

FERARI PEOPLE

FERTILIZER PRICING

UM6P intern Nnaemeka Odionye is

researching the various fertilizer cost components (financial, transport, handling, storage, etc.) and their effect on the final fertilizer price in Ghana. This will provide policy recommendations on how to make fertilizers available, accessible, and affordable. Through a survey in major agrological regions (Bono, Northern, North East, and Upper West) and fertilizer trade routes (Greater Accra and Ashanti regions), the research investigates all value chain activities and actors to determine various costs associated within each strata of the value chain. Fertilizer price transmission is also being investigated within seven domestic markets (Wenchi, Takoradi, Koforidua, Kasoa, Mankessim, Sekondi, Techiman). Furthermore, the relationship between commercial and subsidized fertilizers is being evaluated to provide empirical evidence for policymakers and stakeholders for appropriate policy interventions. ■

FERTILIZER YIELD RESPONSES OF MAIZE & RICE IN GHANA

UM6P intern Samuel Bua has finished

data collection and cleaning as well as some data analysis. Additional analyses, such as principal component analysis and spatial mapping, will be finalized by the end of June. Preliminary results indicate a higher yield in Semi-Deciduous Forest (SDF) than in Guinea Savanna (GS), a significant response of maize to nitrogen and phosphorous treatments, and a tendency for higher yields with addition of sulfur to NPK. ■

FERARI FOCUS

STAKEHOLDERS UPBEAT ABOUT THE GHANA FERTILIZER PLATFORM

*FERARI conducted field visits and interacted with fertilizer sector stakeholders and value chain actors during May-June 2020. These interactions with over 36 public and private sector stakeholders, comprising farmers, researchers, agro-dealers, fertilizer companies and businesses, policymakers, and regulators across Ghana, revealed overwhelming endorsement of the **Multi-Stakeholder Fertilizer Sector Platform** in Ghana.*

A majority of the stakeholders strongly approve of the platform because they say it is very necessary. They believe it will be able to help identify and address the key fertilizer sector challenges in the country. It will also be a morale booster for those at the grassroots level" too; "a perfect idea", as farmers will learn their rights. The stakeholders embraced the platform, which will offer various perspectives on the fertilizer sector regarding government policies and regulations, production, imports, and international trade, while providing the opportunity for advocacy, lobbying, and dialogue. They believe it will address their needs, ensure abundant fertilizers to meet farmer demand, and help value chain actors access financing. They also indicate that the platform will allow effective negotiation to bring down costs and, ultimately, address the challenges of availability and accessibility of quality fertilizers for farmers. [...CONTINUED ON NEXT PAGE >>](#)



▲ The Multi-Stakeholder Fertilizer Sector Platform will address sector challenges of fertilizer availability and accessibility.

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Stakeholders shared some concerns to effective realization of a sustainable platform. Many exhibited fear that it would lose focus. They suggested that the diverse and conflicting interests of the various stakeholders and value chain actors may affect achievement of the platform's purpose. They were concerned that a lack of commitment to meeting attendance due to time constraints and the representatives' lack of decision-making power could hinder the development of the platform. Funding could be an obstacle, as some stakeholders may have difficulty managing the financial cost of attending meetings. Another hurdle is participants' communication and comprehension capacity (e.g., farmers) regarding the use of terminologies during deliberations and the different levels of understanding. Information-sharing and confidentiality could be a challenge if information is divulged to competitors and the speed of updates is not adequate. In effect, all of these issues could affect debate, consensus, and decision-making, as well as stakeholder participation in the platform.

Nonetheless, the stakeholders were optimistic that the concerns can be addressed by strategies such as: **trust building** through professional information management to ensure no abuse and improved accessibility while focusing on the objectives, in spite of diverse interests; **reaching consensus** through discussion and negotiation before bringing the stakeholders together; **education and sensitization** to minimize conflicts while working to meet the collective goals; **equal distribution of power** to allow effective decision-making by strengthening the democratic process with rules and guidelines; and **stakeholder engagement** in understanding that the platform focuses on fertilizer and not political issues, with clearly defined stakeholder roles and a good management strategy and leadership. ■

PH.D. CANDIDATE SELECTION

A major component of FERARI is research carried out by five Ph.D. candidates on topics

including analytical frameworks for fertilizer recommendations, the effects of fertilization on productivity and nutritional quality of crops, socio-technical fertilizer interventions on farm technology, socio-economic factors enhancing sustainable agricultural intensification, and social differentiation and interdependence in soil fertility systems. These cover a broad spectrum of agronomic, crop physiological, socio-technical, socio-economic, and social sciences and are closely interrelated. Thus, the Ph.D. candidates will closely collaborate, share data and ideas, and work as a team.

