



USAID
FROM THE AMERICAN PEOPLE

MALI LIVESTOCK FOR GROWTH (L4G)

ANNUAL REPORT FOR THE PERIOD
SEPTEMBER 29, 2014 – SEPTEMBER 30, 2015
FY 2015

November 5, 2015

This publication is prepared for USAID by AECOM International Development to report on the work of the USAID Mali Livestock for Growth program under Contract No. AID-688-C-14-00004.

MALI LIVESTOCK FOR GROWTH (L4G)

ANNUAL REPORT FOR THE PERIOD
SEPTEMBER 29, 2014 – SEPTEMBER 30, 2015
FY 2015

Contract No. AID-688-C-14-00004

Submitted to:

USAID/Mali

Prepared by:

AECOM International Development

DISCLAIMER:

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

TABLE OF CONTENTS

Acronyms	ii
Introduction and Overview	1
Highlights	2
Component I: Increased Livestock Productivity	3
1.1. Enhanced Technology Innovation, Dissemination, and Management	3
1.2. Increased Access to Quality Inputs and Services	5
1.3. Improved Pastureland and Water Resources Management	9
1.4. Improved Community Literacy, Numeracy, and Nutrition and Hygiene Practices.....	13
Component II: Increased Domestic and Export Trade	14
2.1. Strengthened Market Access and Linkages.....	14
2.2. Decreased Barriers to Trade	15
Component III: Strengthened Local Capacities and Systems	16
3.2. Strengthened Capacity of Local Actors.....	16
Component IV: Improved Enabling Environment for Livestock Sector	18
4.2. Increased Capacity of Civil Society for Policy Analysis and Advocacy.....	19
Cross Cutting Themes	19
Gender.....	19
Environmental Compliance	20
Monitoring and Evaluation	20
Issues, Challenges and Lessons in Year 1	21
Annex A – Financial Report	22
Annex B – Monitoring and Evaluation Plan Progress	23
Annex C – Success Stories	28

ACRONYMS

AE	<i>Auxiliaire d'Élevage</i> (Auxiliary Veterinarian)
ANAVEM	<i>Association Nationale des Vétérinaires Mandataires du Mali</i> (National Veterinarian Association)
APESS	<i>Association de Producteurs et Eleveurs du Savanne et Du Sahel</i> (Association of Savannah and Sahelian Producers and Growers of the Savanah)
BOA	Bank of Africa
CBO	Community-based Organization
CCA	Climate Change Adaptation
COP	Chief of Party
COPRAV	Cooperative Production of Feed Rations for Poultry and Livestock
COR	Contracting Officer's Representative
COVEM	<i>Collectif des Vétérinaires du Mali</i> (Collective of Malian Veterinarians)
CSA	Climate Smart Agriculture
CSO	Civil Society Organization
DEAR	Double Entry Accounting Register
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DRPIA	<i>Direction Régionale de Productions et Industries Animales</i> (Regional Office of Production and Animal Industries)
DNSV	<i>Direction Nationale de Services Vétérinaires</i> (National Office of Veterinary Services)
DRSV	<i>Direction Régional de Services Vétérinaires</i> (Regional Office of Veterinary Services)
ECOWAS	Economic Community of West African States
EMMP	Environmental Mitigation and Monitoring Plan
FARA	Fixed Amount Reimbursement Agreement
FBLT	Functional Business Literacy Training
FEBEVIM	<i>Fédération Nationale de la Filière Bétail et Viande</i> (National Federation of Meat and Livestock)
FMNR	Farmer-Managed Natural Regeneration
FtF	Feed the Future
FOFBEV	<i>Fédération des Organisations de la Filière Bétail-viande</i> (Federation of the Livestock Sector for Mopti Region)
GOM	Government of Mali
ICD	<i>Initiatives Conseils Développement</i>
ICRISAT	Institute for Crop Research in the Semi-Arid Tropics
IER	<i>Institut d'Economie Rurale</i> (Rural Economy Institute)
IFDC	International Fertilizer Development Council
IFP	<i>Institut de Formation Professionnelle</i> (Institute for Professional Training)
ILRI	International Livestock Research Institute
IPR/FRA	<i>Institut Polytechnique Rural de Formation et Recherche Appliquée</i>

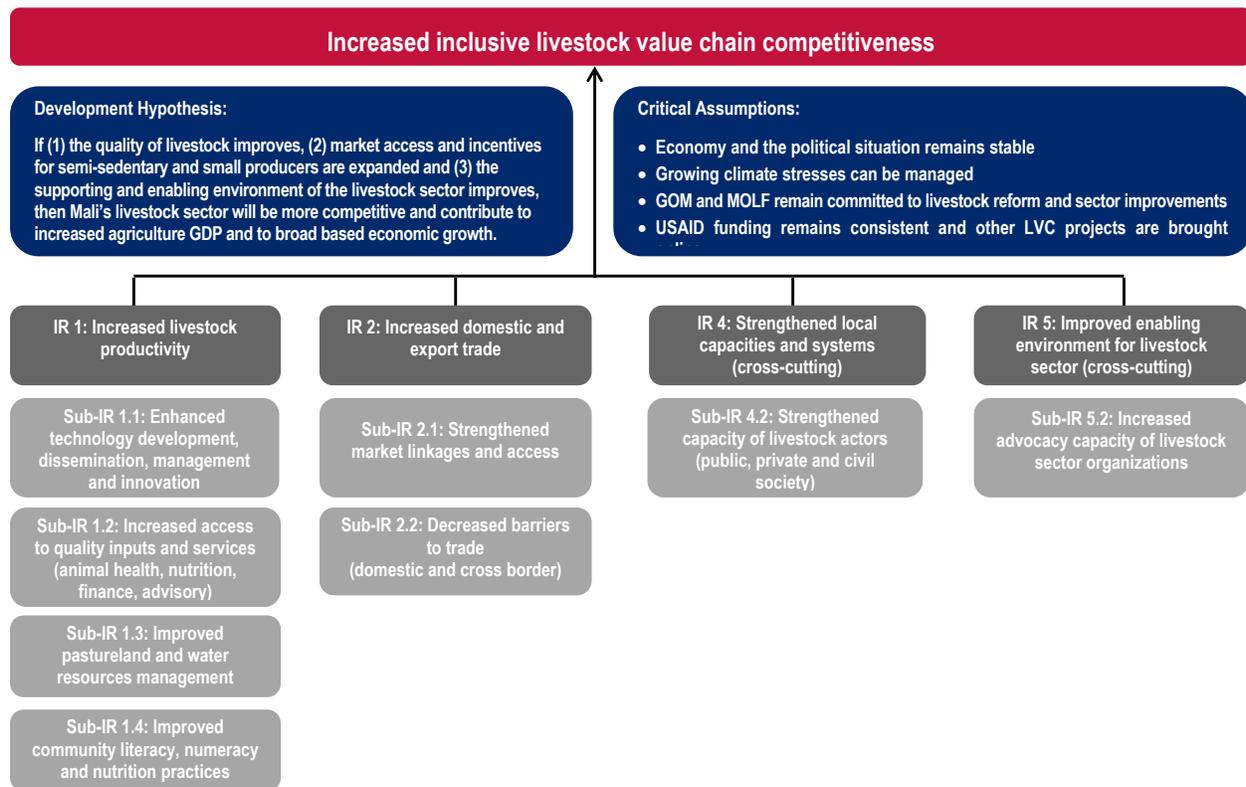
IR	Intermediate Result
LAB	Livestock as a Business
LCV	<i>Laboratoire Centrale Vétérinaire</i> (Central Veterinary Laboratory)
L4G	Livestock for Growth
LVC	Livestock Value Chain
M&E	Monitoring and Evaluation
MFI	Microfinance Institution
MRD	Ministry of Rural Development
MSME	Micro Small and Medium Enterprises
NGO	Non-governmental Organization
OVN	<i>Ordre des Vétérinaires de Mopti</i> (Mopti Veterinarians Organization)
PADESO	<i>Programme d'Appui au Développement Durable de l'Élevage au Sahel Occidental</i> (Support Program for Sustainable Livestock Development in the West Sahel)
PAMF	<i>Première Agence de Microfinance</i>
PPCB	<i>Péripneumonie Contagieuse Bovine</i> (Bovine Contagious Pleuropneumonia)
PPR	<i>Peste des Petites Ruminants</i> (Ovine Rinderpest)
PfP	Payment for Performance
PMP	Performance Monitoring Plan
PO	Producer Organization
PSA	Public Service Announcement
SLPIA	<i>Service Local des Productions et des Industries Animales</i> (Local Livestock Production and Industry Service)
SLSV	<i>Service Local des Services Vétérinaires</i> (Local Office of Veterinary Services)
STTA	Short-Term Technical Assistance
SVPP	<i>Services Vétérinaires Privés de Proximité</i> (Private Proximity Veterinary Services)
SWOT	Strengths-Weaknesses-Opportunities-Threats
USAID	United States Agency for International Development
USG	United States Government
VA	Village Animator
WLBP	Women's Livestock as a Business Platform
YLBP	Youth Livestock as a Business Platform

INTRODUCTION AND OVERVIEW

The key goal of the USAID Mali Livestock for Growth (L4G) program is to improve the quality of livestock, expand market access and incentives, and include poorer households in livestock value chain development. The program targets herders and small producers who do not have reliable access to inputs or financial services, particularly female producers, who are largely isolated from markets and training programs due to cultural norms. L4G also considers youth to be a vulnerable population due to their lack of access to education, land, financial services, extension services, and high rates of unemployment.

The IRs and Sub-IRs for which L4G is responsible are listed in Figure 1 below.

Figure 1. USAID/Mali Results Framework



HIGHLIGHTS

The L4G program started with a successful public launch on January 14, 2015, attended by the USAID Mission Director, Mopti Region Governor, Prefets of Bankass and Koro, and nearly 250 local partners and government representatives. The event was marked by traditional Fulani and Dogon dances. Malian state TV covered the broadcast, and the Malian *Independent* newspaper published a half-page article about the event. The L4G launch included a field visit to Kanikombole village 8 km outside of Bankass. Immediately following the launch, L4G developed village selection criteria to select priority villages. The team also held in-depth consultations with the Prefets and Sous Prefets of Bankass and Koro to agree on criteria for village selection and explain what early L4G activities would focus on.

