



Conclusions and Lessons learned from the USDA-FAS Scientific Exchange Program: “Establishing and Harmonizing Sanitary and Phytosanitary Regulatory Regimes across the Eight Regional Economic Communities of the African Union “

KHAITSA, M.L.^{1*} and BAGUMIRE, A.²

¹Mississippi State University, College of Veterinary Medicine, Starkville, MS, USA

²Food Safety Associates, Kampala, Uganda

*Corresponding author: mkhaita@cvm.msstate.edu

ABSTRACT

The concluding paper in this volume ties all the papers together. Two highly experienced co-editors on the USDA-FAS Exchange program – Prof. Khaita and Dr. Bagumire, – distill what they consider the key lessons emerging from the scientific exchange program and their implications for Africa and other regions that may consider implementing similar projects. Drawing on a wealth of experience and evidence, this final paper summarizes key issues to consider, and lessons learned in implementing such projects in sub-Saharan Africa or elsewhere. The USDA Scientific Exchanges Program (SEP) benefitted the USDA's agricultural researchers and SPS scientific personnel as well as SPS experts and agricultural professionals of African member states, RECs and the African Union Commission (AUC). The fellows were empowered by the scientific exchange and on return home, they advocated sound SPS policies to peers, decision-makers, and the public through training and offering a series of workshops. Fellows were able to get certification in skills acquired during their training in the US such as Hazard Analysis and Critical Control Points (HACCP) and Preventive Controls Qualified Individual (PCQI). Other significant achievements for the fellows included publication of peer reviewed papers in a special issue of the African Journal of Rural Development (AFJRD). Challenges experienced include a delay in starting the project due to COVID-19 pandemic, insufficient funding to facilitate implementation of research agendas developed by fellows and faculty mentors from Mississippi State University, and change in administration and policy in the US on use of federal grants. A few MSU faculty could not participate in the reciprocal visits to fellows' home countries in Africa due to unexpected circumstances. Fortunately, other faculty were able to substitute regarding reciprocal visits. Lessons learned include provision of trained staff in international programs and resources to support project inception and implementation. Resources to support fellows' research agendas should be included in the Scientific Exchange Program's budget.

Keywords: Africa, AfCFTA SPS Policy framework, USDA-FAS Scientific Exchange

Cite as: Khaita, M.L. and Bagumire, A. 2025 Conclusions and Lessons learned from the USDA-FAS Scientific Exchange Program: “Establishing and Harmonizing Sanitary and Phytosanitary Regulatory Regimes across the Eight Regional Economic Communities of the African Union. *African Journal of Rural Development* 10 (3):436-441.

RÉSUMÉ

L'article de conclusion de ce volume fait la synthèse de tous les articles. Deux co-éditeurs très expérimentés du programme d'échange USDA-FAS – Prof. Khaitsa et Dr. Bagumire – résument ce qu'ils considèrent comme les enseignements clés issus du programme d'échange scientifique et leurs implications pour l'Afrique et d'autres régions envisageant de mettre en œuvre des projets similaires. S'appuyant sur une grande expérience et des preuves concrètes, cet article final résume les éléments à considérer et les leçons apprises lors de la mise en œuvre de tels projets en Afrique subsaharienne ou ailleurs. Le programme d'échanges scientifiques de l'USDA (SEP) a profité aux chercheurs agricoles et experts SPS de l'USDA, ainsi qu'aux experts SPS et professionnels agricoles des États membres africains, des CER et de la Commission de l'Union africaine (CUA). Les boursiers ont été renforcés par l'échange scientifique et, de retour chez eux, ils ont plaidé pour des politiques SPS solides auprès de leurs pairs, décideurs et du public par le biais de formations et d'une série d'ateliers. Les boursiers ont pu obtenir des certifications dans les compétences acquises lors de leur formation aux États-Unis, telles que l'analyse des dangers et les points critiques pour leur maîtrise (HACCP) et la certification de personnes qualifiées pour les mesures préventives (PCQI). D'autres réalisations importantes comprennent la publication d'articles évalués par des pairs dans un numéro spécial du Journal Africain du Développement Rural (AFJRD). Les défis rencontrés comprennent un retard dans le démarrage du projet en raison de la pandémie de COVID-19, un financement insuffisant pour la mise en œuvre des agendas de recherche développés par les boursiers et les mentors de la Mississippi State University, ainsi que des changements d'administration et de politiques aux États-Unis concernant l'utilisation des subventions fédérales. Quelques enseignants de MSU n'ont pas pu participer aux visites réciproques dans les pays des boursiers en Afrique en raison de circonstances imprévues. Heureusement, d'autres enseignants ont pu les remplacer. Les leçons apprises incluent la nécessité de disposer de personnel formé aux programmes internationaux et de ressources pour soutenir le démarrage et la mise en œuvre du projet. Les ressources pour appuyer les agendas de recherche des boursiers devraient être incluses dans le budget du programme d'échange scientifique.

