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Food Safety Network PAPA

Ghana

Sanitary and Phytosanitary (SPS)

Capacity Building Needs Assessment

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# Acronyms and Abbreviations

APHIS	Animal and Plant Health Inspection Services
BFS	Bureau for Food Security
FAS	Foreign Agricultural Service
FDA	U.S. Food and Drug Administration
FSN	Food Safety Network
FSWG	Food Safety Working Group
GAP	Good Agricultural Practices
GFSS	Global Food Security Strategy
M&E	Monitoring and Evaluation
OCBD	Office of Capacity Building and Development
SPS	Sanitary and Phytosanitary
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USG	United States Government
WTO	World Trade Organization

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# I. BACKGROUND

A modern and reliable food safety system is a mandatory prerequisite for access to global markets. The Food Safety Network (FSN) PAPA is an innovative funding mechanism established in October 2016 by the United States Agency for International Development's Bureau for Food Security (USAID/BFS), together with the United States Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA), in order to support the food safety elements of the Global Food Security Strategy (GFSS). The mechanism is expected to promote this link between food safety and the GFSS more explicitly and along the value chains of different commodities, building on the founding principles of the GFSS.

The FSN is strongly positioned to add value when a partner starts designing its Sanitary and Phytosanitary (SPS) capacity building projects thanks to the expertise that USDA brings of U.S. agricultural producers, and USDA's ability to find win-win market-oriented development solutions that benefit U.S. agricultural exporters as well as governments, industry, and consumers in stakeholders' countries.

The FSN is a five-year Participating Agency Program Agreement (PAPA) with \$6 million in current funding to strengthen the capacity of SPS systems in selected countries around the world, focusing on a broad range of food safety measures, including those that lead to compliance with internationally-accepted and science-based food safety standards.<sup>1</sup>

The FSN PAPA is a global mechanism and Washington-held seed funds will target activities across various regions. USAID Missions may "buy-in" to the Food Safety Network mechanism to mobilize their own resources to obtain additional SPS-related technical support from partner agencies. More specifically, the FSN provides a pathway for USAID Missions, Bureaus, government and private sector partners, and other stakeholders into food safety programming within the context of current projects and investments. This includes targeted funding to provide technical assistance such as: (i) Rapid SPS need assessments for countries that express a need; (ii) Development and dissemination of distance learning modules and knowledge management; and (iii) Program management, coordination, and reporting.

Under component I of the FSN, the program undertook an effort between March and July of 2018 to assess the SPS capacity building gaps of select GFSS focus countries in Africa - Kenya, Ethiopia, Senegal and Ghana - in order to produce a set recommendations and capacity building activity considerations for USDA and USAID (and other participating USG agencies) in the next phase of Feed the Future. The FSN team engaged with USG, private industry and civil society, and host country government stakeholders through phone and in-person consultations using a rapid assessment, open-ended survey approach as well as literature review and comparative analysis from a more in-depth assessment conducted by USAID, FDA and USDA in 2013.<sup>2</sup> Findings from West Africa were presented at a May 2018 regional USAID FTF event in Ghana and discussed individually with missions. The FSN envisions this document to serve as a resource and basis for ongoing conversations about how to best meet country objectives under the GFSS as well as regional and international trade objectives for US agriculture.

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<sup>1</sup> To date, US \$3m has been provided in FSN core program funds and another \$3m through mission/HQ program related buy-ins to the FSN PAPA. In addition, the program has leveraged another \$1.2m from USDA-FAS and FDA resources.

<sup>2</sup> [https://www.eatradehub.org/summary\\_east\\_africa\\_sps\\_policy\\_review](https://www.eatradehub.org/summary_east_africa_sps_policy_review)

## 2. INTRODUCTION

Sanitary and phytosanitary (SPS) systems are a necessary and integral part of any agricultural value chain investment strategy. As a country's agricultural sector achieves greater production efficiencies and improved physical infrastructure, food yields and domestic food security will increase. To protect these investments, SPS systems and regulations must be in place to ensure production is not negatively impacted by plant/animal pests and diseases and that food is safe and wholesome for domestic consumption and trade. Strong SPS systems and regulations help increased agricultural productivity translate into higher farm incomes and reduced hunger in the form of local, regional, and international market access. As such, SPS capacity building bridges gaps between national capacity and internationally-recognized best practices. More specifically, SPS capacity building:

- breaks down constraints in value chain programming by enabling the supporting SPS market system;
- assists countries to adopt science-based regulatory systems to ensure that domestic food supplies are safe;
- harmonizes domestic regulations with international standards; and
- improves a country's ability to trade regionally and globally.

SPS capacity building is generally a government-to-government interaction and recognizes that countries must commit to regulatory frameworks governing animal health, plant health, and food safety in order to protect agricultural production and food supply.

In 2013, a team of experts from USDA, FDA, and USAID performed an SPS system review in West Africa. In April 2018, USDA traveled to Ghana and Senegal for the purpose of updating this report. Below are the findings of both trips and makes recommendations regarding gaps that still remain.

## 3. THE STATUS OF GHANA'S SPS SYSTEM

Overall, SPS systems in Ghana are not clearly integrated in policy and institutions and there tend to be turf wars around SPS/FS/AH/PH roles and responsibilities. Staffing shortages at various enforcement agencies, coupled with insufficient funding, could have serious detrimental impacts on domestic food safety and trade the in coming years. Where there are laws and regulations governing SPS systems, they are often applied haphazardly or not at all. Fragmented standards, lengthy processes, and too many fees all contribute to a high cost of doing business. More specifically –

- In 2015, the government of Ghana (GOG) developed a National Food Safety Action Plan to address duplication of food safety efforts among ministries and to help coordinate different stakeholders and activities. This Plan supports their 2015 Food Safety Policy five year implementation strategy under which the Ghana Food and Drug Authority (FDA) is the lead coordinating agency. As such, the FDA is responsible for coordinating farm-to-fork food safety activities covering raw to packaged foods and including plant health, animal health, and food safety systems. Unfortunately, the FDA does not have the resources to accomplish what is expected of them. Furthermore, other GOG ministries have responsibility for some SPS enforcement activities, overlapping with the mandate of the FDA. This has created confusion between government agencies regarding

responsibilities. As such, there remains redundancy and complications in Ghana's SPS systems. Lack of cooperation, collaboration, communication and trust between governing entities is impacting the acceptance of certifications and leads to disjointed strategies for the protection of human and animal health.

