and linkages with extension providers from the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) and the Association of Seed Dealers in Mali (ASEMA).

Training and technical assistance were also provided to host organizations – including several women's groups – to improve value addition and post-harvest processing of rice. Producers in Mali are often affected by lower prices during high season due to a flood of products on the market. However, with product transformation and value-added techniques, staple food products could be preserved and sold at periods when they would be able to obtain a much higher price on the market. Volunteers provided support to four cooperatives on the use of new sheller/polisher equipment to produce value-added processed rice. Several women's groups also received guidance on improved packaging and branding to attract new customers and achieve higher prices.

Another significant focus for MAVEN in the staple foods subsector was on building the organizational and management capacity of farmers' groups and women's groups, to help members plan and take advantage of collective efforts. Volunteers provided training and technical assistance on topics such as Farming as a Business, business planning, budgeting, record keeping, profit/loss analysis, and marketing. These efforts strengthened the foundation of participating host organizations, and have resulted in new collaborative efforts and new services provided to members, such as bulk inputs purchases, aggregated sales, and expanded market research (see success story in **Annex 2**). Volunteers also provided assistance to increase access to credit, supporting both farmers groups (to help them become more viable for credit) and

lenders/service providers such as Caisse Agricole d'Epargne et de Cr dit of Yanfolila (CAECY) (to create linkages and help them understand how to assess and engage staple crops producers as clients).

Livestock

Animal husbandry is practiced by 80% of the population of Mali. Following gold and cotton, livestock is the third most important export commodity in Mali, and as such, the livestock subsector is one of the top priorities of Mali's national agriculture development plan (PNIP-SA). USAID/Mali's FTF strategy also identifies livestock as a priority focus subsector to promote both economic growth and improved nutrition. Chief constraints include poor animal health and limited access to forage and supplemental feed both of which result in low productivity, and lack of access to market information.

Cattle

Eleven volunteers provided training/assistance to 459 beneficiaries (23% women) in the cattle subsector, focusing on all aspects of animal husbandry for meat and milk production. Volunteers introduced useful methods to address constraints and make critical improvements to animal health and nutrition, breeding, and herd management. This included recommendations on herd genetic improvement methods such as crossbreeding or herd selection strategies, and improved herd management skills such as planned breeding, calving, weaning, and castration.

In Year 1 of the program, MAVEN supported a few volunteer assignments in dairy. Volunteers introduced new technologies to improve the quantity and quality of milk, and also introduced new products which have enabled hosts to decrease losses and increase sales. Following guidance from USAID/Mali, this focus was discontinued in subsequent years.

MAVEN partnered with CAB Demeso, which provided participant meals and transportation to support assignments in the cattle subsector.

Volunteers also provided training and assistance directly to CAB Demeso, to strengthen staff capacity and build the organization's readiness to provide credit to smallholder farmers. One volunteer developed an integrated accounting and financial model to help smallholders and microfinance providers understand how to analyze and budget for livestock (cattle) activities. Other volunteers provided training to farmers groups and assisted members to develop proposals and strategic plans for cattle operations, to help them obtain credit.



Volunteer Michael Lowery describes how a credit program for smallholder farmers would function

One volunteer assignment was also focused on supporting the Ecole de Formation Agropastorale de Wayerma (EFAPW), the first agricultural school in Sikasso, to design new curricula and provide training to teachers and extension staff on improved cattle management tools. This will help build the capacity of a cadre of trainers and extension providers who can better support the cattle subsector in the future (see success story in **Annex 2**).

Small Ruminants

Starting in August 2012, 13 volunteers provided training/assistance to 737 beneficiaries (28% women) on small ruminant production. The majority of assignments supported farmers groups – including women and youth associations, such as the Women’s Agricultural Union of Finkolo Ganadouogou, Farmers’ Cooperative of Bougouni, and the Women’s Cooperative of Soroble, the “DJIGUI” Youth Cooperative of Bilasso, and the Youth Association of Bla.



Volunteer Carol Delaney demonstrating small ruminant husbandry techniques to women cooperative members

Local veterinarians, local teachers, private farmers, and extension agents (e.g., from the Direction Nationale de la Production et de l’Industrie Animale and the Direction Nationale des Services Vétérinaires) were often invited to participate in volunteer trainings. This served as an important strategy to facilitate follow up and widespread dissemination of volunteer recommendations and new technologies, in addition to further strengthening the skills of these service providers themselves.

Technical assistance and training focused on animal health and nutrition, animal feed, fattening practices, and genetics. Volunteers introduced several tools – such as body conditioning scoring and the FAMACHA card – to help monitor and address animal health issues. In addition, one volunteer worked with EFAPW to upgrade faculty skills and knowledge in small ruminant nutrition and production.

B. Other Activities

The original MAVEN program design included a focus on three other subsectors: horticulture, poultry, and fisheries. MAVEN completed 22 assignments in these areas (representing 28% of total volunteers) prior to the program reorganization in 2012.

Horticulture

Ten volunteer assignments supported farmers groups in the horticulture subsector. Volunteers assisted 361 individuals (25% women). These volunteers provided technical assistance and training to increase quality and yield of fruits and vegetables, and introduced new technologies and management practices such as improved irrigation techniques, planting strategies, germination tests, trellising, composting, nursery solarization, and improved pest/disease

management techniques. A few volunteers also donated improved seeds, which farmers groups are now using and sharing with others.