For almost all Ph.D. positions, the selection procedure has been completed, and with pride we can state that we are very happy with the outcome: we have a team of enthusiastic, highly qualified, and eager Ph.D. candidates from Ghana and Morocco ready to come to

WILLIAM ADZAWLA'S BASELINE STUDY

William Adzawla, Ph.D., is an economist with IFDC's FERARI program. He has extensive

knowledge in agricultural and climate change economics and the role of agriculture in the growth and development of Ghana. William has published several empirical research works that raised concerns about current measures to improve crop production and how poverty among Ghanaian farming households can be addressed. William will bring new energy to the FERARI program with his critical thinking and analytical skills.

Currently, William is implementing a socio-economic baseline survey. This baseline study seeks to analyze the crop production patterns and marketing of the farmers and further understand current fertilizer use for the production of each crop, farmers' (de)motivations for fertilizer use, food and nutritional security, and the poverty status of farming households in eight regions of Ghana. This will provide indicators for monitoring progress and achievement under the FERARI program and generate ideas for complementary program interventions to accelerate reaching the program's objectives. ■



Wageningen as soon as COVID-19 restrictions permit. Mohammed VI Polytechnic University (UM6P) employs the Ph.D. candidates.

There are initial descriptions for each topic. In line with the Ph.D. training program of Wageningen University, where the candidates will defend their theses, the candidates will expand the current ideas into a scientifically challenging, well-prepared, and feasible research plan. This will occur during a stay at Wageningen at the beginning of their Ph.D. trajectories, in close collaboration with their supervisory teams and in close consultation with FERARI coordinators. As much as possible, their Ph.D. trajectories will run parallel and remain well synchronized. This wonderful opportunity will build a strong team of Ph.D. candidates and create maximum synergy between the topics.

We are very much looking forward to this new phase of the FERARI program and will keep you posted on further progress. ■

FIELD TRIAL & PROTOCOL TRAINING

FERARI has partnered with Ghanaian universities and national research institutes to conduct over 240 on-farm and on-station trials in Ghana. There was a need to synchronize field experiments and to agree on the scientific assumption underlying the field trials. Training was conducted for partners to understand field protocols. Specifically, the training involved methodologies for field establishment and data collection for various parameters. ■

► Protocol training at University for Development Studies, Tamale, Ghana.



COVID-19 RESPONSE



The COVID-19 pandemic has affected the execution of some of the FERARI program activities. We were able to strategize quickly to adapt to and cope with the prevailing circumstances. Before the Government of Ghana announced a restriction on movement on March 22, our team and the IFDC Ghana office had already begun working from home. While we continued working from home, the government lifted the restriction on movement for Accra and Kumasi on April 19, 2020.

We took this opportunity to plan for an earlier scheduled data collection trip with key stakeholders in Ghana's fertilizer value chain. Yakubu, Toyib, and Emeka traveled with Williams to the northern part of Ghana for this process while strictly observing social distancing and hygienic instructions. We met with fertilizer importers, distributors, retailers, farmers, university, and research institutions among others and documented their concerns about the fertilizer value chain and outlook.

Crop experiments are being conducted by universities and research institutions. These activities have continued with only slight delays. Various on-station and on-farm experimental trials have already been planted while the remainder will soon follow.

In surveys to study farmers' experiences with the newly distributed fertilizers containing zinc, Professor Saa Dittoh and his team adjusted their original operational plans due to the pandemic. Districts were assigned to one or two enumerators, who were confined to those districts throughout the data collection period, minimizing their movement. Adequate social distancing between enumerators and respondents was also encouraged.

Thus, the FERARI team in Ghana has been able, with some delays, to conduct most of their activities while adhering to all governmental decrees. ■

FERARI DATA COLLECTION APP & TRAINING

FERARI has developed an app to collect all data from experimental fields on tablets and synchronize the collection from all partners. Key features include real-time data collection on-field and off-field, easy capture of field remarks, field image upload, and a quick overview of data collected. The application has a dashboard where all data collected are compiled for management by the FERARI data and GIS expert. On the dashboard, data can be viewed by category, such as agent, region, treatment information, and crop. The dashboard also allows for export of data into other formats and graphing of results. All partners undertaking field trials have been trained to use the app, which is available as a free download on the FERARI website. ■



▲ Training on use of the FERARI Data Collection App.