- Exported horticultural products are intercepted, detained, and/or rejected due to the presence of pests, microbial, and/or chemical contaminants. The domestic horticultural value chain is even less organized; increased capacity and better coordination of oversight among enforcement agencies is needed to meet the demand of the population for a safer and nutritious domestic food supply.
- Food inspections and disease surveillance focus on imported/exported food, crops, and animals/animal products, providing little inspection of the domestic food supply. When domestic inspections do occur, they are greatly limited due to logistical challenges resulting from a lack of inspectors, limited number of vehicles, and poor road infrastructure.
- Risk management is lacking at all levels of the risk determining chain and regulatory authorities have very little capacity to manage rapid and/or emergency response. Technical people are capable, but need more training and have, for the most part, little to no influence on policy.
- The formal market for authentic and effective agricultural inputs is often very weak in remote areas, and the government is not able to regulate the quality or identity of products available to the farmers. Porous borders and poor quality assurance testing infrastructure allow in cheap products from other countries, and these products can consist of sub-standard generics at best to ineffective counterfeits to highly dangerous materials at worst.
- Ghanaian officials repeatedly emphasized the need to build the capacity of the laboratory network. Few labs are well equipped or well maintained. Most of them lack a maintenance budget and resources – equipment, consumables and trained personnel. A fee-for-service approach offers potential for Ghana, but laboratories often do not collect fees charged for providing testing services and therefore cannot use that money to maintain or upgrade equipment or to retain staff. When such fees are collected, they are either only a fraction of the operating costs (i.e., the government is subsidizing the testing activities), the fees go to the central treasury and are not available to the laboratory conducting the work, can only be used for certain purposes (e.g., some laboratories are not able to use collected fees for staff salaries) or a combination of these. In Ghana, the EPA is reported to be the only laboratory able to fully fund itself through fees. Laboratories do not have the flexibility they need to attract, hire, and retain qualified staff and pay them at a rate commensurate to their work, especially in comparison with the private sector, and are unable to dismiss low performing staff. When staff do receive high quality training elsewhere, they are often unable to make use of or develop these skills due to the low capacity of the laboratory. There is little to no coordination in procedures and methods of testing and few mechanisms for sharing of knowledge or information across the region making it difficult to respond to and manage emergencies such as fall armyworm.

- Private sector groups and contacts range from having a lack of interest in policy making and trade facilitation to vocal disagreement with government claims. Opportunities for public-private engagement are promising in Ghana, however there are no clear mechanisms for feedback available to the private sector for contesting government claims or delivering formal opposition to government actions or accounts.
- Regional standards for the movement of agricultural commodities are addressed and acknowledged within regional discussions, but are not applied at a national level other than respecting certificates from other ECOWAS countries. Ghana, by virtue of a distinct colonial history and language from neighboring countries, faces challenges in participating in regional discussions. There is also a need for standards and accompanying paperwork – certificates and other documentation – to be available in multiple languages to expand the potential for regional initiatives and cooperation.

## Fall Armyworm - Impact and Implications for Africa CABI - September 2017

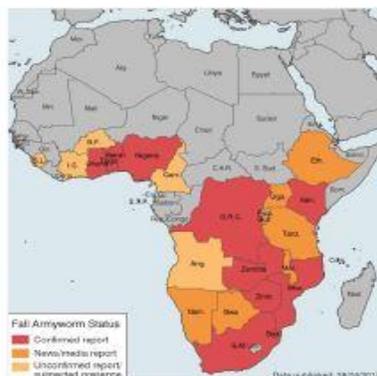
Fall Armyworm (FAW) in Africa has the potential to cause maize yield losses in a range from 8.3 to 20.6m tonnes per annum, in the absence of any control methods, in just 12 of Africa's maize-producing countries. This represents a range of 21%-53% of the annual production of maize averaged over a three year period in these countries. The value of these losses is estimated at between US\$2,481m and US\$6,187m.

- FAW should be expected to spread throughout suitable habitats in mainland sub-Saharan Africa within the next few cropping seasons. Northern Africa and Madagascar are also at risk. At the time of this document's publication, 28 countries in Africa have confirmed the pest on their territory (compared to 12 in April 2017). A further nine countries have conducted or are presently conducting surveys, and either strongly suspect its presence or are awaiting official confirmation. Two countries have stated that FAW is absent. No information on FAW presence or absence could be gathered from the remaining 15 countries.
- Control of FAW requires an integrated pest management (IPM) approach. Immediate recommendations include (i) awareness raising campaigns on FAW symptoms, early detection and control, including beneficial agronomic practices; (ii) national preparation and communication of a list of recommended, regulated pesticides and biopesticides and their appropriate application methods. Work should also start immediately to (i) assess preferred crop varieties for resistance or tolerance to FAW; (ii) introduce classical biological control agents from the Americas. A conducive policy environment should promote lower risk control options through short term subsidies and rapid assessment and registration of biopesticides and biological control products.

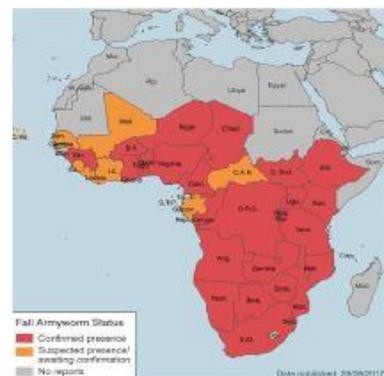
**Early 2016**  
(Georgen *et al.* 2016)



**April 2017**



**August 2017**



All this becomes a significant problem to USAID Ghana's prioritized value chains because inadequate SPS systems constrain value chain development. For example, the presence of detectable pests, diseases, and contamination (natural or man-made) decrease productivity and compromise the food supply and thus food security. For example, due, in part, to poor SPS infrastructure across Africa, catastrophic pests such as fall armyworm (FAW) are able to run amuck across the continent. In September 2017, the Centre for Agriculture and Bioscience International (CABI) estimated the economic cost of FAW at US\$2,481-6,187M for just 12 countries over a three year period, (see sidebar)<sup>3</sup>.

