UPCOMING EVENT
JULY 14-17, 2015
TRAINING ON GHANA/ECOWAS FERTILIZER AND SEED REGULATIONS
for media personnel and agricultural officers. Koforidua, Ghana.

NEWSLETTER
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SENEGAL MAKES PROGRESS TOWARDS IMPLEMENTATION OF HARMONIZED REGIONAL FERTILIZER REGULATIONS

In a major boost towards the adoption and enforcement of Regulation C/REG.13/12/12 relating to fertilizer quality control in the ECOWAS region, Senegal has developed complementary country-specific fertilizer supporting regulations during a consultative meeting held in Saly in January 2015. Organized by the USAID West Africa Fertilizer Program (USAID WAFP), the meeting brought together executives of the National Committee on Fertilizer and Soil Fertility of Senegal (Comité National de Réflexion sur les Engrais et la Fertilité des Sols, CNREFS) and USAID WAFP technical experts to draft legal instruments for establishing a sound national fertilizer regulatory system in Senegal. Senegal is the first country in West Africa to benefit from consultative technical support for the development of a complete set of national legal instruments for Senegal that are fully aligned with the larger regional framework.

FRAMEWORK COMPLIANCE

With similar enacted regulations from other ECOWAS countries such as Ghana, Burkina Faso and Mali serving as reference materials, the meeting participants drafted six regulatory instruments which comply with and support the ECOWAS harmonized legal framework. The instruments included:

1. Draft decree establishing quality control of fertilizers distributed in Senegal.
2. Draft order (Arrêté) for setup of a Division to be responsible for enforcing ECOWAS fertilizer legal framework and quality control of fertilizer distributed in Senegal.
3. Draft order relating to the role, organization and functioning of a National Committee for Fertilizer and Soil Fertility (Comité National Engrais et Fertilité des Sols, CNEFS).
4. Draft order relating to conditions and modalities for issuance of licenses for fertilizer importation and distribution.
5. Draft order fixing registration fees for fertilizer importers and distributors.
6. Draft order relating to violations and penalties for infringements on any provision of the regional and national regulations.
The group also developed a 3-month action plan which identifies further stages towards the technical validation and finalization of these implementation instruments including submission of draft legal instruments to the judicial department of the Ministry in charge of Agriculture (MOA) for legal review and the organization of finalization and validation workshop involving all key stakeholders.

The meeting concluded with specific recommendations vital to successful implementation of the ECOWAS fertilizer regulations in Senegal. The recommendations include reassigning responsibility of fertilizer quality control in Senegal from the existing fertilizer subsidy program portfolio to a newly-created division within the MOA to avoid conflicts of interest; appointing fertilizer inspectors and developing a strategy for their deployment; designating a laboratory among existing facilities as the standard facility for official fertilizer samples analysis; and replacing the current CNREFS with a National Committee for Fertilizer and Soil Fertility (CNEFS).

USAID WAFP seeks to promote agricultural enhancing technologies through its Integrated Soil Fertility Management (ISFM) component, and help refine fertilizer recommendations to improve crop response to fertilizer for higher productivity and better returns on farmer investments. USAID WAFP is funded through the generous support of the American people and implemented by IFDC with technical support from the Africa Fertilizer and Agribusiness Partnerships (AFAP).

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**TECHNICAL SUPPORT AND IMPLEMENTATION**

As part of its mandate from the ECOWAS Commission, the International Fertilizer Development Center (IFDC) through USAID WAFP is facilitating the harmonization of national fertilizer regulations – as well as effective implementation of the resulting harmonized regional fertilizer framework – by providing appropriate technical and/or financial assistance to ECOWAS countries, intended to facilitate increased regional trade and use of quality fertilizers across the region.

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“...policies and programs are needed to encourage fertilizer use in ways that are technically efficient, economically rational, and market friendly.”

— “PROMOTING INCREASED FERTILIZER USE IN AFRICA: LESSONS LEARNS AND GOOD PRACTICE GUIDELINES”, WORLD BANK (AFRICA REGION)

Below: MIR+ presentation on their fertilizer survey in Senegal.
A key factor limiting farmer use of fertilizer in West Africa is the lack of recommendations for fertilizers that result in the most profitable yields for farmers. Fertilizer recommendations in most countries are outdated and too general, failing to address location-specific climatic and soil conditions or crop nutrients requirements. Moreover, they are not geared toward the use of most appropriate and cost-effective fertilizer blends such as high-analysis fertilizer. Soil and plant analyses are important keys to identifying nutrient limitations and refining fertilizer recommendations for crops to best increase yields.