MAVEN volunteers also provided training to help improve marketing of horticulture products. This included an emphasis on customer preferences and food quality and safety issues. In addition, organizational development assignments focused on enabling groups to better organize



Volunteer Bruce Bailey training women horticulture producers in Bamako

themselves, plan collective activities, increase revenues from regular payment of dues, and pursue bulk purchases and sales.

MAVEN staff and volunteers assisted in creating linkages between horticulture producer groups to enable them to inspire and learn from each other, as well as with the AVRDC (World Vegetable Center) for further support and collaborative efforts (e.g., testing of vegetable seeds and preservation methods) after the volunteer assignment(s).

Poultry

Poultry provides an important opportunity for smallholder income generation and improved nutrition. The poultry sub-sector faces lack of reliable access to inputs, poor sanitary controls, minimal marketing, and limited processing capacity and technology. However, demand for poultry products is expanding at a rapid rate.

To address some of these problems, three MAVEN assignments in the poultry subsector helped hosts – such as private enterprise SODOUF and the government Institute d’Economie Rurale (IER) Animal Nutrition Laboratory – to improve the quality of animal feed, introduce safety and biosecurity measures to ensure safe poultry products, and improve hatchery operations.

“MAVEN provided us with expert volunteers whose professionalism and training methods was beyond our expectations.”

-Yaya Sanogo, Technical Manager, SODOUF

Fisheries

The fisheries subsector was originally targeted due to its strong potential for employment and income generation, as well as its importance in providing a viable source of nutrition for rural households. Nine volunteers provided training/assistance to 1,811 beneficiaries in the fisheries subsector.

A major constraint facing fish farmers in Mali is the lack of fish pond construction technology and skill. MAVEN volunteers directly addressed this constraint and taught farmers and service providers how to construct and repair leak-proof ponds. Volunteers also provided training and technical assistance to fish farmers on pond management, fingerling production, fish feed



Volunteer Joe Sullivan demonstrating pond construction techniques

formulations, and processing. Improved practices for feeding strategies, water management, and species control have resulted in decreased losses and increased profit.

MAVEN’s efforts in the fisheries sector included strong partnership and participation of government agencies and other service providers, with several volunteer assignments serving as a Training of Trainers for extension staff. For example, Regional Directorate of Fisheries (DR Peche) extension agents were in need of practical training on tilapia and catfish fingerling production in order to successfully support smallholder fishermen and help improve income

generation. The agents’ participation in MAVEN volunteer trainings has equipped and empowered them to improve service delivery to thousands of farmers in their coverage areas.

As an important means for income and livelihood diversification, MAVEN volunteers also introduced integrated fish and poultry systems. The combination of fish and poultry farming has great potential for both economic and technical reasons. Both industries can be quite lucrative in Mali, and the combination of them allows the outputs from one to become inputs for the other. Chicken excrement is extremely beneficial to fishpond health, and the environment directly surrounding fishponds is ideal for raising chickens. Two volunteers provided training and technical assistance on this topic.

Cross-Cutting

Gender

MAVEN demonstrated a strong commitment to gender throughout the implementation of the program. In the first year of the program, volunteer Anais Troadec, an experienced gender expert, conducted a gender assessment of the program, analyzing gender roles in targeted communities, as well as assessing the level of gender knowledge of MAVEN staff. This included mapping gender-based differences in the following areas: daily activities and time spent on “productive” vs. “reproductive” activities, particularly income sources and levels of participation in target value chains; details of the types of livelihoods assets utilized by men and women (e.g., land, seeds, tools, etc.); and decision-making and participation at both the household and community levels. Ms. Troadec also provided gender sensitivity training to MAVEN staff and hosts. MAVEN staff incorporated many of her recommendations. For example, all volunteers are given a briefing on gender issues, and Winrock designated a “gender focal point” staff person who ensured that gender issues were integrated and addressed in volunteer assignments, program work plans, and in-country human resource policies.

“Volunteer technical assistance reinforced the unity in my village; now men and women are busy side-by-side!”

-Village Chief, Soroble

Numerous MAVEN assignments supported women's groups and women entrepreneurs (e.g., Faso Kaba and Danaya Cereals). In addition, organizational development assignments with farmers' groups incorporated concepts related to gender sensitivity and leadership, to foster stronger working relationships between women and men within the group or community.

5. Results Achieved by Objective and Subsector

Political instability, insecurity, the temporary suspension of program activities, and the program's realignment with USAID/Mali's Feed the Future target subsectors and geographic priorities affected the momentum of the program. On March 22, 2012, a group comprised of former and current military, unhappy with the administration's handling of the rebel insurgency in the north of Mali, staged a coup and overthrew the democratically-elected President. The coup provided an opportunity for separatist rebels groups, who had been the cause of insecurity in northern Mali for months, to seize the northern half of the country and declare it an independent state. As a result of the coup, USAID temporarily suspended development programs and field activities.