The FAW problem highlights significant gaps in SPS systems in Ghana and regionally. These include:

- PPRSD and other National Plant Protection Offices (NPPOs) in the region were unable to detect, identify and intercept the pest at the border or early in fields. It is likely that the inability to do so is rooted in the lack of coordination between SPS authorities.
- PPRSD and other NPPOs in the region do not have proper risk management systems in place to adequately respond to this emergency.
- Farmers' response – to use whatever is available in the absence of safer/appropriate chemistries, along with the lack of government or extension education to disseminate information, to the outbreak has, in many cases, caused the significant overuse of toxic chemicals not intended for use against FAW or on susceptible crops. Widespread anecdotal reports of pesticide misuse indicate a lack of tools other than pesticides for control of FAW. Many producers and extension officers lack of understanding of the effects of pesticide misuse (and problems with pesticide residues). The lack of consequences for misuse, removes incentives to follow proper application procedures and precautions. Further, in the time it takes for the GOG to address root problems, the pest becomes resistant to the chemicals being used against it.
- Farmers do not have access to the appropriate tools (pesticides, biocontrols) to control the insect due to long existing maximum residue level (MRL) issues that constrain access to the needed tools.
- The formal market for authentic and effective agricultural inputs is often very weak in remote areas, and the government is not able to regulate the quality of products available to the farmers. Porous borders and poor quality assurance testing infrastructure allow in imports from other countries that consist of sub-standard generics at best to ineffective counterfeits to highly dangerous materials at worst.
- Regionally, even if one country is able to identify the risk, if bordering countries do not have similar response protocols the whole region remains at risk - hence "you're only as safe as your weakest link".
- The phytosanitary gaps noted in the movement of FAW through the continent will also serve as a barrier to expanding external trade routes from Africa to places such as the U.S., E.U. and the Middle East. As FAW is a quarantine species in the EU, consignments from Africa will face greater scrutiny. Should attempts to control FAW result in increased interceptions due to pesticide residues surpassing the allowed limits, exporters and farmers will face equivalent challenges for different reasons. Until these types of gaps - weak links - are addressed nationally and regionally, successful value chain programming can easily be compromised.

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<sup>3</sup> [http://www.invasive-species.org/Uploads/InvasiveSpecies/Fall%20Armyworm%20Evidence%20Note%20\(Summary%20version\)%20September%202017.pdf](http://www.invasive-species.org/Uploads/InvasiveSpecies/Fall%20Armyworm%20Evidence%20Note%20(Summary%20version)%20September%202017.pdf)

## 4. RECOMMENDATIONS TO STRENGTHEN GHANA'S SPS SYSTEMS

Ghanaian officials understand the components and concepts of a basic SPS system, but the country is far from having an advanced system – however, an advanced system does not necessarily need to be the goal. SPS projects have often attempted to implement high income country solutions in low/middle income countries. This can prove to be too costly and often inappropriate to the context. Therefore, while Ghana can strive for the “Cadillac” of SPS systems, a basic system could be established within a five year period that would allow the country to meet food security, food safety, nutritional, and trade requirements. Once a basic system is established, the GOG can consider additional improvements that will lead them to a more advanced system.

Recommendations included in the Annex of this document and complementary excelsheet address the issues identified above and, for illustrative purposes, are provided at three “roadmap” destination points:

- A. Short term: these are goals that can be obtained by utilizing current USG resources or minimal financial inputs by USAID or other partners and could be achieved within months to two years.
- B. Medium Term: these are goals that will require some additional stretching of financial and planning resources - they would require moderate USG or partner financial inputs and could be achievable in the next 1-3 years.
- C. Long Term: these are goals that require a financial and project planning ladder – they would require substantial USG or partner financial inputs and may be achievable in the next 1-5 years.

### 4.1 Porous Borders

Currently there is a patchwork of SPS regulations across the region. This lack of harmonization is prohibiting trade as it is often quite difficult for the private sector to negotiate the myriad of laws and regulations that govern regional agricultural trade. To further complicate the matter, the often capricious and arbitrary export and import bans only add to the difficulty for traders to move products legally across borders. This difficulty pushes trade to the informal market which makes traded goods much less safe for countries, as there are no regulations or restrictions applied to such movement. Ghana has become an entry point for smuggling – including pesticides – particularly with Togo and Benin. The prevalence of informal trade is causing unpredictability and high costs as well as dangers of pest and disease transmission across borders. Additionally, it increases the threats of adulterated foods and counterfeit agricultural inputs; however borders lack the physical infrastructure to adequately address these risks and inspectors do not have the necessary skills to identify risks. Domestic enforcement mechanisms need to be implemented in a way that fosters greater compliance with international SPS regulations, but do not result in increased black market activity by producers and distributors preferring to operate outside of a legal framework instead of complying with GOG regulations.

The magnitude of informal trade across borders is difficult to impossible to quantify. Pragmatic solutions need to be explored and encouraged to allow surveillance and inspection of plant and animal disease for early detection in West Africa on a participatory scale by farmers and inspectors.

Plant and animal pest and disease issues are also severely affecting food/feed productivity and trade; under-reporting of problems is a major problem in West Africa for both animal and plant diseases and pests. Even if countries know they have a disease outbreak they don't report this to their trading partners, OIE or IPPC. This not only puts human and animal health at risk, but under-reporting of diseases and pests compromises science-based risk assessment efforts with inaccurate information and results in under-estimating the risk of movement of animals and plants within the region. The region is affected by a large number of pest and diseases impacting both plant and animal health. Ghanaian officials estimate that 40 percent of crop loss is due to plant diseases in the field.

The adoption of suitable and applied regulations which provide an incentive for traders to move from the informal to the formal movement of goods will improve the overall safety of agricultural inputs, agricultural production, and food products in Ghana. That said, the adoption of harmonized SPS regulations is an area that requires a regional approach to policy development with national level adoption and implementation - again, "you're only as safe as your weakest link". Unfortunately, government officials' inability to monitor borders and effectively manage outbreaks is severely hampering efforts to increase productivity as well as maintain and develop new markets for their products. Even if Ghana were able to manage SPS issues internally, cross-border pest management is needed to ensure these efforts are not wasted.

Because plant diseases and pests don't recognize political borders, USG-prioritized value chains are at risk. As efforts aimed at increased production through better performing seeds and the use of appropriate fertilizer take hold, the increased production remains at risk from pests such as fall armyworm or contamination from inappropriate chemical use, naturally occurring toxins (particularly aflatoxin), and/or microbiological hazards. Supporting market systems must be in place to ensure increased yields are fully realized in: nutritional value; consumer food safety; increased local, regional, and international trade; and greater incomes all along the value chain. Exploiting different value chain intersections with supporting market systems will help avoid redundancy in market systems development and leverage complementary project resources. For example, increasing risk management performance overall will support all the USG prioritized value chains: maize, soybean, groundnut, cowpea, and shea. So too, all these value chains will benefit from activities enabling the use of safe agricultural inputs and improved laboratory infrastructure. As such, SPS capacity building provides a lot of "bang for the buck" because improvement in SPS systems for one value chain equals improvements for other value chains.

To address the problem, the overall SPS enabling environment must be strengthened so that Ghana is able to protect its food value chains and participate in regional SPS development efforts. Historically, the GOG – like many other African countries – has been found to only respond to agricultural emergencies as they arise rather than taking a proactive approach to preventing emergencies in the first place. This approach became significantly detrimental to trade, when the EU banned leafy green vegetables from Ghana due to the presence of quarantine pests. That said, the GOG now sees the ban as a "blessing in disguise" as it created more awareness around food safety and SPS and forced different stakeholders to come together to discuss food safety and other topics. Efforts to capitalize on this perspective to foster consumer interest in demanding safer food should be made while the event is fresh in stakeholder minds. This can help ensure domestic and international producers are incentivized to address food safety issues. Therefore, we also suggest the development of and investment in an incentive program that takes a deep dive into how to best motivate officials to prioritize SPS systems for the protection of human health; such a program should target decision making officials at the highest levels.