Soil analysis from wet chemistry labs (WCL) can deliver accurate soil and plant analytical results, but the turnaround time can be long and no interpretation or recommendation is provided along with the analytical results. Frequent disruptions in electricity and water supply, and the poor quality of reagents are issues confronting some wet chemistry laboratories in SSA. Interest in the use of mobile soil testing kits is growing because of their simple nature which makes them user-friendly by farmers, extension workers and agro input dealers. This is relevant, especially if the soil testing kits would provide meaningful data about fertility and nutrient limitations of soils that would allow appropriate fertilizer formulation for specific soils and crops.

REGIONAL WORKSHOP
To create awareness and to improve rapid and effective on-farm fertilizer decision-making, USAID WAFP and its partners IFDC, AFAP and ECOWAS collaborated with AGRA, CABI, Columbia University, Soil Cares, ENVASERV and SoilCares to organize a two-day regional workshop to review and evaluate the existing available soil testing kits and develop a roadmap for their efficient use in West Africa.

The workshop took place on March 30-31, 2015 in Accra, Ghana. It brought together 50 participants representing the private sector, farmer organizations, research and extension and soil fertility-related development partners from Benin, Burkina Faso, Chad, Ghana, Liberia, Mali, Nigeria, Senegal and Togo. The meeting afforded participants the opportunity to review the principles and functionality of mobile soil test kits and to get hands-on experience operating of some commonly-used test kits, including the SoilDoc, Hach, Hansen, Palintest SK400 and SoilCares test kits.

The workshop further served as a platform to explore future opportunities for a harmonized approach between partners in validating and calibrating the various portable soil test kits and then disseminating them in West Africa. Participants mapped out a business development strategy to promote the effective use of soil test kits in developing fertilizer recommendations. The strategy included information to prepare the private sector to invest in simple systems for blending new fertilizer formulations arising from recommendations based on the use of soil testing kits.

PRESENTATIONS, DEMONSTRATIONS AND GROUP WORK
To set the tone for participant discussion, the workshop provided technical presentations on soil fertility management issues as well as on the composition and functioning of some of the test kits available. Dr Sampson Agyin-Birikorang of IFDC gave an overview of global productive lands and the characteristics of soils and agricultural productivity systems. He included examples of inappropriate soil fertility management, explaining how these result in soil mining. He further explained how soil nutrient replenishment through adequate fertilizer use can be achieved through knowledge of soil fertility and the soil nutrient needs for any given crop.

USAID WAFP’s soil fertility management specialist, Dr Jean Ekwe Dossa, emphasized the need for soil testing to diagnose nutrient

“...increasing fertilizer use per se is not what should be pursued. What really matters is the right type of fertilizer, at the right dose, at the right time, at the right place”.”

– R. VOORTMAN, PARTICIPANT, E-FORUM ON “INCREASING FERTILIZER USE IN AFRICA: WHAT HAVE WE LEARNED?” FINAL MODERATORS’ REPORT, CENTRE FOR DEVELOPMENT AND POVERTY REDUCTION, IMPERIAL COLLEGE, LONDON.
needs and deficiencies and to identify extreme soil conditions impeding plant growth. Dr. Peter Van Erp of SoilCares, Kenya presented his organization’s approach to soil testing, which is based on infrared reflectance and responds to the challenges of classical soil testing approaches (which take time) in reaching out to a large number of farmers in a more timely manner.

Other presenters including Mr. Emmanuel Lamptey of ENVASERV, Dr. Francis Tetteh of the Soil Research Institute of Ghana, Dr. Agyin-Binkorang and Dr. Lydia Gatere of Columbia University, all of whom took turns to educate participants on the nature and operations of mobile soil test kits. These presentations were followed by practical field demonstrations of how to set up and operate soil test kits. Participants gained hands-on experience in undertaking various procedures involved in collecting, measuring and analyzing soil samples, as well as the reading and interpretation of results.

A key component of the workshop was group discussions. These were meant to generate concrete and pragmatic steps to achieve the various objectives of the meeting. Specific objectives included scaling up and promoting the use of mobile soil test kits, and using the test kit results for better decision-making about fertilizer production, supply and use in West Africa. The groups came up with recommendations that were further synthesized into a roadmap for action. The groups also assigned responsibilities to respective stakeholders to assure successful implementation of the roadmap.