L4G introduced the *Services Vétérinaires Privés de Proximité* (Private Proximity Veterinary Services or SVPP), an animal health network established with the participation of the rural populations and private veterinarians, integrating different actors and veterinary products. A SVPP includes qualified staff and auxiliary veterinarians working under the coordination of a licensed veterinarian and monitored by government authorities. L4G is introducing the SVPP model to improve livestock health through vaccinations and disease treatment, increase herd size and quality, and improve profitability. L4G staff provided training to four veterinarians and 77 *Auxiliaires d'Élevage* (Auxiliary Veterinarians or AEs), including 24 women (31%). Collectively they cover the FTF designated communes in Bankass and Koro *Cercles*. The licensing of private veterinarians is in process, and discussed in greater detail in Section 1.1.

L4G was very successful in engaging women and youth to expand their income potential in the livestock sector, notably through establishing Women's and Youth Livestock as a Business Platforms (WLBP and YLBP), training women in production and sale of nutritional salt licks, increasing women's and youth access to land and providing training in literacy and numeracy. L4G organized the first WLBP with 20 women and the first YLBP with 12 young men and eight teenage girls. These participants developed a basic business plan for FY 2015 along with a Code of Conduct; nine of 21 women's platforms and eight of 13 youth platforms have business plans thus far. The WLBPs and YLBPs have vastly surpassed expectations—participation has grown to include 1,678 women, 246 teenage girls, and 796 youth.

L4G carried out prodigious efforts to improve forage crop production, including introducing producers to improved forage varieties; training and support to seed multipliers, introduction of contour ridge farming, basic technologies to intercrop staple crops with legumes, production of Dolique in recession agriculture and irrigated systems, and introduction of Farmer-Managed Natural Regeneration (FMNR). L4G introduced Moringa leaves for human and animal consumption, working with 16 village-based nursery technicians and additionally training 51 Village Animators (VAs) in Moringa and agroforestry nursery practices. The 51 VAs included 26 women (51%). The 16 nursery technicians (including five women, 31%) produced 8,500 Moringa seedlings by the end of FY 2015, which can plant 5.15 hectares.

To build a strong foundation across all components, L4G conducted a value chain assessment using a highly participatory process. L4G staff prepared a livestock meat value chain map, revised it through input from stakeholders on proposed solutions to constraints in a workshop in Bankass on May 18, and further refined it during a workshop in Bamako August 12-13 with participation of local Bankass and Koro stakeholders, producers and herders; the Bank of Africa (BOA); microfinance institutions (MFIs); CSOs; and Ministry of Rural Development (MRD) representatives. The value chain assessment includes the livestock for meat value chain map, identification of present constraints, and proposed solutions from our clients and partners. Additionally, the report presents a quantitative analysis for beef cattle and sheep that includes projected costs, gross margin, profitability, rate of return, time value of money, and brief sensitivity analysis. A brief marketing analysis that is part of the financial feasibility analysis discusses in some detail the importance of timing for market delivery to maximize profitability. This data will serve as a point of entry with program stakeholders, demonstrating the value of investing in the livestock sector.

COMPONENT I: INCREASED LIVESTOCK PRODUCTIVITY

Livestock production in Mali is mired in a cycle of low investment and low return. Herds are not managed optimally and do not achieve maximum productivity or quality for domestic and export trade. Producers' risk mitigation strategies as well as a weak operating environment result in less than optimal productivity and thus weak competitiveness. L4G's approach is to introduce proven and new technologies, increase access to and use of high-quality inputs and services, improve exploitation of traditional pastureland, and improve human literacy, nutrition, and hygiene in ways that will contribute to increased productivity in the livestock sector.

I.1. ENHANCED TECHNOLOGY INNOVATION, DISSEMINATION, AND MANAGEMENT

The L4G approach to enhancing technology innovation, dissemination, and management focuses on building the capacity of local private sector service providers – including private veterinarians, auxiliary veterinarians, and input suppliers – to respond to the needs of semi-sedentary, women, and youth producers, and improving the means and media for delivering critical information to producers. In its first year of operation, the L4G team worked in partnership with key industry stakeholders to foster critical linkages between producers, extension agents, input suppliers, and other advisory service providers to promote good livestock management practices and introduce relevant, scalable solutions that can catalyze improvements in herd management practices.

MODERNIZE ANIMAL HEALTH DELIVERY SYSTEMS

Rural Mali is mired in a conundrum of privatized veterinarian services being on the books and in the laws. However, inertia and resistance in various forms have held back reforms that would help the privatized vet profession to thrive. Unfortunately, most private veterinarians see their mandate as performing annual vaccination campaigns – a practice that is not profitable and neglects other important aspects of animal health. These include deworming, external parasites control, livestock feed and feed rations, and nutritional supplements. Veterinarians do not have access to business training, and competition between state and private animal health services discourages private veterinarians from doing more than vaccinations. The L4G SVPP model places the private veterinarian in the center of the community he or she serves and ensures a gender-balanced cadre of trained and competent AEs to extend his or her geographic coverage and improve ability to train and deliver timely messages to herders and sedentary producers. The model also supports private veterinarians developing business plans to help them improve their planning for targeted marketing (e.g. Tabaski), seek loans for capital investments, and diversify their revenue streams to include animal health and animal fattening.

L4G provided three days of initial technical training to four private veterinarians in March 2015 to improve their technological competencies and private service delivery during two workshops. They were invited to AE technical trainings, but rarely attended the AE training events. Given this lack of participation, L4G recruited and selected additional veterinarians. In conjunction with the *Ordre des Vétérinaires de Mopti* (Mopti Veterinarians Organization or OVM), L4G continued to screen and test all qualified candidates participate in the SVPP network, with preference for veterinarians with experience working at the village level. Prior to the end of year, L4G shared profiles of the veterinarians with the *Direction Nationale de Services Vétérinaires* (National Office of Veterinary Services or DNSV), which licenses veterinarians. DNSV ultimately rejected one candidate because he is not a veterinary doctor or an Engineer of Applied Animal Sciences. L4G identified a replacement candidate, Mme. Mariétou Mbaye, who is an engineer. Her paperwork is being reviewed alongside the other candidates.

Since AEs are crucial actors in increasing the capacities of private veterinarians, L4G has designed and implemented a training program that provides them technical and practical training. The modules are designed to increase their skills and knowledge on technical subjects as well as management and

administrative skills to succeed in building a business. Dr. Amadou Mahamadou, a Nigerien veterinarian, facilitated training on five SVPP modules (see box below) to 77 participants, including 24 women (31%). Many of the participants are also enrolled at the *Institut de Formation Professionnelle* (Institute for Professional Training or IFP) in Bankass, an L4G partner. The participants each received a total of 20 days of training. The completion of these modules ensures all members of the SVPP network have the same background knowledge and tools to provide community members with a uniform community-based service.

Auxiliaires d’Elevage (AE) Training Modules

1. Roles, functions, and limitations of the AE, and basic concepts of animal health
2. Notions of livestock parasites, parasite cycles and anti-parasitic treatment schedule
3. Parasite life cycles, and diagnostic treatment and prevention of principal livestock diseases
4. Vaccination under private veterinary control
5. Management of AE activities
6. Primer on the conduct of herding
7. Creating an AE business association

L4G organized a formal ceremony to launch the SVPP in September 2015, where the fee-based model was presented. Among the 175 guests at the event were the *Prefets* and *Sous-Prefets* of Koro and Bankass, two L4G-trained private veterinarians, and the L4G-trained AEs.

The SVPP program aimed to develop a formal mechanism to identify, train, and register AEs, while establishing and strengthening a fee-based vet services network. It also sought to strengthen the system of private and auxiliary veterinarians, especially by providing women with encouragement and opportunities to become AEs. L4G made more progress in building the AEs’ skills and capacities than those of the private veterinarians. All activities planned for FY 2015 related to AEs were implemented on schedule.

Private veterinarians are less mobile than they should be to adequately serve herders’ needs in the region, which is why L4G is working identify additional veterinarians and get them licensed. As such, training in business planning for the private veterinarians planned for FY 2015 has been postponed to FY 2016.

IMPROVE AND DEVELOP EFFECTIVE DISSEMINATION AND COMMUNICATION CHANNELS ON LIVESTOCK

Data from the *Direction Régionale de Services Vétérinaires* (Regional Office of Veterinary Services or DRSV)¹ indicate that only 20% of beef cattle and 2% of small ruminants in Bankass and Koro are brought to annual livestock vaccination campaigns. Few herders know who can provide veterinary services for their animals. Although herders can mention and identify the two predominant livestock diseases (PPCB in cattle and PPR in small ruminants), there are too few human and material resources to effectively carry out annual vaccination campaigns. Mali State Livestock Services (DRSV, SLSV, and Commune-level veterinary posts) are understaffed and underfunded, making livestock extension services non-existent, except in extreme emergencies. High rates of illiteracy—as much as 90%²—exacerbate the situation. Another problem is that transhumant herders leave the zone before vaccination campaigns are operationalized.

L4G addresses these communication deficits through a grassroots campaign to provide technical assistance and directly link to our clients and also obtain feedback from them. The multi-faceted approach includes efforts to identify, train, and support a cadre of gender-balanced of VAs and AEs to disseminate animal fattening and animal health techniques and use Public Service Announcements (PSAs) on local radio geared to the learning style of non-literates to sensitize and train rural populations in available livestock services and to deliver relevant and timely technical messages.

During FY 2015 L4G developed PSAs on the benefits of the SVPP model and its registered veterinarians and AEs. PSA topics included the SVPP concept, livestock management, animal health, making and using salt licks, importance of vaccinations, awareness-raising about Moringa, and basic human health

¹ DRSV reports that Bankass and Koro have 953,512 bovine cattle, of which 200,000 are vaccinated (21%). For small ruminants the situation is worse: of 2,385,376 animals, only 50,000 are vaccinated (2%).

² Agha Khan Foundation Activity report for Mopti Region.

and hygiene. They began airing on Radio Seno in Bankass and Radio Singnere in Koro after the formal launch of the SVPP on September 15. This strategy ensured that the SVPP concept was fully accepted by local authorities and that the messages build awareness of the services offered by veterinarians and AEs.

L4G aims to train equal numbers of female and male VAs to disseminate best practices and technical knowledge of animal fattening, forage production, basic business skills, and POs learning to access bank or micro-finance loans. Training on animal fattening has proven to be very successful, as participants have been able to increase their income earning potential and share these practices with others in their respective communes. Fifteen VAs also received training in fabrication of salt licks and the procedures to make urea-enriched hay.

