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Partnership for Safe Poultry In Kenya (PSPK) Program

Final Report March 2009 - August 2011



September 2011

This publication was produced for review by the United States Agency for International Development. It was prepared by Winrock International.

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Submitted to:
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
Office of Economic Growth and Trade

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Task Order No. AEG-I-18-04-0010-00
Task Order Subcontract No. 1071-20-601

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WINROCK
INTERNATIONAL

ACRONYMS

ABD	Agricultural Business Development
ABS-TCM	African Breeders Services Total Cattle Management Limited
AFC	Agricultural Finance Corporation
AIARD	Association for International Agriculture and Rural Development
AKEFEMA	Association of Kenya Feed Manufacturers
AUPWAE	Association of Uganda Professional Women in Agriculture and Environment
CCN	City Council of Nairobi
FAO	Food and Agriculture Organization
GLUK	Great Lakes University of Kisumu
HPAI	highly pathogenic avian influenza
ICT	information communications technology
KACE	Kenya Agricultural Commodity Exchange
KARI	Kenya Agricultural Research Institute
KEPAWAE	Kenyan Professional Association of Women in Agriculture and Environment
KEPOFA	Kenya Poultry Farmers Association
KNPIP	Kenya National Poultry Improvement Plan
KPKS	Kenya Poultry Sector Knowledge System
LBDA	Lake Basin Development Authority
MOLD	Ministry of Livestock Development
MOU	Memorandum of Understanding
NPL	Nguku Products Limited
PSPK	Partnership for Safe Poultry in Kenya
SPC	Science Product Centre
TAWLAE	Tanzania Association of Women Leaders in Agriculture and Environment
USAID	United States Agency for International Development
VCA	value chain assessment

Partnership for Safe Poultry in Kenya (PSPK) Program
Project Completion Report FY2011
Task Order No. AEG-I-18-04-0010-00
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This report outlines achievements during the project period, March 2009 to July 2011.

I. Summary of Experience with Program Implementation

Winrock International implemented the USAID-funded Partnership for Safe Poultry in Kenya (PSPK) program from March 2009 through July 2011. Originally a one-year pilot project, PSPK received an additional year of funding in January 2010, to expand on key successes in Kenya and explore replication across the greater East Africa region.

The goal of PSPK was to promote safe poultry production and marketing systems that incorporate freedom from highly pathogenic avian influenza (HPAI) and other poultry diseases, generating high levels of income and improving nutrition for smallholder families. PSPK aimed to move the Kenyan smallholder poultry sector to higher levels of efficiency and productivity, and to position the sector as a purveyor of safe, nutritious food products for Kenyan consumers.

Project objectives were to:

- Facilitate Kenyan poultry sector stakeholders to work together to characterize opportunities and challenges, define sector growth goals, and commit to action to meet sector goals.
- Build the capacity of the Kenya Poultry Farmers Association (KEPOFA) to define the needs of rural, smallholder poultry producers and manage programs and resources on their behalf.
- Enable and empower smallholder producers to invest in facilities and appropriate technology and apply best management practices that increase productivity and profitability and that assure the biosecurity of their flocks and the safety of poultry meat and eggs.
- Support Kenyan poultry meat and eggs from biosecure smallholder flocks to become recognized by Kenyan consumers for high quality and value.
- Ensure that smallholder poultry producers have access to needed market information and training.

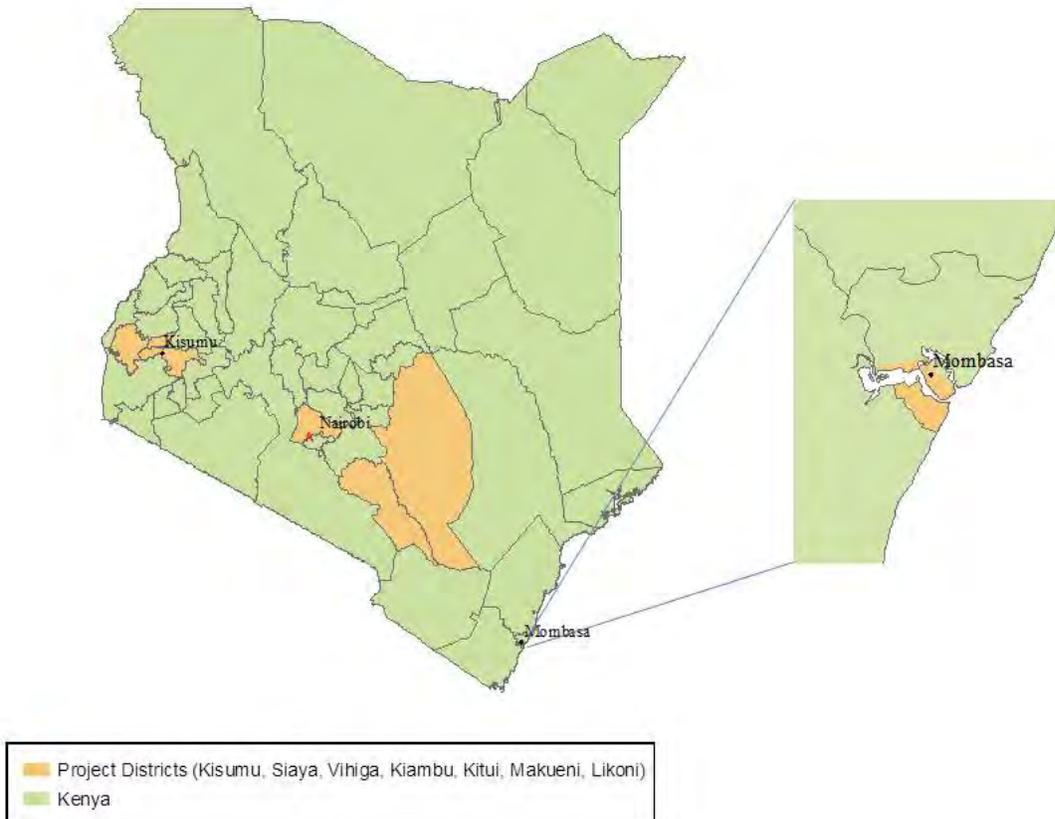
To achieve these objectives, PSPK leveraged skilled volunteer technical assistance to support key poultry value chain actors, including government agencies, NGOs, donor-funded projects, research centers, private firms, and private poultry producers. Technical assistance was targeted at increasing efficiency, improving production and marketing, and improving biosecurity of Kenyan smallholder poultry production.

PSPK operated in nine districts in western, eastern, coast, and central Kenya. (See map on the following page). The program was innovative in that it addressed highly specific tasks along the poultry value chain and was able to draw on resources that most volunteer programs do not have. Unlike traditional Farmer-to-Farmer programs, PSPK utilized both U.S. and local volunteers to provide technical assistance and build capacity of the key actors to achieve the desired project objectives. As noted in the Final Evaluation study commissioned by PSPK¹, *“PSPK has been successful in managing challenges in part because the project had a degree of focus and flexibility that many volunteer programs do not enjoy. The project has been able to select volunteers from within the region as well as within the U.S. This flexibility served to increase the pool of potential volunteers with relevant experience and skills as well as reducing the average cost of*

¹ PSPK commissioned a final evaluation study in May 2011, to determine to what extent the project achieved its objectives and the contributions it made towards moving the Kenyan smallholder poultry sector to higher levels of efficiency and productivity. Volunteers Elon Gilbert and David Eding conducted the study and prepared the report. Gilbert and Eding conducted field visits and interviewed value chain stakeholders, PSPK hosts and beneficiaries.

volunteer assignments.” PSPK originally had resources to field consultants, as well as volunteers, for assignments, but the quality of volunteers enabled PSPK to stay cost-efficient and largely use volunteers. Skilled PSPK staff were also able to engage directly with hosts and beneficiaries to provide further ongoing technical assistance and support. A small grants component further supported PSPK efforts.

Figure 1. Map of PSPK Activities



The initiative was well-received and well-respected by various actors along the value chain and will leave a lasting impact across the poultry sector. As the Director of Veterinary Services from the Ministry of Livestock Development (MOLD), Dr. Peter Ithondeka, states:

“The assistance offered by PSPK pilot project in improving efficiency and productivity through offering technical assistance on biosecurity, demonstration units, strengthening access to business development services, improving market information and strengthening producers’ organizations, has contributed immensely towards enhancing achievement of the poultry industry’s role of providing employment, income generation, and contributing to food security.”

Likewise, the PSPK Final Evaluation states, *“The project has effectively served as a catalyst for efforts by others, many of which did not depend on (or even seek) ongoing support from PSPK.”* The PSPK model was developed in such a way that it is replicable by the partner organizations that are working with demonstration groups. PSPK’s sustainability strategy focused on: (1) building local partners’ capacity to address constraints and leverage opportunities within the value chain; (2) promoting alliances to develop and implement the

Kenya National Poultry Improvement Program; (3) strengthening public-private sector partnerships; (4) linking partners to new resources; and (5) promoting market-driven strategies and demonstrating profit incentives for producers to adopt biosecurity measures. In particular, PSPK built the capacity of MOLD, KEPOFA, and the Association of Kenya Feed Manufacturers (AKEFEMA) to continue to address constraints and support the sector's growth.

II. Data on Performance and Impact Indicators for Each Country FTF Project

Please refer to **Annex 1** for FtF standard indicator tables and the PSPK performance indicator table. **Annex 3** contains notes on impact assessments and exit workshops that provide a sample of both quantitative and qualitative data aside from that which is tracked by FtF and PSPK indicator tables.

III. Major Impacts and Accomplishments Over the Reporting Period

PSPK leveraged the skills and expertise of 45 volunteers and six consultants from the U.S. and Kenya to make a lasting impact on the Kenyan poultry sector. Over the life of the project, PSPK trained 3,185 people (57% women), supported 27 host organizations, and ultimately benefitted 12,008 households. An additional 405 people received training from individuals previously trained by FTF volunteers, via post-assignment field days or visits to the demonstration farms.

Nearly 40% of the assignment activities were focused on strengthening and supporting KEPOFA and its members. Other assignments supported partners and hosts such as MOLD, AKEFEMA, Great Lakes University of Kisumu, Nguku Products Limited, service providers such as Science Product Centre (SPC), ADOK TIMO and Agricultural Business Development (ABD), and the City Council of Nairobi. Assignment focus areas included entrepreneurship development (48.8%), technology transfer (25.6%), finance (2.3%), and organizational development (23.3%). Specific topics included value chain information and input support services (37.2%), marketing (37.2%), production (14.0%), and processing (11.6%).

Key accomplishments and impacts included:

- Leveraging about KSH 100,000,000, or about \$1.1M, in investment for the poultry sector, including funding from the Government of Kenya, private sector investment (including substantial private investment from PSPK volunteers), and donor funding.
- Enabling food insecure families to increase incomes and diversify diets through poultry production.
- Empowering women, as farmers, entrepreneurs, group leaders, and business people within the poultry sector. Of the 1,572 people trained directly by PSPK volunteers, 58% were women. As a result of training, technical assistance, and linkages to financing provided by PSPK, several women established or expanded their poultry businesses; some expanded into provision of vaccines and other inputs for other poultry farmers. (See **Annex 2** for Success Stories).
- Changing farmers' and investors' perception of poultry as a profitable business, by demonstrating economic incentives to adopting improvements and by applying an innovative financial model to provide a simple profit/cost analysis.
- Facilitating the development of a Kenya National Poultry Improvement Program, in collaboration with the Ministry of Livestock Development, providing the framework for a long-term plan to support the ongoing development of the sector.

"I am not afraid of my children sleeping hungry anymore. The money I get from chicken sales helps me to buy the food that I do not grow on the farm. I also have a constant supply of meat and eggs for my family's protein nutrition."

– Alice Pius Makau, poultry farmer

- Increasing access to safe poultry products, by investing in the development and marketing of indigenous poultry brands.
- Facilitating stakeholder dialog and contributing to building a body of knowledge on the poultry value chain –both within Kenya and in the East Africa region.
- Strengthening the capacity of associations and service providers supporting Kenyan smallholder poultry farmers. For example, assistance to KEPOFA resulted in a 110% increase in the number of household members benefiting from the organization’s services.
- Supporting lasting improvements in the feed industry, primarily by assisting AKEFEMA to improve feed quality and develop a certification program for feed manufacturers.
- Promoting efforts to produce high quality feeds at affordable prices. As a result of PSPK technical assistance, Great Lakes University of Kisumu is now using improved feed formulations and will introduce a new poultry science degree to enable further research on poultry feeds.
- Increasing production of safe poultry products, primarily through the development of and ongoing support to 11 biosecurity demonstration farms and dissemination of biosecurity information via brochures, newspaper articles targeted to smallholder farmers, and a web-based information portal.
- Establishing partnerships between farmer groups and market buyers through contract farming. Six buyers were identified and signed MOUs with 15 poultry producer groups.



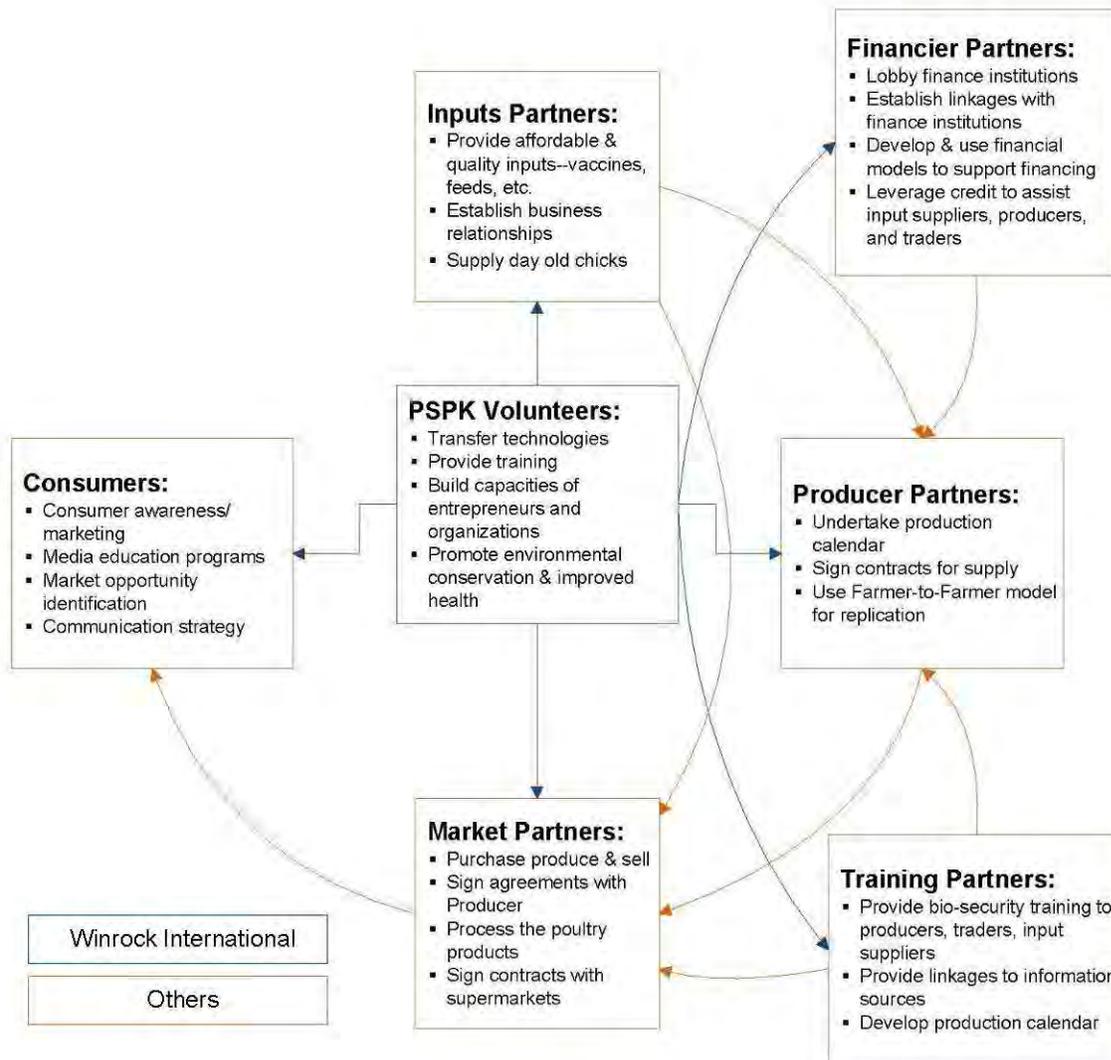
Numerous farmers groups benefitted from hands-on PSPK training on safe poultry production.

By creating economic incentives for farmers to invest in biosecurity measures and improved practices, PSPK has demonstrated how investments in the poultry sector can lead to income generation, improved nutrition, and increased employment, while also reducing the threat of HPAI and other diseases. This strategy ultimately led to the program’s success. The PSPK Evaluation states, “*selecting the adoption of biosecurity measures by farmers as the best vehicle to increase income was exactly the right decision.*”

A. Intermediate Result 1: Assist Poultry Sector Stakeholders to Work Collaboratively to Promote Increased Competitiveness of Kenyan Eggs and Poultry Meat

IR1 focused on establishing and strengthening partnerships among producers, feed manufacturers, service providers, processors, and other key stakeholders in Kenya’s poultry sector. The project employed a value chain approach to identify the key partners and collaborators, taking into consideration the HPAI bird migration corridor and high risk entry points for the disease into Kenya. PSPK identified and ranked constraints and opportunities for each category of value chain actors, based on activities that would have highest potential impact on improving biosecurity, increasing household incomes, and/or increasing the sector’s overall competitiveness. Through stakeholder mapping exercises, PSPK was able to profile specific actors along the value chain and identify the best placed actor(s) to help address selected constraints or opportunities. Figure 2 on the following page shows the categories of actors involved and their specific roles.

Figure 2: PSPK Market-Based Value Chain Model



Activities and Accomplishments

Stakeholder Partnerships

From the onset of the program, PSPK sought to engage various stakeholders to leverage their unique perspectives and efforts and to build synergies and foster local ownership in improving the poultry value chain. This proved to be an important part of the overall program strategy. As the PSPK Final Evaluation states:

“Progress would be possible through collaboration, and most importantly, what individual stakeholders could do on their own with minimal assistance from the project. This reality was made clear to stakeholders from the onset and induced some of them to focus on how to use the project as a source of expertise, short term training, ideas, and connections –locally, nationally, and internationally– that could help them individually and collectively.”

Winrock held a project launch/stakeholder consultation workshop on June 2, 2009. Participants were drawn from numerous organizations actively involved in the poultry sector, including government ministries, AKEFEMA, KEPOFA, private feed laboratories, analytical labs, African Breeders Services Total Cattle Management Limited (ABS-TCM), Kenya Agricultural Research Institute (KARI), NGOs, universities, processors, food retailers, financial institutions, and intermediaries. During the launch workshop, participants identified and mapped leaders in Kenya's poultry sector and discussed opportunities for collaboration and synergy within the sector. The project team leveraged the project launch workshop to initiate stakeholder dialogue and collaboration through a well-planned advocacy strategy that sought to demonstrate how a collaborative effort would impact sector competitiveness. This workshop was a key part in establishing the

"PSPK has played a leading role in the poultry sector through networking with different stakeholders in Kenya and within the region."

--Mr. Fredrick Alia, Marketing Manager and lecturer, Great Lakes University of Kisumu

program, particularly in clarifying expectations, demonstrating program needs and opportunities, and facilitating relationships that ultimately led to the program's success. After identifying opportunities for collaboration and synergy among the actors during the launch workshop, PSPK staff later held meetings with respective actors to discuss how the collaboration and partnership opportunities would be realized.

As an additional step, the project team toured parts of Western Kenya region and Kitui District to hold sensitization/consultative meetings with key partners such as AKEFEMA, KEPOFA, TEGEMEO, University of Nairobi, University of California Davis, FAO, Kenyan Professional Association of Women in Agriculture and Environment (KEPAWAE), and MOLD. Based on the findings of the stakeholder consultation workshop and the tour, PSPK staff produced a draft report of the Western Region poultry value chain analysis. The report identified key players in the poultry sector and commercial relationships between them, as well as constraints and opportunities within the sector. The report also identified opportunities to leverage and strengthen partnerships to help increase overall sector competitiveness. Based on the report findings, PSPK was able to prioritize activities and specific partnerships for volunteer technical assistance and other support.

To foster stakeholder collaboration, PSPK staff also attended the following poultry sector workshops and meetings in the first quarter of the program:

- Poultry Policy National Stakeholders Workshop, KEPOFA, May 30, 2009
- Alive Epidemiology & Laboratory Network Workshop, FAO, May 19-21, 2009
- Workshop on Feed Standards, AKEFEMA, June 2009
- Community Animal Health Network Stakeholders & Members Workshop, GalvMed, June 9-10, 2009
- Animal Feed Stakeholders Workshop, Kenya Bureau of Standards, August 22, 2009
- Evaluation and Impact of Bilateral and Multilateral Trade Agreements on the Poultry Industry, Kenya Human Rights Commission, September 14, 2009
- Participatory Ecological Land Use Management-Kenya, Annual General Meeting, September 10-11, 2009

PSPK held multiple consultations with key stakeholders during the initial months of the project and throughout the program implementation. A mechanism for stakeholder collaboration in the region was discussed with key players in an effort to sensitize partners on the need to focus resources and work collaboratively to make the poultry sector competitive. These consultations were instrumental in identifying and mobilizing key partners, and sharpening the focus of the project more on the value chain for indigenous commercial poultry.