Mots clés : Afrique, Cadre politique SPS de la ZLECAf, Programme d'échange scientifique USDA-FAS

BACKGROUND

The AU SPS Policy Framework for Africa (2019-2024) lays out a roadmap to maximize the efficiency and effectiveness of SPS systems on the continent to enhance and protect human health and facilitate intra-African agricultural and food trade (AU, 2019). The African Union Commission (AUC), and the United States Department of Agriculture (USDA) Foreign Agricultural Service (FAS) initiated a Scientific Exchange Program (SEP) “Establishing and Harmonizing Sanitary and Phytosanitary Regulatory Regimes Across the Eight Regional Economic Communities of the African Union “. The SEP fellowship was to

support the operationalisation of the African Continental Free Trade Area (AfCFTA) with safe cross border trade of agricultural products among member countries of the AU-RECs. Through representatives from the eight RECs the fellowship used the skills and expertise at Mississippi State University and USDA to build scientific skills and capacity of SPS professional from Africa, increase scientific knowledge, enhance SPS collaborative research and establish networks.

METHODS

The fellowship was implemented through a scientific exchanges program (SEP) led by

USDA's Foreign Agricultural Service, faculty collaboration and mentorship of AU fellows and reciprocal visits by Mississippi State University (MSU) faculty mentors to the fellows' institutions, and countries. This was followed by a conference at the World Food Prize in Des Moines, Iowa, US (October 2024), a meeting of scientific exchanges fellows from Africa, Asia and Latin America with the U.S. Secretary of Agriculture. Furthermore, a series of workshops and other trainings were conducted in Africa (Botswana, The Gambia, Mozambique, Nigeria, Uganda and Zambia), on return home by the AU fellows. This training was also supported by African SPS experts (from Food Safety Associates Limited and Utility Services Limited).

The fellows' selection process was based on their SPS expertise and their interest in establishing and harmonizing SPS regulatory regimes across the eight Regional Economic Communities (RECs) of the African Union (AU) assessed through proposals that were submitted to USDA-FAS. The AU participated in the process of selecting fellows in this scientific exchange program including a one-week workshop held in Gaborone, Botswana in May 2024.

RESULTS

Fellowship's most significant achievements and Lessons Learnt. The collaborative nature of the USDA Scientific Exchange Program (SEP), training and research programs benefited: the AU fellows, their home institutions, and member countries; the U.S. host institutions such as Mississippi State University (MSU), the professors, researchers, and students who engaged with the fellows; and the global agricultural sector by improving agricultural productivity, systems, and processes in partnering nations through the transfer of new science and agricultural technologies. Also, the SEP benefitted the USDA's agricultural researchers and SPS

scientific personnel as well as SPS experts and agricultural professionals of African member states, RECs and the AUC. The AU Sanitary and Phytosanitary (SPS) Policy Framework for Africa (2019-2024) was developed as a guide to accelerate the implementation process of AfCFTA (AU, 2019).