1.2. INCREASED ACCESS TO QUALITY INPUTS AND SERVICES

Though vibrant, local livestock markets are not well coordinated or organized to meet the needs of livestock producers and buyers. Fodder production is often household-based, and commercial options are limited. Rural communes are underserved by extension services and private veterinarians, and access to quality inputs can be inconsistent. Trading adulterated veterinarian medicines and supplies is also a serious problem. Most producers view their herds as long-term assets rather than as business opportunities. Access to livestock transport services is also limited, especially at times when the entire transport sector is involved in shipping the cotton harvest. L4G employs market-oriented approaches to address critical constraints to increase access to quality inputs and services. Commercial activities in the Mopti region are robust, thus input suppliers are potentially well-placed to develop innovative approaches to broaden distribution networks and test new modalities for delivering products and services to customers in peri-urban and rural markets.

IMPROVE LIVESTOCK FODDER PRODUCTION AND SUPPLY

Livestock feeding practices are based largely on natural pastureland forages, supplemented with post-harvest field crop residues (mostly poor quality millet stalks). Shifting ecological conditions as a result of climate change, encroachment of crops into traditional pastures, and current livestock endowments render these feeding practices unsustainable and argue for supplementing them with commercial fodder production. Lower-cost fodder will ultimately result in higher margins for producers and lower overall vulnerability to shock and transport rigors, as herds will be healthier and well-fed.

L4G promotes improved fodder and feed by identifying best practices already in place in Mali, and then replicating them in the program zone. L4G sought to build capacity and relationships with risk-tolerant forage producers to adopt new techniques, and aiding with rolling out these techniques to the wider population. L4G addresses the fodder supply deficit through multiple means:

- 1) Introduction of improved forage crop varieties;
- 2) Introduction of dual purpose (grain and fodder) forage crops;
- 3) Rain-fed forage production, including intercropped staple cereals with legumes;
- 4) Recession agriculture to produce *Dolichos lablab* (hyacinth bean);
- 5) Irrigated forage production (especially Dolique, Moringa, and bourgou);
- 6) Train and encourage timely fodder harvest and storage;
- 7) Urea-enriched hay; and



Training on making urea-enriched hay feed for Women and Youth Livestock as a Business Platforms. Bankass, March, 2015

8) Silage making.³

L4G invested considerable effort in FY 2015 to identify and introduce seed technologies that would improve fodder production. The team met with Malian and regional suppliers of seeds to identify the most reliable vendors. With support from local government entities—SLPIA, the International Fertilizer Development Center (IFDC), and the Cooperative Production of Feed Rations for Poultry and Livestock (COPRAV)—L4G identified 16 livestock feed suppliers (15 in Bankass and one in Koro), three fertilizer suppliers, and one mechanized feed chop manufacturer in Mopti Region to increase the rate that stakeholders use these resources. L4G also collaborated with commune mayors and Producer Organizations (POs) to conduct a diagnostic of livestock markets, seven in Koro and eight in Bankass.

Among the program accomplishments for FY 2015:

- L4G distributed 11,486 kg of forage seeds on loan, 18,000 kg of NPK, and 9,800 kg of Urea fertilizer to 37 POs, including 13 youth POs, 18 women-only POs, and 6 mixed gender groups. The inputs allowed forage producers to plant 943 hectares. L4G also directly provided progressive farmers with pilot packages of forage seeds and fertilizer to use their plots for demonstration (and scaling up, as appropriate). The progressive farmers identified and supported with packages are the 32 L4G-trained seed multipliers described below.
- L4G promoted a strategy to strengthen PO management skills and capacity to take on responsibility to manage forage seed and fertilizer loans to their members. As a result, 37 POs (12 in Koro and 25 in Bankass) participated in the seed and fertilizer loan program. L4G developed seed loan contracts with the POs and helped them develop simple loan contracts with their individual members.
- To further stimulate rain-fed forage production efforts, L4G provided input kits to 21 WLBP and 13 YLBP, totaling 1,641 kg of forage seeds, 2,597 kg of NPK fertilizer, and 7,350 kg of Urea – enough for women to plant 52 hectares and youth to plant 16.25 hectares of forage crops. Each kit costs approximately \$80 and sales of products supported with materials in the kits are approximately \$152. Subtracting production costs yields a net income of \$116.
- L4G collaborated with researchers at the *Institut d'Economie Rurale* (IER) Koro to select and train 32 seed multipliers –16 in Koro (one woman) and 16 in Bankass (three women) – to increase local autonomy to produce and sell locally available seeds in proximity to L4G clients. The multipliers planted 17 hectares of forage seed crops in Koro and 101 hectares in Bankass, with a potential value of \$46,800. To select the multipliers, L4G announced its intent to support the launch of a seed multipliers program to POs and VAs and provided an application form. *Cercle* Coordinators and POs reviewed applications and selected the multipliers. IER technicians delivered trainings, and seed multipliers received foundation seed to reproduce and then sell as commercial seed.
- After developing a relationship with 89 villages (25 in Koro and 64 in Bankass) in all 12 Communes in Bankass and six of nine in Koro, the program helped farmers with planting and crop management plans for dual purpose staple crops and legumes and for fertilizer on loan.



Woman PO member applies fertilizer to her cleanly weeded Cowpea plot Pel Village, Koro District, August 2015

³ L4G can only introduce silage making in FY 2016 when crop residues are abundant (after October 2015).

IMPROVE ACCESS TO ANIMAL HEALTH AND NUTRITION INPUTS AND SERVICES

Animal health services can only improve if local capacity is improved and supplies of quality veterinary medicines are more consistent and more widely accessible. Training of AEs is crucial to the process, and these trained cadres work under the supervision either of the L4G *Cercle* Coordinators or the private veterinarians, in collaboration with the Malian State Livestock Services.

Part of the training provided by L4G focused on training AEs to administer vaccines under the supervision of a private veterinarian (Module 5) after which L4G provided participating AEs with veterinary supply kits and basic equipment, thus developing their capacity to support the private veterinarians to provide better geographic coverage and improved services to herders and animal fatteners. Complementing the training provided to private veterinarians and AEs, L4G also identified the National Veterinarian Association (ANAVEM) and Collective of Malian Veterinarians (COVEM) to act as wholesale vaccine distributors to private veterinarians for the annual livestock vaccination campaign. Malian law allows for AEs to administer vaccines under the supervision of a licensed veterinarian or the DRSV.

Fourteen PO representatives that L4G trained in use of salt licks and urea-enriched dry fodder in February 2015 carried out multiplier trainings for an additional 632 people, of which 347 were women. L4G provided training to WLBP and YLBP on nutritional supplements known as salt licks they can sell to herders, which contributes to the livestock value in chain in two ways: increasing their income and improving animal nutrition. During FY 2015, L4G also identified input purveyors for forage and veterinary medicines and started to build relationships between suppliers and producers. Siprovat (Bamako), LCV, and Sahel Veto are input suppliers for veterinary medicines and Bunafama (Grand Moulins de Mali) is the key supplier for provision of animal feed rations.

L4G accomplished all planned activities for FY 2015. Seventy-seven trained AEs are now active providing basic veterinary services to their own and designated nearby villages. L4G specifically targeted youth to become AEs. Of the AEs selected, trained, and equipped, only five males and one female AE are older than 55. The remaining male AEs range from 25 to 35, but women are much younger – 22 years old on average – because



Auxiliary veterinarians show off badges, uniforms and kits. SVPP Launch in Koro, September 2015

most are students or recent graduates of the IFP in Bankass. In July, L4G selected and trained two other private veterinarians, one a female doctor of veterinary medicine, to set up their SVPP services and to assume management responsibility of the trained AEs. In September 2015, the DRSV submitted dossiers and credentials to the DNSV for approval for private veterinarians to set up their services in Bankass and Koro. USAID and L4G have met with the DNSV to help move the dossiers through the system.

IMPROVE ACCESS TO ANIMAL ADVISORY SERVICES

The SVPP model exhorts the private veterinarians to live in proximity to the communities that their businesses serve. L4G-supported private veterinarians create and maintain a close working relationship with herders, sedentary producers, and business-focused POs. Participatory and transparent selection and thorough technical training of AEs and VAs is crucial. L4G also engages in and promotes gender balance to ensure delivery of advisory services. Both these trained cadres work under the supervision either of the L4G *Cercle* Coordinators or the private veterinarians, in collaboration with the Malian State Livestock Services.

L4G trained AEs to buy and stock livestock inputs and veterinary medicines to provide basic veterinarian services and advice to herders and animal fatteners. The private veterinarians manage the supply chain of veterinarian medicines and supplies. The trained AEs' efforts are buttressed by 71 VAs, including 34 women who participated in L4G training events during FY 2015. Female and male VAs are now able to train others in animal fattening, fodder production, and accessing credit. In Koro and Bankass *cercles*, the L4G-supported VAs trained 401 women and 393 men on animal fattening and 106 people (of which 26 were women) in contour ridge farming.



Auxiliary veterinarian practices vaccination of Cattle against three prevalent cattle diseases Bankass, September 2015

L4G also promotes WLBP and YLBP, training these groups in livestock nutritional supplements, animal fattening, forage production, and enriched urea-treated fodder. Platform leaders then return to their villages to train their peers, multiplying the number of people trained. As one key success, the original 40 WLBP and YLBP members trained in nutrition-rich salt licks and provided with training kits organized to train an additional 838 women and 833 youth in block production. Over a three-month period, nine women's groups and eight youth groups produced 1,424 blocks, selling 90% at an average price of USD \$ 0.95 each. Based on these results, secondary beneficiaries who were trained by L4G trainees are on track to produce more than 59,000 blocks over a year and earn more than \$50,000. The value to producers, subtracting production and marketing costs, is \$22,454.

IMPROVE ACCESS TO FINANCIAL AND BUSINESS DEVELOPMENT SERVICES

L4G has engaged the BOA and MFIs, including PAMF, Guinedo, and Kondo Djigma. The L4G approach is to help value chain actors understand the range of financial tools available to them, including potential profit and loss from accessing credit, to improve their herds or services. L4G goals for the year were to coach financial service providers on the needs and capabilities of the livestock sector, build capacity of producer organizations in business development and basic accounting, and promote good savings and loans practices.

During FY 2015, L4G held workshops with POs and cooperatives to increase their knowledge of the lending products offered by banks and MFIs and to build their capacity to access lending products. L4G field staff engaged with MFIs, POs and women and youth to develop loan application documents necessary to access credit for livestock value chain related activities.

By initially approaching the issue of financial education from different perspectives (that of the banks, MFIs, POs, and women and youth), L4G established a base on which it can build in FY 2016. PO training with engaged MFIs is planned for October 2015. L4G improved BOA staff knowledge of opportunities and needs for lending to producer organizations and cooperatives, and the benefits of providing micro-loans to POs, women, and youth. Late in September, L4G invited BOA agents to attend the planned bank, MFI, PO training and exchange workshop for the first week of October, which BOA accepted.