PSPK leveraged and inspired efforts by several poultry sector stakeholders, many of whom initiated activities without direct support from PSPK. For example, PSPK helped connect AKEFEMA with Novus International, an international organization with worldwide expertise in developing nutrition products for

livestock. Subsequently, Novus and AKEFEMA collaborated to benchmark the feed laboratories identified by volunteer Samuel Nahashon and provide hands-on training in the U.S. for staff from the laboratories. Several other initiatives (e.g., led by Nguku Products Limited and KARI) have recently increased their focus on the poultry sector; each of these has been directly or indirectly impacted by the efforts of PSPK.

Value Chain Research

PSPK funded a study to identify market needs and consumer preferences, and to determine the competitive position of Kenyan poultry meat and egg products. Based on its experience in agricultural value chain research, TEGEMEO Institute was selected to conduct the study. The market study identified suppliers of indigenous poultry meat and eggs and their sources, and analyzed preferred traits of birds and eggs, profit margins, and marketing constraints. The study also determined consumer's preferences and explored additional preferences that would stimulate higher consumption of indigenous poultry products. The study focused on end market opportunities in Nairobi, the largest urban market in Kenya, and identified a growing demand for poultry meat and eggs from indigenous birds and biosecure smallholder flocks. This information guided the PSPK-established farmer demonstration groups to focus their efforts on market needs and was also useful in informing policy advocacy efforts. The study findings were shared with various stakeholders to inform producers and other actors of the market requirements and consumer preferences.



Dr. Colverson interviewed key stakeholders to compile a comprehensive poultry value chain assessment report

In addition, volunteer Kathleen Colverson conducted a value chain study focused on competitiveness of Kenyan eggs and poultry meat, identifying major constraints and opportunities faced by actors across the value chain. Dr. Colverson reviewed secondary literature on the poultry value chain in Kenya and conducted face-to-face interviews with value chain actors and key informants to identify and characterize value chain actors, as well as to identify critical points for disease control/biosecurity and for improving productivity, efficiency, profitability, and collaboration along the value chain. Dr. Colverson also provided recommendations on how to address major constraints and opportunities, including recommendations for future volunteer technical assistance. At the end of the assignment, she conducted a workshop and prepared a

final report on her findings. Dr. Colverson's report was an important step in the planning process for PSPK and other stakeholders. Furthermore, the results of both the market study and the value chain study were used by the task force to develop the Kenya National Poultry Improvement Program.

Regional Value Chain Studies and Experience Sharing

PSPK obtained a one-year extension in March 2010, to consolidate achievements made in the first year of implementation. As part of the project extension into year two, USAID included value chain assessments (VCAs) for Ethiopia, Tanzania, and Uganda as part of the revised mandate. The purpose was to illustrate opportunities for poultry sector competitiveness within the region and to foster replication of PSPK successes. To maximize information sharing and synergies across the region, PSPK supported two key activities: value chain studies in each of the three target countries (Ethiopia, Tanzania, Uganda), and a regional lessons learned workshop.

Prior to commissioning the value chain studies, PSPK staff conducted a fact-finding mission to each of the above-mentioned countries. During the fact finding missions, the PSPK team identified a host in each

country that would help PSPK organize the VCA studies and the regional workshop. In Ethiopia, the USAID mission linked PSPK to Dr. Laikemariam Yigezu of the SPS-LMM Program implemented by the Texas A&M University System. In Tanzania, the Tanzania Association of Women Leaders in Agriculture and Environment (TAWLAE) served as the lead facilitator. In Uganda, the Association of Uganda Professional Women in Agriculture and Environment (AUPWAE) facilitated. The fact-finding missions also served to:

- Find out who was doing what in the poultry sector and identify where information could be obtained
- Introduce the VCA concept and identify key actors to be involved in the VCAs and regional workshop
- Introduce PSPK to key poultry stakeholders with the purpose of sharing information on PSPK lessons and successes and to spur dialog



Regional workshop participants shared information on their experiences with poultry production in their respective countries

VCAs were conducted by three local value chain experts to illustrate opportunities to increase poultry sector competitiveness in Ethiopia, Tanzania, and Uganda. PSPK engaged Greg Sullivan, an internationally renowned value chain expert with deep experience in East Africa, to assist in conceptualizing the methodology and to help synthesize the VCA reports into a summary report, providing a regional perspective on poultry sector competitiveness and an overview of regional constraints and opportunities. The VCA consultant in each country also assisted in recruiting participants for the regional workshop, reaching out to candidates within the following categories: smallholder farmers raising local birds; smallholder farmers involved in hatcheries; smallholder farmers raising broilers or layers; producer association representatives; feed millers; traders/service providers; universities; agricultural research institutes; livestock production departments; and veterinary departments.

After the VCAs were completed, PSPK hosted a regional workshop/tour, to disseminate information on PSPK successes, to enable participants to share experiences, and to provide an overview of the regional VCA results. Twenty-eight value chain actors from the targeted countries participated (8 Ethiopians, 10 Ugandans and 10 Tanzanians). Participants visited PSPK-supported farms to gain first-hand knowledge of the activities and improved practices introduced by the project. The VCA consultants presented their VCA findings, and participants provided feedback in deeper conversations on constraints and opportunities. Participants identified key elements of PSPK that should be replicated in their countries and articulated draft action plans to be implemented upon their return. Some of the participants expressed that some of the concepts and models introduced by PSPK have never been seen in their countries. The workshop and tour built relationships between the various poultry sector stakeholders and set the stage for longer-term partnerships and collaboration within the region.

*"It was a good experience networking and sharing information and experience... One participant from Tanzania said she could invite me to Tanzania to train other poultry farmers in Tanzania."
--Eunice Mukai, Kenyan poultry farmer*

Development of the Kenya National Poultry Improvement Program

PSPK engaged two highly experienced U.S. volunteers, Dr. Kathleen Colverson, who had previously conducted the value chain competitiveness study, and writer Peter Colverson, to facilitate a task force formed by MOLD to develop the Kenya National Poultry Improvement Program (KNPIP), a five-year plan to promote competitiveness of Kenyan eggs and poultry meat. The KNPIP provides a shared vision for stakeholders to work together through collaborative action and seeks to address the specific challenges and

opportunities that confront the national poultry sector, with the ultimate goal to move the Kenyan poultry sector to new levels of productivity and profitability through involvement of all players in the value chain.

The task force was comprised of PSPK staff, representatives from MOLD, the Department of Veterinary Services, KEPOFA, AKEFEMA, and the private sector. Facilitated by Dr. Colverson and Mr. Colverson, the task force reviewed the PSPK-commissioned value chain and market studies reports and other documents, and also drew expertise from the National Program for HPAI Prevention, within the MOLD veterinary department. After discussing and conceptualizing elements of the plan, Dr. Colverson convened a workshop to share elements of the plan with key stakeholders and incorporate their feedback. There was a general consensus within the poultry task force and interested stakeholders that the poultry industry has momentum to expand and that the KNPIP can assist it in moving forward. Dr. Colverson introduced the task force members to a participatory model of workshop implementation in order to accomplish the production of a planning document. By the end of the process, the team produced a strategic document for use by MOLD to expand the poultry industry.



As a follow up, MOLD appointed four staff members (including an Avian Influenza expert) from the Department of Livestock Production and Department of Veterinary Services to refine the KNPIP document and develop a funding proposal to implement the program. The proposal seeks to draw funding from donors (46.5%), Kenyan government (43.5%), and private investors (10%). MOLD has pledged KSH 24,560, 000, (equivalent to USD 307,000) per year for three years, in support of this initiative. These funds will support poultry activities in 18 districts, including districts supported by PSPK.

PSPK partnered with FAO to provide a grant to MOLD for two workshops to share the KNPIP with county level ministry staff and stakeholders and discuss a policy framework for implementation. FAO contributed \$10,000 and PSPK contributed \$7,000 towards the two workshops, one of which covered the eastern part of the country (50 attendees), and the other covered the western part (48 attendees). Representatives were selected from each of the 47 counties. During the workshops, the Chief of Animal Production, Mr. Joseph Egesa, announced the 18 districts that were funded to undertake some of the activities by the government during the current financial year. The grant funds were also used to equip the KNPIP secretariat at the ministry headquarters with two computers, two UPS, and a printer. The equipment will also enable MOLD to manage the PSPK website (see page 17) as part of the KNPIP secretariat

PSPK aligned its activities to the KNPIP as part of its exit strategy and also in an attempt to pilot the shared vision of the sector. The Government of Kenya invested Ksh 25 million into the poultry sector in the financial year 2010/2011 and a further Ksh 30 million in the financial year 2011/2012 as part of promoting the shared vision in the KNPIP.

Improved Poultry Feed and Strengthening of the Association of Kenyan Feed Manufacturers

The Association of Kenya Feed Manufacturers (AKEFEMA) is an industry association that brings together licensed feed manufacturers. The association was registered in 2004, in response to a realization that feed manufacturers have a role in quality input production distribution and client capacity building. PSPK provided ongoing support to AKEFEMA, to strengthen its role in self-regulating the Kenyan feed milling

industry. Over the course of the program, PSPK fielded five volunteers to support AKEFEMA, particularly in the areas of feed quality, alternative feed formulations, and organizational development. These efforts have created and strengthened important linkages between AKEFEMA, its members, and feed laboratories, and supported the development of new feed formulations to support the indigenous poultry sector in Kenya. These efforts have also resulted in a 23% increase in AKEFEMA's membership.

Three key constraints were identified by feed millers as most important or the best opportunity for improving feeds: quality, price of feed, and lack of feed for indigenous chicken supplementation. Among the feed quality concerns was the fact that feed millers indicated that the feed laboratories were not able to give reliable and uniform results on samples submitted to them. With this in mind, PSPK fielded Kenyan volunteer Dr. Samuel Nahashon to identify reference poultry feed laboratories with the full capacity to carry out proximate analyses and specialized analytical work such as with mycotoxins, pesticides, amino acid profiles, vitamins, and macro and micro minerals. Dr. Nahashon also evaluated feed manufacturing practices of major feed manufacturers in selected regions of Kenya, and provided observations and recommendations for enhancing feed manufacturing practices.



Volunteer Nahashon visited multiple feed laboratories to help AKEFEMA identify labs with capacity to provide comprehensive analyses

As Dr. Nahashon's assignment demonstrated, there are several public and private laboratories around the country; however, only a few of these labs have the capacity to provide comprehensive analyses of feedstuffs and feed. The identified labs currently serve as reference labs for AKEFEMA. As a result, AKEFEMA will: (1) have capacity to analyze feedstuffs used for making feed rations; (2) determine the nutritional composition of available local feedstuffs; (3) control the inflow of poor quality feedstuffs by analyzing these feedstuffs before importation; (4) formulate balanced rations; and (5) ensure good manufacturing practices in the feed industry. This will facilitate AKEFEMA to put a seal of certification on all feed manufacturers to regulate the quality of feeds produced. With PSPK support, AKEFEMA ratified the identified laboratories and

signed partnership agreements. PSPK also helped connect AKEFEMA with Novus, and together, the organizations have been supporting reference laboratories by taking key staff for training in the U.S. As part of the partnership agreements, AKEFEMA was able to make concessions with the reference laboratories on behalf of their members on various terms (e.g., terms of payment for lab services, an agreed-upon duration of time for the return of lab test results, etc.). Such privileges were meant to encourage other feed manufacturers to join the association and reinforce good manufacturing practices in Kenya's animal feed industry. The demand for laboratory services and projected increase in membership of AKEFEMA will also generate revenues to enhance the capacity of participating laboratories and AKEFEMA.

Further concerns regarding feed quality was related to poor practices undertaken by feed millers. To address these concerns, MOLD has encouraged AKEFEMA to undertake a self-regulating role in the sector. PSPK fielded two volunteers, Robert Albrecht (from the U.S.) and Faith Mutwiri (from Kenya), to work on this issue. The volunteers worked with AKEFEMA to develop a pre-audit package containing all the information needed to understand the steps of the program and actions necessary for certification audit. They also developed a feed standards and certification program and training modules for members to receive a star rating as an indicator of quality of feeds. PSPK awarded a grant to AKEFEMA to implement the feed certification program developed by the volunteers. With the grant funds, AKEFEMA conducted two workshops, one for directors and the other for production managers, quality assurance officers, and

procurement staff. Thirty-eight individuals involved in feed production with their respective feed mills were trained and received a certificate of certification.

The price of feed is high because both livestock and humans depend on maize. To address this constraint, volunteer Basil Bactawar worked with AKEFEMA to develop a database of raw materials for feed formulation and to develop formulations using the identified raw materials, thus providing an alternative to maize. The formulations were developed and sent to AKEFEMA for members to pilot and improve. Bactawar also provided training to feed millers on feed formulations, rations, and the importance of minerals nutrition in livestock production. Over the course of this assignment, Bactawar interviewed local universities, laboratories, private suppliers, and KARI. Participants indicated that this was the first time that a systematic analysis of locally-available materials for feed has been undertaken in Kenya.

To strengthen the organizational capacity of AKEFEMA, volunteer David Pearce conducted an organizational assessment, reviewed the existing governance structure, developed a code of conduct, and provided suggestions on how best to implement the code of conduct and achieve their objectives. Pearce provided consultation on the organization's structure and organizational chart, successful management principles, work planning, and budgeting, among other topics. He worked with AKEFEMA senior staff to brainstorm ways to make the organization more financially sustainable, and conducted training for AKEFEMA staff and members on overall organizational development. The outcome of the assignment was a report detailing how the AKEFEMA secretariat can be operationalized sustainably, along with a detailed activity plan, budget, and exit strategy. The document provides three scenarios for funding the activities.

As a follow-up to the recommendations made by volunteers Nahashon, Albrecht, Mutwiri, Bactawar, and Pearce, PSPK staff and the AKEFEMA secretary held a meeting with Land O'Lakes in Nairobi to explore the possibility of funding AKEFEMA to implement the recommendations. Following the meeting, a proposal was developed and submitted to Land O' Lakes for funding considerations. As a result, Land O'Lakes is currently supporting AKEFEMA on improving their database of raw materials.

PSPK also contributed to building the capacity of individual feed millers. Although there has been an increase in number of industries supplying poultry feeds in the region, most of them have mainly targeted the exotic (broilers and layers) feeds; none of them previously targeted indigenous chicken. With this in mind, PSPK fielded U.S. volunteer Dr. Joseph Orban to work with Tich Nam Enterprises, a business unit of Great Lakes University of Kisumu (GLUK), to look into alternative feed derived from locally-available and inexpensive raw materials and to build the capacity of Tich Nam staff to develop quality feed. Dr. Orban conducted an assessment of the feed mill, feed formulations, grain quality, and production, handling and storage practices, and made recommendations for improvement. Recommendations included improvements to biosecurity measures and specific feed mill and poultry operations. After reviewing Tich Nam's feed formulations, Dr. Orban provided a reference book on nutrient requirements of birds, and provided training to Tich Nam feed mill staff on feed quality

PSPK's Impact on Local Feed Mills

GLUK indicated in a post-assignment report that most of Dr. Orban's recommendations have been implemented. Prior to the volunteer assignment, Tich Nam was infested with rats and weevils, and the mill was surrounded by a thicket of bushes. Following the volunteer assignment, Tich Nam's Marketing Manager, Mr. Aila, notes, "We managed to eliminate rodents, cleared the bushes, fenced off the farm, and introduced foot baths at the poultry unit." The unit is now selling feed for indigenous birds using locally available raw materials. They are publicizing their feeds in different forums, which has resulted in regular sales to agro vets and individual agents and an overall increase in sales from 500kg/day to 1400kg/day. GLUK also began placing students in internships at the feed mill, to further build local capacity to produce feed. In addition, as a result of the partnership between GLUK and PSPK, networking between GLUK and farmers and other organizations has increased. Recently, GLUK conducted training for poultry farmers in collaboration with CDI VOKA and St. Christine Christian. The purpose of the training was to create an awareness of the GLUK poultry feeds to farmers and proper chicken rearing. GLUK offers a market to the farmers for their chickens and encourages them to buy and market GLUK poultry feeds in return.

analysis, feed formulation practices, and how to calculate feed formulations using an Excel spreadsheet. He also provided training on standard operating procedures and poultry production. As a result of Dr. Orban's assignment, Tich Nam made key improvements and increased sales. (See text box on the previous page).

Inspired by their involvement with PSPK, GLUK decided to introduce a Poultry Science Management Course. Dr. Orban and PSPK staff worked with GLUK to develop the curriculum for the course, and the University is now reviewing the document to integrate it within its existing agribusiness management program. This course will be offered to students in the fall semester of 2011. This is a positive development in building in-country capacity to strengthen the Kenyan poultry sector.

Outreach

Communication strategy development was a new activity in Phase II of PSPK. The project employed one staff on a short-term basis to implement a communication strategy with key stakeholders. A proactive communication strategy was developed to promote safe poultry production, transportation, marketing and consumption targeting appropriate media in Kenya. Besides promoting safe production and consumption of chicken products, the communication strategy aimed to disseminate information on lessons learned, to support replication and sustainability. The strategy focused on targeted activities for different audiences: poultry farmers engaged with PSPK, poultry farmers in neighboring areas, traders, advertisers, consumers, government, policy makers, NGOs/CBOs, research institutions, donors, and education and training institutes.

During the Agricultural Society of Kenya international trade fair event held the first week of October 2010, MOLD gave space for PSPK to display its work. Approximately 240 people visited the desk to inquire and learn about PSPK project activities. PSPK staff showcased the poultry website (see page 17) as a source of information and a portal for sharing information among the poultry value chain actors.

PSPK disseminated information on biosecurity measures targeting smallholder farmers in the *Daily Nation* newspaper supplements on October 30, 2010. It is estimated that the audience for the *Daily Nation* on the circulation day was 3.8 million readers. The article generated high levels of interest. In the two weeks following the supplement, the project received over 300 telephone calls from farmers requesting more information. Thereafter, the PSPK program manager continued to receive approximately two calls every week related to the article.



Following the Comprehensive Africa Agriculture Development Program (CAADP) training conducted by the USAID Africa Lead Project (and attended by the PSPK program manager), PSPK also organized training for interested farmers and poultry value chain actors at the Winrock office as a way of disseminating additional information to people outside of the supported PSPK groups. Participants were selected among those who called or visited the PSPK office after reading the newspaper article on PSPK. Fifteen people attended these trainings. Among those trained, 10 farmers intend to start large-scale poultry production. These farmers are at different stages in implementing their plans.

PSPK also organized advocacy field tours for senior government officials to share experiences, demonstrate the success of the PSPK model, and promote replication on future poultry initiatives. Four senior government officials, including the chief of animal production, the head of the poultry section, the animal production department head of project planning and monitoring section, and the veterinary department head

of project planning and monitoring, were involved in the tour, which covered nearly all of the PSPK demonstration farms.

The project reached an estimated 200 people through meetings, workshops, and distribution of brochures that provided information on project activities. In addition, Kyemwole demonstration farm received over 50 poultry stakeholders (random visitors) who learned about the group from other farmers, MOLD officials, or other NGOs. Four PSPK groups (Mhenya Upendo, Millennium Village, Kondele Women's Group, and Nyumbani Village) have conducted four field days, attracting a total of 218 farmers (62.4 % women).

Several outreach efforts were also conducted in the U.S. For example:

- An article about PSPK's efforts to empower women was published in the U.S. Department of State's online newsletter, America.gov, in October 2010. (see http://www.america.gov/women_farmers.html)
- Volunteer Kathleen Colverson was awarded a Presidential Service Award in December 2010, based on her two volunteer assignments with PSPK. Stories and articles on her efforts have been included in Winrock's *Innovations* newsletter, on Winrock's Facebook and Farmer-to-Farmer blog pages, and in a USAID press release highlighting the volunteer service awards.
- Kathleen Colverson conducted four presentations and wrote two articles highlighting experiences and lessons learned from her trips to Kenya.
- Volunteer Jeanne Voigt conducted two presentations in the U.S. and prepared a video on her assignment, which was shared with her business colleagues and posted on Winrock's website and Facebook page.
- Volunteer George Orago conducted two presentations for 61 people, highlighting experiences from his assignment.
- An article on PSPK's impact on women and nutrition was included in the Association for International Agriculture and Rural Development (AIARD) newsletter in the fall of 2010.
- Four success stories have been posted on Winrock's website.



Grants

PSPK awarded a total of \$33,495.84 in grants to the following organizations: MOLD, KEPOFA, AKEFEMA, Private Service Providers Group, Nguku Products Limited, Kondele Hen Women's Group, SUNCHIC Limited, Umoja Poultry Group, Kamuingi Meat Distributors, and Kisumu Chicken Centre. Table 1 on the following page summarizes the grants provided over the course of the project.