▼ Participants at the training on use of the App.



MEETING WITH A MEMBER OF PARLIAMENT

FERARI met with the Honorable Ali Maiga, member of the Parliamentary Select Committee on Agriculture, to discuss his views on agriculture, specifically on fertilizer value chain development and the Ghana Fertilizer Platform.

According to Maiga, the committee is highly interested in:

- ✓ Mass soil testing before fertilizer distribution by the government.
- ✓ Education for farmers on soil chemical and physical properties before fertilizer application.
- ✓ Agricultural census and biometric registration of farmers to improve fertilizer distribution through the Planting for Food and Jobs (PFJ) program.

Maiga suggested the Ghana Fertilizer Platform prioritize distributing fertilizer directly to farmers, addressing fertilizer smuggling, and discussing the Ghana Fertilizer Subsidy Program (with a subsidy level of 50%) as a whole

as well as the mode of payment of the remaining cost of fertilizers by farmers to address sustainability. ■

▼ Toyib Aremu and Yakubu Iddrisu meet with Ali Maiga, member of the Parliamentary Select Committee on Agriculture.



MEETING WITH DISTRICT DIRECTORS OF AGRICULTURE

The FERARI team visited partners and engaged with District Directors of Agriculture in five regions and eight districts to discuss the project and their role as a partner. Their support and participation are of utmost importance to reach the largest number of farmers and other actors. ■

▼ Meeting with the Director of Agriculture in the Savelugu District of Northern region of Ghana.



▼ Meeting with the Director of Agriculture in the Techiman Municipal, Bono Region, Ghana.



PRICE TRANSMISSION IN THE RICE SECTOR

University for Development Studies intern Priscilla Asante continues to study the relationship between marketing of farm produce and farmers' reluctance to invest in fertilizers and other yield-improving inputs. Much progress had been made on the qualitative and quantitative analysis of both primary and secondary data. The total number of respondents for all regions, excluding Greater Accra and Eastern regions, is 430. Due to the COVID-19 pandemic, data collection from those two regions has been stopped but has continued in the Upper East and North East. ■

PERSONAL SURVEY EXPERIENCE

Priscilla Korantemaa Asante, who is working on locally produced rice market linkages and price transmission in Ghana, continued with data collection in the Upper East and North East regions, which were not locked down during the pandemic, while adhering to social distancing and other hygienic measures. Some of the respondents were at first reluctant to provide information about prices, fearing that the researcher was a government official and that government wanted to increase commodity prices. Others were hesitant because data collection for research has not yielded any positive results for them. Factories in particular would not allow photographs, as they stated this had previously led to theft. FERARI has taken note of these concerns and will consider them in the design of future actor engagement. ■



UM6P - GHANA UNIVERSITIES PARTNERSHIP EXPAND BEYOND FERARI



▲ The FERARI international team participating in the Inception Workshop at UM6P, Ben Guerir, in October 2019.

Mohammed VI Polytechnic University (UM6P), a private, not-for-profit land-grant university with a focus on education, research and development, and technology transfer, is a new institution of excellence for undergraduate and postgraduate studies in various scientific disciplines, including industrial management, mining, engineering, agriculture, solar and renewable energy, and entrepreneurship. The university is committed to fostering innovation and offering a cutting-edge world-class education based on applied research and development. In terms of its educational and research approach, UM6P has a demand-driven orientation that focuses on training and educating future generations of researchers, professors, and scientists who will not only contribute to but also lead the development of Africa.

UM6P is currently in discussions with various Ghanaian universities and research institutions in Accra, Kumasi, Tamale, and Cape Coast to build a global and collaborative partnership in fields of mutual interest, including research and infrastructure development in agriculture and related areas. The partnership also aims to enrich the respective educational and research programs and to strengthen and expand cooperation.

The FERARI program catalyzes this process, going beyond fertilizer research and the physicochemical and socioeconomic aspects. The partnership could also extend to other fields of research (crop improvement, soil health, biotechnology), training (co-development of a training program, e-learning, exchange of scientists, professors, and students), and infrastructure development (experimental farms, long-term experimental platform, and soil, water, and plant testing laboratories). ■



▲ The UM6P campus plaza at Ben Guerir.