IMPROVE ACCESS TO RELIABLE TRANSPORT SERVICES

The number of transport vehicles in Mali is insufficient, and those that exist are often broken down or do not comply with transport regulations. A second transport problem is "rent seeking" behavior where drivers are required to pay bribes at customs and gendarmerie posts. Unsafe trucks and mixing consumer merchandise with passengers and livestock are also problems. There is little respect for existing transport regulations and required transport paperwork is often not in order. Some of the existing legislation and

regulations actually are a disincentive for free movement of commerce; thus legislation needs to be changed at the national level. Additionally, roads are in disrepair. L4G strives to understand transporters constraints through diagnostics and dialogues with them and other livestock value chain actors, working in collaboration with the West Africa Trade Hub and the International Livestock Research Institute (ILRI), and advocating for improvements of regulations, enforcement, and fair play for transport services.

Four transporter representatives participated in the L4G value chain mapping exercise held in Bankass on May 18. L4G also met with transporters and local gendarmes in May, conducting a brief study of their expressed concerns as regards transport constraints. Their concerns are indicated in in Table 1 below.

Table 1. Transporter and Police Concerns about Livestock Transport Constraints

Transporter Concerns	Police (Gendarme) Concerns
<ul style="list-style-type: none"> 1) Paying bribes is common, even if the transporter has met 100% of established livestock transport codes and regulations; 2) The number of livestock vehicles is insufficient; 3) Vehicles are in disrepair because transport is not a lucrative business; 4) Roads are poorly maintained, causing wear and tear to their vehicles 	<ul style="list-style-type: none"> 1) Transporters do not respect the transport code; 2) Vehicles are always overloaded.

Following the workshop the participants trained other syndicate members in basic precepts of value chains and potential transport opportunities. They are now engaged with L4G livestock producers and POs to conduct more and larger volume shipments of animals to regional markets. L4G met with technicians of the West Africa Trade Hub twice during FY 2015 to plan coordination and will collaborate with the project in FY 2016 to improve transport and develop positive business opportunities addressing the concerns expressed by these stakeholders.

I.3. IMPROVED PASTURELAND AND WATER RESOURCES MANAGEMENT

Throughout Mali, traditional rangeland is being squeezed as some pastures are converted into cropland and others degrade from overgrazing and climate change. Livestock producers have little access to extension or advisory services that would mitigate degradation and improve productivity of the land. L4G introduced Climate Change Adaptation (CCA) strategies at the village and catchment level to increase water availability during the “lean season” when animals lose excessive weight and fodder availability declines. Addressing these two constraints contributes to improving animal health and weight, thereby contributing to overall revenues.

IMPROVED UNDERSTANDING OF LIVESTOCK WATER POINTS

The network and placement of water points in Mali is closely related to traditional herding passages and pastoral activities. Nearly all are recessional and insufficient for herd volumes, posing a constant problem for herders. Given the tremendous potential along the Bandiagara Falaise in Bankass *Cercle*, L4G included water harvesting activities that would enable four villages at the base of the Falaise to increase their water stocks for increased forage production. L4G identified all existing water points in the nine communes in Koro and began identifying water points in Bankass. L4G discussed water points with the mayors’ offices, but L4G’s participatory process takes time and mayors face constraints such as delayed elections that affect their access to resources. Instability has also been a factor. L4G will support plans to rehabilitate the most dilapidated, assuming the points serve for livestock access and rehabilitating them will contribute to increased gross margins.

Concomitant to building permeable dams, L4G's approach to improve rain-fed forage production included contour ridge farming, a low-cost technology to farm following the precise contour of the land, and construction of contour stone bunds (small contour stone barriers that collect water, increasing forage production potential). Where large stones and boulders are plentiful and in areas with significant impermeable rock surfaces, L4G encouraged Dogon stone masons to learn and implement the technology to use local resources (both human and material) to build permeable dams to harvest rainfall runoff. This improves aquifer recharge, allows for expanded areas of irrigated forage crops, and provides better access to livestock water points during the eight-month dry season.

L4G identified 21 work sites for water harvesting in four villages along and below the Falaise to rehabilitate destroyed dams and/or to construct permeable dams. L4G developed necessary procedures for water harvesting integrating the concept of Payment for Performance (PfP) where payment would be made only if work performed met L4G technical standards. The communities agreed to follow technical guidance and quality control standards established by L4G, maintain the structures during and after the construction, and plant trees and/or forage crops downstream of the structures. L4G hired a technical specialist, Amadeu da Silva, from Cape Verde to provide the training and initial oversight of the activities, described in Table 2.

Table 2. Water Harvesting Sites Supported by L4G in FY 2015

Village	L4G Support	Catchment	Cost ⁴	Village Contribution	Potential Value of Crops in Area ⁵
Kanikombole	Construction of 4 trapezoid-shaped permeable dams	8 km	\$7,143	\$1,594 (22%)	\$6,050
Ende 1	Construction of 3 trapezoid-shaped permeable dams	.8 km	\$6,038	\$1,583 (26%)	\$5,610
Ende 2	Rehabilitation of 1 stone masonry dam, 5 trapezoid-shaped permeable dams, 5 small fitted-stone check dams	2 km	\$18,541	\$4,276 (23%)	\$11,138
Oualia	Construction of 3 trapezoid-shaped permeable dams	.6 km	\$5,986	\$1,529 (26%)	\$6,875

Three permeable dams at Ende 1 Village collapsed after a high intensity rainfall event recorded at 70 mm. Three permeable dams 4 km away at Oualia Village fully withstood all 2015 rainfall events. L4G staff visited the sites to ascertain the cause of collapse at one site and structural integrity at the other site. The conclusions are detailed in Table 3 on the following page.

Though the three structures did not perform as hoped, the permeable dams do not require repair. Water flows down the catchment as it did before anything was constructed. L4G has no plans to construct new permeable dams in FY 2016. Rather the team will continue to work with the Kani-bonzon Commune Mayor and with the communities to study results achieved and consider community motivation and potential return on investments. Structural design changes will follow the conclusions in Table 3 and recommendations from experienced Dogon stone masons.

⁴ Cost includes labor, materials, site supervisor costs, and outside technical assistance.

⁵ All crops except groundnuts are new to producers, therefore L4G reduced the estimated weight average/ha of potential revenue from \$813/ha to \$550/ha. L4G estimates 67% of normal sales revenue since farmers need to learn to master the crops. Crop values per hectare are expected to increase in subsequent years as producers learn the profit potential of irrigated forage sold during the lean season.

Table 3. Technical Analysis and Comparison of Permeable Dams Built at Two Villages

Location, Number of Structures, Status	Site Characteristics and Design Specifications	Construction Method	Conclusion and Means of Verification
Ende I Village (3): collapsed	<ul style="list-style-type: none"> Moderate slope (20% to 25%). Natural waterfall and stilling basin immediately upstream of the three permeable dams constructed. Moderate and smaller size stone available for construction. Moderate amounts of protective tree cover in the water course. Trapezoidal; dug foundation; 4 meters width at base and 2 meters at crest. No weir structure needed; top of crest fitted with cement mortar at zero slope. 	<ul style="list-style-type: none"> Upstream and downstream faces built with chiseled and fitted medium-size stones; interior filled with medium and smaller stones. Crew workers more accustomed to building fitted stone structures. 	<ul style="list-style-type: none"> Chiseling and fitting stones was inadvisable. Medium and smaller stones did not resist the water forces along the catchment. Design specifications and budget review. Site visits and digital photos taken during and after construction.
Oualia Village (3): fully intact	<ul style="list-style-type: none"> Steep slope (35% to 45%). No natural waterfall and stilling basin at the head of the basin. Large boulders and large size stones present on site and available. Significant amounts of protective tree cover in the water course. Trapezoidal; dug foundation; 4 meters width at base and 2 meters at crest. No weir structure needed; top of crest fitted with cement mortar at zero slope. 	<ul style="list-style-type: none"> Huge boulders already in place as an integral part of the core; work crews instructed to use 2 meter crowbars to move stones to fill in center and sides. Crew workers mostly young men able to use lever to move massive stones and boulders. Upstream and downstream faces of structure rustic. Little/no effort to chisel and “fit” stones into the structure. 	<ul style="list-style-type: none"> Rustic structures built with massive stones and boulders were better able to withstand the water forces. Younger workers more readily move large stones. Design specifications and budget review. Site visits and digital photos taken during and after construction.

Women of Oualia Village completed one demonstration site for contour stone bunds. L4G staff trained 22 women and six men in this village in layout of zero slope contour lines and precision construction for contour stone bunds. L4G completed the survey of all existing water points along the Falaise in FY 2015.

L4G carried out a comprehensive, participatory inventory of water points (fully completed in Koro and partial in Bankass) with the local livestock organizations in order to update water resources points and identify livestock drinking water needs to create an action plan facilitating organizational planning.

L4G worked closely with the Kani-bonzon mayor’s office to establish five water harvesting management committees in the four villages. The committees are intended to help communities plan to manage increased water resources, oversee and execute routine structure maintenance, increase forage production and improve livestock access to water points, and avoid conflicts over water that is now more abundant in the adjoining aquifers. The L4G team drafted regulations and articles to guide the local water management committees. L4G staff, Mr. Da Silva, and the mayor of Kani-bonzon worked closely with water users and water user committees, making 24 total site visits during FY 2015. Visits sensitized

villagers and crew leaders on PfP contracting and benefits of harvested water for livestock and irrigated forage production, evaluated impact of recorded rainfall events, supported committees with planning and implementing routine maintenance, reviewed compliance with USAID environment regulations for water use, and encouraged villagers to grow irrigated Dolique.

L4G trained and equipped 39 villagers (19 women) to use rain gauges to collect rainfall data in Koro and Bankass. This exercise complemented the villagers' efforts to construct or repair 21 water harvesting structures during FY 2015.

IMPROVED GRAZING AND PASTURELAND MANAGEMENT

Herders have limited access to quality forage in both Bankass and Koro, particularly given effects of climate change and environmental degradation. Available pastureland and livestock corridor passages are decreasing. Another complication is that even where pasture is available, water points are sometimes scant or do not exist. This situation causes conflicts between sedentary producers and transhumant herders. Furthermore, livestock are in an almost perennial state of insufficient pasture for their survival. This leads finally to underperformance of the livestock value chain.