## 4.2 Agricultural Inputs

To increase yields and decrease losses that will sustain food security in the region, West African countries must utilize all agricultural tools available to them, particularly agricultural inputs. However, the use of contemporary agricultural inputs in Ghana is plagued by an inability to enforce laws and regulations, distribution problems, registration inefficiencies, informal trading systems, and low quality or counterfeit products. Other problems include farmers' misunderstanding of when, on what crops, and/or how to apply different agrochemicals, including biopesticides. Additionally, the GOG has neither the necessary physical infrastructure nor the incentive to control illegal products. For example, although quality assurance testing of imported pesticide products is mandated and enforced in the formal market, officials have no access to informal markets, and in particular to smuggled or counterfeit products (which are by definition outside legal distribution systems). At the production and processing value chain level, many up-chain actors do not recognize or do not care about the consequences of pesticide misuse, and therefore do not provide any consequences for pesticide applicators who apply incorrectly, even if the applicators know what they are "supposed" to do.

### **Counterfeits and Product Quality**

Counterfeit chemicals and poor quality of pesticide products pose a major threat to the agricultural sector and public health – yet there is little capacity to stop it. Although testing of formally imported inputs is mandated and occurs, there is no monitoring of products in the informal marketplace and no enforcement of suspected violations. This is a very serious issue – in the best case scenario, counterfeits and mislabeled products lack efficacy; in the worst case scenario people and livestock are exposed unwittingly to highly toxic chemicals that are not allowed for use. Disincentivizing participation in informal input markets without destroying those markets or the benefits they provide is an issue that needs examining.

### **Proper Use of Inputs**

Producers, particularly smallholder farmers, often do not use agricultural inputs for their intended purpose, either because of cost, improper labeling, and/or availability of allowed products. Farmers often do not understand, or have any incentive, to properly use chemical products, and are not fully aware of the health risks that could ensue through the misuse of inputs. An educational campaign is needed at regional, national, and local levels regarding the dangers of inputs misuse and how to use products safely, but in a context that is relatable and achievable by smallholder farmers. Full good agricultural practices (GAP) compliance is often unrealistic, but some very basic practices, explained in easily understood materials can assist farmers in making significant safety gains. In addition, all value chain actors need to be educated on the consequences of pesticide misuse to provide an incentive for applicators (farmers or professional spray service providers) to apply them properly.

### **Pest Control Availability**

The weak pesticide regulatory structure in Ghana contributes to compromised farmer and consumer health at home, and results in import detentions/denials when commodities are exported outside of the region, particularly to the European Union. This is because as newer, less toxic, pesticides are developed and registered for use in the industrialized world, many older chemistries are restricted or banned in the global arena.

Due to complicated bureaucracies and high costs, manufacturers of new generation pesticides are not inclined to register these products in Africa; thus farmers are forced to continue using outdated,

highly toxic formulations - as seen in the response to FAW. This results in export maximum residue level (MRL) violations, increased risk to worker safety and domestic and international food supplies as well as increased environmental degradation.

If international MRLs are established and adopted, registration requirements are consistent among national authorities, and data protection issues are addressed, pesticide manufacturers will face fewer constraints to registering products in African markets and African farmers will have increased opportunities to obtain safer products.

## 4.3 Scientific Capacity

There is not just a question of capacity to meet SPS requirements in Ghana, but also a question of scientific capacity to set and enforce SPS standards and to analyze risk. Scientific capacity includes both individual know-how as well as appropriate scientific infrastructure and funding for SPS activities.

Education, training and retention of qualified personnel are enormous issues. There are procedural obstacles and officials at all levels need more training and skills to perform necessary duties effectively, for example:

- Field extension officers are not adequately trained to identify potential risks in the field. There are no mechanisms to communicate the risks and provide solutions to the farmers or food producers;
- Laboratory/field technicians need to be trained in updated analytical methods and techniques and to participate in proficiency and validation programs ensuring they maintain relevant skills going forward;
- Regulatory officials, who assess risk and determine if actions need to be taken, lack an understanding to how best apply actions to specific cases.
- Strict government personnel regulations limit the ability of regulatory management to have staff at inspection points when needed as well as in hiring and compensating high performers and firing poor performers;
- Fees levied on services performed are often returned to central government accounts, greatly limiting the ability of testing and inspections management to invest in the technicians, laboratory equipment, consumables needed to support strong laboratory capacity and the inspectors, vehicles, and fuel needed to properly and efficiently inspect facilities.

To ensure consumers' access to safe and suitable food, a network of well-equipped SPS laboratories run by a trained and skilled staff in a transparent manner is necessary. An effective laboratory network tests and validates the safety of food from production through harvest and processing. Such a network characterizes risk and protects domestic crops from foreign pest and disease, helps monitor for and keep microbiological and chemical contaminants and residues out of food and water supplies, and contributes to assessments of environmental impacts of, for example, agrochemicals.

In Ghana, there is no routine testing for microbiological and chemical residues on food, (pesticide residue refusals are mostly due to the presence of unapproved active ingredients for that crop). Nor is quality assurance of agricultural inputs regularly performed. There has been an attempt by the Ghanaian EPA to conduct testing through private labs, however they have yet to receive approval to do this.

A laboratory at the Tema seaport for pesticide quality control has been built but has yet to be equipped, (we are told that gas chromatographs are in the budget for this year). The World Bank reportedly has additional

equipment to donate.

Funding for lab functioning needs to be prioritized consistently in Ghana. While the EPA is fully self-funding through fees, and keeps all of the fees it collects, PPRSD does not. PPRSD is in the process of restructuring in such a way that will allow them to keep fees but are limited by Parliament as to how much they can charge.

## 4.4 Transparency

Private sector engagement in SPS processes is limited and significantly contributes to the problems with implementation of regional and country-level SPS standards. Ghana representatives in regional meetings agree on harmonized policy yet there is little prior communication with in-country stakeholders. This results in push-back from stakeholders during implementation. Private sector groups and contacts range from having a lack of interest in policy making and trade facilitation to vocal disagreement with government claims. Opportunities for public-private engagement are promising in Ghana, however there are not clear mechanisms for feedback available to the private sector for contesting government claims or delivering formal opposition to government actions or accounts. In order to address issues surrounding the current lack of transparency, including mistrust of SPS decision making processes, a transparent, participatory approach to policy development that includes input from public and private entities at all levels of the value chain must be designed. In support of transparency, countries need to establish and maintain Notification and Enquiry Points for exchange of SPS information with trading partners.