During the second half of FY12, the MAVEN team worked to re-align activities with Feed the Future, identify new partners and host beneficiaries, and accelerate the pace of the program. However, beginning in January 2013, the rapidly deteriorating security situation required that planned volunteer assignments be put on hold again for three months.

Despite these challenges, MAVEN still succeeded in exceeding the anticipated volunteer target, fielding 78 volunteers (three more than planned per the no-cost extension). However, while the delays in program implementation did not affect the program's ability to meet the volunteer target, it did affect timing and impact monitoring of volunteer assignments. Due to a pause in operations from January to March, and additional time required to reschedule postponed volunteer activities, the majority of FY13 assignments were completed in the last two quarters, leaving insufficient time for hosts to adopt new technologies and demonstrate significant impact.

Over the life of program, MAVEN accomplished the following:

- 4,554 farmers (3,940 FTF; 77% FTF women) and others applied new technologies or management practices
- 5,872 (5,018 FTF; 50% FTF women) individuals received short-term agricultural productivity or food security training
- 85 (69 FTF) food security private enterprises, producer organizations, water users associations, women's groups, trade and business association, and community-based organizations received assistance
- 808 (750 FTF) members of producer organizations and community based organizations received assistance
- 29 (18 FTF) private enterprises, producer organizations, water users associations, women's groups, trade and business association, and community-based organizations applied new technologies or management practices
- 5,818 (5,501 FTF) hectares under improved technologies or management practices
- 124 (104 FTF) technologies or management practices made available for transfer
- 4,741 (4,381 FTF) rural households benefitted directly

- 75 (40 FTF) MSMEs, including farmers, received assistance to access loans
- 1,399 (1,234 FTF) MSMEs received business development services from MAVEN-assisted sources

The full MAVEN indicator data table can be found in **Annex 1**.

Examples of subsector and host-level impacts and achievements are highlighted below:

Staple Foods

- The Benkady Women Rice Growers Cooperative of NPegnoso benefitted from two volunteers who provided training and assistance to Coop members on rice cultivation and processing, as well as organizational development. After the volunteer trainings, the 225 members started to use improved seeds and adopt improved pest control and fertilization practices, thereby increasing yields and reducing red rice infection on their crops. The Coop is also now able to process rice using a sheller/polisher machine, and it is charging other neighboring farmers to use this service. As a result, the members have achieved a higher profit margin and increased sales from processed white rice and rice processing/polishing services provided to other farmers; now, members obtain 300 FCFA (\$0.60) per kg with polished rice as compared to 125 FCFA (\$0.25) with unprocessed rice. Production has increased from 40 to 378 tons, translating into a net annual profit of \$906,778 compared to \$9,373 before the volunteer assignments. The Coop has also adopted a new record keeping system to capture transactions related to machine operations, agricultural inputs and loans, and warehouse inventory, as recommended by the volunteers.
- Three other women's rice producer groups also benefitted from training on rice processing, improved seed, and record keeping. As a result of volunteer assistance, Benkady Women Rice Growers Cooperative of Kouroumaso's 243 members increased production by about 50% (from 1.6 to 2.5 tons of better quality rice per hectare), and also increased the quality of processed rice, which gains double the price of unprocessed rice. Likewise, the Loutana Women Rice Growing Cooperative's 700 members adopted improved seed and increased rice production from 1.8 to 2.5 tons of rice per hectare. Coop members have improved the quality of rice and are now producing processed rice and rice bran, which members sell for \$0.35 more per kg than before. Each of the Cooperatives is now offering a rice polishing service for their entire communities.
- The Kafara Farmers' Cooperative participated in two MAVEN volunteer assignments focused on organizational development, business planning, and staple crops production. The Cooperative has also received support from INTSORMIL in the form of seeds and mineral fertilizers provided for experimentation and promotion. Members are now growing hybrid varieties of sorghum and millet for the very first time, and the Cooperative has produced 96,000 tons of grain, despite the worst climate conditions of the last five years – as opposed to 103 tons of grain produced before the volunteer assignments. As a result, the Coop generated a net annual income of \$8,736 in the 2011-2012 growing season, compared to \$250 in the year prior. This success has enabled the Coop to engage 61 new members and 100 new seasonal employees to assist with production and harvesting field work.

- The Union of Women Processors (UWP) of Mopti significantly increased its outreach to Malian farmers; it is now providing services to 900 producers, replicating information and training learned from volunteers. As a result of volunteer assistance, UWP cooperatives have increased cereal processing by 1,500 kg (from 4,500 kg to 6,000 kg) annually. In addition, UWP members have improved labeling and packaging for cereals and other products; membership fees are paid more regularly; and UWP board members are now using financial tools to analyze finances and compile monthly financial statements.
- Winrock sent two volunteer experts to provide training and technical assistance to Faso Kaba staff on improved seed production practices and the use and maintenance of new seed processing equipment, and to introduce hybrid seed production. Now that Faso Kaba is effectively using the new equipment and adopting the technical and business management recommendations made by the MAVEN volunteers, the company's processing operations have become more efficient and seed quality has improved. In 2012, Faso Kaba produced and sold more than 1,000 tons of seed --ten times what the company sold when it first started-- at 800 CFA (\$1.60) per kg (as compared to 500 CFA per kg that the company earned in previous years). As a result, sales increased from \$338,292 in 2010 to \$2,178,516

"Thanks to the systematic interventions of Winrock F2F/MAVEN volunteers, I have transformed my traditional hand-made seed processing unit into a modern enterprise with much greater reach on national level!"