Table 1. PSPK Grants

Recipient	Amount	In-kind Grant Specifications
MOLD	\$7,013	Two workshops with participants (48 Western & 50 Eastern) from actors identified by MOLD; two computers, two UPS, & a printer to equip the KNPIP secretariat enabling MOLD to manage poultry website
KEPOFA	\$2,520	Desktop computer, printer, and photocopier for the KEPOFA secretariat
AKEFEMA	\$4,070	Directors workshop on feed certification program conducted (42 attendees); first feed certification training conducted with program beneficiaries (38 attendees)
Nguku Products Ltd	\$3,202	Kenya Bureau of Standards (KEBS) and Halal certifications; 10,000 branded packaging bags for indigenous chicken; branded aprons and overalls, promotional materials, and stickers; premises branding
Kondele Hen Women's Group	\$3,270	Freezer, four cooler boxes, four crates for transporting live birds, and two weighing machines; 8,000 branded packaging bags, branded t-shirts, overalls and promotional materials; premises branding
Private Service Providers Group	\$4,000	Automatic incubator (538 egg capacity); 3 KVA/300 kwh generator for incubator
SUNCHIC (K) Ltd	\$3,663	Freezer, two cooler boxes, refrigerator for vaccines, ten crates for transporting live birds; branded t-shirts, aprons, and gumboots; 6,000 branded packaging materials and flyers; premises branding
Kamuingi Meat Distributors	\$3,250	Freezer, two cooler boxes, refrigerator, 10 crates for transporting live birds, branded t-shirts, aprons, and gumboots; 6,000 branded packaging materials and flyers; premises branding
Umoja Poultry Group	\$3,269	Freezer, four cooler boxes, four crates for transporting live birds; 6,000 branded packaging materials; branded t-shirts, apron, and gumboots; premises branding
Kisumu Chicken Centre	\$3,231	Freezer, four cooler boxes, four crates for transporting live birds, and bicycle; 6,000 branded packaging materials and flyers; branded t-shirts, aprons, and gumboots; premises branding
TOTAL	\$37,488	

Kenya Poultry Sector Knowledge System (KPSKS)

Volunteers Jake Watson (from the U.S.) and Murithi Borona (from Kenya) developed the Kenya Poultry Sector Knowledge System (KPSKS), a web-based, open-source data management and information sharing system that links value-chain actors and provides a valuable source of information. The volunteers worked with a sub-committee drawn from key actors (MOLD, KARI, TEGEMEO, and others) to develop the system to link value chain participants in a “knowledge commons” approach. MOLD ICT manager Mr. Abaga and ICT Officer Evelyn Wanjiru represented the MOLD in the sub-committee. The software that was used to develop the web site is Joomla Pack, which is compatible with that used by the directorate of e-government. To expand the original portal to include publishing and advertising capabilities, Jake Watson returned to Kenya on a second assignment. During the assignment, a webmaster was identified and terms of reference developed to provide ongoing technical and marketing support of the portal.

The portal is live at <http://www.kenyapoultry.org> and has already reached more than 14,000 hits. The site contains useful information for poultry sector stakeholders, for example on poultry production, feed, animal health and disease control, avian influenza outbreaks, nutritional value of poultry products, profiles of different stakeholders and service providers, and a directory of organizations and actors engaged in the poultry sector. Logos from the six PSPK traders and farmer groups have also been uploaded to the site. The site also contains a forum, whereby registered members can interact with each other, post questions, etc. This forum is the most used part of the site; many users have been able to post questions and receive responses from poultry sector experts.

As a follow up to recommendations made by Watson and Borona, MOLD nominated an editorial team to be responsible for editing articles in different thematic areas. MOLD also nominated Evelyn Wanjiru to provide ICT support to the editorial committee. The editorial committee is headed by Dr. Okitoi Oriama of KARI. Both Ms. Mwanza from MOLD and Dr. Okitoi of KARI were trained on how to manage and update the website. The team has sent out calls for articles and information through the Mifugo news, which is a quarterly ministerial magazine with nationwide readership. This will ensure that the portal remains vibrant. The establishment of the editorial committee was an important step in ensuring sustainability of the site. As noted in the PSPK Final Evaluation report,

“The work of the Editorial Committee in establishing and overseeing the website is an excellent example of collaborative action among stakeholders supported with high quality assistance from a volunteer. Committee members are committed and engaged despite the fact that they receive no special compensation for their participation. The representatives from MOLD and KARI are among the most active and effective committee members. Members are constantly looking for ways to improve the effectiveness and enhance interaction with users... Visits to the site (hits) have expanded significantly and with it the interest of companies to pay to advertise through the site. Advertising can generate revenue that should off-set operational costs and to move this activity towards becoming self-sustaining in the future. To an important extent this activity has been institutionalized and its operations will continue beyond the conclusion of PSPK.”

B. Intermediate Result 2: Increase Income for Kenyan Rural Smallholder Poultry Producers

PSPK activities under IR2 contributed substantially to increasing income for smallholder producers. PSPK partnered with KEPOFA and other service providers, both to provide training and technical assistance to their members/clients, as well as to build their own capacity to improve service delivery and strengthen their own operations. These efforts have garnered numerous successes, as described in the sections below.

Activities and Accomplishments

Strengthening the Organizational Management and Governance of KEPOFA

The Kenya Poultry Farmers Association (KEPOFA) is an association comprised of mainly backyard poultry producers, with the mission to contribute to socio-economic empowerment of its members by addressing sector constraints related to poultry production, processing and marketing through lobbying, advocacy and delivery of quality services. Part of PSPK’s strategy was to provide targeted assistance and training to KEPOFA, to strengthen its role as a facilitator and service provider for Kenyan smallholder poultry farmers.

PSPK undertook two volunteer assignments to directly support the strengthening of KEPOFA, and an additional eight assignments supporting KEPOFA members. As a result of PSPK activities, KEPOFA membership increased by 57% (exceeding the original project target of 10%). This translated to revenue of Ksh 169,600 (~\$2,020) for KEPOFA and a 110% increase in number of household members benefiting from KEPOFA.

“Many people are now aware of the association”
--Ms. Wairimu Kariuki, KEPOFA Chairperson

In PSPK’s first assignment with KEPOFA, volunteer Ceylon Barclay conducted an organizational assessment of the association, reviewed the association’s strategic plan, and provided suggestions to address constraints. Based on the assessment, Barclay made several recommendations, including the hiring of an executive director and director of development in order to put in place organizational infrastructure

necessary for business plan development. KEPOFA authorized him to conduct fundraising for the organization, and he has generously donated his time post-assignment to continuing to help in this endeavor.

Volunteer Paul Miller came to Kenya to help KEPOFA develop a business development services model for delivery of innovative services to KEPOFA's smallholder farmer members. Miller interviewed KEPOFA members to assess training/service delivery needs, and based on this information, developed a model and curriculum for business service provider training.

Local consultant, Mr. J. B. Kiragu, reviewed KEPOFA's strategic plan, reports from volunteers Barclay and Miller, and other documents presented by KEPOFA, and developed a draft business plan that was sent to Barclay for fundraising purposes. Kiragu also conducted training on business plan development for KEPOFA directors while undertaking consultations on the business plan inputs.

Eight local volunteers were involved in establishing a database of Kenyan poultry farmers, utilizing data obtained during the process of identifying existing formal and informal farmer groups. (See "Identification and Strengthening of Poultry Farmer Groups" activity). The database was presented to KEPOFA to inform membership recruitment. Over the course of the project, PSPK continued to work with KEPOFA to enlist and train new farmers on aspects of safe poultry production. KEPOFA members participated in biosecurity demonstrations and trainings, as described on pages 20-23.

PSPK also assisted KEPOFA in linking to other stakeholders for support. For example, PSPK and KEPOFA contacted a number of donor organizations on the possibility of obtaining funding to establish a business department within the organization. In addition, to further link KEPOFA farmers to financial institutions, PSPK and KEPOFA worked with Agricultural Finance Corporation (AFC) and Agricultural Business Development (ABD) to refinance Umoja Poultry Group (a member of KEPOFA) and expand their poultry operations. AFC agreed to refinance the group, and ABD agreed to put a fixed deposit to guarantee the group to approximately Ksh 1,500,000 (~\$17,860).



Likewise, microfinance institution ADOK TIMO was able to advance two farmers loans to KEPOFA members for establishing poultry farming in Kisumu.

Consultations and ongoing assistance to KEPOFA continued throughout program implementation. Monitoring of volunteer recommendations revealed that KEPOFA had implemented most of the recommendations, including finalization of a business plan, conducting presentations to new potential members, distributing the biosecurity manual to more farmers, replicating PSPK biosecurity and production training, and purchasing radio air time to distribute information to farmers in local language.

Identification and Strengthening of Poultry Farmer Groups

To identify existing formal and informal farmer groups, eight local volunteers were recruited and fielded (one per province: Nairobi, Eastern, North Eastern, Coast, Rift Valley, Nyanza, and Western province). These volunteers developed a database of formal (registered) and informal (non-registered) farmer groups in the eight provinces. The volunteers visited each provincial social development office and the MOLD offices to obtain the data. A total of 304 individual farmers were added to the database, along with 288 groups, thus

giving a total of about 7,200 farmers. This data is important in dissemination of Avian Influenza prevention materials developed by various actors in the value chain.

Four smallholder poultry farmer groups were selected among the list of 288 groups identified above for capacity building. These groups are: Sustainable Options in Kitengela - Eastern province, Likoni Customs Poultry Group- Coast province, Lake Basin Development Authority (LBDA) in Nyanza, and Nguku Farm in Eastern province. Both Nguku Farm and LBDA were included because of their role in training, processing, and marketing (value addition) chicken from smallholder poultry farmers. The groups were trained in poultry value chain development, requirements for producing high quality chicken, business planning, biosecurity protocols, poultry feeds, marketing, quality control, record keeping and good management practices, and sustainability plans. PSPK training has enabled groups to make significant improvements. Many farmers were previously unaware of the income generation potential of poultry, but after seeing the successes from PSPK, they were convinced. Many more farmers joined producer groups and cooperatives after witnessing these successes.

PSPK collaborated with existing service providers and projects to access and provide training and technical assistance to producer groups. This was identified in the PSPK Final Evaluation as an element of success. Rather than duplicating efforts, PSPK supplemented, supported, and improved ongoing efforts, thus strengthening the existing network of service providers and ensuring long-term sustainability.

PSPK training improved service delivery of Nguku Farm and LBDA, as well as improving their own practices and operations. LBDA itself has decreased mortality rates, expanded the number of broilers and Kenbro chickens, and increased the number of vaccinations given to farmers. LBDA trained 300 farmers from July 2010 to February 2011. The improvement of extension services to LBDA's farmers has generated increased interest in more training on poultry management. The feedback from the farmers has been very positive.

Volunteer Jeanne Voigt worked with microfinance provider ADOK TIMO to develop training for the poultry groups that they support. She reviewed ADOK TIMO's products and services for poultry farmers, identified training needs, and trained women poultry group leaders on financial management and record keeping. This training served as "Training of Trainers," with the intent that ADOK TIMO and the women leaders will be able to replicate the training for other group members in the future.



Biosecurity Demonstration Farms

PSPK selected 11 groups (in 9 districts) to serve as biosecurity demonstration farms. For each group, one member was selected by the group to lead and manage the group demonstration farm; most of these leaders were women. PSPK prioritized pilot farms that had at least 50% female participation; this added to the success of the program and greater impacts on the family, as increased income was often spent on family health or children's education. Many of the groups were comprised of vulnerable populations, such as people living with HIV/AIDS, orphan villages, and women-headed households.

The selection of demonstration farms was based on bird migration pathways and the concentration of birds in Western and Nyanza, thereby making these areas a high risk entry point for HPAI. PSPK identified

organizations and institutions that were already working with poultry farmer groups and that could feasibly partner with PSPK to address project objectives and/or key constraints. These partners –highlighted in Table 2– provided PSPK with 11 demonstration groups to pilot biosecurity practices and receive technical assistance and training from PSPK volunteers.

Table 2: PSPK Partners and Associated Biosecurity Demonstration Farms

No	District	Group Name	Members	Partner	Farm Owner
1	Msambueni	Umoja Poultry Group	15	ABD/KEPOFA	Ms. Lea Kemaiyo
2	Makueni	Kyemole Poultry Group	19	ABD	Mr. Pius Makau
3	Makueni	Nzueni Poultry Group	80	ABD	Mrs. Dorothy K. Kioko
4	Lower Yata District	Nyumbani Village	56	Nyumbani village	Mrs. Agnes Mbithi
5	Kikuyu	Karai Ugi Poultry Group	30	Heifer Project International	Mr. Peter Muchai
6	Kericho	HOFAPO (Horticultural Farming and Poultry Group)	14	MOLD extension group	Mr. Joseph Kiplagat Tiony
7	Nyakach	Star Ladies Women Group	12	ADOK TIMO	Mrs. Ruth Owiyo
8	Kisumu East	Mayenya Upendo	14	ADOK TIMO	Mr. John Onyango Awino
9	Kisumu East	Kondele Market Traders Women Group	12	SPC	Ms. Margaret Mirambe
10	Vihiga	Mgoma Dairy Goat And Poultry Group	13	SPC/GOK	Mrs. Bethelida Amagove
11	Gem	Sauri Millenium Poultry Farmers Group	26	Millennium Village	Mr. Francis Okoth

Biosecurity committees were formed in each group to ensure that the biosecurity practices established on the demonstration farms are adopted by other group members on their individual farms. The committees were also responsible for coordinating the aggregation of produce and facilitating linkages to chicken buyers.

A biosecurity team of five PSPK volunteers (Wilcox, Mingala, Mbugua, Yamo, Orago) and one consultant (Henzler) provided training and technical assistance to the farms on the following biosecurity practices: regular vaccinations and proper vaccine handling, proper feeding, supplementation and use of potable water, control of internal and external parasites, control of rodents, control of traffic through fencing of chicken yards and selling procedures, proper housing with isolation provisions, and foot dipping and hand washing systems. For farmers undertaking artificial incubation, use of recommended equipment and protective clothing and sanitation of hatching eggs as biosecurity practice was recommended. A biosecurity manual and brochure were developed by biosecurity experts Dr. David Henzler (consultant) and Sophia Wilcox (volunteer), and edited in the U.S. by volunteer Pam Kahl. The final documents were distributed as part of the communication strategy promotion materials and are also available on the PSPK website.

All biosecurity measures introduced by PSPK were low-cost and therefore feasible for smallholder farmers to implement. (See photos on page 22). As a result of PSPK trainings and technical assistance, the demonstration farms are thriving. As farmers have adopted the biosecurity measures and safe poultry production practices demonstrated by PSPK and the demonstration farms, they have decreased mortality rates of their chickens, increased and improved production, and increased sales. This has resulted in increased incomes, improved nutrition, and in some cases, the establishment of new poultry businesses. Participating farmers have enthusiastically expressed their gratitude and shared thoughts on how PSPK has positively impacted their lives. Many demonstration farms have received visitors from neighboring farmers,

thus multiplying the overall spread effect of these PSPK-supported activities. (See **Annex 2** for Success Stories.)



(The above photos show simple biosecurity measures: 1) a sign posted outside of a poultry farm; 2) hand washing procedures; 3) safe handling of chicks; 4) foot bath procedures)

The demonstration farms are also encouraged to develop business plans using the financial model developed by volunteer Bill Wolfe and follow an agreed-upon supply schedule with identified buyers. Dubbed the “chicken bible” by some PSPK beneficiaries, the financial model provides an easy way to analyze costs and profit against variable inputs and flock sizes. PSPK implemented the financial model with each of the 11 demonstration groups. Each member of the groups provided information on their current poultry flock size and costs; the information was used to produce a profitability analysis using the financial model. This information was shared with the respective farmers and the group. During this process, PSPK was able to establish guidance on the minimum flock size (27 birds per farmer) to break even. PSPK therefore recommended a minimum flock size of 30 birds with commercial feed supplementation. With that flock size, the net income after 16 weeks would be Ksh 1991, while the profit margin was found to be on average 12% (about Ksh 18 per day) with a 42% return on investment. This production was based on the use of chick and duck mash and grower mash used during brooding and growing.

The financial model has helped farmers understand how increases in flock sizes and bulk purchase of inputs affects their profitability and has helped them plan and make decisions accordingly. Likewise, the financial model has helped farmers secure funding to support their

“This model has opened our eyes to the chicken rearing business.[Before,] some of us had only three chickens and thought we were in the chicken rearing business. Thanks to PSPK!”
 --Mr. Francis Okoth, Sauri Millennium Poultry Farmers Group

growing poultry businesses, serving as an easy-to-understand tool for microfinance institutions to instill confidence in what they are funding. Volunteer Bill Wolfe conducted a presentation to a select group of microfinance institutions to show them how to use the model. In addition, PSPK helped link groups to Equity Bank, ADOK TIMO, Yehu Microfinance, UTS, and others for financing. Several groups have been successful in securing funding. For example, using the financial model, Umoja poultry group is holding discussions with ABD, Bixa, and AFC for a program to refinance poultry operations which were disrupted during the last general elections. The group received 18,000 broilers for a trial contract managed by both the group and Bixa Ltd.

A study was conducted by FAO to determine the drivers for biosecurity adoption among smallholder poultry farmers the project was working with. Respondents were randomly selected from a sample group of PSPK pilot farm members and those farmers who acquired biosecurity knowledge by visiting the pilot farms. The results of the study indicated that implementation of the biosecurity measures was very successful. The findings indicated that vaccinations were ranked first of the biosecurity practices adopted among the groups. The least adopted was hand washing and use of proper equipment. A significant finding relevant to Avian Influenza prevention is that 71.2% of the farmers were no longer living with their birds because of fear of contracting zoonotic diseases; they are now housing their birds separately.

Business Development Services

To support business development services, Private Service Provider Group in Eastern Province received a grant to build its capacity to provide access to indigenous day old chicks in Makueni. An incubator, solar panel, and accessories were purchased. The group also obtained 300 indigenous chicken hatching eggs from KARI to produce their first breeding stock. Volunteer June deGraft Hanson worked with members and provided training on handling hatching eggs and hatchery management. The first batches of day old chicks were obtained in February 2011 and sold to the members to be used as breeding stocks for hatching egg production. A government livestock officer covering the area is working with the group to ensure sustainability of the hatching operations.

“Most of the problems we had prior to collaborating with Winrock [PSPK] have been solved... They always availed highly knowledgeable facilitators from Nairobi office and from as far as the United States of America. We are now able to hatch and distribute over 400 day-old chicks every month.”
--Ms. Eunice Musyoka, Secretary,
Private Service Providers Group

Volunteer Jonathan Moyle provided technical assistance for farmers supported by Science Product Center (SPC). He was involved in building the capacity of smallholder poultry farmers in managing breeding flocks and producing clean fertile hatching eggs from indigenous chickens. He provided training on installation and management of incubators, egg quality and handling, embryo diagnosis, genetics and diet of breeder hens, and other topics relevant to successfully producing healthy day-old chicks. Moyle was also able to help fix incubators that were not working properly prior to the assignment. The trained farmers will be involved in producing day old chicks for other farmers in their villages as a business development service.

The project also supported the establishment of SUNCHIC Limited. Prior to involvement in PSPK, SUNCHIC was just getting started and had not yet developed a business plan. The company is now registered in Kenya and is focused on processing, marketing, selling, and distribution of chicken, in addition to supporting farmers by linking them to finance and providing training on prevention and treatment of poultry diseases. SUNCHIC offers support to over 5,000 farmers in Bomet and Molo districts in the Rift Valley. SUNCHIC is one of six traders who received training on biosecurity measures for handling chicken during transportation processing and marketing. The other traders are: Nguku Products Limited, Kamuingi Meat Distributors, Kisumu Chicken Centre, Kondele Women’s Hen Group, and Umoja Poultry Group. Volunteer Bob Corshen worked with the traders to develop brands and a marketing plan for their indigenous

poultry products. Corshen teamed with volunteers from University of Nairobi's School of Arts and Design to design logos for the newly identified brands. (See images below).



Volunteer Bill Wolfe adapted his financial model for traders and provided training to the traders on how to use the model. Volunteer Keith Ellis conducted biosecurity and safety training for all six traders. The training provided the traders with skills that are needed to ensure consumer confidence and demand for their products. In addition, the traders were awarded a total of \$17,000 in the form of in-kind grants to acquire processing equipment, transportation crates, storage equipment, cool boxes, and packaging materials for safe processing and marketing of poultry products. For purposes of marketing their newly branded products, the grant was used to develop fliers and printing other promotional materials (e.g., t-shirts). As a result of assistance provided by PSPK, SUNCHIC has grown and is currently positioned to be a key processor if it is able to acquire funding or obtain other investors. Likewise, PSPK support enabled the Umjjoa Poultry Group to become the first group in the south coast region of Kenya to sell chickens in packaging materials.

In addition to the branding support and grant, PSPK provided additional assistance to Nguku Products Limited (NPL). In November 2009, Winrock recruited NPL to participate in PSPK biosecurity trainings. Since then, PSPK staff and volunteers (Ellis, Wolfe, and Corshen) have visited NPL and made recommendations to improve the inadequate conditions in order to address consumer safety concerns and increase productivity of the plant. As a result of initial support provided by PSPK, NPL improved the conditions of its slaughtering facility, hired more staff, and more than tripled its production from 2009 to 2010. Based on these immediate improvements, PSPK recruited private investors to rehabilitate and operationalize the business. The investor contributed an estimated KSh20 million to NPL based on the applied financial model. Volunteer Gary Mutz worked on establishing a linkage between NPL and private service providers. As a result, NPL held discussions and agreed to partner with PSPK's private service providers in supporting the farmer groups in Makueni to improve production of indigenous chicken to supply NPL's processing plant, which is now up and running. By the end of the project period, two of the service providers supporting about 20 groups have signed supply contracts with NPL to provide a minimum of 200 chickens every week. The number of clients that NPL services has increased by 87%.

To facilitate good contract farming between the groups and buyers, volunteer Christopher Grace worked on market linkages and advised farmers on group-based marketing and aggregated production, as well as on pooling resources together to buy inputs as a group. He also developed a marketing model complete with

agreement forms between buyers and sellers. As a result of the assignment, three groups (Umoja Poultry Group, Millennium Poultry Group, Kondole Women’s Group) identified their input requirements and held consultations with input suppliers. Kisumu Chicken Centre signed supply contracts with Millennium Village, Mgoma poultry group, Mayenya Upendo, Star Ladies Group, and HOFAPO in Kisumu and Rift Valley. Kamuingi Meat Distributors signed contracts with farmer groups in Mwingi and Thika. By the end of the project, contracts were established between 15 PSPK-supported groups and buyers.