The L4G approach to pasture management is participatory and involves working with mayors, POs, State Technical Services, and the communities to rehabilitate lands and identify passage corridors that can be recuperated. L4G actions also link to each commune's Economic and Social Development Plan. As regards arable land, L4G attempts to develop contracts to access cropped land residues in exchange for manure from the owner's feeding livestock. Another L4G strategy trains producers in FMNR, a process whereby land owners and their family members learn to identify and protect naturally sprouting beneficial tree seedlings so that their planted fields become agroforestry systems.

During FY 2015 L4G worked with the mayors of communes in Bankass and Koro *cercles* to identify existing pasturelands and livestock passage corridors. Training in FMNR and forage tree nursery management were primary L4G strategies this year. Important trees in the FMNR system in Mopti are *Faidherbia albida* (locally known as "Balanzan") and *Balanites egyptica*. Balanzan produces valuable forage and edible livestock pods during the lean season. During the rain-fed season, Balanzan, a leguminous tree, provides valuable nitrogen fixation to enhance the productivity of millet, sorghum and cowpea. *Balanites egyptica* is a dual purpose forage tree (grain, flowers, and forage leaves). Through FY 2015, L4G trained 120 producers in FMNR in Koro and Bankass. Since training in FMNR took place at the very end of FY 2015, hectares converted to FMNR can only be reported in FY 2016.

L4G identified best practices in pastureland management and Climate Smart Agriculture (CSA) that could be replicated in Bankass and Koro; and build the capacity of livestock groups to better utilize manure for soil fertility and scale up, as appropriate. L4G trained 106 people (26 women) in contour ridge farming,



Livestock watering upstream of a small fitted stone check dam. Mopti Region, Bankass Cercle, Ende 2 Village

75 women in construction of contour stone bunds, 29 resource users (nine women) in Koro in manure collection, storage, and application, and 25 stone masons in construction of permeable dams.

CSA activities included: seed loans of more than 11 tons of improved/drought resistant or dual purpose (grain and fodder) forage crop varieties; sensitization and training of 334 producers in Dolique - *Dolichos lablab* (Hyacinth bean) in recession agriculture systems or as an irrigated forage crop. L4G staff distributed 837 kg of Dolique to growers on loan to produce 70 hectares for planting in FY 2016. The estimated value of the Dolique produced is \$47,740.⁶ Recruitment of Dolique growers will continue in FY 2016. Dolique is normally planted in September through November. L4G has a major campaign under way to disseminate seed and encourage irrigated and recession agriculture production starting in the first quarter of FY 2016. Future Dolique seed will be available from seed harvested in FY 2016. During FY 2015 L4G developed two PowerPoint presentations on Dolique and other visual materials to sensitize potential growers to the benefits of growing and marketing this crop. MRD staff and PADESO managers in Bamako showed great interest in promoting Dolique as a forage crop.

I.4. IMPROVED COMMUNITY LITERACY, NUMERACY, AND NUTRITION AND HYGIENE PRACTICES

IMPROVED COMMUNITY LITERACY AND NUMERACY

Illiteracy and inability to do even simple math calculations prevent people of all ages to become entrepreneurial in the livestock sector. Illiteracy varies from 68% and 90% for women across Mali. Illiteracy is also highly correlated to rural poverty. Youth and teenage girls suffer from weak access to schools and unavailability of state managed agro-livestock extension services. If and when extension services are provided, these are directed to men. The L4G gender assessment conducted this year identified and detailed specific constraints to women and youth participation in livestock value chains.

Working across all program components and with all community-based program partners, L4G addressed these constraints by introducing functional literacy and numeracy to give partners basic skills relevant to their livelihood and by introducing dual-purpose crops that can increase fodder production and also have by-products with high nutritional content. L4G's insistence to include and train vulnerable populations (women and youth) is crucial to our approach. Functional Business Literacy Training (FBLT) delivered to these populations includes animal fattening and basic animal health, fabrication of nutrient-rich salt licks, livestock feed supplements, production of irrigated and rain-fed forages, recuperation of degraded lands, basic math and numeracy skills for the livestock sector, and contour ridge farming.

The bulk of L4G's activity in improving community literacy and numeracy has come from ongoing engagement with the WLBP and YLBPs, POs, VAs, and AEs where training has incorporated literacy and numeracy skills along with technical subjects. L4G training in animal health and animal fattening, forage crops production, and introducing Dolique, Moringa, and Bambara Nut as viable dual purpose crops has included functional literacy and numeracy. During FY 2015, L4G trained 71 VAs, including 34 women, on group-based participatory adult training techniques, malnutrition, and the three principal food groups and their role in human nutrition.

IMPROVED NUTRITIONAL STATUS OF WOMEN AND CHILDREN

Poor hygiene practices related to food, water, and milk handling in Mali lead to high rates of malnutrition, spread mastitis and brucellosis, and reduce the productivity of women. Improved dietary quality and

⁶ L4G predicted irrigated Dolique to earn \$1,018 per hectare when planted on clay soils or clay loam soils as are found in Baye Commune, Bankass *Cercle*. The majority of soils in the L4G area are sandy. Farmers met with in Koro and Bankass claimed they knew the crop, but they did not have seed to plant. L4G now considers Dolique a newly introduced crop and is training farmers accordingly. First year yields with new farmers are estimated at 67% of potential = \$682/ha.

diversity at the household level, coupled with good hygiene, can have a transformative impact on the development of children and women's productive and reproductive responsibilities. Good nutrition, including breastfeeding, adequate protein consumption, and diverse high-micronutrient foods consumed during the first 1,000 days of life are essential elements for a healthy, productive life. Good hygiene is also critical where highly perishable milk is regularly handled and consumed.



**Watering Moringa seedlings in tree nursery
Bankass, September 2015**

The WLBP and YLBP are cross-cutting, as they expose women and youths to entrepreneurial approaches in the livestock value chain, but equally important, they provide these groups a forum to share and exchange ideas on other topics, such as health, nutrition, women's role in sustainable CCA, rights to access land and water, and conflict mitigation within the livestock value-chain. The L4G team introduced Moringa as an irrigated garden crop to reduce malnutrition in existing or new gardens by providing training 51 VAs (26 women) and 16 nursery technicians (five women) in nursery skills and agroforestry. Within a month they produced 8,500 plants and integrated the plant into existing fenced and irrigable gardens. L4G expects to partner with other USAID FTF partners on this initiative in FY 2016.

The L4G program also explored plans for pilot Moringa programs at schools working with the USAID Education Program and the Regional Ministry of Education in Mopti should L4G determine a role that directly supports program goals.

COMPONENT II: INCREASED DOMESTIC AND EXPORT TRADE

Livestock sector competitiveness in the Mopti region of Mali is constrained by ongoing conflict in the north that has now spread to project intervention areas, low levels of trust and collaboration, poor responsiveness to market requirements, and high market transaction costs. To improve competitiveness and ensure that the benefits of growth are distributed more equitably among small and semi-sedentary producers, women, and youth, these actors must find ways to effectively engage with market players, collaborate for mutual benefit, and gain improved access to financial services.

2.1. STRENGTHENED MARKET ACCESS AND LINKAGES

IMPROVE VERTICAL LINKAGES TO BUILD TRUST AND SUSTAINABLE MARKET RELATIONSHIPS

Producers have weak production and marketing skills. Herders and animal fatteners are adverse to risk and have difficulty identifying marketing opportunities along the value chain. The profitability of the livestock business is weak, reflected in its weak livelihoods position and associated poverty. Climate change and the rural exodus exacerbate the situation.

The first step L4G took in supporting market linkages was to consult with and train local populations on basic livestock value chain mapping and analysis. The L4G approach to improve market relations also included efforts to build local capacity. L4G provided specific training to male, female and youth livestock fatteners to identify marketing opportunities and learn basic math skills to calculate improved margins by selling further along the meat value chain (cattle, goats, and sheep). L4G was very successful in engaging women and youth to expand their income potential in the livestock sector, notably through establishing WLBP and YLBP, training women and youth in production and sale of nutrient-enriched salt licks, increasing women's access to land, and providing 568 women training in literacy and numeracy. L4G additionally trained 489 men and youth in functional literacy and numeracy.

STRENGTHEN HORIZONTAL LINKAGES TO ACHIEVE ECONOMIES OF SCALE

Individual producers who live in poverty are often “price-takers” in livestock value chains. By working together and building trust relationships through youth business groups, women’s groups, and business-focused POs, the poor can create horizontal linkages. Poor people can also build social capital through creation of horizontal linkages (e.g. peer teaching and learning, apprenticeships, creating transparently managed and locally controlled business groups, and labor sharing). The L4G approach focuses on creating and supporting legitimate business groups in the livestock sector.

L4G staff took exhaustive efforts to identify villages and POs and also prioritized their performance and sought to link them to one another. L4G horizontal linkages also encouraged bottom-up communication and gender balance in the paradigm of Layers of Extension. PSAs also helped to sensitize people in horizontal linkages, along with the program’s three-day Livestock Value Chain workshop, culminating in a value chain assessment.



Women and Youth Livestock as a Business Training in fabrication of nutrient-rich salt licks for livestock. Bankass, March 2015

In FY 2015 L4G staff initially identified 209 POs in 60 villages across six communes in Koro and six in Bankass, ultimately selecting 50 for ongoing engagement. L4G prioritized their performance and worked to link them to one another. POs took on responsibility to negotiate land access for women and youth (52 hectares to date), to distribute seed and fertilizer on loan, and to manage loans to their members. L4G also held POs responsible to select capable AEs and VAs. The activity has begun to establish links between POs, women and youth, and MFIs, to facilitate economies of scale; this is area is an intersection between other L4G components as the Business Literacy training provides stakeholders with financial knowledge, VAs disperse sensitization information, allowing new partnerships and loans to form, and requires that bank loan officers recognize the needs of POs and other similar groups.

L4G held a series of three Livestock Value Chain Workshops to gather input from stakeholders on constraints in the value chain and possible solutions, as reported previously. The final workshop took place August 12-13 in Bamako with 45 participants, including six women. AECOM Value Chain Specialist Josilien Edouard led the workshop and participants included regional stakeholders, national level leaders, USAID/Mali, and L4G staff. The goals were to: 1) define the concept of a value chain, 2) present and share with participants the inclusive L4G livestock value chain approach, 3) present and prioritize key constraints in the value chain, 4) present solutions proposed by L4G to address constraints within the scope of L4G, and 5) consider proposals and contributions from the participants to finalize and validate the L4G value chain approach. A value chain assessment is being finalized for submission to USAID in the next quarter. The focus on these workshops meant L4G did not yet create a buyers list or establish market days in the communes as planned, but will do so early in FY 2016 informed by the input gathered during the assessment process.