The fellows were empowered by the scientific exchange and on return home, they advocated sound SPS policies to peers, decision-makers, and the public through training and offering a series of workshops. Fellows were able to get certification in skills acquired during their training in the US such as Hazard Analysis and Critical Control Points (HACCP) and Preventive Controls Qualified Individual (PCQI). The MSU faculty mentors' reciprocal visits to Fellows' institutions and countries resulted in building collaborative research networks expected to lead into sustainable partnerships between SPS researchers and stakeholders in Africa and the US.

The project led to development of tools to improve SPS measures implementation. For instance, a tool was developed for "Streamlining Phytosanitary Risk Analysis and Establishing Commodity Based Phytosanitary Certificate Validity Period" in Zambia, led by one of the fellows, (Martin Siazemo). This tool addressed an SPS existing challenge highlighted in the 2019-2024 SPS policy framework for Africa (Annex 7, strategy 1.3). Also, several workshops were successfully conducted in Africa led by fellows on return to Africa. For example, a workshop on "*Capacity Building, Sensitisation and public policy initiatives in Uganda*" (Agonzibwa *et al.*, 2025) aimed at enhancing SPS stakeholders' exposure to and understanding of international SPS standards, the WTO TBT/SPS Agreements, and best practices in regulatory compliance. The workshop brought together government agencies, private sector representatives, academia, and civil society to

discuss Uganda's regulatory framework, institutional matters, and the future of improved SPS implementation.

Key recommendations from the workshop included improving institutional coordination, strengthening stakeholder engagement, and aligning national policies with international trade arrangements for a more competitive and robust trade environment.

Another workshop conducted was “*Promoting Demand-Driven Capacity Building in Agricultural Training Institutions*” in Zambia. The objective of this workshop was to assess the current capacities and extent of collaboration between agricultural training institutions (ATI's), research and extension services in the sanitary and phytosanitary industry in Zambia. Other workshops that were successfully conducted in Africa include: “*Application of Risk Analysis Principles in Food Safety in Africa Using Aflatoxin In Gambian Groundnuts as a Pilot Study*”. This workshop was attended by fellows from The Gambia and Nigeria facilitating establishment of Equivalence and Mutual Recognition as a result of harmonizing protocols for aflatoxin testing in ground nuts and grains in the two countries.

Additional workshops included “*Capacity Building, Sensitisation and public policy initiatives in Uganda*” (Agonzibwa *et al.*, 2025). This workshop aimed at enhancing SPS stakeholders' exposure to and understanding of international SPS standards, the WTO TBT/SPS Agreements, and best practices in regulatory compliance. The workshop brought together government agencies, private sector representatives, academia, and civil society to discuss Uganda's regulatory framework, institutional matters, and the future of improved SPS implementation. Key recommendations from the workshop included improving institutional coordination, strengthening stakeholder engagement, and

aligning national policies with international trade arrangements for a more competitive and robust trade environment. “*Promoting Demand-Driven Capacity Building in Agricultural Training Institutions*” . The objective of this workshop was to assess the current capacities and extent of collaboration between agricultural training institutions (ATI's), research and extension services in the sanitary and phytosanitary industry in Zambia (Himunyanga and Shanmugam Ganapathi, 2025).

The faculty mentors' reciprocal visits to Fellows' institutions and countries resulted in building collaborative research networks that are expected to grow and result in sustainable partnerships between SPS researchers and stakeholders in Africa and the US. For instance, an additional project “*Risk Management in Agricultural Produce: Study on produce exposure to Pesticide residue through structured questionnaire using Beans and sesame seeds in Nigeria as case study*” was awarded by USDA-FAS to the Nigerian National Food and Drug Administration and Control.