Volunteer David Mitchell conducted training for 23 officials from the City Council of Nairobi (CCN), the Provincial Director of Veterinary Services, and Nairobi City Inspectorate on risks of live bird marketing in urban areas and the safety concerns of consumers. As a result, a committee was formed to oversee the implementation of Mitchell’s recommendations and explore ways to raise funds to support implementation of biosecurity measures by small scale poultry traders in Nairobi.

“PSPK has been instrumental in training City Council of Nairobi public health officers and in the establishment of the linkages between the poultry marketers and CCN officers.”

--Mr. Kikuyu, Senior Public Health Officer

Mitchell also conducted a training to sensitize 44 urban live bird and poultry meat traders on the risks of live bird marketing and how to produce safe poultry meat that meets consumer safety concerns. The traders provided recommendations for consideration by the committee appointed during the earlier government officials training. The Nairobi Provincial Director of Veterinary Services indicates that PSPK trainings have boosted hygiene standards and fostered a stronger relationship between the veterinary department, CCN, and poultry traders. “Previously, the chicken traders used to run away from the City Council or the veterinary department officials during periodic inspection of slaughter processes,” she states. This is now no longer the case.

SMS Market Information System

To increase smallholder poultry farmers’ access to information on market prices and market dynamics, PSPK lobbied Kenya Agricultural Commodity Exchange (KACE) to include poultry market information in its product catalogue. KACE agreed to include poultry and launched an updated commodity market information catalogue at the end of March 2010. Farmers call 0900 88 11 88 on their mobile phones and follow simple steps on how to use the service to access daily market prices for chicken.

IV. Major Implementation Problems

There were no significant implementation problems encountered, but there were normal challenges that arose during implementation. One of the most significant was the high demand for program support and expectations of poultry sector stakeholders. Fortunately, stakeholders expressed tremendous enthusiasm for PSPK, but this also created a challenge for program staff faced with responding to all of the expectations. For example, some partners expected PSPK to fund activities identified and recommended by the volunteers.

V. Lessons Learned and Best Practices

Key lessons learned and best practices include the following:

- An important lesson from PSPK is that producers will adopt biosecurity measures if there is a financial incentive. The dual focus on smallholder production and measures to address biosecurity threats was key to increasing competitiveness and incomes.
- Use of volunteers coupled with provision of grants is a cost effective and efficient approach to supporting value chain actors. The combination of targeted, high quality technical assistance and grants enabled PSPK to make a deeper impact than most Farmer-to-Farmer programs.

- Pairing U.S. and local volunteers on joint assignments has several benefits: enabling hosts to benefit from multiple perspectives, enabling the volunteers to learn from one another, and strengthening the local pool of experts to replicate and further disseminate information and training.
- Poultry production, as one of the only activities that women can engage in without the involvement of men, can be an important economic and leadership opportunity for women.
- The financial model is a very essential extension tool for improving smallholder production and promoting commercialization.
- Addressing market and market information enhances smallholder production interests.
- The small staff size has been a key constraint to providing effective support to farmer groups.
- The project's focus on a single value chain contributed to impact and enabled the use of specialized technical experts as field staff.

VI. Recommendations for Future Development Efforts

As PSPK was designed as a pilot project, program activities were undertaken in a narrow geographic area of Kenya, and program beneficiaries and producer groups were limited. Future development efforts should expand the model to additional geographic areas and program beneficiaries. Additional recommendations for future development efforts include, but are not limited to, the following:

- Replicate the PSPK model using successes and lessons learned to improve the poultry sector and increase smallholder incomes in the region (Kenya, Tanzania, Uganda, Ethiopia) to increase the competitiveness of the sector in the region and promote regional trade.
- Customize the financial model to each country and build the capacity of partners to use the model effectively and efficiently.
- Establish poultry business hubs around the six established traders/processors and link the farmer groups to the poultry business hubs.
- Support targeted promotion of the six brands to increase consumer demand and subsequently create an opportunity to improve productivity efficiency at the farm and business hubs.
- Support collaboration to realize the shared vision and full implementation of the KNPIP.
- Expand poultry production support to additional women producers in order to increase household income and nutrition.
- Leverage and support opportunities for regional trade and information sharing across East Africa.

Annex 1: Standard FTF Reporting Tables & PSPK Indicator Table¹

¹ Refer to accompanying Excel file for standard Farmer-to-Farmer reporting tables

Custom Indicator Targets and Achievements – Final Report

Deliverables, Indicators, & Targets	Life of Program Target and Comments	Results/Achievements
# of volunteers fielded	49 total volunteers: 34 US and 15 local volunteers (based on knowledge of the sector and women's multiple workloads, PSPK aims to recruit 30% female volunteers)	45 total volunteers: 26 US and 19 locals (21% female volunteers) plus 4 local value-chain consultants (originally planned as volunteers) ² for a total of 49
Standard USAID Indicators		
# of host institutions strengthened	15 hosts (Phase I hosts continue in Phase II); disaggregated by: # women's organizations/associations assisted as a result of USG supported interventions: 11 # of producer organizations, water user associations, trade and business associations, and community-based associations receiving USG assistance: 2 # of agriculture-related firms benefitting directly from USG supported interventions: 7 # of public-sector [government] agencies: 1	27 hosts disaggregated by: - 4 women farmer groups ³ - 9 producer organizations/associations - 9 firms - 2 public-sector agencies
# of individuals who have received USG supported short-term agricultural sector productivity training	2,000 (at least 50% female; assumes this includes the participants trained in Phase I and includes partner training reported after PSPK conducts field days and training of trainers). During Phase II, partners will be trained to compile training and demonstration attendance sheets that document name and gender of participants.	3,185 individuals trained (57% female), including: - 1,572 trained by volunteers, - 258 field day attendants - 1,355 demo farm visitors and trainees, KNPIP sensitization workshop attendees, regional tour trainees, CAADP trainees, and members of four farm groups

² Phase II planning envisioned the use of volunteer experts to conduct the regional value chain assessments, however based on further discussions with the USAID/Missions, it was agreed that we would employ local consultants to conduct the value chain assessments in each of the three countries. A fourth consultant, US-based, was then engaged to create a regional value chain report from the three individual country reports.

³ The design of the program relied on identified partners to select producer groups based on incidence of biosecurity problems, particularly high mortalities. Therefore, PSPK was not directly involved in the selection of groups, nor the formation of groups, and could not specifically target women's organizations/associations.

# of rural households benefitting directly from USG interventions	2,000 households (beneficiaries of direct technical assistance, participating members of targeted producer associations, field days & TOT)	12,008 households benefited from technical assistance including: <ul style="list-style-type: none"> - 3,747 individuals have benefitted directly from the volunteer assistance (58% women) - 5,000 households receiving business support services from SUNCHIC Ltd in Bomet and Molo⁴ - 450 households accessing market from Private Service Providers Group in Makueni⁵ - 2,811 members of KEPOFA, AKEFEMA, and field day attendants
# of new technologies or management practices made available for transfer as a result of USG assistance	8 technologies or management practices transferred, or made available for transfer (Phase I include: KNPIP, feed standards and certification program, KPSKS (portal), biosecure model, BDS plan, poultry market info SMS, and financial model).	8 technologies or management practices transferred
PSPK Custom Indicators		
# of poultry sector-specific policies researched	5	5 policies researched reviewed, including: <ul style="list-style-type: none"> - Kenya National Poultry policies reviewed - Feed standards policies reviewed and being researched - Policies on indigenous poultry production reviewed and are being researched - Knowledge and information systems being researched

⁴ SUNCHIC recruited 5,000 farmers to engage in contract farming. Farmers received training and vaccines from SUNCHIC, and agreed to sell their chickens to SUNCHIC in return.

⁵ 450 members from 10 groups recruited and being supported by Private Service Providers Group in Makueni, who is providing biosecurity training and services to members.

		<ul style="list-style-type: none"> - Tegemeo Institute undertook a study on competitiveness of indigenous poultry in the market and consumer preference traits; a second SOW was developed last year by Tegemeo and submitted to USAID to leverage funding for implementation. No funding obtained yet
# of poultry sector-specific policies reviewed and approved for promotion by stakeholders	2	<p>2 policies reviewed/approved, including:</p> <ul style="list-style-type: none"> - Current poultry policy document reviewed and mainstreamed into the KNPIP as part of implementation framework - Value chain assessment of Western Region of Kenya done by PSPK staff reviewed/approved for promotion
# of poultry sector-specific policies submitted to Ministry of Agriculture Agricultural Sector Coordination Unit for consideration	2	<p>2 policy documents:</p> <ul style="list-style-type: none"> - The KNPIP submitted to Ministry of Livestock Development for review and the Permanent Secretary approved the document - Current draft poultry policy approved by the cabinet and stakeholder sensitization conducted (served as implementation framework)
Stakeholder organizational map detailing roles, mandates, resources, geographic presence, target populations, etc. for poultry sector stakeholders	4 completed (one per country)	4 value chain studies completed (Kenya, Uganda, Tanzania, and Ethiopia) and a regional synthesis of the 4 value chain reports completed
Meetings, workshops, and/or seminars with regional participation	1 regional workshop/tour prior to value chain studies that will also develop action plans for value chain studies	<p>5 total workshops with regional participation</p> <ul style="list-style-type: none"> - 4 workshops conducted in Tanzania, Uganda, and Ethiopia (2) to share experiences and VCA reports - 1 regional workshop in Kenya attended by 28

		people from Tanzania, Uganda, and Ethiopia
Targeted competitiveness enhancing projects	4 initiated	4 initiated in Kenya, Tanzania, Uganda, & Ethiopia
Study on alternative feeds for poultry	1 completed	1 study completed
Increased membership (families) in KEPOFA	300	848 new members recruited, resulting in 57% membership increase (283% of indicator target)
Increased sale of poultry meat and eggs for farms participating in market agreements	50%	Results include: <ul style="list-style-type: none"> - MOLD noted a 72% increase in number of birds being slaughtered in Nairobi and attributed to PSPK ⁶ - Kondele Women group achieved 30% increase in sales - Mayenya Upendo had 33% increase in flock size (from 200 to 300) - HOFAPO group had a 40% increase in day old chick production and change in incubator capacity from 80 to 500 - Nyumbani village (constitutes 720 orphans and 72 grandparents) had a 10% increase in sales and the 72 households are no longer being given donor-provided transport to visit their homes or relatives but are paying for transport from chicken sales
# of biosecurity enhancing technologies demonstrated on-farm	8	8 practices being promoted in 11 demonstration farms through: <ul style="list-style-type: none"> - 4 farmer field days conducted

⁶ "...there was notable increase in the number of slaughtered animals in the Province (Nairobi)....The huge increase in the poultry slaughter figures (72%) has been greatly attributed to intensified poultry surveillance in the areas adjacent to Burma Poultry and partly due to an educative workshop on safe poultry production sponsored by Winrock International." (MOLD, Veterinary Department, Annual Report, 2010)

		<ul style="list-style-type: none"> - 7 smallholder farms practicing day old production and employing egg sanitation practices as part of biosecurity
# of farmers employing project-demonstrated biosecurity enhancing technologies	200 (at least 50% female)	<ul style="list-style-type: none"> - 181 farmers are employing biosecurity practices (69% female)⁷
# of Poultry BDS firms (or BSP – business service providers) selling services	2	8 BDS firms comprising: <ul style="list-style-type: none"> - 2 individuals providing support services to Kyemwole and Nzueni groups - 6 traders linked to producers
Collaborative organizational assessment and business plan for KEPOFA	1 completed	1 completed
KEPOFA-donor funding agreements	1 approved	1 proposal developed and submitted by KEPOFA to GTZ
Agreements for testing of indigenous poultry and egg marketing systems	2 tested	16 which include: <ul style="list-style-type: none"> - 10 agreements developed and signed between identified traders - 6 traders identified and training planned for implementing agreements
Reports of results of pilot indigenous poultry market development projects	2 completed	2 completed: <ul style="list-style-type: none"> - Nguku Products Centre signed contract marketing with two private service providers in Makueni - Strategic investor from US identified and invested over Ksh 20 million to revamp with

⁷ This number includes only farmers on the demo farms, though the figure is likely much larger; this figure does not include farmers who have attended field days or have been trained by service providers because we are unable to substantiate whether or not farmers who received training from other trainers have employed biosecurity enhancing technologies at home.

		<p>Nguku products limited</p> <ul style="list-style-type: none"> - 6 brands of chicken developed for 6 traders
Poultry business services provider training curricula and manual	1 set completed	1 set comprising a manual and a brochure completed
# of management practices or innovations identified and introduced for dissemination to reduce the risk of spread of AI	During Phase I, PSPK experts David Henzler and Sophia Wilcox identified eight key practices essential to AI risk reduction. These eight practices will be disseminated through farmer field days.	8 practices disseminated through farmer field days to reduce risk of AI.
# producers directly supported to introduce improved management practices that mitigate the risk of spread of AI	15 producer groups with average of 25 members each directly supported (at least 50% female). This estimate does not include additional producers indirectly supported through field days and Kenya National Poultry Improvement Plans.	16 producer groups including: <ul style="list-style-type: none"> - 11 producer groups with average 16 members each directly (comprising 69% women) supported by the project - 4 farmer groups trained on biosecurity but not involved in demo farms
# of people who have seen or heard a USG-funded avian and/or pandemic influenza-related message	US Department of State Operating Plan (OP) indicator. Estimate includes people participating in PSPK training and technical assistance (direct and through training of trainers) as well as audiences from planned communications campaigns (e.g., radio and television) in Kenya. Number will be estimated based on the reading, viewing, and listening audiences of participating media outlets, as well as tracked through training records, technical assistance, and demonstrations.	3,821,589 people have heard and include: <ul style="list-style-type: none"> - 3.8 million <i>Daily Nation</i> readers exposed to article on poultry biosecurity practices - 3,747 people who were directly assisted by volunteers - 240 people visited the PSPK desk at ASK international trade fare - 300 telephone callers received telephone information support following article on daily nation - 1000 key value chain actors reached through mass email awareness on poultry website - 14,094 hits to the Kenya poultry website portal - 250 registered members of the website - 169 traders heard directly from project - 258 individuals participated in farmer field days

		<ul style="list-style-type: none">- 631 group members heard directly from project (include 450 from service providers)- 900 leaflets distributed in country & regionally
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Annex 2. Success Stories

Poultry Production Improves Lives in Kenya

Thousands of smallholder farmers learn safe poultry practices and, in turn, increase their incomes



A proud poultry farmer shows her flocks to PSPK volunteers

Poultry is an important source of income and nutrition for smallholder households in Kenya. From 2009-2011, Winrock's PSPK program provided training and technical assistance to nearly 6,000 individuals, most of whom have struggled over their lifetime to earn an income, feed their families, and send their kids to school. Through targeted technical assistance and training provided by highly skilled volunteers from the US and Kenya on topics such as: safe poultry production practices, biosecurity, animal feed, processing, marketing, business plan development, and financial management, these smallholders now have a lot to smile about.

Biosecurity training, largely concentrated on 11 PSPK-supported demonstration farms, has significantly decreased mortality rates and thus enabled farmers to improve production, increase their flock size, and ultimately earn more income and dramatically improve their lives. Some of these trainings have reached the most vulnerable populations in Kenya: women-headed households, orphans and vulnerable children, persons living with HIV/AIDS, and unemployed youth.

Ms. Theresa Ongoro, a member of the Kondele Hen Women's Group –one of the top-performing demonstration groups– proudly states, *"Look at us now. We look healthier than before!"* Kondele Hen Women's Group engages local youth, in an effort to provide employment and build entrepreneurship skills in the community. Members of this group have benefitted from mortality rates decreasing from more than 50% to less than 10%, and as a result, are now able to pay school fees and hospital bills as well as increase the amount of protein intake at home. One hotel has contacted the group to request a supply of 50 packaged chickens each week, and other chickens are sold regularly for restaurants, funerals, and weddings. The group's chairperson, Ms. Margaret Mirambe, describes how the success has not gone unnoticed, stating that *"many people in the community want to be associated with us."*

Likewise, Mayenya Upendo, another successful demonstration farm, has improved the lives of its members –all whom are persons living with HIV/AIDS. Group members have fenced off the poultry farm, built housing units for chickens, integrated foot dips and washing points with disinfectant solutions at the entrance of the farms, and vaccinate their chickens to protect from disease. Prior to their involvement with PSPK, members did not know about any of these safe production practices. Now, members are selling more chickens and receiving loans to expand their businesses. Members have also banded together to talk to neighboring farmers about vaccination, and overall membership has increased. Mr. John Owino, the group's chairperson, proudly states that his income has increased 7.5% since involvement with PSPK. He is using income generated from chicken sales to pay his children's school fees. He hopes to continue to increase sales and one day use the income to build a permanent home.

These successes are just a few examples of the numerous successes found within the 11 demonstration farms and other poultry stakeholders that PSPK has supported. By building the capacity of key poultry sector stakeholders such as farmers associations, service providers, the Ministry of Livestock Development, universities, and research institutions, PSPK leaves a lasting legacy and ensures that thousands more smallholder farmers –like the members of Kondele Women's Group and Mayeya Upendo– can receive valuable poultry production and biosecurity training in the years to come.

Supporting Growth and Success within Kenya's Poultry Sector *Service Providers, Women Leaders, and Proud Farmers Share Newly-Learned Practices with Others*

PSPK has provided technical assistance and training to ADOK TIMO and its affiliated poultry groups since 2009. A micro-finance institution that serves rural and peri-urban communities in western Kenya, ADOK TIMO offers financing and business development services to help entrepreneurs and farmers – especially women– to succeed. When PSPK first started working with ADOK TIMO, the organization was supporting only two poultry groups with approximately 10 members each. The members were keeping very few chickens with no commercial value, and were facing limited success due to poor production, handling, and biosecurity practices. Through targeted training and technical assistance provided by PSPK volunteers, this started to change. Today, ADOK TIMO and its growing number of poultry members are active participants in the poultry value chain and are reaping the financial and nutritional benefits from expanded safe poultry production.

An important part of ADOK TIMO's current success is a result of leveraging strong women leaders. To help ADOK TIMO build the capacity of these women leaders, PSPK sent business specialist Jeanne Voight to work with the poultry groups in November 2010. Jeanne assessed the microfinance products provided by ADOK TIMO and the training needs of poultry farmers and the women leaders. Jeanne then developed and delivered training on poultry production and financial management to 90 poultry farmers (88 of whom were women). Her training will serve as a Training of Trainers, which ADOK TIMO and the women poultry group leaders will replicate.

Confident that her assignment created instant changes for the participants, volunteer Jeanne Voigt states, "I noted numerous occasions when women clearly understood for the first time that they either made money or operated at a loss. This was real learning. The women were far more self confident by the end of the exercises. They had accomplished a difficult task and had succeeded."

According to Phelesia Abolo and Teresa Odhiambo, two of ADOK TIMO's earliest members, most of the people who have been attending PSPK training can now vaccinate their chickens, build poultry housing units, keep sound records of sales and accounting transactions, and draft business plans. Biosecurity practices first taught to them by PSPK are now an everyday part of their poultry businesses. As a result, mortality rates have dropped from 99% during certain seasons to less than 50%, and members have successfully acquired loan funding to help them expand their poultry businesses.



Jeanne Voight provides training to women leaders on financial management and record keeping

Word on this success has spread. Now, ADOK TIMO has eight poultry groups, each with 10-14 members, who are sharing their expertise with others. "Members are now helping in vaccinating chickens within the surrounding areas," Ms. Phelesia proudly states. Visitors from other areas have been coming to the members' farms to see what they have been doing.

Since its involvement in PSPK, ADOK TIMO has increased poultry loans from two to 50. Having seen the benefits within the poultry sector, Adok Timo, the women leaders, and other successful farmers are committed to continuing and replicating their success.

Building Confidence with New Brands for Safe, Indigenous Poultry Products

A rising demand for indigenous poultry products in Kenya provides a great opportunity for smallholder producers. Increased sales of indigenous products would bring essential income to the smallholder farmers who produce these products, as well as the traders and processors who help get these products to markets. However, in order to fully take advantage of this demand and facilitate entry of indigenous eggs and poultry meat into supermarket chains, smallholders need to ensure consumers that their products are high-quality and free of disease. With this in mind, PSPK fielded poultry expert and business owner Bob Corshen to help articulate local poultry meat and egg brands and develop a brand marketing strategy for six traders, taking consumer preferences into consideration and leveraging the power of the products' competitive advantage. The effort was a success, and the brands are in use today, thus paving the way for thousands of other smallholder producers to sell their indigenous poultry products.

Corshen worked with each individual trader to develop a concept –including a brand name and logo– that defines themselves and their products. Corshen then worked with student volunteers from the University of Nairobi, School of Arts & Design, to develop draft designs for each concept. Together, the students and the traders worked to finalize the logos. Corshen also provided guidance on marketing strategies and how and where to use these new logos. Each participant was extremely pleased with the end result. Corshen notes, *“I sincerely believe that seeing their company/organization name and logo in a professional design gave each of them the feeling that they were now going to become leaders in the indigenous poultry business.”*

The traders were each provided with a grant to help them market their brands. These funds enabled one of the traders (SUNCHIC) to develop multiple advertisements for their products (see photo to the right). The grants also enabled the traders to acquire processing equipment, transportation crates, storage equipment, cool boxes, and packaging materials for safe processing and marketing of their poultry products.

With these defined brands, the traders have increased confidence in their ability to sell their products, and consumers can increase confidence in and awareness of the producers and traders involved in the growing market of indigenous poultry products in Kenya. In fact, the largest supermarket chain in Kenya immediately expressed a high level of interest in fresh, indigenous chicken, and indicated that he would create shelf space for these newly branded products.