RECOMMENDATIONS AND WAY FORWARD
Several key recommendations were made by stakeholders at the workshop in order to achieve the goals of the roadmap:

- IFDC was mandated to coordinate all related activities across key institutions and programs toward validating and promoting soil test kits in West Africa. Focal points will be identified to make an inventory and report on all test kits-related ongoing initiatives in their respective countries and institutions.

- To organize further training around the kits, field testing and validation, which should occur before large-scale promotion. Suitable individuals from each participating country, with the necessary scientific knowledge to sample, analyze and interpret results, are to be trained in best-practices for soil testing, from kit operation and maintenance to making recommendations based on the results and uploading results data to national databases.

- Development of test kit communications materials useful in training farmers and other stakeholders, and available for use as descriptive technical bulletins for broadcast and electronic media.

Finally, the workshop advocated for the need to explore, educate and encourage the private sector to take full advantage of the potential business opportunities that are expected to emerge around the importation, distribution and use of the mobile soil test kits, as well as in the development, production and supply of specific fertilizer blends that respond to the science-based recommendations produced by soil test results.
“This was an excellent opportunity for our company to expand its operations and to get hooked to a reliable source of supply... We are committing ourselves to progressively developing partnership with OCP for (...) specific and recommended NPK formulations for Mali and Senegal.”

– MR. MOUSSA SYLLA, SAB HOLDINGS OF SENEGAL

PRIVATE WEST AFRICA FERTILIZER BUSINESSES ESTABLISH LINKAGES WITH GIANT PRODUCER OCP

Representatives of 11 private fertilizer enterprises from across West Africa paid a 3-day business visit to the Office Chérifien de Phosphates (OCP), the largest producer of phosphorus in the sub-region, with the view to exploring the possibility of new partnerships and networks for the supply and distribution of fertilizers in West Africa.

The tour, organized by USAID WAFP with support from OCP, forms part of USAID WAFP’s efforts to improve levels of fertilizer consumption in Sub-Saharan Africa. The low levels of fertilizer use are partly caused by limited availability resulting from supply constraints – including the absence of effective business linkages and underdeveloped distribution networks. Introducing fertilizer production and blending and distribution companies to OCP, a giant producer of primary raw materials, is an effective path to improving fertilizer supply by facilitating business relationships between important actors in the fertilizer value chain.

EN鼓舞ING BUSINESS OPPORTUNITIES

With a new fertilizer production capacity of one million tons per year targeted at African markets, OCP has a keen interest in developing and creating new partnerships with importers and distributors of fertilizers located in the West African sub-region. The tour created opportunities for company representatives to have exclusive B2B meetings with various officials of OCP to discuss possible business opportunities within the West African market. Participants also visited OCP’s phosphorus production facility in Jorf Lasfar.

Mr. Cherefou Mahatan of MANOMA SA of Niger explained, “this relationship that has just been established between OCP and our respective companies is a very positive one for the future of the fertilizer industry in West Africa. When managed properly, it will help inject efficiency and reliability along the supply chain and subsequently lead to improved availability of relevant fertilizers for our consumers”. He appealed to OCP to grant the possibility of paying for consignments by letters of credit to enable the West African enterprises place orders at the soonest possible time.

POSITIVE RESULTS FOR THE FUTURE

Post-visit follow-ups have revealed that SAB Holding is already at an advanced stage in preparation to order three 40-foot containers of specific NPK blends from OCP in the shortest possible time to start the business partnership between the two companies. This was confirmed to USAID WAFP by SAB’s representative on the trip, Mr. Moussa Sylla. Similarly, Tropic Agro from Burkina Faso has initiated discussions with OCP to commit an amount of US$ 2.5 million for the purchase of 5,000 metric tonnes of DAP meant for onward distribution to wholesalers and retailers in Burkina Faso.

Tour participants visiting an OCP processing facility in Jorf Lasfar.

“...”
INTERNATIONAL FERTILIZER PRICES THROUGH MARCH 2015 (ALL FOB BULK SPOT, USD/MT)