## 5. ANNEXES

### 5.1 Activity Action Table: Suggestions for improving the overall SPS enabling environment and strengthening SPS practices

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<p><b>1A.a Support efforts to develop harmonized regional, trilingual SPS certificates and inspection protocols to facilitate regional trade within the GOG.</b> One of the barriers to trade in the region is the lack of recognition between countries of each other's phytosanitary certificates; this is due to, among other things, a language problem as well as lack of consistency of forms. INCENTIVE<sup>4</sup></p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Participate in regional workshops then define and agree upon what consistent certificates and form look like.</li> </ul>	<p><b>1B.a Build the capacity of the PPRSD to perform the information gathering, evaluation, and record keeping</b> necessary to develop recommendations for a position or action in response to a specific pest risk. This will ensure that policy makers have the proper information to allocate resources in the event of invasion, incursion or infestation. Encourage regional integration of plant quarantine policy, such as through a Regional Plant Protection Organization, which ensures dialogue on movements of commodities and cooperation to address mutual problems. RISK MANAGEMENT<sup>5</sup></p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>USDA and the USAID Regional Mission have collaborated with ECOWAS to begin this dialogue</li> </ul>	

<sup>4</sup> Recommendations that require GOG buy-in are marked INCENTIVE and should be addressed through a concurrent "incentive program".

<sup>5</sup> It may be that a deep dive with a risk management program will be most effective. Suggestions throughout this document supporting risk management are marked RISK MANAGEMENT.

	<p align="center"><b>A. Short Term</b></p> <p align="center">Current/minimal financial input achieved within 1-2 years</p>	<p align="center"><b>B. Medium Term</b></p> <p align="center">Moderate financial input achieved within 1-3 years</p>	<p align="center"><b>C. Long Term</b></p> <p align="center">Substantial financial input achieved within 1-5 years</p>
<p align="center"><b>Basic System</b></p>	<ul style="list-style-type: none"> <li>▪ Technical guidance to GOG to move “harmonized” forms toward adoption.</li> </ul>	<p>under the AFSTS II phytosanitary border control project. With technical assistance/training, assist the GOG in implementing actions to which they’ve committed at the regional level.</p> <ul style="list-style-type: none"> <li>▪ Meet with NGOs, such as CABI or IITA to define areas of mutual concern and collaboration.</li> <li>▪ Expand basic understanding on pest identification to build upon past training. This will include efforts to improve the ability for inspectors to identify pests and distinguish between quarantine and cosmopolitan pests. As well as the importance of creating working relationships with universities.</li> <li>▪ Technical assistance on how to establish and implement an early warning system, surveillance system and pest monitoring systems within the country at both a general and pest specific levels.</li> <li>▪ Continue to provide basic training on how to establish (and the</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>		interrelationship) of a robust plant health system.	
	<p><b>1A.b Build the capacity of plant health officials to accurately characterize pest risk</b>, such as the ability to conduct pest risk assessments (PRAs), risk-based inspections, pest surveillance, and prepare pest lists. RISK MANAGEMENT</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Trainings on how to incorporate risk in decision making. This would include communication, management of risks. Utilizing risk-based inspection methods for screening passengers/ baggage as well as shipments. Additionally, training would include how to conduct a risk based analysis and assessments.</li> </ul>	<p><b>1B.b Focus SPS policies and regulations on domestic issues and harmonization with international standards.</b> While the government and private sector often work together effectively to overcome SPS issues when exports are at stake, little monitoring of food/feed sold in the domestic market is performed. This is a significant problem to domestic public health and food security. SPS systems that meet international standards will also protect domestic food supplies. This must be done in such a way that limits “red tape” which could drive private entities toward informal trade. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Technical assistance to the GOG to help define how existing regulations for exported goods can be tweaked/ changed to also protect domestic food supplies.</li> <li>Technical assistance related to pest surveillance for products destined to the local market.</li> <li>Guidance on setting up a passenger</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>		<p>inspection system and the continued strengthening of cargo inspection to reduce the risk of entry of exotic pests.</p> <ul style="list-style-type: none"> <li>▪ Guidance on the development of manuals and guides at the regional level and to work towards domestic adoption. This would include border inspection manuals and other tools.</li> </ul>	
	<p><b>1A.c Establish viable relationships and collaboration between GOG’s various agencies and organizations at the airport and seaports.</b> Many government agencies share various jurisdictions at the country’s ports of entry. While there is clear distinction between the various offices, there is strikingly little coordination and collaboration between these offices, despite their goals being aligned.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Education and awareness guidance to various agencies at the airport and</li> </ul>	<p><b>1B.c Establish viable record keeping systems.</b> In addition to human capital investments, in order to effectively perform pest identification and surveillance, plant quarantine divisions require exposure to and the establishment of a “digitized” record keeping system. Such a database is used for interception records of plant pests, an electronic phytosanitary certification system, and to determine regulatory actions. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Ensure that PPRSD has the authority to host a database with interception and surveillance data. The database should be electronic with the ability to track and</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>	seaport about the interrelationships, as well as information sharing as to each agency's dependency on others. This would include NPPO, customs, immigration, security officials, airlines as well as the airport (or seaport) authorities.	analyze data. <ul style="list-style-type: none"> <li>Consider existing models for databases, including ones established by USDA (PIMS), CABI and others.</li> <li>Provide technical guidance to link the stakeholders currently collecting the data (inspectors, plant protection officials, extension, universities, exporters) to begin setting up the system.</li> </ul>	
<b>Intermediate System</b>		<p><b>1B.d Assist in establishing Areas of Low Pest Prevalence (ALPP)/Pest Free Areas (PFAs) where appropriate.</b> PFAs and ALPPs are technical and administrative processes to achieve acceptance of the phytosanitary status of a delimited area. This is outlined in ISPM No. 29 and serves as a powerful tool for addressing pest pressure and establishing the ability to export commodities (e.g. citrus to the EU).</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Technical assistance to learn about pest free areas, their benefits, how to set-up and monitor, etc.</li> </ul>	<p><b>1C.a Support PPRSD efforts to restructure and establish the Ghana Plant Health Authority and help build the capacity of the quarantine office, laboratories, training centers.</b> PPRSD lack of human capacity is endemic, the entire infrastructure of these divisions requires upgrading and investment, particularly in human resource capital. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Technical guidance to the GOG on what authorities/responsibilities fall under a well-functioning NPPO, including a viable risk management and surveillance systems. Discussion on</li> </ul>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Intermediate System</b>			<p>importance and need of quarantine systems and spaces.</p> <ul style="list-style-type: none"> <li>▪ Training for PPRSD officers on the entire risk chain - including risk identification, risk inspection, communication, and response.</li> <li>▪ Training for PPRSD inspectors on what to look for and what steps to take when a risk is identified.</li> <li>▪ Training on conducting quarantine treatments and application, including instructions on conducting treatments safely. This will assist in countries' abilities to access US and other markets where treatments are necessary. Will additionally decrease likelihood of pest introduction to own country.</li> <li>▪ Training and technical assistance on utilizing an integrated pest management approach. This would include guidance on what this would entail.</li> </ul>
			<b>1C.b Assist in establishing post-entry</b>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
			<p><b>quarantine (PEQ) centers.</b> Ghana requires a mechanism to conduct PEQ assessments of preparative material. In accordance with ISPM No. 34 this Ghana needs to adopt guidelines for the design and operation PEQ stations for holding imported consignments of plants, mainly plants for planting, in confinement in order to verify whether or not they are infested with quarantine pests.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Analysis of the cost of establishing PEQ centers.</li> <li>▪ Inspector trainings to understand what is/is not quarantinable.</li> <li>▪ Assistance for them to work with other authorities at inspection facilities (such as Airport and Seaport authorities) to ensure adequate space and access is provided to PPRSD’s inspectors and consignments.</li> </ul>