As a result of PSPK support, the Umjoo Poultry Group to become the first group in the south coast region of Kenya to sell chickens in packaging materials.

Mr. Njuguna of SUNCHIC– excitedly states, *“SUNCHIC wouldn't be where it is now if it wasn't for Winrock [PSPK]!”*

Another trader, Ms. Benta Owino of the Wambo Development Group, notes, *“We are now professors of chicken rearing and marketing because of PSPK!”*



SUNCHIC developed strong advertisements with the support of PSPK.

Improving Food Security in Rural Kenya *Helping Women Earn Money and Feed their Families*

In rural Kenya, women have very few resources to call their own. Despite this, they are primarily responsible for feeding their families and taking on the lion's share of household and agricultural work. Employment and income generating opportunities for women are meager, particularly given time constraints from their heavy household demands. More than 30% percent of all Kenyan households are headed by women, and the majority of these households face chronic food insecurity.

Winrock's USAID-funded Partnership for Safe Poultry in Kenya (PSPK) program offers a viable solution for rural, food insecure families, providing women (as well as men) with opportunities to increase income and produce an important protein source for their families. As the primary poultry producers in Kenya, women comprise more than 65% of PSPK's beneficiaries.



With PSPK support, Alice Pius Makau is able to raise disease-free chickens to earn income and feed her family

Before receiving support from PSPK, Alice Pius Makau, from Makueni District, struggled to feed her family. Household income and food sources – particularly protein sources– were extremely limited, and on some days, there was not enough food to go around. Alice was already raising chickens but was doing so ineffectively without information on how to keep her chickens healthy and free of disease.

PSPK provided Alice and other members of the Kyemole Poultry Keepers Group with training and technical assistance on biosecurity and safe poultry production, as well as linkages with buyers, improved feed, and financing. As a result, Alice and her fellow poultry producers are now gaining confidence, earning extra money, and improving their family's nutrition. Alice proudly states, "I am not afraid of my children sleeping hungry anymore, because I have enough food for them, all of the time. The money I get from chicken sales helps me to buy the food that I do not grow on the farm. I also have a constant supply of meat and eggs for my family's protein nutrition."

Testimonials from other women tell similar stories of positive change and increased food security.

Christine Kyalo, also from the Kyemole Poultry Keepers group in Makueni, proudly explains, "Before this project, my family ate meat only on special occasions. In the past, eggs were not common in the home, but now I give two eggs to each member of the family every day, and especially during the dry periods, eggs form part of the meals that I cook."

Selesia Abolo, of the Star Ladies Women Poultry Group, asserts that the livelihoods of many women have been greatly enhanced – including her own. "My earning an income from chicken has reduced

tensions that were there in the family because of lack of enough money,” she said. “Now we are able to manage through tough times, because there is at least money to buy something to eat.”

Likewise, Marieta Mackenzie from the South Mbooni District explains, “My life has changed. Now, I also have money just like my husband. The feeding habit of my family has changed. The family now diets on chicken when they wish, or anything else which I can afford.”

In 18 months, PSPK has trained more than 1,000 women, and assisted more than 1,700 poor households.

Empowering Female Entrepreneurs

Changing the Lives of Rural Women in Kenya

In Kisau, a remote hamlet in Mbooni District in Eastern Kenya, rains are scarce and hope is historically scarcer. Families struggle to survive, with limited resources and few opportunities to find employment and earn an income.

But in the midst of this challenging environment, Eunice Mukai is smiling.

After receiving training from Winrock's USAID-funded Partnership for Safe Poultry in Kenya (PSPK) program, Eunice oozes with optimism, thanks to new opportunities for poultry rearing and trading, which, she says, has come at a time when she and other women needed it most.



Eunice Makai expresses gratitude for all that she has learned from PSPK.

In October 2009, Eunice attended PSPK's biosecurity awareness training and learned about chicken handling and vaccination. After realizing the great economic potential in chicken, she soon after ventured into chicken rearing herself. Eunice constructed housing units for the chickens just like she had been instructed in the PSPK training, and since March 2010, she has been taking at least fifty chickens to sell in Nairobi every month. Since then, "I have sold over 500 chickens," she says. –This totals over \$3,100 in sales and nearly \$1,300 in profit.

Her success has not stopped there.

Eunice noticed that many other farmers had chickens which were frequently dying from diseases, so she decided to try to help with vaccinations for her neighboring farmers. At first, she faced the challenge of storing the vaccines, since there were no cold storage mechanisms due to lack of electricity. She explains, "I realized there was great untapped business potential for me in this area, and therefore I approached the Ministry of Livestock to help with storage, and they accepted. Every week, I buy and use 2,400 doses of vaccine. Currently, it appears like the whole district depends on me for vaccination. Government officers always refer farmers to me. Before PSPK, I was not keeping chicken and I purely depended on medicine sales for income, but now I have about 100 chickens."

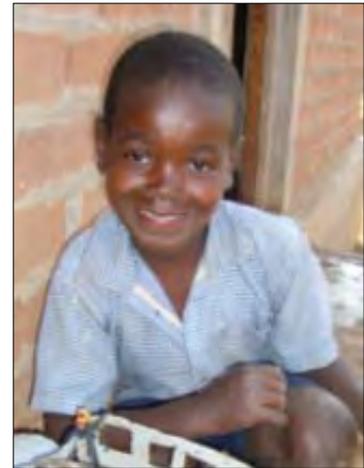
After the training from PSPK, many women have come to Eunice for consultations. She has managed to mobilize 12 farmer groups, comprising 450 farmers (400 of whom are women) who are engaged in the best practices for chicken production. Eunice notes that many of the women were enthusiastic to join the farmer groups, as they had nothing else to do to support their families or improve their living conditions. "This is some sort of employment, which has even motivated some men to join the groups," she asserts. She also indicates that a growing percentage of farmers in the group are youth. "Youths are also engaging in the business," she says, adding that, "many of those came back from places like Nairobi, where they had gone to look for jobs, to start rearing chicken after hearing good stories from my groups."

With PSPK support, Eunice recently signed a contract to supply chicken to Nguku Product Centre. She will supply 200 chickens every month, earning nearly \$900. Within two years, she hopes to grow her own business by helping each farmer in the twelve groups to rear 1,000 indigenous chickens every four months.

Other women poultry producers are following in her footsteps and emerging as entrepreneurs and successful business women. PSPK has trained over 1,700 people (including more than 1,000 women) along the value chain since its inception in May 2009, empowering and enabling many others like Eunice to drastically improve their lives.

Livelihood Development Training Increases Income & Improves Nutrition for Kenyan Orphans *Poultry Rearing Provides a Beacon of Hope*

Located three hours east of Nairobi, Kenya, on land donated by the Kitui District City Council, Nyumbani Village is the realization of the vision of the late catholic priest, Father Angelo D'Agostino, to create a self-sustaining community to serve orphans and elders who have been left behind by the "lost generation" of the HIV pandemic. The Village provides a family-like setting for orphaned children under the stewardship of elderly adults, providing youth with physical, psychosocial and spiritual development, and, at the same time, providing holistic care and support for the grandparents in their later years. Through group homes and community services, the Village seeks to harness the energy of youth and the maturity of elders to create new blended families that foster healing, hope, and opportunity. The Village also seeks to ensure that the residents in the surrounding communities reach a certain level of self-reliance through the Village sustainability program.



One of Nyumbani Village's many orphans, happy to receive support

The Village sits within the poorest division in the Kitui District and has a high incidence of HIV and a high number of HIV orphans. The Village is currently home to 780 orphans and 78 "grandparents" (78 households). Once the orphans reach the age of 18 years, they graduate out of the home to start their adult lives in their rural areas. In the village, they are expected to learn different livelihood skills and, when possible, to accrue assets that they will relocate with.

Recognizing the great needs as well as the great potential within the Village, Winrock International's Partnership for Safe Poultry (PSPK) Program provided technical assistance and training on poultry production and biosecurity practices, to build skills and provide a source of income and nutrition for these deserving households. The training has enabled the Village to reduce mortalities and produce safe chickens for consumption and sale. In 2010, chicken sales generated Kshs 256,000 (about \$3,000) for the households. Pius Muinde, the animal health officer at the Village farm, states, "After we conducted vaccinations and disease



Animal health officer Pius Muinde inspects the isolation unit provided by PSPK.

control measures, mortalities dropped from 80% to about 20%. PSPK established a holding unit to isolate any new chicken for a period of one month before it can be allowed to go to the households. Now, the adaptability of pest, disease and predator control within the households is high due to the awareness of hygiene and well being of the chickens on the farm. When some of the members go back to their families, they take with them the best practices in safe poultry production."

The families in the households have increased their incomes and now have a regular supply of chicken meat and eggs. "Now, poultry is a big factor in the sustainability program at Nyumbani Village. The families do not wholly rely on the management for their daily needs," says Pius. In August 2009, the Village's Central Unit had 97 chickens, and each household had one or two chickens. Now (April 2011), the Village has 300 chickens at the Central Unit and approximately 3,000 chickens total at the household level (40-50 chickens per household). As the households' chicken populations grow, so does their hope and self-reliance.

Biosecurity Increases Household Incomes

A Brighter Future for Kenya Small Scale Poultry Producer

Sam Mutie, a small scale poultry producer, lives with his wife and two children on a one-acre farm in Makueni District of Kenya. Over the years, Mutie never let his flock build up. Whenever his flock became large, he sold off the chickens at throw away prices because he feared disease outbreak and didn't have enough money to feed or vaccinate the chickens.

In April 2010, Mutie attended a training conducted by Winrock International's USAID-funded Partnership for Safe Poultry in Kenya (PSPK) program on biosecurity and better chicken handling procedures. The training gave him skills and confidence to face the challenges of disease outbreak. At that time, he only had 20 mature chickens and about 70 chicks. "The biosecurity training was on vaccination and how one can feed chickens in a few months in order to make money," Sam says. "They informed us that when you feed chicks up to four months, you get value for your activity."



Sam Mutie shares how PSPK biosecurity training increased his production and income and improved his family's nutrition

Mutie returned to his farm and set up biosecure housing units for his chickens. "I have housing units for chicks to prevent them from contracting diseases," he says. "Many chickens were dying from diseases, but the training on vaccination helped me to keep my chickens safe until they become mature." In May, just one month after the training, Mutie had already seen his flock increase to 200 chickens.

"In July, I sold 50 chickens at Kshs 300 each. I got Kshs 15,000 (~\$190), added more money and bought one acre of land," says Mutie. In addition to his poultry production, Mutie used the proceeds from the chickens to open and stock his own shop.

Thanks to PSPK intervention, Mutie gets excited when he shares that he and his family not only increased production and income but also improved their nutrition. Now they eat eggs and meat twice a week. "Before, I used to eat meat once a month," says Mutie. "I also use the chicken manure for my orange and mango plantations."

Improved Biosecurity and Management Practices Increase Productivity *Success is on the Horizon for Nguku Products Ltd*

Nguku Products Ltd (NPL), located 25 miles outside Nairobi in Lukenya, struggled over the years to keep its poultry farm and slaughtering plant in operation. The facility was underutilized and depended solely on its adjacent farm for birds to slaughter. Because of poor management, unclean slaughtering conditions, rodent infestation, and a high mortality rate, the slaughter and sale of chickens were at a low of 1,000 per month.

Fortunately, as a result of training provided by Winrock International's USAID-funded Partnership for Safe Poultry in Kenya (PSPK) program, NPL has improved the conditions of its slaughtering facility and more than tripled its production. In November 2009, Winrock recruited NPL to participate in PSPK biosecurity trainings. Since then, PSPK staff and international "Farmer-to-Farmer" volunteers have visited NPL and made recommendations to improve the inadequate conditions in order to address consumer safety concerns and increase productivity of the plant. As an incentive to implement the recommendations, PSPK also provided the opportunity for NPL to market itself on the Kenya poultry website, <http://kenyapoultry.org/>.

On February 2, 2010, NPL hired Aggrey Lukoye as farm manager to implement PSPK recommendations, including better overall farm management procedures, improved cleanliness and hygiene techniques for



Aggrey Lukoye tells PSPK Program Manager Dr. Bonface Kaberia about improvements made by NPL.

the slaughtering facility, as well as biosecurity measures for the poultry farm. As a result, NPL is now more organized, the rats are no longer roaming the poultry farm, and plans are being made to repaint the poultry slaughter house. "The place used to be dirty and bushy, but it is now clean and hygienic," says Lukoye.

In addition, following the PSPK model to contract with farmers to supply broilers as opposed to NPL's earlier model of raising and slaughtering its own chickens, NPL has currently contracted directly with four farmers to supply broilers. NPL also signed a contract in September 2010 with a service provider to collect and deliver chickens from 10 groups (about 450 farmers) from Makueni.

Now, with a constant supply of birds, NPL slaughters and packages approximately 10,500 chickens in three months' time. Lukoye states, "Before I took over the management of this farm in February, NPL was selling less than 3,000 birds in three months." Enthusiasm and aspirations are at an all-time high; Lukoye indicates, "The target now is to slaughter 6,000 birds per month. In the next three months, there'll be a big difference."

Engaging Government to Support Poultry Production

PSPK Training Results in Improved Service Delivery and Government Financial Commitment to Support the Growing Sector



PSPK staff and volunteers work together with the Kenyan government to develop a National Poultry Improvement Plan

Winrock International's USAID-funded Partnership for Safe Poultry in Kenya (PSPK) Program promotes safe poultry production, increasing incomes and improving nutrition for smallholder families. PSPK has initiated training and technical expertise for thousands of Kenyan smallholder farmers, coupled with training and support to various government entities. This dual focus has created strong movement within the poultry sector in Kenya, setting the stage for further growth and sustainable impact.

At the national level, PSPK worked with the Ministry of Livestock Development (MOLD) to develop and implement a Kenya National Poultry Improvement Plan (KNPIP). Rosemary Mwanza, the Head of Poultry Production at MOLD, has acknowledged PSPK's strong support and indicates

that the KNPIP has been well received amongst poultry sector stakeholders. "We got very good feedback on it," she says. "Some farmers wanted to be involved in its implementation." The government has already contributed Ksh 25 million per year for its implementation for the next five years. PSPK has provided ongoing support as well as a grant to hold KNPIP sensitization workshops and equip the MOLD poultry office to act as the KNPIP secretariat. PSPK has also provided support to MOLD to develop and manage a poultry website, which provides information and connects stakeholders within the poultry sector. Stakeholders can post information related to poultry production, processing, marketing, biosecurity measures, etc. Traders and farmer groups are able to advertise and seek services and products on the site. The website has logged 6,500 visitors since its launch in late 2009.

PSPK trained 23 public health officers with the Nairobi City Council, the office of the Provincial Director of Veterinary Services, and the Nairobi City Inspectorate on biosecurity practices and poultry marketing.

This kind of training was nonexistent prior to PSPK. According to Mr. Dominic Kikuyu, Senior Public Health Officer at the Council, the training has enhanced the Council's service delivery in the poultry domain. The training has also improved the standards in poultry marketing, especially for 44 traders in Nairobi who also participated. Positive interactions at the training and a development of a common understanding of safe poultry production and marketing has led to improved trust between poultry traders and city council health officers, which was lacking at the beginning. Prior to the training, the traders would hide from City Council health officers as they inspected poultry slaughter areas.

"...there was notable increase in the number of slaughtered animals in the Province (Nairobi)...The huge increase in the poultry slaughter figures (72%) has been greatly attributed to intensified poultry surveillance in the areas adjacent to Burma Poultry and partly due to an educative workshop on safe poultry production sponsored by Winrock International."

(MOLD, Veterinary Department, Annual Report, 2010)

These changes, at both the national and city level, enable further growth within the poultry sector, which can provide critical sources of income and nutrition for poor, smallholder families with few resources and limited livelihood opportunities. "I see more people going into poultry production and marketing," says Mr. Dominic.

Farmers Groups' Training Produces Dramatic Results ***Increasing Incomes and Sales for Hundreds of Kenyan Poultry Farmers***

In Kenya, up to 75% of poultry farmers (a majority of whom are women) raise small, free-roaming flocks that are extremely susceptible to disease. Unfortunately, many backyard poultry farmers are beyond the reach of public sector extension services and have little support to improve their production efficiency, and diseases claim a large toll of their poultry. Groups such as the Kenya Poultry Farmers Association (KEPOFA) and Agricultural Business Development (ABD) are providing services to help farmers improve practices, increase productivity and competitiveness, and generate more sales. Despite their strong resolve, these groups were in need of assistance to increase impact on their members. Luckily for them and for the thousands of farmers they support, Winrock International's Partnership for Safe Poultry in Kenya (PSPK) Program was able to help.

KEPOFA has 2,323 members who comprise mainly backyard poultry producers. KEPOFA's mission is to contribute to socio-economic empowerment of its members by addressing sector constraints related to production, processing, and marketing through lobbying, advocacy, and delivery of quality services. KEPOFA came to Winrock with a need to develop and implement strategies that will build on urban demand for safe, indigenous chicken eggs and meat. ABD is a community-based organization with a mission to increase incomes for smallholder farmers. Over the last five years, ABD has been facilitating the development of agricultural value chains, including indigenous chicken, for 645 members. It has been providing support to poultry producers in helping them form groups and linking them to animal health services, but needed further support in improving production and value addition to enhance returns.

In light of these needs, PSPK developed biosecurity demonstration farms and provided training on biosecurity practices for KEPOFA and ABD members. Most of the KEPOFA farmers have now received



Farmers trained by PSPK implement safe production practices and see an increase in incomes

PSPK's technical training on biosecurity practices in poultry production and marketing. "The farmers are now knowledgeable about production and safe poultry production procedures," says Ms. Wairimu, KEPOFA chairperson. Farmers also know how many chickens they are supposed to keep in order to make money.

Likewise, Sarah Nzau, Program Manager of ABD's Makueni office, states, "The attitudes of the groups have changed. The mortality rates have dropped considerably, since farmers are now vaccinating their birds and know the vaccination programs well. They now have more income, due to the increased number of birds they are now selling."

Since the training, KEPOFA has had a cumulative increase in members (848 members, a 57% increase). After additional support from PSPK on applying a financial model and developing a brand, one of the groups acquired an agricultural loan of Ksh 750,000 (\$8,844) to finance their poultry production business.

The successes achieved after PSPK training has generated excitement and interest among other poultry farmers. "Now, most of the other farmers are calling, asking to be trained on biosecurity practices, marketing their chickens, and on the financial model," Sarah states.



Poultry Groups See Improvements after Implementing Biosecurity Measures

In September 2009, a team of biosecurity specialists working with PSPK visited 25 locations in Kenya to observe poultry production practices and demonstrate appropriate biosecurity measures as a way to both reduce the risk of poultry diseases and increase production. Since then the groups have implemented numerous biosecurity protocols and have experienced a reduction in mortality, which should ultimately result in increased sales and incomes.

Sauri Millennium Poultry Farmers' Group

Sauri Group Chairman requested a local extension officer who was accompanying PSPK team



for monitoring visit to compare performance of the group with other local poultry groups. The extension officer reviewed Sauri Group's poultry operation and concluded that in terms of biosecurity practices, the group was well ahead of other local groups. However, he also noted that despite the advancements in biosecurity, Sauri group was yet to aggregate their birds for bulk sales. Sauri Group Chairman replied, "I can boldly say that come end of this year, I will have sold over 500 birds."

Mahenya Upendo Support Group

As a result of training provided by PSPK, the Mahenya Group approached four hotels and a number of kiosks along Akamba road and wayside shopping center in Kisumu seeking to supply them with broilers. They also invited five groups from their area to form a regional marketing team. The team developed a supply schedule to ensure that they are able to meet the supply of awarded orders, and maintain a steady customer base. Prior to receiving biosecurity training, Mahenya Group lost approximately 20 chickens for every 100 birds, but with improved biosecurity measures the group now loses only 3-5 chickens per 100 birds.

Horticulture Farming and Poultry Group (HOFAPO)

Prior to PSPK training, members of HOFAPO active in poultry rearing (9 women & 5 men) had never vaccinated their birds. As a result of training, the group learned that their failure to vaccinate was a primary cause of their high loss of birds. The group now vaccinates appropriately and had reduced their losses to as low as three birds per 100. The Ministry of Livestock Development brings other farmers to HOFAPO member farms to demonstrate the appropriate biosecurity technologies. HOFAPO produces and sells one-month old chicks. Now when the group receives orders, members come together to work out the numbers of birds each

member will contribute to meet the order. HOFAPO's chief constraint at present is a lack of fencing, but they are hopeful that they will be able to soon invest in proper fencing as a result of increased sales of chicks.

Star Lady Women's Group

Star Lady Women's Group, currently ten women and two men, started in late 2008 and began saving with Arch Diocese of Kisumu Timo (ADOK TIMO) microfinance institution. The group later obtained a loan to start production of day old chicks and local broilers for sale. They purchased an incubator with the loan funds but were unable to hatch chicks due to poor training. Four different times, group members were unsuccessful, but managed to repay the entire loan through merry go round contributions, whereby every month, a member would pay from their pockets a given amount, which originally would have been given to one member to buy household goods, in order to pool together resources to repay the loan. Following training from the Science Product Center in May 2009, the group was able to produce 70 day old chicks, but eventually lost all 70 to disease. Many group members despaired and lost hope in their endeavors. After participating in training with PSPK, the group implemented the biosecurity practices which were demonstrated, including limiting individuals into the poultry house area and insisting that those with access wash their hands and use foot baths when entering and exiting. They also instituted simple improvements in feeding and watering. As of March 2010, the group had 32 birds, including 20 three-month old chicks and 12 one-month old chicks; six hens were also sitting on a total of 58 eggs. Despite the renewed enthusiasm, the group still needs approximately US\$225 to repair their poultry houses and resume full operations, and is considering another loan.