Other significant achievements for the fellows included publication of peer reviewed papers on the projects developed during the scientific exchange program in a special issue journal “*African Journal of Rural Development*”. A total of four fellows (from Mozambique, Uganda and Zambia) published papers in the special issue (Agonzibwa *et al.*, 2025; Himunyanga and Shanmugam Ganapathi, 2025; Mendes and Dodds, 2025; Siazemo *et al.* 2025, Agonzibwa and Akinyi, 2025). The special issue journal will facilitate dissemination of information about the USDA-FAS scientific exchange program to a larger audience.

DISCUSSION

Several significant achievements were accomplished as a result of USDA-FAS

scientific exchange program as outlined earlier. However, there were some drawbacks during implementation of the project including a delay in starting the project of up to two years due to COVID-19 pandemic which disrupted international travel. The pandemic also led to a delay in selection of fellows that participated in the scientific exchange. Additionally, there was insufficient funding to facilitate implementation of research agendas jointly developed by fellows and faculty mentors from MSU. Also, there was a delay in processing funds that had been mobilized to support implementation of fellows' research agendas in Africa. As a result some fellows were unable to receive the funding to implement their projects. Also, due to change in administration and policy in the US regarding use of federal grants, the project ended earlier than planned.

A few MSU faculty could not participate in the reciprocal visits to fellows' home countries in Africa due to unexpected circumstances. Fortunately, other faculty were able to serve as substitutes regarding reciprocal visits. Turn over of staff from MSU also impacted the rate of implementation of the project. Additionally, not all 27 fellows selected particularly those from the AU and the RECs were able to participate in all activities planned for the program due to scheduling conflicts.

Lessons learned include provision of trained staff and resources to support project inception and implementation. Resources to support fellows' research agendas should have been included in the project budget. Turn over of project management staff should be minimized to ensure smooth running of the program. Also, staff should be trained and equipped with the relevant skills to implement international projects. The fellows should receive some orientation before traveling to the US and faculty mentors should also be oriented before they travel to Africa. This would improve fellows and faculty cultural exposure

and better understanding of appropriate cultural communication and behaviour under different cultural context.

CONCLUSIONS

The AU SPS fellowship program (8 th August to 4 th November 2023) was a great opportunity to bring together plant health, animal health and food safety experts from the African continent. Through a blended approach of lectures, practicals, one-on-one mentorship and group discussions, the fellows were able to enhance their capacity in the area of SPS that is expected to be replicated in their respective countries. In addition, the fellows had opportunity to meet and interact physically/virtually with federal and state staff of USA in areas SPS and commerce. This will further foster collaboration between the US and Africa. The fellowship contributed to enhancing the efficiency and effectiveness of SPS systems on the continent. This is critical to ensuring that SPS measures applied are intended to protect human, animal, and plant health and life, as well as fostering collaboration amongst the fellows, the countries they serve and the US.

ACKNOWLEDGMENTS

The authors wish to acknowledge support from the AU commission, AU-RECs and member states, all the fellows that participated in the USDA-SEP, Mississippi State University administration and faculty that served in various capacities including as mentors to the fellows. Additionally, we recognize the valuable financial support provided by USDA-FAS to facilitate the Scientific exchange program, and all the resource persons in the US and Africa that shared their expertise to successfully implement the program.

DECLARATION OF CONFLICT OF INTEREST

The authors declare no conflict of interest in this paper

REFERENCES

AfCFTA, 2018. The African Continental Free Trade Area (AfCFTA) Agreement
<https://au.int/en/treaties/agreement-establishing-african-continental-free-trade-area>

AU, 2014. The African Union Agenda 2063. The Africa We Want. Popular version published by the African Union Commission.
https://au.int/Agenda2063/popular_version

2019-2024. African Union Department of Rural Economy and Agriculture.
https://au.int/sites/default/files/documents/40036-ocau_sps_policy_framework_-_full_document.jpg

AU, 2019. The African Union AU. 2019. Sanitary and Phytosanitary (SPS) Policy Framework for Africa