2.2. DECREASED BARRIERS TO TRADE

LINK LIVESTOCK SECTOR STAKEHOLDERS TO THE REGIONAL TRADE POLICY DIALOGUE

Livestock exports from Mali, especially the Mopti region, are constrained by the high cost of transport, illegal taxation, rent seeking, and poor producer understanding of the Economic Community of West African States (ECOWAS) regional agricultural trade protocols. Livestock movement on-the-hoof can also be costly if herders cannot access grazing land or watering stops en route to market. Prices then fall because animals are underweight or sick. Finally, producers who seek to export often lack adequate

understanding of procedures required in the ECOWAS region; rules are also inconsistently enforced. The L4G team's role in decreasing barriers to trade has been to advise and mentor Malian livestock organizations, while collaborating with USAID-funded regional projects that address trade and policy. L4G works in close collaboration with the *Fédération Nationale de la Filière Bétail et Viande* (National Federation of Meat and Livestock or FEBEVIM) to identify existing barriers and also potential marketing opportunities. For example, Senegal requires more than 700,000 sheep for the Tabaski holiday, and the Senegalese Government is favorable to encouraging an environment conducive to Mali's sheep exports⁷.

L4G activities in FY 2015 focused primarily on understanding market access challenges through detailed market studies, which will contribute to design and implementation of activities to improve market access in FY 2016. L4G developed a scope of work for a report on barriers to trade for program clients and stakeholders. Obstacles the report will address include: poor quality and inconsistent supply of animals; weak financing for livestock marketing; inefficiently organized livestock passage corridors; dilapidated markets (poor off- and on-loading ramps, no toilets, and sub-standard cattle treatment chutes); poor or unavailable dissemination of livestock prices, lack of use of forward sales contracts between producers and export agents; and rent-seeking behavior that decreases producer and exporter profit margins. The study will take place in FY 2016. A competitive selection process was completed in September 2015, which took longer than anticipated because of the extra time required to find qualified consulting firms competent to implement the study.

L4G began collaborating with Orange and Malitel in FY 2015, but was unable to use mobile money for payment transfers to workers along the Bandiagara Falaise because steep altitude drops result in poor signals. Over the next year L4G will seek to collaborate with Orange and Malitel to encourage mobile payments for livestock transactions and provide LMIS information via SMS messaging.

COMPONENT III: STRENGTHENED LOCAL CAPACITIES AND SYSTEMS

L4G's engagement with public, private, and civil society actors throughout FY 2015 demonstrated that they all would benefit from capacity building assistance, but that they have varying types and levels of need. Our support to individual livestock and fodder producers has focused on basic business and technical skills that will improve their capacity to engage in the marketplace with fatter, healthier animals. The larger private sector, including service providers like input suppliers, veterinarians, and feed mills also have low entrepreneurialism, have not ably taken the place of missing extension services, and have found it challenging to build trust among their customers. The *Fédération des Organisations de la Filière Bétail-viande* (Federation of the Livestock Sector for Mopti Region or FOFBEV) and many other civil society organizations (CSOs) are largely member managed, personality-driven organizations that lack organizational and financial capacity. L4G emphasizes community-based technical assistance.

3.2. STRENGTHENED CAPACITY OF LOCAL ACTORS

BUILD THE CAPACITY OF KEY PUBLIC SECTOR ACTORS IN THE LIVESTOCK VALUE CHAIN TO MANAGE DONOR FUNDS

The Government of Mali, through the Ministry of Rural Development (MRD), is a key player in formulating policies that allow the livestock sector to flourish. MRD absorbed the Ministry of Livestock and Fisheries shortly before L4G began implementation, which changed the potential landscape for the proposed MRD access to a FARA.

⁷ FEBEVIM is working directly with the Senegalese Government to promote Tabaski sheep exports.

Dr. Mamadou Coulibaly assumed his role as the advisor to the MRD in charge of animal production and industry in June, replacing L4G's designated interlocutor. L4G provided program updates and coordinated with him to plan the Livestock Value Chain Workshop held in August 2015. He showed particular interest in the SVPP initiative and efforts to increase forage production, especially Dolique as a legume forage crop.

L4G was not able to provide significant capacity building assistance at MRD because of structural changes to the Ministry of Livestock and Fisheries, staff changes at MRD, and constraints on staff time.



Livestock Value Chain Workshop with L4G COP, USAID/ Mali Mission Director, MRD Representative Bamako, August 2015

ENGAGE PRIVATE SECTOR ACTORS TO DEVELOP INNOVATIVE APPROACHES TO MEET MARKET STANDARDS AND REQUIREMENTS, AND VIEW LIVESTOCK PRODUCTION AS A BUSINESS

Self-selection plays an important role in determining which private sector individuals and firms the L4G team engages. L4G seeks dynamic individuals and firms willing to take calculated risks and invest their own resources in new ideas and approaches, particularly people who can act as change agents to influence others. Because many women do not directly participate in marketing livestock beyond the farm gate, L4G works with input suppliers and producer organizations to develop appropriate approaches to reach women individually and in groups.

L4G private sector engagement included many activities described earlier: developing a Livestock as a Business (LAB) manual; developing a basic functional numeracy manual to introduce basic livestock math skills to semi- and non-literate L4G clients; introducing standards and norms as part of the animal fattening training; linking POs and their members to MFIs and banks; linking producers, herders, and animal fatteners to the networks of auxiliary vets established during FY 2015; identifying private sector livestock input, veterinary medicines, and feed ration suppliers; engaging vulnerable populations to develop Livestock as a Business Platforms; and disseminating PSA messages related to livestock as a business. Bunafama feed ration factory is an investment opportunity for animal fattening activities. A challenge is that producers do not generally have money to invest in feed rations and factory in Bamako. One approach L4G is taking is helping animal fatteners cut costs by producing their own forage and feed, enriching hay with urea, or learning on farm silage making. Bottom-up investment helps keep fattening costs reasonable.

L4G field staff engaged and trained community level producers and herders to understand horizontal and vertical linkages in the livestock value chain. In the L4G animal fattening trainings, participants learned the basic norms and standards for market delivery, buyer preferences and exigencies, and innovations to plan marketing to sell at peak price periods (Ramadan, Tabaski, and Christmas). L4G developed and rolled out the LAB Manual and translated parts of it into French to train selected producers on use of basic math calculations to move along a supply chain to improve their projected profit margins. Staff are adapting training modules to include performance standards, but the need to engage other institutions has delayed completion. L4G began to study with FEBEVIM possibilities to promote sheep exports to Senegal for the Tabaski Feast.

L4G developed a scope of work for a study on forage markets in August 2015 and completed the competitive selection process in September 2015. The study was delayed while the aforementioned activities were launched.

BUILD MANAGEMENT CAPACITY OF LIVESTOCK SECTOR CIVIL SOCIETY TO HELP THEM BECOME MORE PROFESSIONAL, INCREASE REVENUES AND IMPROVE SERVICE DELIVERY

Public sector actors in Mali are not particularly oriented to market standards or business-minded. CSOs in Mali are often weak, not sufficiently responsive to members, and have little management capacity without the focus or vision to represent their membership. FOFBEV and OVM are comparably weaker than the *Association de Producteurs et Eleveurs du Savanne et Du Sahel* (Association of Savannah and Sahelian Producers and Growers of the Savanah or APSS) and FEBEVIM, which proved to be stronger entities with a stronger business focus and a better capacity to respond to members' needs and aspirations.

L4G identified private and public sector actors to support in Koro and Bankass, including private veterinarians, cooperatives, exporters, input suppliers, and forage seed growers as actors in the private sector, and training institutes (IFP and IER) along with civil society organizations and associations as actors from the public sector.

L4G met regularly with livestock organizations to engage them on planned program activities and solicit their input.

- L4G engaged FEBEVIM to discuss constraints to livestock exports and potential collaboration to increase forage production in Bankass *Cercle*, members' constraints to obtaining credit, border crossing delays, and initiatives to analyze and strengthen FEBEVIM's internal management and advocacy capacity.
- In June, L4G worked with OVM and FOFBEV to develop a Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis and to collaboratively work with them to identify management constraints and propose concrete steps for their capacity building.
- L4G worked with the *Chambre d'Agriculture de Mopti*, DNPIA, DRPIA, APSS, FEBEVIM, and the Governor's office to promote the Operation Tabaski for sheep marketing in Mopti Town, including supporting preparatory meetings, fact-finding and outreach missions, security management, and branding, including banners. The average weight price for each of the 1,070 sheep sold was \$99.35 (54,640 FCFA). Total sales for the event were \$106,305, and with 25% coming from Bankass and 15% from Koro, the sheep from these *cercles* generated sales of \$42,520 for L4G clients. L4G plans to provide similar support during other Malian holidays.
- In June, L4G met with Dr. Henri Kaboré of the African Union/ECOWAS Regional Animal Health Centre, which focuses on strategies, policy and legislation in the livestock sector and works to harmonize vaccination campaigns. Collaboration with L4G focuses on improving governance capacity, establishing clearer guidelines on international standards for animal health, reducing the most prevalent cattle diseases (PPCB and PPR), and supporting Standardized Methods and Procedures for Animal Health. Dr. Kaboré attended and actively participated in the L4G livestock value chain workshop held in August, speaking about proper registration of AEs and strict supervision by private vets.

L4G planned to conduct a formal capacity assessment of livestock CSOs in the Mopti region, but the person designated to conduct the study was included in a supplemental proposal to USAID for which a contract modification was not finalized before the end of the reporting period. L4G will seek an alternative strategy in FY 2016.

COMPONENT IV: IMPROVED ENABLING ENVIRONMENT FOR LIVESTOCK SECTOR

Transformation of the livestock sector in Mali requires stronger local organizational capacity and service delivery systems. Private sector actors should take on increased risk and recognize livestock as a business. Livestock cooperatives and federations must become more professional and offer improved services to members that generate revenues and ensure sustainability.

4.2. INCREASED CAPACITY OF CIVIL SOCIETY FOR POLICY ANALYSIS AND ADVOCACY

Among the constraints to livestock sector competitiveness in Mali are high export costs, cumbersome transaction procedures, delays along major transport routes, inadequate animal feed and fodder during the lean season, and adulterated veterinary medicines. To address these challenges L4G prioritizes key policies and works with relevant organizations in the public and private sector to create an enabling environment. Increasing the capacity of these organizations to analyze and advocate contributes to improvements in the enabling environment for livestock, which helps the sector to become more competitive in exports and more efficient in domestic trade.