--Maimouna Sidibé Coulibaly,
owner, Faso Kaba

in 2012. The company has shared its new knowledge with others, training 150 stockists and hosting 300 farm demonstrations and 10 field days, which were attended by 3,000 farmers. The company's owner, Maimouna Sidibé Coulibaly, was invited by USAID to participate in a roundtable organized by the alliance for food security and nutrition, as part of President Obama and USAID Administrator Rajiv Shah's visit in Senegal. Coulibaly credits MAVEN and F2F as being important contributors to her ongoing success.

- In partnership with IICEM, five MAVEN volunteers supported Danaya Cereals, providing training and assistance to improve quality, develop formulations for new products (including infant cereal), and establish linkages across the value chain. As a result of these assignments, Danaya is now connected and providing mentoring to women's cereal producers and other processors, strengthening a solid chain for the production of infant cereals and other products. Volunteer recommendations were happening as Danaya was working on installation of their new facility, and thus, immediate changes were put in place. This included improved sanitation practices (e.g., protecting doors/areas to prevent cross-contamination) and improved packaging.

Cattle

- Members of the Farakala Agro-Pastoral Cooperative have improved animal fattening and animal health practices. As a result, their cows are fattening more quickly, and clients now have more regular access to fattened cattle. Furthermore, with improved animal husbandry and animal health practices, farmers are benefitting from reduced losses (see success story in **Annex 2**).

- The Cooperative for the Promotion of Breeding in the Commune of Ouélessébougou has made substantial improvements in artificial insemination practices, use of nutritionally dense feed ingredients, herd management, and record keeping, as a result of training from three MAVEN volunteers. After making changes introduced by the volunteers, the Coop has increased annual gross sales from \$90,000 to \$321,697 in just two years.

Small Ruminants

- As a result of volunteer training and assistance on improved small ruminant health practices, the Farmers' Cooperative Wuyanion of Lofine is now able to identify and address basic diseases. By adopting simple improvements such as keeping animals in dry, clean, and well ventilated pens, the incidence of disease has decreased greatly. Members have also started to supplement animal feed with nutritional products. These changes have resulted in a 70% increase in sales.
- One volunteer worked with the Women's Cooperative of Soroble, providing training and assistance on small ruminant management and feeding strategies. After the training, the 46 Coop members have adopted new feeding and animal health practices such as use of locally-available supplements, deworming techniques, and introduction of a water pen. The volunteer invited men to participate in the training, and as a result, 12 men have since joined the Cooperative and now work actively alongside the women.

"Neither the light of the moon nor the light of the sun is as bright as the light of knowledge brought to this village today. Judith Moses brought a light to our village. She opened our eyes!"

-- Yaya Kone, Secretary in charge of External Affairs at "Wuyanion" cooperative of Lofine

Other Impacts

- In the **horticulture** subsector, hosts have demonstrated improvements in water, soil, and pest management for a variety of horticulture crops. Despite the worst drought of the last five years, members of the Kafara Women's Association "Nisonidia" increased income by 25%, and Cooperative Koli Magni increased income by 30% after implementing volunteer recommendations. Likewise, the Borko Farmers' Cooperative increased yields by 30%, due to the use of composting techniques taught by a volunteer.
- Digne te don Horticulture Cooperative improved pricing and marketing strategies, including direct linkages with customers and expanding marketing stands to facilitate increased sales. Members are now working together to produce and market organic produce and are receiving higher prices for this. With the extra income earned, the Coop is now initiating an internal savings and lending program for members.
- After demonstrating improvements following volunteer assistance, MAVEN staff worked to create linkages between horticulture cooperatives and local restaurants and organizations to promote sales. As a result, the Signignesiki Horticulture Cooperative is now selling its products to the US Embassy.

- As a result of volunteer recommendations, **fish farmers** are now making their own fish feed and constructing leak-proof ponds. For example, the Fish Farmers' Cooperative of Bougouni, built and/or rehabilitated 18 ponds, and the Manabougou Fishermen Cooperative built 14 ponds after attending volunteer trainings. After witnessing their strong success, 120 nearby farmers joined the Manabougou Coop. Prior to the volunteer training, the Coop was selling 200 kg of fish at \$1.50/kg. Two years later, the Coop is able to sell 553 kg of fish at \$2.40/kg.
- "What I have been searching for ten years, a MAVEN volunteer gave to me in ten days!"*

--Yacouba Diarra, president, Fish Farmers Cooperative of Bougouni
- F2F training with SODOUF has led to several improvements in the enterprise's **poultry** production. Since the training, SODOUF conducts regular analysis of feed and feed ingredients, and has adjusted feeding practices according to volunteer recommendations. As a result of these changes, the enterprise has decreased chick mortality rates and increased production of eggs. In addition, plant operations have been better organized to maximize efficiency. For example, a weekly operation schedule is now posted for staff, and the enterprise implemented a raw material inventory system.
 - MAVEN assignments in the staple foods subsector have generated strong **publicity**. For example, volunteer Stella Salvo's assignment with Faso Kaba garnered the interest of the Malian newspaper *L'Essor Quotidienne*, which published an article in 2012, and the national TV station TM2, which aired a feature on Salvo's work. This article was also disseminated on www.africaseed.net. Stories of Faso Kaba's success have been published in *Le Grigot* and shared by Winrock, USAID, AGRA, and others. Likewise, volunteer assignments with Danaya Cereals and other hosts have generated media coverage by Radio Siguida Kunkan, Radio Guinta, Radio Chanel 2, and TM2 TV station.