Women's Group Improves Biosecurity Measures and Becomes a Model for Other Groups

The Kondele Market Traders Women's Group, comprised of 12 members (8 women & 4 men), in Kondele Village is located at what was the epicenter of post-election violence that rocked Kenya following the election in December 2007. Prior to the violence, the group had a membership of 40 (27 women & 13 men). The skirmishes destroyed most members' premises and displaced many of them. Members' poultry structures were destroyed and their birds and equipment were looted. Since that time the group has worked diligently to rebuild and resume operations.

Following biosecurity trainings with the PSPK program, members learned that they should designate an area for selling birds away from the farm. They have since built a house to keep chickens which are ready for sale, and don't allow buyers past that point. They also constructed an isolation unit for sick birds, and bought dust coats for the members working in the hatchery. Access to the hatchery is limited, and members with access to the hatchery must wear dust coats, use the foot bath, and wash their hands upon entry and exit.



The group also provides vaccination services on request, or via mass campaigns. Mass vaccination campaigns are done for free, to help ensure that the group is protected from the risk of outbreaks, and the local chief is expected to notify the public about the vaccinations. Vaccinations on request are done for a fee.

The group now produces 300 day old chicks each month, and has established a small vegetable farm to ensure their chickens are fed well. They regularly receive orders for chickens for weddings, funerals, and other occasions. In these cases, the group slaughters and packages the chickens for the clients themselves. Unfortunately the group does not have electricity on site, but their goal is to one day have a freezer which would enable them to process and store a larger volume of birds to sell directly to hotels. PSPK will be working with buyers on biosecurity protocols, and in making linkages between producers and buyers, to enable groups like the Kondele Market Traders Women's Group, to increase their production and sell larger quantities to buyers at regularly scheduled intervals.



Margaret Mirambe, group leader said, "...we have about 30 farmers coming from Mwingi district to learn from us. People visit and copy what we are doing."

87 year old farmer praises KEPOFA

Between May and August 2009, KEPOFA witnessed an influx of 64 more poultry farmers joining their farmers association, among them an 87 year old farmer in Kericho enunciating the benefits she reaped from rearing indigenous chickens and watching her son, Joseph Tiony, do the same starting as a backyard poultry farmer and now moving into commercial production, resulting in part to the assistance he received from KEPOFA.

Mr. Tiony has been practicing artificial incubation of eggs using a paraffin incubator

and his farm was used by the Ministry of Livestock Development as a training ground for other indigenous chicken farmers. But he did not have proper bio-security procedures in place and was experiencing high chick mortality. In late August, after joining KEPOFA, his farm was visited by a bio-security team that conducted training sessions with other farmers. Since this visit, he imposed strict bio-security measures recommended by the team and satisfyingly witnessed an average 20% decrease of chick mortality on his farm. Once again, he has been approached by the Ministry to form a poultry group to facilitate dissemination of new bio-security technologies in poultry production in the rural areas.

This latest increase in KEPOFA membership was the result of a recent field study in Western Kenya led by the project coordinator, Thomas Kaudia, Winrock volunteer, Mr. Bill Wolfe, and Miss Mary Were, KEPOFA director, Nyanza province. Additionally, the cumulative effects of earlier field visits by Winrock volunteers, successful practices of bio-security measures, the membership drive effort by partners, and the active involvement of KEPOFA representatives making field visits with the PSPK project team have strengthened KEPOFA's role and lead to increased membership.

Formed in 2002 as a farmers association catering to the needs of Kenyan poultry farmers, KEPOFA today boasts a membership of over 1,500 – mainly backyard poultry producers – and continues to attract farmers in large numbers throughout Kenya as they hear about the increases in poultry production that members are having since implementing bio-security norms learned through KEPOFA. KEPOFA is also encouraging organizations promoting poultry production to join for the ease of disseminating information and reaching more farmers, and the Science Products Centre in Kisumu took the lead on being the first organization in the region to join.

Mrs. Martha Kiptiony, the 87 year old farmer , boasts “mtoto yangu ni number one kwa kuku” (“My child is number one in raising chickens”), and the advertisement of Tiony's success and it's relation to KEPOFA speaks volumes.



Ms. Kiptiony argues the benefits of KEPOFA membership



Poultry Farmer Groups Demonstrate Success during Farmer “Field Days”

PSPK is facilitating farmer “field days” with selected demonstration groups. The field days will expose other farmers and groups in the vicinity of the demonstration groups to aspects of commercial poultry keeping, as well as to appropriate biosecurity measures. During the April-June reporting period, three field days were carried out with Nyumbani Village, Sauri Millennium Village, and Kondele Women Traders Group.

During the field day, Mrs. Julian Akinyi Oloo, a member of Sauri Millennium Development Self-help Group told other farmers that “before PSPK, we did not take chicken rearing seriously, but after sensitization on profitability analysis of our current chicken keeping and implementing biosecurity practices, we now understand that we can actually make money from chicken. In our group, each farmer has committed to raising 100 chickens each.” She further continued, “one of us had 6 local hens and was shown not to be viable but now has over 200 birds. The money obtained from chicken helps us to feed, educate and even buy property. We have decided to do chicken business.”

Product	Quantity	Unit	Cost	Value
Eggs	15 trays	sh.300 per tray	sh.4500	
Table Chickens	200	sh.310	sh.62000	
Day Old Chicks	100			
Vaccinations (Deworming)				
Medicines				
FEED/STOCKS				
LABOUR				
Other				

Photo 1: Juliana shows the products sold and incomes generated from January-June 2010.



Photo 2: Mr. Willy Diru, Agriculture and Environment Officer for the Millennium Village Project served as guest speaker for the field day.

During the Field day at Sauri Millennium village, the Divisional Livestock Extension, Mr. Sabastian Okotsi (seated) said that he had many other poultry groups and from PSPK work with Sauri Millennium group he has realized that “kuku (chicken) is our gold.” He continued, “We need to aggregate production with all other groups in Kogelo, for purposes of marketing together as well as lobby for support from key government and policy makers. This group is way ahead of others with biosecurity and application of business model and I will continue to organize study visit with other groups to come here and learn from this group. We have organized to acquire a stall at Yala market where all these groups will be marketing their aggregated produce.”

Farmers Facilitate Bio-Security Norms

In September 2009, Winrock volunteer Clair Wilcox visited 25 locations – farms and host organizations, interviewing 22 farmers and one broker seller – and found minimal to no bio-security measures in place. Since her visit, positive results are being realized as indicated by an overall average decrease of 20% in chick mortalities in Kericho at Tiony’s farm, and in Kisumu at Star Lady’s farm, the LBDA poultry unit, and the Science Products Centre. In Eastern province, the control of ectoparasites is being achieved.

At five of the stops during her two week assignment, Wilcox conducted field demonstrations to a total of 200 farmers (142 women) using glow-germ powder which introduced the concept of microbes – where they can be found and how they are transmitted – and measures restricting human traffic to prevent the transfer of microorganisms to the farm and poultry flock.

Another example of a bio-security measure was the installation of a foot bath or foot dip (containing water mixed with a disinfectant) placed strategically at the entrance to a poultry farm/unit. Anyone entering or leaving facility would step into the bath to disinfect their shoes or boots to prevent the spread of pathogenic microorganisms.



Foot bath is being constructed at Nyambani Village in Kitui. No foot baths existed before the training in bio-security applications.

Many of the farmers rear chickens in groups but also have individual farms in their homes. Wilcox designed bio-security poultry production technologies for these smallholder producers and trained them in bio secure-poultry production in the rural areas. These trainees were given the task of training their neighbors in proper bio-security norms as a means of disseminating the technology.

Based upon the principals of the model farm as presented by a former consultant, Wilcox made a presentation to a diverse group, including individual farmers, a delegate from each visiting cooperative group, managers of three poultry production facilities, and regional directors of KEPOFA, indicating specific methods of bio-containment and a practical demonstration of disease transfer. She also facilitated the development of individual action plans which will become permanent records of the progress made on each farm.

An estimated 2,140 individuals will initially stand to benefit from the training and technical assistance provided by Wilcox and her colleagues. This figure includes the 1,475 members of KEPOFA as well as the smallholder producers and farmers of Nyubani Village. Sending these trained farmer-community leaders back to their communities to disseminate the information on conducting bio-secure poultry farming will make a much broader impact.



Annex 3: Notes from Impact Assessments & Exit Workshops

I. Women's Case Studies

A. Introduction

The following are verbatim representations of case studies showing the impact of PSPK on the lives of different women. They were collected through a series of face to face and telephone interviews conducted from the 19th to 23rd July 2010. The face to face interviews were conducted for Nzueni and Kyemole poultry groups, while the telephone interviews were done for Sauri Millenium Poultry Groups, Mayenya Upendo, Star Ladies and Mgoma Dairy and poultry farmers.

An issue, which is a lesson learnt that emerged out of this process is that, telephone interviews were harder to conduct than the face to face ones. For most, there was bad telephone connection or unavailability of respondents, necessitating repeat calls. To ensure good quality of case studies, considerations to allocate time for documentation of testimonies and case studies during field visits could be made in future.

1. Nzueni Poultry Keepers

The group began on the 16th November 2008, with only 16 members, who grew to 75 members by mid 2009. Currently it has 45 serious members- including 19 Men and 26 Women. There are members who have since dropped out but have requested to be allowed to come back to the group. The following are

verbatim testimonies obtained from interviews with the following women:



Dorothy Kioko

Poultry has helped to improve women lives in this group. It is a good initiative that contributes to the well being of women and their daily living. When I am short of cash, I sell some of the chicken and am able to get ready cash to pay for my children's school fees I am also able to settle any debts that I have incurred in the month. Nutrition for my family and especially for my

children has been greatly enhanced. I say this because at least once a week, I am able to slaughter and consume one whole chicken. I also supplement the meat with the eggs I get from the chicken. I also cook chicken, for my visitors, when they come to visit.

Agnes Mueni

I have 21 chickens, last week I sold about 49 each at Ksh 450 each. I was able to fetch a substantive amount of money, which helped me to clear outstanding school fees balance for my children, who are all in boarding schools. I have learnt the value of keeping poultry in a professional and informed way. I have made more money from selling chicken than any other farm produce I have tried to engage. When my children close school and they come home for holidays, I am able to give them treats of chicken meals, more frequently than I did in the past. I also not have a constant supply of eggs for my little child. Lastly,

I have cut down costs of fertilizer for my farm, because I am able to make manure from the chicken waste, to grow other foods. Believe you me; I do not have to do any other work other than poultry/ chicken keeping.

2. Kyemole Poultry Keepers

Alice Pius Makau

PSPK has really helped women in this group to improve productivity of chicken by implementing bio-security services. Personally, I am able to get both food and money from poultry keeping. I am able to sell at least 20 chickens every month at 400 Ksh a month. I also make some extra money from the sale of day old chicks (DOCs). I am not afraid of my children sleeping hungry anymore, because I have enough food for them, all the time. The money I get from chicken sales helps me to buy the food that I do not grow on the farm. I also have a constant supply of meat and eggs for my family's protein nutrition. For me I have everything I need. If I have chicken, I don't have to wait for my husband to give me money for my basic needs such as sugar, soap, salt like I used to do before.

Christine Kyalo

Before PSPK I only had 10 chickens, now I have 42 of them. I learnt to feed and to implement bio-security measures for both DOCs and grown chicken. It does improve the economic situation for me though not in a big way, because I do not keep enough of them. However, I am aiming to step up production to a point where I can sell up to about 100 of them in a month. Keeping chicken has provided income to buy fuel I need for cooking and other basics such as sugar, tea leaves and salt. It has also helped to improve home relations with my husband; there is more love and support from him, because I don't have to turn to him for money, all the time. When there is money in the home there is more love.

3. Sauri Millennium Poultry Farmers' Group

Juliana Ahenda

Sauri Millennium Development group has 24 members- 12 men and 12 women. Poultry rearing and sales have boosted women's incomes. This is because they are able to sell both eggs and meat. Money received helps to pay school fees for our children, buy other farming inputs such as seeds. It is also a source of employment for me and a way to keep me busy.



4. Mayenya Upendo HIV & AIDS Support Poultry Group

John Owino

This group was started in 2009 by 9 members who were HIV positive, talented and gifted, but unable to meet their day to day challenges at the time. Today it has 70 members, out of which 50% are HIV positive and 60% are women. Keeping poultry has helped the women living positively to earn a living by selling chicken and eggs. Most importantly, they are able to get healthy protein nutrients from the chicken meat and eggs, by consuming chicken. Our group also takes care of orphaned vulnerable children (OVCs), and so the money raised from selling chicken helps to pay for their school fees, clothing and other basic necessities. The women taking care of them cook eggs, which provide their much needed protein.



5. Star Ladies Women Poultry Group

Selesia Abolo

Chicken is a good source of food and income and really boosts the economic livelihoods of women. Because of the knowledge that I have acquired from PSPK, it has become very easy to produce chicken, in a sustainable and profitable way. I am encouraged to get into the chicken business in a bigger way, having seen that there are financial institutions such as ¹ADOK TIMO, that are willing to provide financial support to small farmers like us. My earning an income from chicken has reduced tensions that were there in the family- because of lack of enough money. Now we are able to manage through tough times, because there is at least money to buy something to eat.

6. Mgoma Dairy Goat and Poultry Self Help Group

Agnetta Adisi

I and my female group members have really benefited from chicken. Out of it we have been able to pay school fees, buy basic necessities such as salt, sugar and kerosene for cooking. Domestic violence in the homes has tremendously reduced, because we have now enough food and cash in the house. We don't eat chicken a lot, but we sure have enough eggs for the children.

¹ ADOK TIMO has already provided a loan to the Star ladies group

II. PSPK Impact Summaries

A. Western Region Poultry Groups and Partners

1. We Look Healthier Now: Kondele Hen Women Group

Kondele Hen Women Group is one of the best performing PSPK pilot groups. Their acknowledgment of PSPK efforts to train them on best poultry production is worth writing home about. From the time Winrock International's PSPK trained this group on biosecurity protocols in 2009, mortality rates have dropped to less than ten percent from more than fifty percent originally. The drastic drop in mortality rates coincided with a corresponding increase in productivity and income levels for the group.

The group, composed of twelve members and seven youth, does aggregated production and sells their chickens as per orders solicited by the youths from funeral committees, weddings, hotels and restaurants.

PSPK gave them a grant to take their business to higher levels of production and marketing. The grant went into the purchase of items, which included but not limited to a deep freezer, weighing, scales and branded t-shirts. PSPK also developed a logo for them as well as packaging materials and a marketing flyer for their poultry products.

Packaging their poultry products in the branded packaging materials has opened doors for requests to supply their chickens to far flung areas like Nairobi. According to Ms. Margaret Mirambe, the group chairlady, a certain hotel in Nairobi has requested this group to supply about 50 packaged chickens each week. One Prof. Rana had recommended the group's poultry products to the hotel.

Some members can now ably pay their school fees and meet hospital bills more comfortably unlike before, when they used to rely on contributions from well wishers or other members in the community, according to Ms. Mary Magere, a member of the group. She adds that her household used to go for three months without even eating chicken, but now "we can eat about two in a month".

"Look at us now," said Ms. Teresa Ongoro, another member of the group. "We look healthier than before".

An unquantifiable benefit to the group is the bequeathing of leadership roles in other community groups to both the chairlady and some other members of the group. Margaret adds that the group is more popular now, and "many people in the community want to be associated with us". The group members are now being targeted in other development projects as well.

2. I Can Now Access Credit: Mayenya Upendo member

John Owino, the chairperson of this group, which comprises of persons living with H.I.V/AIDS, notes that the group observes biosecurity measures like fencing of the poultry farm, erecting recommended housing units for the chickens, putting up foot dips and washing points with disinfectant solutions at the entrance of the poultry farms. They also vaccinate their chickens against diseases both at individual and at community level. They neither knew of such practices nor carried them out, until PSPK came into the picture and trained them on the same.

Mass vaccinations have helped us to reduce mortalities and “we talked to our neighbouring farmers to vaccinate their chickens” to curb potential en masse spread of diseases within their locality. His income has increased by at least 7.5 percent, mainly as a reduction in mortalities. “Last time, the total cost of buying vaccines for mass vaccination was Kshs.1000”, says Mr. Awino.

He now depends on poultry as a means of livelihood unlike before. “I was able to take a loan to purchase a motorcycle,” which loan he has been repaying with the proceeds from chicken sales. He acquired the loan from Adok Timo microfinance in Kisumu, which he has fully repaid. He also depends on sales from chicken to pay his children’s school fees. From chicken sales, he hopes to have a permanent house in the future.

Mr. Awino had to relinquish some of the volunteer roles he had within the community because he was now busy engaging in full time poultry production. “We bring new flocks (between 300-500 chickens) after every four weeks.” When the chickens are mature, they feed on them as well as sell them for, averagely, Kshs.350 each.

Three more members have joined the group bringing the total number to 21 from 18 members in May. Twelve of the members are women.

Mr. Awino also notes that partnership with PSPK has opened his world to new friends in the poultry circuit. Such networking has helped him to access the market for his chickens.

Mr. Awino is categorical that PSPK can do more by training within the community to scale up the positive impact most of the members within this group are enjoying. He also indicates that he would be receptive to financial support to double his production capacity (to 1000).

3. Chicken Vaccination Within 3km Radius (STAR LADIES)

Members of this group rear indigenous chicken at household level for business purposes, which was not the case originally according to the group chairlady, Ms. Ruth Owiyo. There are twelve members, ten of whom are women.

They never used to vaccinate their chicken but they now do this after every three months, often times involving poultry farmers from other areas within a radius of three kilometres. They do this in collaboration with the local veterinary office. Ms. Owiyo says she has vaccinated at least 500 chickens for over 30 farmers.

“I have been selling chicken, chicks and eggs to pay my children’s school fees,” says Ms. Owiyo. “Another member, who is a retired teacher, sold some of her chickens to buy goats and sheep.”

Ms. Owiyo also acknowledges the nutritional and food security benefits they have acquired from eating chicken meat and eggs.

4. Increased Networking with Farmers (Great Lakes University of Kisumu)

Mr. Fredrick Aila is categorical on the change that has taken place at GLUK Feed Miller from their collaboration with PSPK. “There were many weevils and rats at the feed miller, but this has changed

now.” The Feed Miller was once immersed in a bush, but the bush was later cleared. Production also increased after a PSPK volunteer made indigenous chicken feed formulation for them. “There was an increase in feed quality, and many farmers are now rearing their chickens on our feeds.”

Aila also mentions that the partnership between GLUK and PSPK has enabled greater networking with farmers and other organisations. Recently, GLUK conducted training for poultry farmers in collaboration with CDI VOKA and St. Christine Christian. The purpose of the training was to create an awareness of the GLUK poultry feeds to farmers and proper chicken rearing. GLUK also offers market to the farmers for their chickens and encourages them to buy and market GLUK poultry feeds in return.

5. Improved Extension Service (Lake Basin Development Authority)

Chicken mortalities on the Lake Basin Development Authority (LBDA) poultry unit were as high as 40 percent, until PSPK came in to train staff members at the farm on biosecurity measures and ideal poultry production. About 400 chickens out of 1000 would die, before the adoption of biosecurity practices, which included foot baths and washing of hands in disinfectant solutions at points of entry to the farm and periodic vaccination of chicken. Now, less than 35 out of 1000 birds die. “There’s a time only 12 out of 100 died”, says Ms. Dorcus Akal, the LBDA Acting Farm Manager.

Collaboration with PSPK has also improved the extension services to train farmers on how to rear indigenous chickens and broilers. “The improvement of this service has spurred interest in trainings for more training on poultry management”.

Ms. Akal adds that this year, they have vaccinated about 2350 chickens for the farmers, as part of the extension service.

There are now 2000 broilers on the farm and 60 Kenbro chickens.

6. New Outlets to be Opened: Kisumu Farmers Chicken Center

The centre is a PSPK beneficiary on best practices in poultry production. Only four members out of the 25 in this group are men. The group started with 13 members. New members pay a registration fee of Kshs.500. “The centre is now attracting more attention from people,” some of them seeking membership, according to Ms. Benta Owino, the chairlady of the group.

“PSPK trained us on biosecurity practices, cleanliness and customer care,” says Ms. Owino. “We now sell an average of 30 chickens per day.”

The group also plans to open three more poultry shops in Kisumu and one along the Kisii - Sirare highway.

7. Poultry Mortalities Have Reduced: Mungoma Dairy Goat and Poultry Group

“Magonjwa hayajatusumbua tena (poultry diseases no longer bother us)”, says an elated Ziporah Ombuya, a member of Mungoma Dairy Goat and Poultry Group. “We used to lose even 100 percent of our chickens to diseases and predation”, but this has drastically reduced to only about 10 percent.

“We had never heard of such biosecurity practices like fencing the poultry farm, chicken housing, foot baths and hand wash points at points of entrance to the farm”, says Ms. Agneta Adisa, the chairperson of the group. They also rarely vaccinated their chickens, but they now do, even for their neighbours. “We have also trained approximately 2000 members of ideal poultry management.”

Besides selling of chicken and eggs, they also sell chicken droppings as manure. A bag of about 25 kgs goes for Kshs.300. They also benefit from the nutritional value of consuming poultry meat and eggs. “This has improved our health,” says Ms. Bethelida Yasha, another member of the group.