<table>
<thead>
<tr>
<th>FERTILIZER TYPE</th>
<th>APR-14</th>
<th>MAY-14</th>
<th>JUN-14</th>
<th>JUL-14</th>
<th>AUG-14</th>
<th>SEP-14</th>
<th>OCT-14</th>
<th>NOV-14</th>
<th>DEC-14</th>
<th>JAN-15</th>
<th>FEB-15</th>
<th>MAR-15</th>
<th>1 MO</th>
<th>YEAR</th>
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<tbody>
<tr>
<td>N Urea (grilled, Arab Gulf)</td>
<td>352</td>
<td>315</td>
<td>328</td>
<td>342</td>
<td>344</td>
<td>348</td>
<td>318</td>
<td>312</td>
<td>320</td>
<td>334</td>
<td>316</td>
<td>286</td>
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<td>-10%</td>
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<tr>
<td>N Urea (granular, Indonesia/Malaysia)</td>
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<td>299</td>
<td>301</td>
<td>309</td>
<td>333</td>
<td>350</td>
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<td>311</td>
<td>323</td>
<td>309</td>
<td>285</td>
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<td>-2%</td>
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<td>N Ammonium Sulfate (Black Sea)</td>
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<td>115</td>
<td>114</td>
<td>122</td>
<td>148</td>
<td>154</td>
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<td>148</td>
<td>150</td>
<td>153</td>
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<td>24%</td>
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<td>N Ammonia (Yuzhny)</td>
<td>510</td>
<td>499</td>
<td>463</td>
<td>451</td>
<td>470</td>
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<td>588</td>
<td>596</td>
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<td>426</td>
<td>405</td>
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<td>P DAP (Baltic/Black Sea)</td>
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<td>458</td>
<td>496</td>
<td>513</td>
<td>506</td>
<td>491</td>
<td>473</td>
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<td>488</td>
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<td>P MAP (Morocco)</td>
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<td>K MOP (Israel)</td>
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<td>298</td>
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<tr>
<td>K SOP (in €, North-West Europe)</td>
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<td>435</td>
<td>465</td>
<td>465</td>
<td>465</td>
<td>471</td>
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<td>NPK 16-16-16 (FSU)</td>
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<td>350</td>
<td>359</td>
<td>365</td>
<td>366</td>
<td>367</td>
<td>365</td>
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<td>363</td>
<td>360</td>
<td>-1%</td>
<td>4%</td>
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FERTILIZER RECOMMENDATIONS FOR RICE IN SELECTED WEST AFRICAN COUNTRIES

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>BENIN</th>
<th>BURKINA PASO 1</th>
<th>BURKINA PASO 2</th>
<th>GHANA</th>
<th>MALI 1</th>
<th>MALI 2</th>
<th>NIGERIA 1</th>
<th>NIGERIA 2</th>
<th>SENEGAL</th>
<th>TOGO</th>
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<tbody>
<tr>
<td>Source</td>
<td>CRA-CF CrPA</td>
<td>INERA</td>
<td>INERA</td>
<td>SARI</td>
<td>IER</td>
<td>IER</td>
<td>FFD</td>
<td>FFD</td>
<td>Direction de l’Agriculture</td>
<td>ITRA</td>
</tr>
<tr>
<td>Agro-ecological Zone</td>
<td>Country-wide</td>
<td>Irrigated/ raining campaign</td>
<td>Country-wide</td>
<td>Irrigated/ raining campaign</td>
<td>Country-wide</td>
<td>Rice area</td>
<td>Sahel, Sudan, Savanna, Northern Guinea</td>
<td>Savanna, Southern Guinea, forest</td>
<td>Country-wide</td>
<td>Country-wide</td>
</tr>
<tr>
<td>Application rate (kg/ha)</td>
<td>200</td>
<td>300</td>
<td>300</td>
<td>400</td>
<td>100</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Time/mode of application</td>
<td>Dressing</td>
<td>Dressing</td>
<td>Dressing</td>
<td>2 weeks and 5 weeks after planting</td>
<td>Planting</td>
<td>Planting</td>
<td>Planting</td>
<td>Planting</td>
<td>Dressing</td>
<td></td>
</tr>
<tr>
<td>Fertilizer 2</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
<td>Urea</td>
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<tr>
<td>Application rate (kg/ha)</td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>125</td>
<td>100</td>
<td>-</td>
<td>75</td>
<td>75</td>
<td>100</td>
<td>50</td>
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<tr>
<td>Time/mode of application</td>
<td>Top Dressing</td>
<td>Dressing</td>
<td>Top Dressing</td>
<td>5 weeks after PD</td>
<td>Top Dressing</td>
<td>-</td>
<td>Dressing</td>
<td>Dressing</td>
<td>Dressing</td>
<td>Top Dressing</td>
</tr>
</tbody>
</table>

"...fertilizer is not a complete solution. Great progress can be made by helping smallholders increase their understanding of – and capacity to operate within – the marketplace of ideas, technologies, and commodities.”

– MICHAEL B. WALLACE, WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT, "INORGANIC FERTILIZER USE IN AFRICA: ENVIRONMENTAL AND ECONOMIC DIMENSIONS"