6. Leveraging Resources and Ensuring Sustainability

MAVEN engaged in several strategic partnerships to leverage complementary resources, enable wider dissemination of information and impacts, and promote sustainability. For example:

- IICEM field staff assisted with SOW development and post-assignment follow-up. IICEM also provided transportation and meals for trainees.
- CAB Demeso provided meals and transportation for its clients who participated in MAVEN volunteer trainings. CAB Demeso staff also played a role in following up with clients to assist with the adoption of volunteer recommendations.
- Morila Gold Mine covered costs for volunteer lodging and meals for three assignments, with a total contribution of more than \$4,000. Morila staff also shared assignment info within the community, helped gather information to develop SOWs, and invited stakeholders to build a demonstration site to further disseminate volunteer trainings after the assignments.
- Several National and Local Directorates provided support to MAVEN volunteer assignments. For example, DRPIA Sikasso helped organize farmers and engaged staff to help with post-assignment follow up. DRPIA contacts also helped make connections between MAVEN and other potential host organizations.

- The World Bank *Project d'Appui Communité Rurale (PACR)* collaborated with MAVEN and provided follow up to beneficiaries on three small ruminant assignments.
- Several local governments/city halls assisted by sharing info about MAVEN activities, providing training venues, and helping to obtain support from local leaders/stakeholders.
- The USAID PAJE Nièta program invited youth to participate in one volunteer assignment (focused on small ruminant production). PAJE Nièta staff helped with the selection and organization of the young entrepreneurs' participation, and provided follow up support after the assignment.

In many cases, these partners participated in volunteer assignments as TOT to enhance the skills and knowledge of extension and service providers.

MAVEN also supported linkages between stakeholders (e.g., between different women's or farmers' groups, as well as between women's/farmers' groups and the private sector). This included linking horticulture producers to local restaurants and the US Embassy, and linking cereal producers to processors and traders. These linkages will enable stakeholders to continue to work with each other beyond the terms of the program.

7. Recommendations Regarding Unfinished Work and/or Program Continuation

With the 6-month, no-cost extension of the program, MAVEN was able to exceed the original LOP target number of volunteers. While some performance targets were not achieved, the program was able to make significant achievements in spite of periodic insecurity, the 2012 coup d'état, and significant program realignment with USAID/Mali's Feed the Future strategy.

While MAVEN program work is complete, program beneficiaries would benefit from continued support, and should be linked to USAID/Mali's future programming in cereals and livestock to the greatest extent possible. ACIDI/VOCA and Winrock recommend that USAID/Mali also consider designing future volunteer programs to support the Mission's portfolio and complement other large-scale programs. Volunteer programs, such as MAVEN/F2F have been an effective, low cost program that blends two goals—providing technical services to enhance sustainable economic development and opportunities for good people-to-people level exchanges.

8. Lessons Learned

- Illiteracy is a major constraint in Mali and needs to be considered when planning assignments. Volunteers must come equipped with pictorial and/or hands-on training materials/exercises, and staff must devote additional time to work with the hosts to collect baseline and impact data, complete training attendance sheets, etc.
- Most agricultural cooperatives and women's groups in Mali are still at a very nascent stage of development. An important starting point with these groups is training in organizational development (starting with simple concepts of group formation and cooperation).

- To promote greater impact, it is important to identify and select hosts/beneficiary groups that are capable of and committed to adopting and widely spreading information and improved technologies introduced by volunteers.
- Involving public sector agencies, local leaders, other development partners (including US government funded programs) were key success factors in the identification of new hosts, as well as in assignment implementation and follow-ups.
- A critical success factor is to identify hosts who have the will and ability to participate actively and implement volunteer recommendations.
- The flexible nature of the MAVEN program (modeled after Farmer-to-Farmer) enabled the program to adapt to shifts in priority focus subsectors, target geographic areas, and on-the-ground realities. Despite many changes and delays, the program was able to adjust and still make a strong impact.
- The shift from five subsectors (originally) to fewer subsectors enabled greater and deeper focus.

9. Success stories

Please see **Annex 2** for success stories.