FERTILIZER VALUE CHAIN STAKEHOLDER ANALYSES



UM6P intern Toyib Aremu completed 36 interviews from 25 groups of stakeholders, which form the basis for his analysis on the Ghana fertilizer value chain. A power-interest grid shows which stakeholder has more power and interest than others. Stakeholders were asked which actors are relevant in addressing particular issues in the value chain. Many actors from the public domain hold much power and interest compared to some private sector actors, who have higher interest yet lower power and influence. A network analysis of how actors are connected reveals who is central in the network, who is most connected to other actors, and who is most linked to other well-connected actors in the value chain. Following the graphical analyses, the interview transcripts must be analyzed to properly compose the discussion. While conducting the interviews, it was clear that stakeholders are aware of the challenges that have been identified, revealing the need to transition to solving these challenges through a multi-stakeholder process. ■

MONITORING THE FERTILIZER SECTOR ENVIRONMENT WITH ENGRAIS, AFO & WAFA

On March 30, 2020, **Inter-Réseaux Développement Rural** published in a special edition of their "Grain de Sel" [grain of salt] magazine, featuring Ghana and its agriculture: **"Ghana, an agricultural exception in West Africa?"**

<http://www.inter-reseaux.org/publications/revue-grain-de-sel/no78-ghana-an-agricultural/?lang=en>



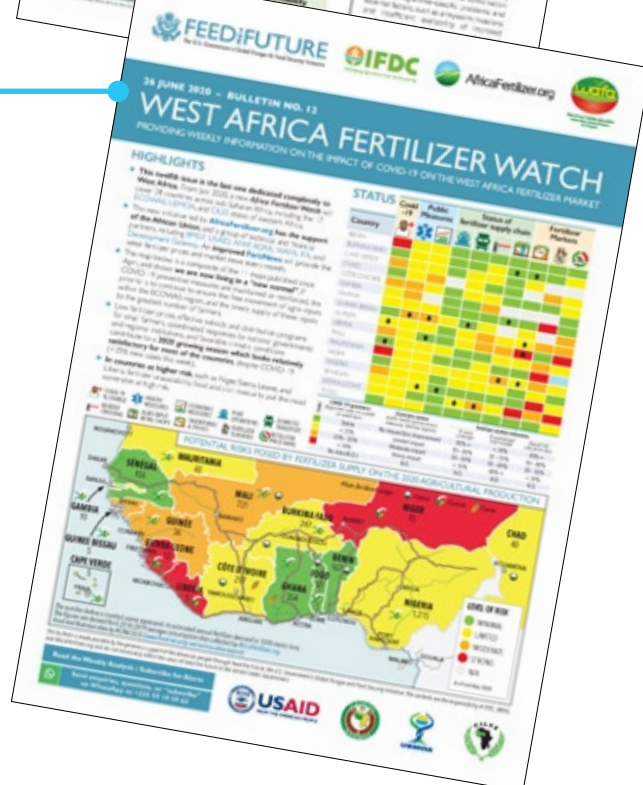
IFDC and the Ministry of Food and Agriculture Crop Service Directorate co-authored an article on **"Ghana: pioneering 'smart' input subsidy programmes"**, highlighting the 13 key principles for smart subsidy programs that forms the backbone of the future ECOWAS directive in this matter, and the progresses made so far by the Government of Ghana to align the PFJ strategy on these principles.

https://www.inter-reseaux.org/IMG/pdf/pages_de_interreseaux-gds-no78_gb-p15-16.pdf



The FERARI and EnGRAIS teams are sharing methodologies, data sources, and a data set to track fertilizer cost, retail price, stock availability at port, warehouses, and retail shops, and logistic elements along the supply chain. The **FertiNews monthly bulletin**, published by **AfricaFertilizer.org** (AFO), is capturing information for Ghana and for five other key fertilizer markets in West Africa.

With the rapid spread of the COVID-19 pandemic, these elements will be used in the **West Africa Fertilizer Watch**, initiated in late March by IFDC, AFO, and the **West African Fertilizer Association (WAFA)**, to provide information on the impact of the disease on the fertilizer market in West Africa. The weekly dashboards and analysis can be found at <https://ifdc.org/2020/04/10/west-africa-fertilizer-watch/>.



FERARI
FERTILIZER RESEARCH & RESPONSIBLE IMPLEMENTATION

IFDC
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