BUILD THE CAPACITY OF CSOS TO ADVOCATE ON BEHALF OF THEIR MEMBERSHIP TO GOVERNMENT AND DRIVE PUBLIC-PRIVATE DIALOGUE

In Mopti, FOFBEV is the major advocacy organization for the livestock sector. It provides support services to members, largely on an ad-hoc basis. To a limited extent, OVM plays a similar role for veterinary professionals in Mopti. FEBEVIM plays a coordinating role at the national level, advocating on behalf of its members and working to advance relationships with professional organizations, chambers of commerce, and public and private organizations to address challenges in the livestock sector.

L4G is collaborating with FOFBEV, OVM and FEBEVIM as well as the West Africa Trade Hub to minimize “rent seeking” at the Malian border and other checkpoints. There have also been discussions to establish a “green” telephone line to register complaints about requests to pay bribes. The program delayed activities planned under 5.2 to implement activities that needed to happen ahead of the rainy season, but L4G continues to foster dialogue with CSOs, POs and government entities.

BUILD THE CAPACITY OF UNIVERSITIES AND THINK TANKS TO DEVELOP ANALYTICAL RESEARCH ON LIVESTOCK ISSUES

L4G has found that independent policy research and formulation is not a well-developed concept in Mali. Universities like the *Institut Polytechnique Rural de Formation et Recherche Appliquée* (IPR/FRA) produce high-quality graduates, but have less experience in producing policy research. Research institutes along the lines of American think tanks are relatively non-existent in the agriculture and livestock sector. Due to the lack of research groups, L4G has not implemented activities in this field and has dropped the activity for FY 2016; any done in the future will be linked with the Food Policy Innovation Lab.

CROSS CUTTING THEMES

GENDER

Women perform a variety of tasks in the livestock sector, including general agricultural work, alongside maintaining the household and family. They feed animals, clean their stalls, compost manure, and are responsible for breeding and tending to the health of smaller animals. There are important gendered differences in livelihoods, levels of vulnerability, and power relations within the household. Throughout the Bankass and Koro *cercles*, livestock husbandry is the most important livelihood for women. Men have higher rates of cattle ownership while women are mainly concentrated in small ruminants (goats, chickens, and sheep). Livestock is considered a key asset for rural households and a primary livelihood resource for these rural communities. Access to livestock resources facilitates multiple opportunities, namely the ability to produce food, generate cash income, manage risks, and build up assets.

Women’s livelihood strategies leave them highly vulnerable to economic and other shocks. L4G implementation of its gender plan has integrated both women and men into program-supported activities. In March 2015 L4G began training women and youth to produce nutrient-rich salt licks, a simple

livestock supplement that helps herders and pastoralists through the long dry season while enabling women and youth to increase their incomes. As noted above, L4G trained a total of 40 women and youth to use the blocks with their own animals, who in turn trained 1,671 women and youth in production and use of salt licks. L4G conducted a field study and sensitization campaign that convinced five property owners to provide legally registered land-on-loan deeds for 5.25 hectares of land, which will be made available to 200 female beneficiaries.

The gender team developed the analysis and action plan for this area, and completed several effective sensitization campaigns during their time in project zones. In addition, WLBP are expanding in number and membership, which is a gauge of their positive impact in the communities). VAs are currently 48% women and AEs are 31 % women, which aligns well with the program’s gender-balance goals.



**Woman proudly shows her registered land-on-loan title deed
Ende Toro Village, Bankass District**

ENVIRONMENTAL COMPLIANCE

The SVPP model intensifies use of veterinary medicines and promotes more extensive annual vaccination campaigns for cattle and small ruminants. The process to improve herd health has environmental implications since veterinary medicine containers and “sharps” require proper disposal to protect the environment. L4G did not implement any livestock vaccination campaigns during FY 2015 (the first ones are scheduled for the first quarter of FY 2016) so there were no environmental issues associated. Procedures are in place to ensure proper disposal of containers and sharps for 2016.

L4G efforts to improve rain-fed forage crop production always took into consideration strict compliance to soil erosion control and environmental compliance. L4G took an approach to increase forage production in activity zones through both improved rain-fed production practices and water harvesting for irrigated agriculture. L4G introduced technologies such as contour stone bunds and contour ridge farming on the farmers’ cultivated fields. Both these technologies improve yields and productivity, while also reducing soil erosion, a noted problem in both Koro and Bankass *Cercles*.

To ensure that all rain-fed and water harvesting works met the required design and construction standards, the L4G team developed and operationalized quality control inspection checklists that also incorporated environmental compliance. The French language quality control inspection checklists and environmental compliance checklists are available upon request.

MONITORING AND EVALUATION

L4G completed a baseline study for four indicators in its Performance Monitoring Plan (PMP). L4G staff developed a Scope of Work and released a solicitation, and a Malian firm was selected to implement the study in July to August 2015. The draft report was received in September 2015 and revised according to L4G staff comments. CADES used “recall” survey methodology to collect data for calendar year 2014 and 2015, which allowed it to establish the baseline data included in this report (Annex B).

The four indicators included in the study are:

- Gross Margin per head (cattle, small ruminants) disaggregated by sex of producer
- Value of exports of cattle, small ruminants, as a result of USG assistance

- Offtake rate (cattle, small ruminants) by producer organizations, cooperatives assisted by FTF
- Value of incremental sales (collected at farm level) attributed to FTF implementation

L4G separately prepared a Scope of Work and bidding process to identify baseline information for a fifth indicator, percentage of occurrences of parasitic and contagious livestock diseases in FTF-assisted producer groups. L4G identified the *Laboratoire Centrale Vétérinaire* (Central Veterinary Laboratory or LCV) as the best option to implement this study. As a government agency, contracting with LCV requires USAID Contracting Officer (CO) approval, which was pending as of the end of FY 2015.

ISSUES, CHALLENGES AND LESSONS IN YEAR I

Lessons of the water harvesting approach using permeable dams. Of the 15 permeable dams that local workers built in four villages in FY 2015, three of them in Ende 1 village failed after a significant rainfall event of 70 mm (approximately 3 inches), while others withstood the water force. Additionally, four of the five permeable dams upstream of the stone masonry dam in Ende 2 need repairs. Three permeable dams at Ende 1 may have collapsed because they were built with smaller stones. It notably is easier for workers to break up larger stones so that they can transport them on their heads; but the practice is detrimental to permeable dam stability when run-off flows have strong forces, as is the case along the downslope side of the Bandiagara Falaise. Three permeable dams at Oualia Village (in close proximity to Ende 1 Village) withstood the force of the same amount of flood water. Structures at Oualia Village were built by moving large boulders and fitting them to existing boulders and rock outcrops that were an integral part of the permeable dams built there.

L4G will continue to investigate the impacts (positive and negative) that permeable dams have had in the four villages along the Bandiagara Falaise in Bankass *Cercle* in FY 2016. If impact assessments show permeable dams to be financially sound investments for the livestock value chain and environmentally appropriate, L4G will consult with USAID Mali on possible future actions. L4G continues to work with the Mayor of Kani-bonzon Commune and the local water management committees on expanding irrigated forage production with the expanded water resources, works maintenance issues, user fees, environmental compliance, and livestock access to water.

ANNEX A – FINANCIAL REPORT

QUARTER 4						
	Total Budget	Expenditure Q4 (Jul to Sept 2015)	Cumulative Spent Thru Sept 2015	Budget Remaining	Obligated Amount	Obligation Remaining
	(A)	(B)	(C)	(D)	(E)	(F)
Direct Costs	\$7,648,898	\$531,154	\$1,147,622	\$6,501,276		
Indirect Costs	\$1,462,216	\$108,469	\$290,296	\$1,171,920		
Fixed Fee	\$478,334	\$33,580	\$75,491	\$402,843		
Total	\$9,589,448	\$673,203	\$1,513,408	\$8,076,040	\$2,232,482	\$719,074

ANNEX B – MONITORING AND EVALUATION PLAN PROGRESS

Indicators	Baseline Value	Target FY2015	Results for FY2015	% Achieved	Remarks
IR I: Increased Livestock Productivity					
1. Gross margin/head (cattle, small ruminants) disaggregated by sex of producer	\$40.43 (cattle)	\$42.05 (cattle)	\$48.22	115%	The rate of improvement surpassed expectations due to price increases during Ramadan and Tabaski and L4G clients having applied animal fattening technologies disseminated through the program.
	\$32.85 (small ruminants)	\$34.16 (small ruminants)	\$40.73	119%	
2. Number of vulnerable households using improved practices and/or technologies related to livestock as a result of USG assistance	N/A	4,000	3,333	83%	L4G support to WLBP, YLBP, POs and VAs has reached 7 Communes (4 in Bankass and 3 in Koro). The SVPP has reached all 12 Bankass communes and 6 of 9 Koro communes. Activities will be intensified in FY2016 to reach remaining communes.
IR I.1 Enhanced technology innovation, dissemination and management					
3. Number of farmers and others who have applied new technologies or management practices as a result of USG assistance	N/A	10,000	3,584 Male: 1,332 Female: 2,252	36%	Includes number of people participating in construction of water harvesting structures; producers engaged in contour ridge farming; members WLBP and YLPB producing and selling nutrient-rich salt licks and urea-enriched hay; AEs clients implementing animal health best practices, and producers (women, men, youth) who planted improved forage varieties. Activities will be intensified in FY2016 to reach remaining communes, which will further increase results for this indicator.
4. 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	N/A	32	44	138%	10 WLBP, 10 YLPB and 24 POs whose members have applied new technologies, including fabrication of nutrient-rich salt licks, urea-enriched hay and animal fattening techniques. The target can be increased.