The members’ livelihoods have improved due improved poultry sales. They can now meet hospital bills and their children’s school with more ease than before.

The group has seventeen members, two of whom are men. New members pay a registration fee of Kshs.3000.

8. Poultry Rearing As a Livelihood (Sauri Millennium Poultry Group)

There has been a change of attitude towards poultry rearing amongst the members of Sauri Millennium Poultry Group. Mr. Francis Okoth, the group secretary, says the training they received from PSPK on best poultry production since 2009 has changed their mindsets from viewing poultry as a convenient source of livelihood. They now pursue poultry production as a commercial venture.

Mr. Okoth mentions that some of the benefits resulting from his contact with PSPK include networking with other farmers, an improved social profile, skills development on poultry management and improved livelihood. “I never knew that one can sell day old chicks,” says Mr. Okoth.

He has been sensitising other farmers on the same and also plans for quarterly mass vaccinations. Mr. Okoth adds he has been able to pay school fees for his children with proceeds from poultry sales. The chickens are also nutritional necessities for their meat and eggs. He has also acquired new leadership roles especially with the Yala Co-operative Society, for which he is the Interim Secretary elect. Besides, he was elected as the secretary for the Gem Poultry Farmers’ Co-operative Society.

However, the positive changes have introduced new challenges like emerging trends in family and community relations. Some of these have hampered production due to cases of jealousy against those who are doing very well, especially in a scenario of free range system. “This has hampered rearing of so many chickens, which are seen as a nuisance to neighbours.”

Despite this, Mr. Okoth says some of them can now access loans to expand their poultry housing units and to fence their homes. People have realised that fencing of their farms reduces cases of chicken thefts and conflicts with neighbours. The increased demand for credit is also as a result of the realisation of the commercial potential of poultry rearing.

For all these, Mr. Okoth says that PSPK intervened at the right time.

B. Eastern Kenya Poultry Groups and Partners

1. Returns are good: Nguku Products Limited (NPL)

On Saturday 4th, NPL launched its poultry products, in the packaging materials that PSPK developed for them. The sales for that day were Kshs.20,000 according to Mr. Joshua Kikuvi, NPL Farm Manager. The returns for that week were Kshs.60,000. That week, they slaughtered approximately 1000 chickens. On 14th of June, they had slaughtered about 600 chickens.

2. Revived Nairobi Market: Nyumbani Village

From the time PSPK gave them two cooler boxes, Pius Muinde, the Animal Health Officer mentions that they revived their Nairobi market, and have supplied over 100 chickens so far. They also supply 10 chickens to the neighbouring Kenyatta University Campus in Kitui every Friday.

“We have also engaged a marketer to market our chicken to more potential clients,” says Mr. Muinde.

Mr. Muinde says the benefits of PSPK intervention are evident from the pest and disease control measures at the farm and within the households. This has resulted in reduction in mortalities and increased production. There is now better control of chickens from outside by putting them at the isolation unit. The sales have also increased and according to Mr. Muinde, some two grandmothers at the village are now paying school fees for the children they are taking care of, at the polytechnic.

Mr. Muinde also mentions that many other farmers outside the village have adopted some of the PSPK best poultry production practices like constructing appropriate housing units for their chickens and having their chickens vaccinated. “Some brothers next to our village have copied (best chicken rearing practices) from us and are doing even better,” says Mr. Muinde. He also mentions that he has vaccinated about 650 chickens outside the village.

At the central unit, there are 170 chickens (20 chicks, 50 growers and 100 mature birds). At the household level, there are about 2500 chickens.

Mr. Muinde adds that training of other farmers outside the village would be a good idea. The idea of linking them to microfinance institutions would also be useful in helping them to access credit to finance their poultry business.

3. Incubator Unveils a New Shared Dream: Eunice, Service Provider

Ms. Eunice Mukai, a Service Provider (SP) in the larger Eastern region of Kenya, acknowledges the trainings offered to her on best practices in poultry rearing. As a service provider for a group of over 450 poultry farmers, mortalities reduced by about 75 percent.

Armed with her knowledge on biosecurity practices, proper chicken vaccination and ideal rearing, she trains other farmers to observe the same measures.

“As an SP, I am now like a role model. I rear chicken in the right way so that other farmers can learn from me,” she says.

She also mentions that she learned a lot about marketing her chicken through linkage with traders to as far away places as Nairobi. “There’s assurance of market for the chickens being increasingly produced,” said Ms. Mukai.

The Private Service Providers’ Group (PSPG), for which she is a secretary, received a grant from PSPK to purchase an incubator, which, Ms. Mukai says has opened their eyes even more. “I am able to sell day old chicks, although the demand is very high.”

The day old chicks now go for Kshs.80, up from Kshs.65 just a few months ago, due to the rising costs of production. “I have hatched two batches, and my income has gone up”. She says she has so far hatched 490 chicks, whose profit margin has been 50 percent.

For the PSPG, the incubator has unveiled a new shared dream in devising ways to consolidate their gains and take their business to another level.

4. Meeting School Fees Requirements: Kyemwole Group and Nzueni Poultry Group

Alice Pius Makau, a Kyemwole member and David Mukeku of Nzueni poultry group acknowledge they have been able to pay school fees for their children from poultry sales. Mrs. Makau, says that PSPK made Kyemwole group more aware of poultry rearing practices. She adds that a visit to other poultry farmers in other parts of the country could be necessary to allow them learn from other farmers. She also says that more intervention is needed in training them on proper hatching procedures by use of the manual incubator.

Mr. Mukeku on the other hand says that he has been able to pay school fees for his three children, all of whom are at the university, partly with proceeds from chicken sales.

“I had a few chickens before the training, but afterwards, I had up to 100,” says Mr. Mukeku. “I sold all of them and got about Kshs.48,000 in May 2011 to pay my children’s school fees.”

If PSPK was to continue, Mr. Mukeku says that the group members would be happy to receive a grant to bolster their poultry business. He adds that there would also be need for continued training seminars and exchange visits with other poultry farmers from different parts of the country. He also admits that the issue of marketing is still a challenge, and they would be glad to receive more training on it.

III. PSPK Impact Survey Report

A. Introduction

An impact survey was conducted between 08/06/2011 and 15/06/2011 among key PSPK partners in Western Kenya (Nyanza and Western Provinces) and Eastern Kenya (Eastern Province). The objective of the survey was to determine; (1) Achievements and impacts, (2) Challenges and (3) Schedule for exit workshops planned for July 2011. Information was collected from pilot farms, traders and partner organizations. The following entities were visited: Kondele Market Traders Women Group, Mayenya Upendo Support Group, Star Ladies Women group, Mngoma Dairy Goat and Poultry Group, Sauri

Millennium Poultry Group, Kisumu Chicken Centre, Nguku Products Limited, Nyumbani Village, Private Service Providers' Group, ABD, Kyemwole Poultry group and Nzueni Poultry Group.

Major achievements include reduction of mortality due to adoption of biosecurity practices, increase in production and access to market outlets. The major impact is an increase in income and improvement in nutritional status and food security. All the stakeholders visited were not happy that PSPK is winding up at the end of July, 2011.

PSPK is working with eleven pilot farms spread in Mombasa, Makeni, Kitui, Kikuyu, Kericho, Kisumu and Vihiga counties and regions in Kenya. The program is also working with four groups namely; Nguku Products Limited, Sustainable Solutions, Likoni Customs Poultry Group and Lake Basin Development Authority.

B. Methodology

Respondents were asked the following questions:

1. List at least five main achievements.
2. Rank the achievements starting with the most important.
3. List activities PSPK could implement if the program were to continue.

C. Results and Discussions

1. Kondele Traders Women Group

Table 1: Achievements by Kondele Traders Women Group.

No	Achievements	Rank	Impact
1	Increase in income.	4	Ability to support more orphans: four orphans in form one and eight orphans have finished form four.
2	Improvement in nutrition and food security.	1	"Members hardly fall sick and are looking healthy – <i>Wameng'ara</i> ".
3	Reduced Chick Mortality.	3	Diversification of products with some farmers keeping broilers and commercial layers.
4	Increased popularity and respect in the community.	5	Many of the group members are being offered leadership positions in other community development projects.
5	Access to market.	2	Increased sales and revenue base.
6	Branding of the group.	6	More customers from as far as Nairobi demanding products, e.g. from Professor Rana.

Table 2: List of activities PSPK could implement if the program were to continue (Kondele group).

No	Activities	Remarks
1	Building poultry house for each farmer to expand production.	MOLD may be approached to implement this as part of KNPIP.

2	Exchange visits among different partners and pilot groups.	
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2. Mayenya Upendo HIV/AIDS Support Group

Table 3: Achievements by Mayenya Upendo HIV Support Group

No	Achievements	Rank	Impact
1	Improvement in poultry keeping as a result of applying biosecurity practices.	3	<ul style="list-style-type: none"> Restructuring of the farm to comply with biosecurity norms. Increased adoption of biosecurity practices by neighboring farmers.
2	Reduced mortality.	1	<ul style="list-style-type: none"> Increase in the number of chicken being sold from 150 monthly to 300.
3	Increase in income.	2	<ul style="list-style-type: none"> Ability to educate children from chicken sales. Plough back profit to improve the farm.
4	Dependency on chicken rearing as means of livelihood.	4	<ul style="list-style-type: none"> Paid loan taken to buy a motorcycle from chicken sales More farmers are joining the group. One member has repaid loan taken to establish a barber shop.

Table 4: List of activities PSPK could implement if the program were to continue (Mayenya Upendo).

No	Activities	Remarks
1	Training more farmers in other areas on poultry production.	
2	Support group to increase production to 1000 broilers per month.	The group should use the linkage created with ADOK TIMO.

3. Star Ladies Poultry Group

Table 5: Achievements by Star Ladies Poultry Group.

No	Achievements	Rank	Impact
1	Every member has some chicken.	3	<ul style="list-style-type: none"> Chicken population has increased. Members are able to sustain customer orders through group marketing.
2	Able to synchronize production using mother hens.	5	<ul style="list-style-type: none"> Increase in chicken population with many farmers contributing to buy vaccines which are now cheap per veil.
3	Mass vaccination of chicks and mature chicken of about 500-1000 chicken at	4	<ul style="list-style-type: none"> Increase in the population of chicken.

No	Achievements	Rank	Impact
	once.		<ul style="list-style-type: none"> • Many farmers are taking to chicken production. • Reduced mortalities 3km radius from the pilot farm.
4	Good and positive collaboration among community members.	7	<ul style="list-style-type: none"> • Increased willingness to adopt biosecurity practices and to contribute whenever vaccines have to be purchased.
5	Increased income through sale of chicken products.	2	<ul style="list-style-type: none"> • Some members have bought sheep and goats from sale of chicken. • Members are able to pay part of the school fees for their children. • Members are investing in other enterprises.
6	Improved nutrition and food security.	6	<ul style="list-style-type: none"> • Reduced incidences of diseases and money spent on treatment.
7	Recognition by community members as role models.	1	<ul style="list-style-type: none"> • Members being offered leadership positions in community projects.

Table 6: List of activities PSPK could implement if the program were to continue (Star Ladies Poultry Group).

No	Activities	Remarks
1	Further training.	
2		

4. Great Lakes University, Kisumu (GLUK)

Table 7: Achievements by GLUK- Tich Nam Enterprises.

No	Achievements	Rank	Impact
1	Improved cleanliness of the feed mill production areas.	2	<ul style="list-style-type: none"> • Happy and motivated feed mill workers.
2	Better rodent control.	3	<ul style="list-style-type: none"> • Raw materials and products are intact and wholesome.
3	Improved product quality.	1	<ul style="list-style-type: none"> • Reduced complaints from customers. • Increased product sales from 500 kg per day to 1400 kg per day. • Reduced product returns from customers due to increased quality.
4	Improved field extension services.	4	<ul style="list-style-type: none"> • More customers demanding products.
5	Improved collaboration and networking with other organizations promoting poultry production such as CDA, God	5	<ul style="list-style-type: none"> • More demand for poultry feed products. • Good customer base from Siaya and

No	Achievements	Rank	Impact
	Abuoro SACCO, St Christine Christian.		Simeya hatchery.

Table 8: List of activities PSPK could implement if the program were to continue (GLUK-Tich Nam Enterprises).

No	Activities	Remarks
1		
2		

5. Lake Basin Development Authority (LBDA)

Table 9: Achievements by LBDA.

No	Achievements	Rank	Impact
1	Reduced mortality from over 40% to less than 1%.	1	<ul style="list-style-type: none"> • Maintaining market share. • Satisfied customers as products are always available.
2	Improved extension services.	3	<ul style="list-style-type: none"> • Increased sales of KENBRO cocks.
3	Mass vaccination for farmers.	2	<ul style="list-style-type: none"> • More farmers calling on us to vaccinate their birds. • More farmers are taking into poultry rearing.

Table 10: List of activities PSPK could implement if the program were to continue (LBDA).

No	Activities	Remarks
1	Training farmers on feed making.	
2	Sensitizing consumers to pay more for broiler meat.	

6. Farmers/Kisumu Chicken Centre

Table 11: Achievements by Kisumu Chicken Centre.

No	Achievements	Rank	Impact
1	More farmers joining the group.	3	<ul style="list-style-type: none"> • More chicken available for sale. • Farmers paying 500 membership fee thus boosting financial base.
2	Increased sales.	1	<ul style="list-style-type: none"> • Able to plough back and refurbish the shop. • Able to buy two electronic scales, chopping board, fly catcher. • Paying school fee and other family needs.
3	Recognition by the community.	2	<ul style="list-style-type: none"> • Members being offered elective positions in community projects.

Table 12: List of activities PSPK could implement if the program were to continue (Kisumu Chicken Centre).

No	Activities	Remarks
1	Advertisement and sensitization.	

7. Mngoma Dairy Goat and Poultry Group

Table 13: Achievements by Mngoma Dairy Goat and Poultry Group.

No	Achievements	Rank	Impact
1	Reduced mortalities.	2	<ul style="list-style-type: none"> Group has gained confidence in rearing chicken and have introduced broiler keeping.
2	Mass vaccination.	7	<ul style="list-style-type: none"> More farmers are taking chicken rearing as a business.
3	Synchronized production.	3	<ul style="list-style-type: none"> Population of chicken has gone up and more chicken are now available for sale.
4	Use of poultry manure to enrich the soil.	8	<ul style="list-style-type: none"> Each farmer has a vegetable garden. Improved nutrition. Saving on food purchases.
5	Incubation and artificial hatching of chicks.	4	<ul style="list-style-type: none"> More sales of day old indigenous chicken.
6	Improved community partnerships.	6	<ul style="list-style-type: none"> Reduced theft of poultry products.
7	Improved market access.	9	<ul style="list-style-type: none"> More customers coming for products.
8	Increased income.	1	<ul style="list-style-type: none"> Group members are now able to plan their daily lives.
9	Improved nutrition and food security.	5	<ul style="list-style-type: none"> Group members agree they now look healthier than before.

Table 14: List of activities PSPK could implement if the program were to continue (Mngoma Dairy Goat and Poultry Group).

No	Activities	Remarks
1	More training for the community at large.	
	Subsidize on cost of feed through seed money.	

8. SAMILEPO

Table 15: Achievements by SAMILEPO Poultry Group.

No	Achievements	Rank	Impact
1	Realizing that poultry keeping is a business.	2	<ul style="list-style-type: none"> More attention paid in managing flocks. Family members willingly

No	Achievements	Rank	Impact
			participate in looking after the chicken.
2	Reduced mortality by applying biosecurity measures.	1	<ul style="list-style-type: none"> Increased sales since because of increased number of chicken.
3	Development in skill and marketing process.	3	<ul style="list-style-type: none"> Better flock performance. Success in training farmers.
4	Access to markets.	4	<ul style="list-style-type: none"> Ability to pay school fee for children and buy food. Increased sales. Increased income.
5	Networking.	6	<ul style="list-style-type: none"> Many people coming for training. Many people.
6	Recognition by community as a trainer.	7	<ul style="list-style-type: none"> Many farmers are coming for training. Earning more money by training farmers. Many farmers are going into poultry rearing.
7	Increasing profile in the community.	5	<ul style="list-style-type: none"> Elected as Secretary of Gem poultry marketing corporative.
8	Improved nutritional status by eating poultry products.	8	<ul style="list-style-type: none"> Reduced incidences of sickness.
9	Realization of lost opportunity by farmers who failed to use inputs from Millennium village.	9	<ul style="list-style-type: none"> Many farmers want to join the group.

Table 16: List of activities PSPK could implement if the program were to continue (SAMILEPO).

No	Activities	Remarks
1	Exchange tours between pilot farmers	
2	Practical training in making poultry feed	

9. Nyumbani Village

Table 17: Achievements by Nyumbani Village.

No	Achievements	Rank	Impact
1	Control of pests and diseases by practicing biosecurity applications.	1	<ul style="list-style-type: none"> The grandparents are now supplying the village with poultry products. Increase in poultry population within the village.
2	Increased income.	2	<ul style="list-style-type: none"> Two of the grandparents are now paying school fee for grand children at the polytechnic.
3	Training farmers coming from other areas outside the village.	4	<ul style="list-style-type: none"> Adoption of poultry production by many farmers outside the village such as the catholic brothers.

No	Achievements	Rank	Impact
4	Mass vaccination.	6	<ul style="list-style-type: none"> • Increase in chicken population within and outside the village.
5	Continuous production.	3	<ul style="list-style-type: none"> • Grandparents are starting to meet their own budgets.
6	Farmers are now educated on poultry production.	5	<ul style="list-style-type: none"> • More farmers taking to poultry rearing.

Table 18: List of activities PSPK could implement if the program were to continue (Nyumbani Village).

No	Activities	Remarks
1	Training farmers outside the village.	
2	Linking farmers to MFIs.	

10. Bene Agrovet Service Provider Group

Table 19: Achievements by Bene Agrovet Service Provider Group.

No	Achievements	Rank	Impact
1	Reduction in mortality by about 75%.	2	<ul style="list-style-type: none"> • Improved sales.
2	Market linkages and access to assured markets.	1	<ul style="list-style-type: none"> • More farmers are going into chicken rearing.
3	Recognition as a role model in poultry production.	6	<ul style="list-style-type: none"> • Community offering elective positions to service providers.
4	Customer confidence with chicken products.	7	<ul style="list-style-type: none"> • More customers asking for chicken.
5	Ability to incubate and hatch chicks.	5	<ul style="list-style-type: none"> • More farmers are making orders for day old chicks. • 490 chicks hatched in three settings.
6	Good chick market at Kshs 80 per chick.	8	<ul style="list-style-type: none"> • Improved income with 50% net profit.
7	Improved income.	3	<ul style="list-style-type: none"> • Buying hatching eggs from farmers.
8	Service providers are now working as a group.	4	<ul style="list-style-type: none"> • Overall improvement in chick production and livability.

Table 20: List of activities PSPK could implement if the program were to continue (Bene Agrovet Service Provider Group).

No	Activities	Remarks
1	Strengthen market linkages.	
2	Enlarge incubation process by giving more grants.	
3	Train more farmers.	

11. Kyemwole Poultry Group

Table 21: Achievements by Kyemwole Poultry Group.

No	Achievements	Rank	Impact
1	Application of biosecurity practices.	3	<ul style="list-style-type: none"> Reduced mortalities. Ability to diagnose and control diseases. Reduced incidences of predation.
2	Market access and linkages.	2	<ul style="list-style-type: none"> Able to sell chicks and growers at premium prices.
3	Increase in income.	4	<ul style="list-style-type: none"> Able to pay school fee, buy food and drugs to treat chicken.
4	Gained allot of knowledge in poultry production.	1	<ul style="list-style-type: none"> Able to train other farmers. Able to control diseases. Able to cost production.

Table 22: List of activities PSPK could implement if the program were to continue (Kyemwole Poultry Group).

No	Activities	Remarks
1	Further training.	
2	Exchange tours.	
3	Sensitize community about poultry production particularly vaccination.	

12. Nzueni Poultry Group

Table 23: Achievements by Nzueni Poultry Group.

No	Achievements	Rank	Impact
1	Increased income from poultry sales.	2	<ul style="list-style-type: none"> Paying school fee for children in the university.
2	Increase in poultry numbers as a result of good management.	4	<ul style="list-style-type: none"> Enough chicken to sell and meet family budget.
3	Training in biosecurity.	1	<ul style="list-style-type: none"> Reduction on mortality.
4	Access to markets.	3	<ul style="list-style-type: none"> Better prices for poultry products

Table 24: List of activities PSPK could implement if the program were to continue (Nzueni Poultry Group).

No	Activities	Remarks
1	Help farmers to build poultry houses.	MOLD may be approached to implement this as part of KNPIP.
2	Link farmers to loaning systems.	
3	Organise more seminars.	

IV. NAIROBI PSPK EXIT WORKSHOP

A. Workshop Objectives

- Share PSPK partnership experiences among the various groups and partners we have been working with in the respective regions
- Facilitate linkages and networking among partners
- Identify and document lessons learnt from PSPK partnerships
- Develop the way forward for partners after PSPK

The Program Manager made a presentation on “Approach, Accomplishments, and Opportunities” of the PSPK Program over the last two years.

B. Reactions on the Program Manager’s Presentation

Dr. Felister Makini, Deputy Director, Kenya African Research Institute (KARI) was concerned on whether there was a change in gender dynamics in poultry rearing. This is against the fact that a majority of PSPK beneficiaries are women at 69 percent.

Ms. Tabitha Kimani, a socio-economist with the Food and Agricultural Organisation (FAO) concern was the risk of small holder farmers’ and traders’ brands facing stiff competition and eventual from established entities like KENCHIC.