	<p align="center"><b>A. Short Term</b></p> <p align="center">Current/minimal financial input achieved within 1-2 years</p>	<p align="center"><b>B. Medium Term</b></p> <p align="center">Moderate financial input achieved within 1-3 years</p>	<p align="center"><b>C. Long Term</b></p> <p align="center">Substantial financial input achieved within 1-5 years</p>
<p><b>Advanced System</b></p>	<p><b>1A.d Assist Ghana in making its National SPS Committee (NSC) viable.</b> The efficient organization and functioning of NSCs is essential in enabling greater and more productive coordination at all levels of engagement in order to achieve the goals of food security, increased trade and income growth. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Training on the SPS agreement and the various aspects of how the different stakeholders and actors (from across public and private) interact. This will include benefits of the agreement and will focus on both front-line officials as well as management level and at the decision making levels (though, separate to address individuals' job duties).</li> <li>▪ Workshops that educate stakeholders about the</li> </ul>		

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
	<p>benefits of and functioning of the NSC domestically and internationally.</p> <ul style="list-style-type: none"> <li>▪ Training for GOG officials to understand how to effectively participate in bi-annual WTO SPS Committee meetings.</li> <li>▪ Trainings for GOG on inquiry point and notification systems.</li> <li>▪ Guidance on the coordination of SPS issues within Ghana to more effectively represent their positions and issues in international fora.</li> </ul>		

## 5.2 Activity Action Table: Suggestions to address agricultural inputs access and use

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<p><b>2A.a Counterfeit and Poor Quality Products:</b></p> <p>Document the extent of counterfeit and poor quality input products within Ethiopia – building on recent similar efforts in the region. This is essential in order to prioritize interventions.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Stakeholder workshop to outline product counterfeit/quality study to identify representative pesticide, fertilizer, vet drug or other inputs to evaluate.</li> <li>▪ Workshop on mechanisms (looking at global models elsewhere) on how monitoring and enforcement programs are funded.</li> </ul>	<p><b>2B.a Counterfeit and Poor Quality Products:</b></p> <p>Implement pilot inputs monitoring program that targets the highest risk products in the markets.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Workshop to develop sampling and testing program – identifying targeted inputs and sampling/testing design with participating stakeholders, including results packaging and delivery to enforcement agencies.</li> <li>▪ Training for monitoring officials on identifying questionable products and protocols for collection.</li> <li>▪ Training of chemists in national laboratories on how to conduct analysis following protocols that will produce legally defensible results and reports.</li> </ul>	<p><b>2C.a Counterfeit and Poor Quality Products:</b></p> <p>Develop sustainable national monitoring and enforcement program.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Assist GOE in developing legislation that funds monitoring/enforcement work.</li> <li>▪ Assist GOE in establishing national monitoring/enforcement program, including identifying roles and responsibilities of agencies.</li> <li>▪ Assist GOE in piloting full monitoring and enforcement program with technical, legal, and regulatory support.</li> </ul>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
		<ul style="list-style-type: none"> <li>▪ Training of enforcement officials on confiscation protocols of suspect products.</li> <li>▪ Public education campaign, through retailers and the media, on the importance of using authentic inputs, and how to recognize counterfeits.</li> </ul>	
<b>Basic System</b>	<p><b>2A.b Proper Use of Inputs:</b></p> <p>Develop and/or strengthen pest/disease identification and soil nutrient needs, in the context of pest/disease control and soil improvement. Simple manuals can be developed (or adopted from others) that identifies pests/diseases/deficiencies with listed recommendations.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Exercise to identify key pests and diseases that affect priority crops and livestock.</li> <li>▪ Develop list of currently registered and available</li> </ul>	<p><b>2B.b Proper Use of Inputs:</b></p> <p>Develop (or adopt from others) informational materials to disseminate best input options for crops and livestock.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Develop a mitigation handbook that provides pest/disease/nutrient deficiencies with options for inputs that are low-risk and effective for farmers, agro-input dealers, extension.</li> <li>▪ Training of extension and agro-input dealers on how to utilize and distribute the manual to farmers.</li> <li>▪ Trainings to educate the full value chain on the negative consequences of pesticide misuse, how to monitor</li> </ul>	<p><b>2C.b National Monitoring Programs:</b></p> <p>Develop sustainable national monitoring and enforcement program.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Assist GOE in developing legislation that funds monitoring/enforcement work.</li> <li>▪ Assist GOE in establishing national monitoring/enforcement program, including identifying roles and responsibilities of agencies.</li> <li>▪ Assist GOE in piloting targeted monitoring and enforcement program with technical, legal, and</li> </ul>