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
Intermediate Result 1: Improved Agricultural Productivity											
Sub-Intermediate Result 1.1: Enhanced Human & Institutional Capacity Development for Increased Sustainable Agriculture Sector Productivity											
4.5.2-5	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	number	gender, duration (new/continuing)	0	0	1,610 (644 women)	117 FTF ONLY: 117 (74 women; 117 new)	4,483 (1,766 women; 3,103 new; 1,380 continuing)	4,437 (3,259 women; Duration: 1,883 new, 2,554 continuing) FTF ONLY: 3,823 (2,964 women; Duration: 1,883 new, 1,940 continuing)	4,600 (1,840 women; 3,220 new; 1,380 continuing)	4,554 (3,333 women; Duration: 2,000 new, 2,554 continuing) FTF ONLY: 3,940 (3,038 women; Duration: 2,000 new, 1,940 continuing)
4.5.2-7	Number of individuals who have received USG supported short term agricultural productivity or food security training	number	gender, type of individual (producers, government, private sector, civil society)	0	797 (366 women); FTF ONLY: 215 (101 women)	3,465 (1,386 women)	3,622 (1,765 women); FTF ONLY: 3,371 (1,728 women)	3,281 (949 women; 656 private sector; 2,625 producers)	1,453 (672 women; Type: 1,060 producers, 343 private sector; 44 civil society, 6 gov) FTF ONLY: 1,432 (667 women; Type: 1,042 producers, 342 private sector, 42 civil society, 6 gov)	7,700 (3,080 women; 1,540 private sector; 6,160 producers)	5,872 (2,803 women; Additional disaggregates included FY13 data ONLY: Type: 1,060 producers, 343 private sector; 44 civil society, 6 gov) FTF ONLY: 5,018 (2,496 women; Additional disaggregates include FY13 only: Type: 943 producers; 343 private sector; 33 civil society; 6 gov)

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
4.5.2-11	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	number	type of organization, duration (new/continuing)	0	31 FTF ONLY: 19	35	14 FTF ONLY: 14; (Duration: 14 new; Type: 1 trade/biz association; 9 women's groups; 3 producer orgs; 1 CBO)	5	40 (Duration: 35 new, 5 cont.; Type: 20 producer orgs, 3 CBOs, 10 women's groups, 1 trade/biz association, 6 private ent.) FTF ONLY: 36 (Duration: 33 new; 3 cont.; Type: 16 producer orgs; 3 CBOs; 10 women's groups; 1 trade/biz association; 6 private ent.)	30 (disaggregates not available)	85 (Disaggregates include FY12 & FY13 data only: Duration: 49 new, 5 cont.; Type: 23 producer orgs, 4 CBOs, 19 women's groups, 2 trade/biz association, 6 private ent.) FTF ONLY: 69 (Additional disaggregates include FY12 & FY13 data only: Duration: 47 new; 3 cont.; Type: 19 producer orgs; 4 CBOs; 19 women's groups; 2 trade/biz associations; 6 private ent.)
4.5.2-27	Number of members of producer organizations and community based organizations receiving USG assistance	number	type of organization (producer org, non producer org CBO); gender	0	n/a	n/a	n/a	390 (156 women; 380 producer orgs; 10 CBOs)	808 (404 women; Type: 788 producer orgs, 20 CBOs) FTF ONLY: 790 (401 women; Type: 770 producer orgs; 20 CBOs)	390 (156 women; 380 producer orgs; 10 CBOs)	808 (404 women; Type: 788 producer orgs, 20 CBOs) FTF ONLY: 790 (401 women; Type: 770 producer orgs; 20 CBOs)

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
4.5.2-28	Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community based organization that have applied new technologies or management practices as a result of USG assistance	number	type of organization; duration (new/continuing)	0	n/a	n/a	n/a	21 new (9 producer orgs; 8 women's groups; 1 private enterprise; 1 biz association; 2 CBOs)	29 (Duration: 13 new; 16 cont.; Type: 9 women's orgs, 17 producer orgs, 2 private ent., 1 CBO) FTF ONLY: 18 (Duration: 10 new, 8 cont.; Type: 8 women's orgs, 9 producer orgs, 1 private ent.)	21 (9 producer orgs; 8 women's groups; 1 private enterprise; 1 biz association; 2 CBOs)	29 (Duration: 13 new; 16 cont.; Type: 9 women's orgs, 17 producer orgs, 2 private ent., 1 CBO) FTF ONLY: 18 (Duration: 10 new, 8 cont.; Type: 8 women's org, 9 producer org, 1 private ent.)
Sub-Intermediate Result 1.2: Enhanced Technology Development, Dissemination, Management, and Innovation											

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
4.5.2-2	Number of hectares under improved technology or management practices a result of USG assistance	number	technology type (crop genetics, animal genetics, pest mgmt, disease mgmt, soil, irrigation, water mgmt, post-harvest handling & storage, processing, climate mitigation or adaptation, fishing, other, total); duration (new/continuing); gender (male, female, association applied)	0	0	3,200	0	8,000 (1,360 crop genetics; 400 pest mgmt; 400 disease mgmt; 800 soils; 800 water mgmt; 4,240 other; 1,600 new; 6,400 continuing; 800 male; 800 female; 6,400 association applied)	5,818 (Gender: 2,145 female, 41 male; 3,632 association applied; Type: 4,436 crop genetics, 383 soil, 1 fishing, 280 disease mgmt; 17 irrigation, 129 pest mgmt; 572 other; Duration: 1,320 new, 4,498 continuing)	8,000 (1,360 crop genetics; 400 pest mgmt; 400 disease mgmt; 800 soils; 800 water mgmt; 4,240 other; 1,600 new; 6,400 continuing; 800 male; 800 female; 6,400 association applied)	5,818 (Gender: 2,145 female, 41 male; 3,632 association applied; Type: 4,436 crop genetics, 383 soil, 1 fishing, 280 disease mgmt; 17 irrigation, 129 pest mgmt; 572 other; Duration: 1,320 new, 4,498 continuing)
4.5.2-39	Number of new technologies or management practices made available for transfer as a result of USG assistance	number	phase of development (under research, under field testing, made available for transfer)	0	26 FTF ONLY: 10	6	17 FTF ONLY: 17	5	81 FTF ONLY: 77	15	124 FTF ONLY: 104