On her part, Wairimu Kariuki, the chairperson of the Kenya Poultry Farmers Association (KEPOFA) felt that PSPK’s regional focus in the second year came too soon. She suggested PSPK could have consolidated the gains made in year one in year two rather than conducting value chain studies in other East African countries.

C. Partners’ Presentations

1. SUNCHIC – Mr. Samuel Njuguna, Poultry Trader

Mr, Njuguna has attended many PSPK workshops. These have contributed immensely to his knowledge in the poultry sector. PSPK also developed brands for him. Mr. Njuguna was also a beneficiary of US\$3000 grant towards. With the grant, PSPK helped him brand his shop, develop marketing and information fliers, acquiring packaging materials as well as purchasing a deep freezer.

Mr. Njuguna explained. “Right now, I have about 5,000 in Molo and Bomet.”

“Sunchic wouldn’t be where it is now if it wasn’t for Winrock (PSPK).” – Samuel Njuguna, Proprietor, SUNCHIC

2. Umoja Group – Duncan Wekesa, Member

Umoja poultry group used to experience high chicken mortalities. More than ten out of 100 birds used to die as opposed to about 2 or 3 currently.

The group also had problems repaying a loan they had previously acquired from Agricultural Finance Corporation (AFC), but AFC has agreed to refinance the loan to a tune of Kshs1.5 million. Talks regarding the same are ongoing.

Duncan also mentioned that Umoja is the first group in the South Coast region of Kenya to sell chickens in packaging materials, developed using a US\$3000 grant that PSPK extended to them. The group has also branded its premises with the logo as well as acquired packaging materials, fliers and a deep freezer to boost their products.

The group has also been linked to Bixa, a Day Old Chick production company to enhance their production capacity. About 11,000 chickens would be ready for sale in about two weeks, according to Mr. Wekesa.

3. Kenya Poultry Farmers Association (KEPOFA) – Wairimu Kariuki

PSPK was instrumental in developing an operational plan for KEPOFA besides extending US\$10,000 to facilitate the formation of the Poultry Association of East Africa at a three day workshop held in July in Nairobi.

Wairimu Kariuki mentioned that the partnership PSPK had established with farmers, traders and other actors is very essential in promoting the Kenyan poultry industry. She also suggested that the data on PSPK achievements is significant and should be disseminated as much as possible.

She also indicated that whatever support that can be given to KEPOFA is welcome.

4. Food and Agricultural Organisation (FAO) – Tabitha Kimani

Ms. Tabitha Kimani mentioned that PSPK collaborated with FAO in funding the Kenya National Poultry Improvement Program (KNPIP) workshops. FAO also conducted a study on factors leading to the adoption of biosecurity practices on PSPK pilot farms.

She suggested that since PSPK is coming to an end, there is a possibility for further funding proposals are geared towards issues like HPAI surveillance, food security and livelihood.

5. Provincial Director of Veterinary Services – Dr. Josephine Wright

She confirmed that PSPK's partnership with her department and intervention in the poultry value chain in Nairobi had boosted hygiene standards. As a result of such intervention, the number of chickens being slaughtered in Nairobi had improved by an impressive 72 percent.

She also mentioned the fact that PSPK partnership had boosted the relationship between the veterinary department, the City Council of Nairobi and the poultry traders in Nairobi. Previously, the chicken traders used to run away from City Council or the Veterinary department officials during periodic inspection of slaughter processes. This made it very difficult to implement the requisite changes regarding proper food handling and slaughter procedure.

Dr. Wright also indicated she was very impressed with the mobile slaughter house, which was part of a demonstration in a presentation Dr. David Mitchell made while on PSPK volunteer mission in Kenya.

6. Director of Veterinary Services (DVS)

Ms. Mercy Chege, representing the Director of Veterinary Services, said the Director was impressed with what PSPK had managed to accomplish within the short lifespan of two years.

The Director also emphasised the essence of passing on the knowledge acquired through PSPK existence to many other people and by “engaging in recommended practices and sharing experiences”.

“The assistance offered by PSPK pilot project in improving efficiency and productivity through offering technical assistance on biosecurity, demonstration units, strengthening access to business development services, improving market information and strengthening producer organizations, has contributed immensely towards enhancing achievement of the poultry industry’s role of providing employment, income generation and contributing to food security. The project activities on promoting Biosecurity and public awareness through trainings and demonstrations played a crucial role towards the efforts made to enhance the country’s free status from HPAI whose threat was very high during the first

D. Way Forward and Recommendations

- a. Achievements of PSPK should be shared with other development partners. This can avoid the duplication of efforts by other partners who wish to take the poultry industry forward.
- b. The Program Manager mentioned that some of the achievements can be put in article format and posted on the Kenya Poultry website.
- c. There is need for more outreach work, for instance, The Kenya Poultry website can be linked to other websites so make it easily accessible for anyone looking for poultry information.
 - i. KEPOFA is key in pushing the poultry industry forward. With better organisation, KEPOFA can organise the smallholder farmers and traders to compete with entities like KENCHIC. This can be achieved through developing and strengthening the commercial arm of KEPOFA.

V. Kisumu PSPK Exit Workshop

The Program Manager made a presentation on “Approach, Accomplishments, and Opportunities” of the PSPK Program over the last two years.

A. Reactions on the Program Manager’s Presentation

Mr. John Oloo, the representative of the Provincial Director of Livestock Production (PDLP) wanted to know how the element of rearing a minimum of 30 chickens in order to break even was arrived at.

According to the Program Manager, the concept of raising a minimum of 30 birds for a farmer to break even is a result of using the financial model. Inputs like feeds, labour costs, housing, time, etc are keyed in the financial model to assess the profitability of the different birds.

Mr. Oloo also suggested that more avenues for acquiring chicken transportation crates cheaply should be explored since the ones sold by AMIRAN are costly. The entry of more players could eventually make the prices more affordable.

He was however, impressed with the issue of branding the traders, which he indicated is useful in giving them an identity.

Ms. Wairimu Kariuki noted that appreciation of quality and animal welfare necessitates proper transportation of chickens, hence the need for such crates. She also noted the significance of disseminating PSPK information on biosecurity, financial model, e.t.c. to more key actors.

Mr. Okitoi Orima gave a preview of the space requirements in the transportation of chickens.

B. Partners’ Presentations

1. Sauri Millennium Poultry Group (SAMILEPO) – Francis Okoth

The Secretary of the group says he can’t quantify the benefits he has got from partnering with PSPK. He mentions that mortalities have dropped a great deal, the ability of farmers to sell day old chicks unlike before, the periodic vaccinations done both at farm and community levels. He also notes that he has been training farmers from as far as the neighbouring district and province on the ideal poultry production procedures, the knowledge he acquired from PSPK.

2. Gem Co-operative Farmers Society – Joseph Ochieng

The chairperson of the group indicates that farmers in the region initially didn’t know that poultry had a huge income generating potential. But, when many of the farmers went to see what some of the farmers working with PSPK were doing, i.e. conducting mass vaccinations, erecting foot baths and leaky tins, and fencing of the farm e.t.c. most of them joined SAMILEPO group and the Co-operative Society in order to partake of the gains.

So far, about 140 members have registered with the co-operative society according to Mr. Okoth. A service centre where farmers will sell their poultry products will soon be opened.

3. Association of Kenya Feed Manufacturers (AKEFEMA) – Albert Bundi, Program Officer.

PSPK funded AKEFEMA to develop a feed certification program, feed quality improvement and to hold a director's training on the same. The feed millers are now producing feeds for indigenous chicken. In the past, most of the feeds were tailored to the broiler industry. The main challenge currently is the rising cost of feeds due to a shortage of maize.

4. Mayenya Upendo Group – John Awino

The group has 25 members who living with HIV/AIDS. The members used to experience high mortalities due to diseases like New Castle. But, PSPK introduced the idea of mass vaccination, which has drastically lowered the mortalities rates in the group. "Mass vaccination that PSPK introduced to us is so far the most effective", noted Mr. Awino, the group secretary. "Mortalities used to be more than 10 percent when we were rearing less than 200 chickens as a group", but this has reduced to between 2-3 percent when they are producing 500 birds every three weeks.

Most of the members within the community adopted the mass vaccination practice after they realised the drop in mortalities in the Mayenya Upendo Group's chickens.

Recently, they bought vaccines worth Kshs.1,500 compared to the Kshs.1,000 they used in the last quarter.

Mr. Awino notes that the partnership boosted the group's market for their poultry products. "Even now, people are calling me on supplying them with chickens." The group also received training on feed formulation as well as record keeping. "We never used to keep records but we do now," he said, adding that, "We now know whether we are making profits or losses."

5. Mngoma Dairy Goat and Poultry Self Help Group – Mr. Kennedy Misango

The group secretary indicates that PSPK trained them on poultry production practices like isolating new or sick birds before they are put with the rest of the birds, erecting a leaky tin and a foot dip at the entrance to the poultry farm and conducting periodic vaccinations.

"We are now training farmers from as far as Kakamega County," said Mr. Misango.

6. Great Lakes University of Kisumu (GLUK) – Fredrick Aila

GLUK's Tich Nam Enterprises, which runs the feed mill, was infested with a lot of rats, weevils besides being surrounded by a thicket. On the recommendation of a PSPK volunteer, the bushes around were cleared, the feed mill expanded, a weighing scale purchased as well as establishing poultry unit as part of the enterprise.

"We managed to eliminate rodents, cleared the bushes, fenced off the farm and introduced foot baths at the poultry unit," noted Mr. Aila, Tich Nam's Marketing Manager noted. Increased poultry production prompted a sales target of at least 35 chickens per day.

The PSPK volunteer also developed an indigenous feed formulation to be produced at the feed mill.

Tich Nam enterprise also began placing students on internship at the feed mill.

The university now has a community outreach program that focuses on training farmers on the best practices in poultry production as well as sensitising them on the feed of the Tich Nam Enterprise. “We have trained farmers in areas like Sirisia, Siaya, Migori, Homabay, Rachuonyo and Kisumu.”

The university also signed an MOU with SUSLA (Southern University at Shreveport Louisiana) to start a Poultry Science Management program at GLUK with the support of Prof Joseph Orban, who served as PSPK volunteer.

7. Lake Basin Development Authority (LBDA) – Dorcus Akal

There was a high chicken mortality at LBDA’s Migosi farm before PSPK’s intervention. The partnership with PSPK has seen the reorganisation at the farm. There is also a lot of extension service being offered to farmers within the community. “Now, many farmers come to our farm for extension services,” noted Ms. Akal. At one point, more than 40 farmers came at the same time for training on poultry production

8. Kondele Women Group

The group was affected by the 2007/2008 post election violence in Kenya and lost all their chickens and property destroyed.

PSPK came in to train this group on biosecurity protocols and best practices on poultry production in 2009. Hitherto, lots of chickens were dying from diseases. Observance of biosecurity protocols alone, i.e. setting up foot baths, leaky tins, fencing the poultry units and regular vaccination of the birds, reduced mortalities by over 33 percent. Their flock has increased and so has the income of the group members.

“Even when there are money problems, we solve them by selling our chickens.” – Ms. Christine Esbon Akinyi, Secretary, Kondele Women Poultry Group.

Ms. Akinyi also mentions that as a result of the training they received from PSPK, the group has trained more than 30 other groups on the proper poultry production procedures.

Beril Akoth, a Kondele Youth leader says the youth solicit for orders which they supply on commission basis.

The main challenge now is the emerging disunity among some of the poultry groups and entities within the region on the issue of price for both chickens and day old chicks. “There is need for poultry groups within the region to have a common ground on prices,” said Ms. Akinyi.

9. Farmers Chicken Centre – Benta Owino

This entity depicts the third model where a trader is linked to farmers. The farmers produce chicken, which are later sold to this trader for sale to the end market. Benta Owino is a member of Wambo Development Group and runs this marketing entity.

She acknowledges PSPK’s training on marketing and branding as being very useful to her. The market outlet sells eggs, slaughtered chicken, although they also supply to restaurants, individuals, wedding and funeral committees on order.

PSPK developed a brand for this trader and also gave her a grant to pain her shop with the brand, acquire a deep freezer, packaging materials, branded t-shirts, aprons, marketing fliers, live bird crates, gumboots and a cool box.

Besides improving their sales, Ms. Owino acknowledges the fact that their profile as a chicken selling entity has greatly has improved. She further indicates that, “We are now Professors of chicken rearing and marketing because of PSPK.”

10. ADOK TIMO - Phelesia Bolo

Through ADOK TIMO, a local microfinance institution, PSPK trained more than forty groups. Most of the farmers within the groups can now access credit courtesy of linkages that PSPK created with the microfinance institution. ADOK TIMO now has 22 branches within Nyanza Region.

11. Ministry of Livestock Development (MOLD)

“PSPK is ending when it is just starting.” – *Mr. Stephen Gikonyo, Ministry of Livestock Development.*

Steve Gikonyo, a representative of the government of Kenya’s Ministry of Livestock Production was categorical thus: “PSPK is ending when it is just starting.” He expressed the Ministry of Livestock’s willingness to take forward the initiatives undertaken by PSPK within the last two years.

12. Provincial Director of Livestock Production (PDLP)

Mr. John Oloo, representing the region’s Provincial Director of Livestock Production (PDLP) underscored the fact “PSPK has helped our farmers in attitudinal change, especially on the issue of engaging in poultry production as a business,” noted Mr. Oloo. “Poultry is now the new frontier.”

“PSPK has helped our farmers in attitudinal change, especially on the issue of engaging in poultry production as a business.” – *Mr. John Oloo, PDLP representative.*

He also observed that issues like feeding and quality of the poultry products are essential as the market tends to the international paradigm.

C. Way Forward and Recommendations

- The issue of branding the traders and farmers is important according to Ms. Wairimu Kariuki, KEPOFA chairlady. She, however, suggests the need to think about a national brand, which could help the farmers and traders to withstand the competitive face of established brands like KENCHIC. This can help the farmers to sell as one organisation.

- She also points out the need to organise workshops to discuss such issues as poultry prices, feeds, markets and related inputs and outputs.
- Dr. Ludovicus Oriama Okitoi, senior research officer at the Kenya Agricultural Research Institute (KARI) suggests the farmer groups, traders and institutions like LBDA and GLUK need to build the sector by conducting more training on aspects like biosecurity, marketing and other essential areas in poultry production.
- Mr. Okitoi also points out that LBDA and GLUK can contribute immensely to the poultry in the western region of Kenya. The improvement can be based on the Kenya National Poultry Improvement Program (KNPIP), but tailored to the needs of the region.
- He also suggests that institutions like KARI, GLUK and LBDA can draft a joint proposal for possible funding options to take the poultry production process forward.
- Mr. Fredrick Aila, GLUK Tich Name Enterprise Marketing Manager, indicates the university has an MOU with SUSLA to take the poultry industry forward through development of a Poultry Science Management Program.

VI. MAKUENI EXIT WORKSHOP

The Program Manager made a presentation on “Approach, Accomplishments, and Opportunities” of the PSPK Program over the last two years.

A. Reactions on the Program Manager’s Presentation

Ms. Wairimu Kariuki, KEPOFA chairlady indicates that the linkages between the smallholder farmer, service provider (SP) and Nguku Products Limited (the processor) offers a platform for a sustainable buyer as opposed to farmers being left at the mercy of brokers. PSPK has been trying to establish such a linkage, as one of the three models of poultry production and marketing.

The market cannot sustain brokers and it is the farmers who would eventually lose out in case they do not want to be part of contractual supply of chickens to the processing facility.

Farmers also need to follow up and find out what KEPOFA is doing for them as a way of ensuring value for the money they pay to register as members.

B. Partners’ Presentations

1. Private Service Providers

Agricultural Business Development (ABD) linked the private service providers to PSPK. The training they received from PSPK on proper poultry production, poultry marketing, biosecurity protocols and on record keeping and

“We are now able to hatch and distribute over 400 day old chicks every month.” –
Eunice Musyoka, Secretary, Service Providers.

financial management has given them a new inspiration besides taking their poultry businesses to a higher level. The main challenge the service providers and their farmer groups faced was the lack of day old chicks. PSPK offered the service providers a grant to purchase a 528 egg capacity incubator as well as a generator as back up in the event of power outage. The purpose of the incubator was to address the shortage of day old chicks.

“We are targeting 1000 as the first batch of chickens to rear on our farm. This is to ensure we sustain the supply of chickens to Nguku Products Ltd.” – *Mr. Benson Mutua, Chairperson, Service Providers.*

“We are now able to hatch and distribute over 400 day old chicks every month,” Ms. Eunice Musyoka, the secretary of the service providers group said. She also indicates that “Most of the problems we had prior to collaborating with Winrock have been solved..... They always availed highly knowledgeable facilitators from Nairobi office and from as far as the United States of America”.

Some of the service providers purchase chickens from farmers, after which they supply 1000 birds each week to Nguku Products Limited. The SPs also provide vaccinations, feeds, drugs as well as training the farmers on proper poultry management.

The group chairperson mentioned that the SPs have bought two acres of land on which to establish a poultry farm. According to Mr. Mutua, “We are targeting 1000 as the first batch of chickens to rear on our farm. This is to ensure we sustain the supply of chickens to Nguku Products Ltd.”

Mr. Mutua also added that he is glad GLUK is in the process of offering courses in Poultry Science Management. “I am happy GLUK has started the Poultry Management Program. This was not available anywhere locally.” Mr. Mutua also mentioned that he would be happy to enrol for a Masters program at GLUK with a Poultry Management Major.

“I am happy GLUK has started the Poultry Management Program. This was not available anywhere locally.” – *Mr. Benson Mutua*

2. Kyemwole Poultry Group

This is one of the two model farms in Makueni County, and also one of the best PSPK model farms. Mr. Pius Makau, the group chairperson points out key practices like fencing of the poultry unit, setting up of a leaky tin and foot bath, periodic vaccinations and constructing chickens housing as per required age and size. The farm now experiences low mortality rates, ranking as low as 5 percent. The farm has also received so many visitors and other farmers interested in learning how Mr. Makau conducts the poultry production venture in a proper manner. On some of the biosecurity practices, he mentioned that some of the community members are often sceptical about dipping their feet in and washing their hands with disinfectants at the entrance of the farm, but he says this is changing.

“I have the market now. I can't even meet the demand.” – *Mr. Pius Makau, Kyemwole Group chairperson.*

“I have the market now. I can’t even meet the demand,” Mr. Makau states. He also says PSPK taught the poultry group the essence of record keeping, marketing and financial management.

Ms. Christine Kyalo, a member of the Kyemwole Poultry Group, says she had neither chickens nor chicken houses, besides knowing very little about chicken. But after PSPK trained her on importance of chicken as a commercial venture and on proper rearing practices, she developed interest in and started rearing chicken. “I now have around seventy chickens on my farm.”

3. NYUMBANI VILLAGE

The animal health officer of Nyumbani Village states that practices like vaccination, fencing the poultry unit, setting up the isolation unit as well as erecting foot dips and leaky tins was not a practice at the farm, until the advent of partnership with PSPK.

“We used to have lots of mortalities resulting from New Castle, but after conducting periodic vaccinations, the mortalities have gone down.”

“There is now increased chicken on the farm, and we have even employed a marketer to explore more markets.” – *Mr. Pius Muinde, Animal Health Officer, Nyumbani Village.*

Two grandparents are now paying school fees for their children out of sales from chicken and eggs.

“There is now increased chicken on the farm, and we have even employed a marketer to explore more markets”, indicated Mr. Muinde. The farm now has about 3000 birds at household level and at the central unit. Mr. Pius conducted the last vaccination in July 2011.

PSPK offered them a cool box as well as three live bird crates for safe transportation. With the cool box, they now transport 25 chickens to Nairobi every week.

The village also supplies about eighty pieces of chicken to Kenyatta University College in Kitui, South Eastern University College in the same area and at the Nyumbani Village Guest house each week, according to Mr. Stephen Muthama, Nyumbani Village marketer.

4. Nzueni Poultry Group

PSPK introduced the idea of periodic vaccinations, foot baths, leaky tins to Nzueni Poultry Group, according to Ms. Dorothy Nzioka, the group chairlady. She also cites the establishment of linkages between the group and service providers as very important. PSPK trainings also dwelt on proper record keeping, establishment of selling points for chickens, feed formulation for the local chicken as well as proper chicken.

5. Ministry of Livestock Development (MOLD) - Alice Mbachu

Alice Mbachu, representative of the Deputy Director of Livestock Production stated: “What other training can we offer?” She cited the farmer to farmer extension as very useful. PSPK has played a significant role in the face of very few government extension staff in the field.

Mr. Japheth Kivindu from the area Ministry of Livestock office, indicated: “PSPK has helped bridge this gap.” He added that the Ministry has given chickens to about seven groups to enable them increase production and meet the supply demand. “We need to take up the mantle as PSPK exits through continued collaboration with service providers in areas like vaccination programs.

C. Way Forward and Recommendations

- Formation of a poultry cooperative society is necessary to give farmers one voice to advance the interests of the poultry industry.
- Some participants also expressed the need for the farmers and traders to brand their products for the purposes of traceability and identification.
- There’s need to collaborate in marketing or supply of chickens. This would alleviate the challenge of shortages or inconsistent supply as one group may ask another group to come in and help with supplies where the demand is enormous.
- Record keeping is important as this can help the farmers know whether they are making profits or losses. This may also help farmers have a competitive edge over other poultry farmers.
- The participants also suggested the need to establish satellite day old chick production centres to boost and sustain day old chick supply.
- There is also need for farmers to unite and draft proposals on how to take the poultry industry forward. Consultations should also be initiated between the farmers and different stakeholders in the poultry value chain to promote the poultry industry.