	<b>A. Short Term</b>	<b>B. Medium Term</b>	<b>C. Long Term</b>
	Current/minimal financial input achieved within 1-2 years	Moderate financial input achieved within 1-3 years	Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<p>pesticides, veterinary drugs, or fertilizers that are lowest-risk and effective.</p> <ul style="list-style-type: none"> <li>If low-risk and most effective control products are not available, then develop strategies with stakeholders to encourage new registrations of promising inputs.</li> </ul>	<p>for misuse, and remedies to prevent misuse.</p>	<p>regulatory support.</p>
	<p><b>2A.c Pest Control and Fertilizer Availability:</b></p> <p>Review national registration lists of currently available inputs, determine relative risks and benefits (e.g., cost) of these products vs. potential lower-risk and more effective alternatives.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Exercises conducted by pest, disease, and nutrient experts to review currently registered input products, identify alternatives that exist outside of the country, and conduct a</li> </ul>	<p><b>2B.c Pest Control and Fertilizer Availability:</b></p> <p>Conduct risk assessments of currently used inputs, considering farmer/family exposure, and consumer and environmental safety.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Provide training on input risk assessment to regulators, targeting input products identified in previous earlier activities (hazard and exposure). These would include thorough case examples for regulators to work and make risk determinations.</li> </ul>	<p><b>2B.c Establish national pesticide monitoring program.</b></p> <p>It is difficult to prioritize pesticide interventions without scientifically-backed knowledge of the specific pesticide residue levels on domestically consumed products. Ethiopia's FDA has requested assistance in developing a national monitoring plan to determine the extent and levels of pesticide contamination of the food supply.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Guidance on establishing a national monitoring program.</li> </ul>

	<b>A. Short Term</b>	<b>B. Medium Term</b>	<b>C. Long Term</b>
	Current/minimal financial input achieved within 1-2 years	Moderate financial input achieved within 1-3 years	Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<p>pricing study of the current products vs alternatives.</p> <ul style="list-style-type: none"> <li>Stakeholder workshops to gain real experience from farmers on what products are actually being used and their views on efficacy of those products, identify the priority gaps in product availability, and identify marketability of alternatives.</li> </ul>	<ul style="list-style-type: none"> <li>Series of consultations conducted to cover more risk assessments of inputs one-by-one with regulators and risk assessment experts. The goal will be to determine which input products to prioritize for registration re-evaluation and alternative requests.</li> </ul>	<ul style="list-style-type: none"> <li>Piloting a monitoring program on a few targeted crops throughout the domestic market chain.</li> <li>Training and policy guidance to improve the data required for efficacy and environmental effects trials.</li> </ul>
	<p><b>2A.d National Monitoring Programs:</b></p> <p>It is difficult to prioritize input interventions without scientifically-backed knowledge of the specific residue levels on domestically consumed products. Ethiopia’s FDA equivalent has requested assistance in developing a national monitoring program to determine the extent and levels of residues in the food supply.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Workshop on mechanisms (looking at global models elsewhere) on how residue monitoring and enforcement</li> </ul>	<p><b>2B.d National Monitoring Programs:</b></p> <p>Implement pilot inputs monitoring program that targets the highest risk commodities in the markets.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Workshop to develop sampling and testing program – identifying targeted commodities and sampling/testing design with participating stakeholders, including how to prepare reporting and delivery to enforcement agencies.</li> <li>Training for monitoring officials on</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
	<p>programs are funded, designed, and prioritized.</p> <ul style="list-style-type: none"> <li>Stakeholder workshop to develop a pilot monitoring and enforcement program, identifying priority crops/livestock.</li> </ul>	<p>sampling design and developing protocols for collection.</p> <ul style="list-style-type: none"> <li>Training of technicians in national laboratories on how to conduct analysis following protocols that will produce legally defensible results and reports.</li> <li>Training of enforcement officials on confiscation protocols of unsafe commodities.</li> </ul>	
<b>Intermediate System</b>	<p><b>2A.e Assist the GOE to establish programs to identify pest control needs</b>, identify trade standards gaps, and become more proactive in making newer pesticides available to growers. Such a program will lead to increased yields (less crop damage), increased trade opportunities (less illegal residues on exported products), and a safer domestic food supply. RISK MANAGEMENT INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Convene stakeholder meetings (similar to the</li> </ul>	<p><b>2B.e Develop legislation for control of and strong oversight of pesticide use as well as extension staff training on proper use of pesticides.</b> There is little guidance on the use of pesticides or GAPs at the farm level. Nor is there governance of pesticide suppliers (product control, use, and application training) in Ethiopia. This is a significant gap which has implications not only for food safety, but also farm worker safety and environmental health. Such legislation should support formal stakeholder processes to identify and prioritize pest control as well as establish trade standards. These can be complemented by national programs to develop Codex maximum residue level (MRL)</p>	<p><b>2C.d Pest Control and Fertilizer Availability:</b></p> <p>Removal or modification for allowed uses of the highest risk inputs, and facilitation of new registration incentives and processes.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Consultations with risk managers and industry stakeholders on input product registration strategies that allow better control over products in the market (e.g., limiting the number of products containing the same/similar active ingredients),</li> </ul>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Intermediate System</b>	process in the US) to identify national pest control priorities.	standards. RISK MANAGEMENT INCENTIVE EDUCATION <sup>6</sup>  Activities might include: <ul style="list-style-type: none"> <li>▪ Technical assistance to help the GOE develop self-funding mechanisms so that they can adequately monitor and enforce pesticide product regulations. (For example, Costa Rica imposes a 0.5% tax on pesticide imports or sales which is used to manage pesticides).</li> <li>▪ Develop pesticide application manuals that are appropriate for real-world situations and conditions of Ethiopia, rather than based on unrealistic expectations of farmers.</li> </ul>	and develop timeline and strategies for removing/limiting highest risk products. <ul style="list-style-type: none"> <li>▪ Strengthen national research teams, through training and assisting in actual projects, to coordinate with product manufacturers in generating efficacy and/or residue data to support new registrations and establish trade and national standards.</li> </ul>
	<b>2A.f Educate policy makers regarding the problems of toxic pesticide use and support Ethiopian officials' participation in Codex.</b> The GOE has an opportunity to influence MRLs set for pesticide residues through attendance at Codex forums.		<b>2C.e Strengthen national pesticide research teams to coordinate with pesticide manufacturers in generating residue data to facilitate new registrations and establish trade standards.</b> Registrations cannot be established without a recognized MRL, either in another country

<sup>6</sup> Several recommendations in this document suggest developing educational programs. Do agricultural education/training projects already exist? Could the subject matter marked with EDUCATION be incorporated into these?