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
4.5.2-13	Number of rural households benefitting directly from USG interventions	number	duration (new/continuing); gendered household type (FNM, MNF, M&F, CNA)	0	985 FTF ONLY: 672	3,465	2,676 FTF ONLY: 2,648	4,039 (323 FNM; 606 MNF; 3,110 M&F; 3,030 new; 1,009 continuing)	1,080 (Duration: 813 new, 267 continuing; Gender: 66 FNM, 125 MNF, 785 M&F, 104 n/a) FTF ONLY: 1,061 (Duration: 254 cont., 807 new; Gender: 66 FNM; 766 M&F; 125 MNF; 104 n/a)	7,700 (disaggregates not available)	4,741 FTF ONLY: 4,381 (LOP disaggregates n/a)
Intermediate Result 2: Expanding Markets and Trade											
Sub-Intermediate Result 2.4: Improved Access to Business Development and Sound and Affordable Financial and Risk Management Services											
4.5.2-30	Number of MSMEs, including farmers, receiving USG assistance to access loans	number	size (micro, small, medium); sex of owner/producer (male, female, joint, n/a)	0	0	n/a	0	50 (50 micro; 30 male; 20 female)	75 (size: 73 micro; 1 small, 1 med.; size: 12 female, 62 male, 1 joint) FTF ONLY: 40 (size: 40 micro; sex: 12 female, 28 male)	50 (50 micro; 30 male; 20 female)	75 (size: 73 micro; 1 small, 1 med.; size: 12 female, 62 male, 1 joint) FTF ONLY: 40 (size: 40 micro; sex: 12 female, 28 male)

MAVEN Summary Performance Data Table

Feed the Future Indicator Number	Indicator	Unit of Measure	Disaggregation	Baseline Value	FY2011 Actual	FY2012 Target	FY2012 Actual	FY2013 Target	FY2013 Actual	LOP Total Target	LOP Actual
4.5.2-37	Number of MSMEs, including farmers, receiving business development services from USG-assisted sources	number	size (micro, small, medium); MSME type (ag producer, input supplier, trader, output processor, non-ag, other); sex of owner/producer (male, female, joint, n/a)	0	n/a	n/a	n/a	150 (150 micro; 127 ag producer; 8 input supplier; 15 other; 90 male; 60 female)	1,399 (size: 1,373 micro, 23 small, 3 med.; MSME type: 1,114 ag producers, 16 input suppliers, 100 other, 169 output processors; sex: 213 female, 262 male, 9 joint, 915 n/a) FTF ONLY: 1,234 (size: 1,221 micro, 13 small; MSME type: 960 ag producer, 8 input supplier, 100 other, 166 output processors; sex: 171 female, 140 male, 8 joint, and 915 n/a)	150 (150 micro; 127 ag producer; 8 input supplier; 15 other; 90 male; 60 female)	1,399 (size: 1,373 micro, 23 small, 3 med.; MSME type: 1,114 ag producers, 16 input suppliers, 100 other, 169 output processors; sex: 213 female, 262 male, 9 joint, 915 n/a) FTF ONLY: 1,234 (size: 1,221 micro, 13 small; MSME type: 960 ag producer, 8 input supplier, 100 other, 166 output processors; sex: 171 female, 140 male, 8 joint, and 915 n/a)

Annex 2. MAVEN Success Stories

Improving Livelihoods for Cattle Farmers in Mali

The cattle population and demand for meat in Mali have been consistently growing since the 1990s. In high rainfall, mixed-farming areas in the southern part of the country, like the Sikasso region, cattle farmers are faced with the additional challenge of fattening their cattle while inflicting minimal damage on arable land. For 30 smallholder farmers with the Agro-Pastoral Cooperative of Farakala, cattle provide an essential source of income. Though the Coop benefits from a functioning village livestock market, members were in need of assistance to increase productivity and meet the growing demand.

Coop members had the opportunity to participate in hands-on technical training for the first time ever, when MAVEN volunteer Dale ZoBell came to work in their village in November 2012. ZoBell provided training and demonstrations on feed, mineral supplementation, and forage management; animal nutrition based on age/maturity of the animals; disease control; and animal genetics. He also addressed questions related to marketing and pricing. The participants gained considerable knowledge and skills in evaluating and fattening their herds.