Indicators	Baseline Value	Target FY2015	Results for FY2015	% Achieved	Remarks
IR 1.2 Increased access to quality inputs and services					
5. Percent of occurrences of parasitic and contagious livestock diseases in FTF-assisted producer groups/cooperatives	TBD (en cours)	3%	NA	NA	Baseline data will be collected once L4G receives USAID consent to subcontract with LCV.
6. Number of MSMEs, including farmers, receiving business development services from USG assisted sources	N/A	40	40	100%	4 private vets trained in business management; 5 farmer organizations received loans for animal fattening and forage production activities; and 31 POs trained in animal fattening techniques and improved production of rain-fed forage crops to improve their businesses.
IR 1.3 Improved pastureland and water resource management					
7. Number of hectares under improved technologies or management practices as a result of USG assistance	N/A	60	64.57	108%	12 ha from water harvesting actions, recession agriculture and other irrigated plots (forage and Moringa); 52.57 ha from planting rain-fed improved forage varieties.
8. Number of pastoralists or smallholder producer families practicing improved management of pasture and other forage resources as a result of USG assistance	N/A	3,000	2,967	99%	Includes WLBP and YLBP members and other family members who carry out transformation of urea-enriched hay and/or production of rain-fed forage crops with improved varieties provided by L4G; other women, men and youth producers who have received and planted improved forage seed varieties.
IR 1.4 Improved community literacy, numeracy and nutrition and hygiene practices					
9. Number of households observed to be practicing improved complementary feeding and nutrition	N/A	80	92	115%	VAs who received on malnutrition and the role of 3 basic food groups in human nutrition worked with 92 households to practice better nutrition habits.
10. Number of people receiving functional literacy and numeracy training	N/A	200	1,057 Male: 489 Female: 568	529%	Members of WBLPs, YBLPs, POs plus VAs and AEs benefited from various FBLT provided by L4G staff. The target can be increased.

Indicators	Baseline Value	Target FY2015	Results for FY2015	% Achieved	Remarks
IR 2: Increased Domestic and Export Trade					
11. Value of exports of cattle, small ruminants as a result of USG assistance	\$1,198,710	\$1,246,658	\$ 826,175	66%	Results are for 7 communes. Activities are still being scaled up in remaining communes.
12. Off-take rate (cattle, small ruminants), by producer organizations, cooperatives assisted by FTF	14.53% (cattle)	15.11% (cattle)	21%	138%	The target was surpassed because POs have 2-3 lucrative market windows per year for beef cattle, resulting in a higher than expected offtake rate.
	19.95% (ruminants)	20.75% (ruminants)	20.5%	99%	
13. Number of MSMEs receiving US Government assistance to access loans	N/A	60	73	121%	73 members of 5 farmer organizations received loans for animal fattening and forage production activities.
IR 2.1 Strengthened Market Access and Linkages					
14. Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation	N/A	\$ 300,000	\$109,360	36%	This low rate is due to a lack of large investors in the program implementation area and a lack of improvement in security creating the conditions that would attract investment. Target may need to be lowered given these conditions.
15. Number of firms (excluding farms) or CSOs engaged in agriculture and food security related manufacturing and services now operating (at or above cost) because of USG assistance	N/A	16	20	125%	10 WLBP and 10 YLBP engaged with L4G on forage production.
IR 2.2 Decreased Barriers to Trade					
16. Average number of days required to trade livestock across borders (average of export/import time)	TBD (en cours)	3.9		0%	The analysis of tariff and non-tariff barriers to reducing export time will be completed in the first quarter of FY 2016. The consultant has been selected and will begin work in October 2015

Indicators	Baseline Value	Target FY2015	Results for FY2015	% Achieved	Remarks
17. Number of transporter/trader/cooperatives investing in new trucks or repairs to move cattle and small ruminants into target markets as a result of US Government assistance	N/A	3	3	100%	Three members of transporter syndicates participated in the Livestock Value Chain workshop (Bankass); following the workshop they trained other syndicate members in basic precepts of VCs and potential transport opportunities. They are now engaged with L4G livestock producers and POs to conduct more and larger volume shipments of animals to regional markets.
IR 4: Strengthened Local Capacities and Systems					
IR 4.2 Strengthened capacity of livestock actors (public, private and civil society)					
18. Ability of Ministry of Livestock and Fisheries (MOLF) to accept and manage a FARA analyzed and improved (Milestone based)					MOLF was merged into the Ministry of Rural Development. L4G support during FY2015 was not prioritized due to staff changes at MRD and competing priorities. USAID plans to drop this activity in FY2016.
19. Percent increase in number of client/members satisfied with FTF assisted organizations/association	N/A	5%	0	0	Percentage satisfaction not measured as the period is too short to give proper value. Also, increasing member satisfaction was not a significant action area in FY2015.
IR 5: Improved Enabling Environment for Livestock Sector					
5.2 Increased capacity of civil society for policy analysis and advocacy					
20. Number of livestock related organizations advocating to the government on behalf of their members as a result of US Government assistance	N/A	N/A	0	0	Not included in FY2015 program activities.

Indicators	Baseline Value	Target FY2015	Results for FY2015	% Achieved	Remarks
Cross-Cutting Indicators					
21. 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	N/A	40	44	110%	POs with which L4G is working in the 6 focus communes.
22. Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	N/A	300	330	110%	People participating in L4G trainings.
23. Proportion of female participants in USG-assisted programs designed to increase access to productive economic resources (assets, credit, income or employment)	N/A	35%	38%	108%	Percentage of female members of WLBP, YLBPs, and POs; percentage of VAs and AEs who are female.
24. Proportion of females who report increased self-efficacy at the conclusion of USG-supported training/programming	N/A	65%	60%	92%	
25. Value of incremental sales (collected at farm-level) attributed to FTF implementation (In \$, 1 \$=500 FCFA)	\$453,541	\$485,289	\$308,959	64%	Results are for 7 communes, so value will increase with further expansion in Bankass and Koro. Also, crops supported by L4G have not yet completed their cycles to determine yields and sales increases.

ANNEX C – SUCCESS STORIES



USAID
FROM THE AMERICAN PEOPLE



SUCCESS STORY

Small Herders Profit from Moving Up Supply Chain



Mr. Salif Guindo, age 43, Don Village resident and smallholder.

“Before participating in the L4G trainings, I used to spend too much money buying lots of sacks of expensive feed rations and vitamin complex. I never thought of the need to deworm my herd. So the weight gain of my animals was weak, despite my enormous expenses. Learning the technology package taught by L4G, I have now reduced the period for sheep fattening as well as my production costs. I now buy animals in good health, at the right time, and when prices are affordable. I know how to store feeds and forages which I produce, and this allows me to greatly reduce herd feeding costs.”

Mr. Salif Guindo
Don village resident and trainee

Telling Our Story

U.S. Agency for International Development
Washington, DC 20523-1000
<http://stories.usaid.gov>

West African Muslims have a saying: “Ramadan is atonement (fasting); Tabaski is the Feast of Joy”. The Tabaski Feast in Mali represents a significant business opportunity for smallholder herders dedicated to sheep fattening. Unfortunately, due to a lack of technical know-how and math skills to calculate additional profit from value-added marketing, few producers take full opportunity of the superb prices paid in the capital city market. Conscious of this weakness, the USAID Mali Livestock for Growth (L4G) program sensitizes and trains smallholder herders (women and men) in Bankass and Koro Districts (Mopti Region) to improve production practices, to plan to sell at specific times of the year when market prices are high, and to learn math skills to calculate added marketing margins to move up a supply chain to earn more profits.

Thanks to hands-on training provided by L4G, Mr. Salif Guindo, resident in Don Village (Koporo-Pen Commune), Koro District, calculated his added marketing margins for beyond local market sales and made significant additional profit from selling 20 sheep in Bamako, the capital city of Mali, just before the Tabaski Feast.

Learning math skills to calculate value-added marketing margins for beyond local market sales is a key part of L4G. With these math tools, Salif took his 20 sheep to Bamako just before the Tabaski Feast, knowing he could fetch a higher price than in the local market. Indeed, his projected sales in the local Koro market were \$109 per sheep minus his local marketing costs of \$57 or \$ 2,123 for the herd. He applied L4G’s motto “You have to spend money to make money!” and invested \$307 in marketing costs to transport his sheep to Bamako. The investment paid off because he was able to sell his sheep at an average price \$150 per head in Bamako, giving him total revenue of \$3,000. Subtracting out the marketing costs, which included paying himself a daily wage of \$3, he realized an additional margin of \$570, an increase of 27 percent. Indeed, part of the effort was helping him understanding these calculations.

Salif Guindo’s successful value-added marketing story is just one example of how the USAID Livestock for Growth program is training hundreds of herders (women and men) to respond to the market while at the same time significantly increasing their profit margins. His success will encourage others to do the same.

SUCCESS STORY

Moringa – Miracle Tree Proves to be Lucrative

Better Nutrition at Home, More Forage for Livestock



Working in Mopti Region – the livestock capital of the Mali – L4G aims for healthier, fatter animals that bring more at market. Better forage contributes to animal weight gain, and dual purpose crops have the advantage of improving household nutrition.

“Before the arrival of the [L4G] program, I was producing some 30,000 forest tree seedlings each year, but I was only earning \$54 per month. I am now selling the totality of my plants for an income of \$727 in two months of activities”

Mr. Harouna Guindo,
Nursery Technician, Bankass

As part of USAID’s Feed the Future Initiative, the Mali Livestock for Growth (L4G) program promotes growth of forage crops while also working to reduce malnutrition. The Moringa plant fits both goals perfectly: livestock voraciously eat the protein-rich raw leaves and stems, and its leaves can be prepared in a variety of ways as a delicious food for human consumption.

Moringa is practically unknown in Mopti region due to lack of information and viable extension services. In 2015, L4G staff trained and equipped 16 nursery technicians in 12 villages to grow the tree, providing them with seeds of the improved Moringa variety, PKM-I. A month after the training, the technicians had produced more than 8,500 seedlings, sufficient to out-plant 5.15 hectares. Meanwhile, L4G has been working hard to educate local populations about the tree’s many health and productivity benefits.

Bintou Togo, a female nursery specialist in Telly village in Bankass Cercle, notes: “Before the arrival of the USAID L4G program, there were five scrawny and unexploited Moringa plants in our village. Thanks to the program, the women in Telly now understand Moringa’s extraordinary benefits to improve our families’ nutrition, give us livestock forage, and provide us a source of income. The training has impacted our association and the whole village. We have already produced 320 Moringa seedlings in our nursery. Seeing the enthusiasm within our group, we have already decided to out-plant most of the plants to our group’s vegetable garden and distribute the rest of the seedlings to other association members to feed ourselves and our animals. A second batch of 500 Moringa seedlings will be sold in our and surrounding villages. The money we earn will serve to support operating costs of our tree nursery and are a small business opportunity for me.”

Harouna Guindo, a nursery technician in Bankass, says: “Before the arrival of the program, I was producing some 30,000 forest tree seedlings each year, but I was only earning \$54 per month. The new variety produces plants with much larger leaves and the program links us to other NGOs who come to buy Moringa plants to distribute to their beneficiaries, so I now have a market to sell to. With the contacts I have, I am now selling the totality of my 2,000 plants for an income of \$727 in two months of activities.”

Telling Our Story

U.S. Agency for International Development
Washington, DC 20523-1000
<http://stories.usaid.gov>