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Intermediate System</b>	<p>Delegates should attend on a regular, long-term basis in order to develop effective relationships and deep understandings of technical and political issues. Ethiopia must begin to contribute to the development of standards, not only the adoption of standards. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Conduct pesticide risk assessment in the context of phasing out the highest risk pesticides, identifying lower-risk alternatives, including new active ingredients not currently available.</li> </ul>		<p>or Codex. Many tropical fruits and vegetables do not have MRLs because they aren't grown in developing countries, and hence no Codex either because no data has been generated. Ethiopia has successfully partnered with the US IR4 program to generate such data under a pilot project, and this project needs to be institutionalized in order to further gain access to newer pest control tools.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Annual projects conducted jointly with the Ethiopia study teams and IR4 partners, targeting priority pests/pesticides/crops.</li> </ul>
<b>Advanced System</b>		<p><b>2B.f Develop and/or strengthen agricultural practices.</b> Knowledge of and capacity building in foundational food safety systems is needed at all levels – from farm to processors to national governments to regional communities. Emphasis must be placed on the importance of a solid food safety foundation that includes GAPs, Sanitation Standard Operating Procedures (SSOPs), GMPs and Hazard Analysis Critical Critical</p>	<p><b>2C.g Proper Use of Inputs:</b></p> <p>Develop a plan for input stewardship, including container return/collection, appropriate packaging requirements, agro-input licensing/ training.</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>Stakeholder workshop to identify</li> </ul>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Advanced System</b>		<p>Control Point (HACCP).</p> <p>Activities might include:</p> <p>Trainings in GAPs, Sanitation Standard Operating Procedures (SSOPs), GMPs and Hazard Analysis Critical Critical Control Point (HACCP).</p>	<p>incentives for container return and recycling programs.</p> <ul style="list-style-type: none"> <li>▪ Stakeholder workshops to determine the most effective and appropriate packaging, and develop strategies to incentivize government and industry to adopt such packaging.</li> </ul> <p>Consultation meetings with government and industry to better understand agro-input dealer qualifications and licensing, and develop strategies to strengthen the process through regulations, fee structures, and training programs.</p>

### 5.3 Activity Action Table: Suggestions to improve scientific capacity in Ethiopia

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<b>3A.a Pursue the development of labs with other donors</b> (e.g. the World Bank).	<p><b>3B.a Review and update national SPS policies and regulations</b> in order to provide a solid management base for decision makers and clarify enforcement roles and responsibilities. Strong enforcement mechanisms must be implemented to enforce updated policies. Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Review existing policies in terms of international requirements and identify where strengthening may be needed.</li> <li>▪ Provide technical guidance to help strengthen policies/regulations.</li> <li>▪ Assist in the development of a communication plan and SOPs for new/modified regulations.</li> </ul>	<p><b>3C.a Establish a sustainable lab training program and prioritize laboratory technician salaries in national budgets</b> that can help address the issue of high staff turnover, INCENTIVE EDUCATION</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Integrate universities in the education scheme to build greater capacity for laboratory/diagnostic testing and pest identification outside of the government.</li> <li>▪ Inventory capabilities across the region to determine where expertise lies. Ethiopia does not need to be expert in everything if other expertise exists.</li> </ul>
		<b>3B.b Develop and enforce policies that support the implementation of mechanisms by which public service agencies may retain service fees</b> for the purpose of reinvesting in their facilities and hiring/training staff.	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Basic System</b>		<p>Revenue generated from fees needs to support the service provided. Too often government agencies have no mechanism to provide services within the public sector because the fees for service go back into general funds, thus there is no ability for these agencies to expand and improve services. INCENTIVE Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Perform an assessment that considers lab funding under different mechanisms – e.g. public/private partnerships.</li> </ul>	
		<p><b>3B.c Assist national laboratories to implement consistent diagnostic methodologies</b> that will lead to mutual recognition of test results in the region. RISK MANAGEMENT</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Review diagnostic methodologies across the region to determine consistencies and differences.</li> <li>▪ Convene a stakeholder meeting that brings pertinent individuals to consider what methodologies are most useful and could be</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
		<p>implemented nationally.</p> <ul style="list-style-type: none"> <li>▪ Pursue the implementation of agreed upon diagnostics.</li> </ul>	
<b>Intermediate System</b>		<p><b>3B.d Develop and implement programs to attract and retain talent in the government.</b> Due to high staff turnover, sustainable training programs need to be established, particularly in the case of laboratory expertise. The GOE needs to prioritize laboratory technician salaries in their budget or establish adequate user fee schemes. INCENTIVE EDUCATION Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Review existing training programs to determine if/where appropriate training could be added or individuals included.</li> <li>▪ Review salary structure within scientific organizations to determine what monetary or other incentives could be utilized in retaining staff.</li> </ul>	<p><b>3C.b Development of an East African Reference Laboratory.</b> Support the development on a reference lab in the East Africa region. While Bless Agri Food Laboratory Services maintains reference cultures and support other laboratories in Ethiopia – including government laboratories – its reference cultures are imported from Europe and it does not act as a reference laboratory. Bless is well positioned to develop into a regional reference laboratory, but would need higher-level political support from the government of Ethiopia and from the African Union to do so.</p>
			<p><b>3C.c Develop sustainable training models</b> within national governments, RECs, and the AU. These training models could include</p>

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Advanced System</b>			<p>partnering with universities (particularly lab facilities) and using extension services to reach more recipients and impart critical SPS knowledge such as risk assessments, proper certifications, and use of inputs. EDUCATION Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Identify existing resources that can be used for training, such as distance learning modules.</li> </ul>
			<b>3C.c Support the establishment of some labs for ISO accreditation. INCENTIVE</b>

## 5.4 Activity Action Table: Suggestions for improving transparency

	<b>A. Short Term</b>	<b>B. Medium Term</b>	<b>C. Long Term</b>
	Current/minimal financial input achieved within 1-2 years	Moderate financial input achieved within 1-3 years	Substantial financial input achieved within 1-5 years
<b>Basic System</b>	<p><b>4A.a Perform a mapping exercise to identify relevant policy formulating stakeholders.</b> Inter-Ministerial communication and coordination is a major constraint as well as stakeholder involvement in the policy development process. A mapping exercise could reveal, at a minimum, where the duplication and gaps exist in the current structure and identify tools to get Ethiopia on the path to strong policy development and implementation. This could include literature reviews, interviews, workshops, etc.</p>	<p><b>4B.a Implement suggestions from the previously performed mapping exercise.</b></p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Assist in the development of a cross-agency communication plan (e.g. to include customs).</li> <li>▪ Include non-agricultural border officers in SPS inspection trainings.</li> </ul>	

	<b>A. Short Term</b> Current/minimal financial input achieved within 1-2 years	<b>B. Medium Term</b> Moderate financial input achieved within 1-3 years	<b>C. Long Term</b> Substantial financial input achieved within 1-5 years
<b>Advanced System</b>			<p><b>4C.a Assist Ethiopia in making its National SPS Committee (NSC) viable.</b> The efficient organization and functioning of NSCs is essential in enabling greater and more productive coordination at all levels of engagement in order to achieve the goals of food security, increased trade and income growth. INCENTIVE</p> <p>Activities might include:</p> <ul style="list-style-type: none"> <li>▪ Workshops that educate stakeholders about the benefits of and functioning of the NSC domestically and internationally.</li> <li>▪ Training for GOE officials to understand how to effectively participate in bi-annual WTO SPS Committee meetings.</li> <li>▪ Trainings for GOE on inquiry point and notification systems.</li> </ul>