Volunteer Dale ZoBell examines local cattle forage in Farakala, Mali

The Coop members indicate that learning how to better nourish and fatten their animals has had a significant impact on the production and the health of their cattle. Following ZoBell's recommendations, members are now diversifying and supplementing cattle feed and regularly monitoring animal health. Since the training, members of the Coop have noticed a major difference in the rate at which their animals fatten. Before the training, they sold their fattened cattle three times a year, since it would take 3-4 months to reach market weight. Now, the animals reach their target weight and are ready to be sold after only two months. This means they can sell at least five times a year. In addition, regular monitoring and improved management practices (e.g., keeping animals in a controlled area while fattening) has led to reduced animal losses.

The Coop secretary Davide Sagara states, *“This training revitalized our cattle production system through the selection of best animals to be fattened and the behavior change in terms of feeding strategies!”*

Building the Capacity of Staple Crops Cooperatives

Business skills training provides a foundation for growth and sustainability

A common challenge for farmers' cooperatives in rural Mali is the lack of business skills. Although cooperatives are composed of people who have been farming for generations, schooling is limited, and there are no business classes that help farmers develop their entrepreneurial skills. This is especially difficult for women, who are traditionally responsible for household tasks that easily take up a large portion of the day.

Since 1980, local NGO Groupe de Recherches et d'Applications Techniques (GRAT) has been working on socioeconomic development in the Sikasso region with groups involved in the production of staple foods (millet, sorghum, rice and potatoes), truck gardening, and small ruminant breeding. Given the critical need for farmers' groups to more successfully work together and approach farming more like a business, GRAT contacted MAVEN to request organizational development and business skills training for the M'Pedougou, Kandiandougou, and Kalifabougou Women's Cooperatives.

In June/July 2012, MAVEN volunteer Stephen Veryser trained 120 women and 90 men from these three groups. His training covered entrepreneurship, simple business planning, and common issues related to running a business. The sessions were interactive and enabled the participants to practice brainstorming and planning collectively.



Volunteer Steven Veryser with members of the M'Pedougou Women's Cooperative

Prior to the training, the Coop members did not think of their activities as a business, and they were not regularly tracking expenses and income for their activities. During the training, participants learned how to develop basic business models for the daily activities that they were already involved in. They learned to calculate the savings they would keep by farming a collective field and selling the harvest as a group. Participants also learned to keep accurate records of expenses, sales, and profit for their collective enterprises, as well as the value in regularly analyzing their activities and collectively planning for the future.

As a result of Veryser's training, each of the Coops have improved management of resources and increased profits. Since the training, Coop members have been measuring their farm area and the amount of inputs that they need, and are analyzing expenses and sales. The Coops now work to secure financing before beginning new activities. Before the training, Coop activities would be haphazard; members would prepare their fields before they had seeds or inputs, and if they didn't have money, the fields would go unfarmed. Now, members make sure they are prepared before starting an activity.

Bintou Coulibaly, from Kalifabougou Women Association, states, *"Before, agriculture had been the least desirable occupation; but now it has become a real money-making opportunity. With our new skills in entrepreneurship and business management, we can plan ahead of time."*

Equipping Future Agriculture Leaders

Mr. Mamadou Massar Dicko started the Ecole de Formation Agro-pastorale de Wayerma (EFAPW) with only three rented classrooms and commitment of a few friends to train 10 students eager to learn about agronomy. Today, EFAP-W hosts six classes and over 300 students, and is the only secondary school for agricultural education in the city of Sikasso. The majority of students enrolled in EFAP-W are children of farmers in the region, who will return to the family farm to help improve production.



Volunteer David Darkoh demonstrates record keeping tools to EFAPW students

Agricultural training is essential in Sikasso, which is known as the granary of Mali, for its production of a significant portion of Malian food such as cereals, fruits, and vegetables. With a goal to prepare students to combat poverty and malnutrition in their communities, Mr. Dicko approached the USAID MAVEN Program for assistance to innovate and adapt the school's curricula and programs to address the real needs related to agricultural development in the region.

With support from MAVEN volunteers, EFAPW is on its way to meeting this goal.

Volunteer Craig Edwards worked with the school to develop an improved internship program, start a new library (in part using books, documents, and newspapers that he donated), and initiate several school improvement activities to boost pride and community within the school. Edwards also helped Mr. Dicko identify and approach public and private sector representatives to serve on an advisory group to provide ongoing feedback to EFAPW on needs and employment opportunities across the agriculture sector. Many of these advisors will also host student interns.

Two other volunteers, David Darkoh and Daniel Miller, subsequently worked with EFAPW to enhance faculty skills and improve curricula on cattle and small ruminant production. Darkoh introduced improved cattle management and record keeping tools, while Miller provided training on improved animal health and feeding practices. Information provided by the volunteers will be integrated into EFAP-W training with students and local producers.

Eager to implement all of the volunteers' recommendations, Mr. Dicko states, *"I feel like I was blind all the time, and [as a result of the volunteer assistance] my eyes just opened abruptly!"*

The school is now even more committed to seizing the important opportunity to educate and provide the best agricultural technicians to promote sustainable development within Sikasso and elsewhere. Likewise, the members of the new EFAPW advisory group are eager to contribute to preparing the next generation of agriculturalists. As one local agribusiness owner (who is now in the EFAPW advisory group) explains, *"If we are not able to produce quality technicians in agriculture today, who will take care of tomorrow after our generation has retired, to meet the challenges of agricultural development?"*