

Regulatory Decision Making for Pesticides in Africa and the Middle East

Hazard based or risk based?



Vision, Mission and Values

Vision:

Working together for sustainable agriculture.

Mission Statement:

As a global network we act as an ambassador for the plant science industry, encouraging understanding and dialogue whilst promoting sound science and agricultural technology in the context of sustainable development.

Values and Beliefs:

Respect:

- Respect the views and values of others and act with honesty, humility and humanity.
- Seek the respect of others for our values and beliefs.

Openness:

- Communication is a fundamental priority in all our activities.
- We will act with openness in all our dealings with stakeholders and actively engage in dialogue, exchanging opinions and facts, in order to increase society's understanding of our industry and our understanding of society.

Commitment:

- We are committed to serve our members and stakeholders operating to the highest possible standards of professionalism ensuring the effective and prudent management of our resources.

Technology:

- We believe in the benefits that technology brings to human development and progress, and to sustainable agriculture.
- We believe in the complementary and synergistic nature of technologies developed and offered by the plant science industry.
- We believe in science as the engine of innovation and the core principle of regulatory decision-making.

Sustainability:

- We are committed to promoting full and effective stewardship (the responsible and ethical management of a plant protection or biotechnology product throughout its life cycle) to the field level, and recognize that the appropriate management and use of our products is an important element underpinning sustainable agriculture.
- We will strive to work together with others to achieve a proper balance between all dimensions/pillars of sustainable development.
- We will strive to maintain a healthy, ethical and viable business environment for the plant science industry.



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Message from the President and the Director General

Dear Reader

The regulatory framework for pesticides has always been a high priority for our association. In particular, the vision of **harmonized regulatory schemes at the sub regional level** has been a key priority ever since CropLife Africa Middle East was established in 2002.

Our association's most recent effort in the support of regulatory schemes has been the presentation and discussion of the "**Principles of Regulations**", a set of good governance principles that are in place in many countries globally. These principles, if implemented properly, will prepare the foundation of well functioning regulatory schemes at country level. Through a carefully conducted "**Gap Analysis**" process current regulatory schemes were discussed in detail and rated jointly with regulatory authorities in the Africa Middle East region. One of the identified gaps is the **lack of local risk / benefit assessment** when approving, restricting or banning pesticides. It was found that regulatory authorities often do not have the resources nor the required expertise to conduct a country specific risk assessment, a risk assessment that would cover possible local risks that may be related to the use of a certain pesticide, but to also consider and weigh up the benefits that such pesticides bring to local farmers, to the local agricultural system and to the national economy as a whole. It was a general conclusion from these Gap Analysis workshops that there is a need for capacity building on risk assessment in most of the countries in Africa Middle East. **CropLife will therefore offer special risk assessment training starting as early as 2016.**

In parallel to the described longer term efforts to promote these "Principles of Regulations" for improving the regulatory framework for pesticides in the Africa Middle East region, some **global regulatory policy issues** have emerged. These are the issue of **Highly Hazardous Pesticides (HHPs)**, the issue of **Endocrine Disrupting Chemicals (EDCs)** and the issue of **Pollinator Health**, targeting primarily the neonicotinoid group of insecticides. Another major policy issue followed with the **classification of glyphosate and other pesticides by the International Agency for Research on Cancer (IARC) as possible carcinogens**. IARC is an independent agency set up under the umbrella of the World Health Organization (WHO), a fact that gives this body high credibility in the public debate. Several country governments, not only in Africa, reacted to this IARC classification by imposing use or sales restrictions for glyphosate. A few months later, IARC published their next report stating that **red and processed meats** are equally likely to **cause cancer, similar to the earlier rated pesticides**. In this context, it may be worthwhile to remember that a few years ago, the same **IARC** concluded and **published that** among others, **mobile cell phones and coffee were also probable cancer inducing agents**. Since its creation, **IARC has analysed close to 500** substances and agents and **found that only one would not induce cancer**. This result supports other findings by reputable toxicologists that found that about half of all natural and synthetic substances on our planet will induce cancer in respective animal feeding studies depending on the dosage and time exposure.

Challenged with the fact of totally **contradictory findings by both, the Environmental Protection Agency (EPA) in the US and by the European Food Safety Agency (EFSA)** who concluded that the normal use of these products according to the approved labels are safe to operators, the environment, and to consumers, **IARC then added a statement on their website saying that their assessment and rating did not take into consideration the real exposure and practical risks resulting from the use of glyphosate in agriculture but was purely basing their judgement on the possible hazard.**

However, in the ongoing public debate, this important difference is simply overlooked and it is probably too difficult to communicate and explain the difference between hazard and risk to the public and consumers at large. The **century old wisdom published by the Swiss scientist Paracelsus back in 1538**: „Alle Dinge sind Gift, und nichts ist ohne Gift; allein die dosis macht, daß ein Ding kein Gift sei“ (**Anything is poison and nothing is without poison; only the dosage makes it that a thing is not poison**) seems to become irrelevant in our today's world. Instead, even **competent authorities**, in developed world countries and fully aware of the important difference between hazard and risk, **move towards a Zero Risk political decision making process when it comes to pesticides.**

The same regulating bodies and also those consumers asking for a ban on glyphosate and pesticides based on their potential hazard, continue to allow the use of cell phones, drink coffee and eat red and processed meats even if these exposures in our daily lives present a far bigger risk to induce cancer than the occasionally observed minute traces of some well researched pesticide residues on our daily diet. **For pesticides, the demand is for a Zero risk approach** and this should not only be done in developed countries that could potentially afford to live on the basis of less productive and more expensive organic farming systems, but should be applied **globally**. The call for the restriction and progressive banning and elimination of HHPs, EDCs will continue, and specifically target pesticides.

As an industry, **we cannot support** the popular demands of **judging pesticides purely on their hazardous** properties and not consider the real exposure and risk resulting from their responsible use. Even less so, we cannot support the demand by many representatives from the rich and wealthy North – where all have full stomachs and spend a minimal share of their income on food – that such politically driven Zero Risk Approaches should also be implemented in the developing world countries.

Our industry supports the careful assessment of the risks and benefits for all pesticides including the “so called HHPs” on a case-by-case basis. If stewardship and responsible use training efforts prove to be insufficient to mitigate potential risks to operators, consumers and the environment, our member companies support the restriction of such uses and even the phase out of such products. **We strongly advocate that such decisions must be taken by responsible national governments that are in the best position to carefully weigh up the risks against the benefits of the continued use of pesticides** including the “so called HHPs”. In our view, it is critically important that the interests of local agricultural systems are taken into consideration before any decisions on banning are taken.

On behalf of CropLife Africa Middle East, we would like to thank all our stakeholders for their support during 2015. We look forward to working together in 2016 and beyond.

Yours sincerely,



Eric Bureau
President of the Board



Rudolf Guyer
Director General

Key Data and Hub Structure

CropLife Africa Middle East A.I.S.B.L. represents the Plant Science Industry in the countries of Africa and the Middle East. The Plant Science Industry includes manufacturers and distributors of crop protection products (pesticides), seeds and biotechnology products.

At the end of 2015 the association consisted of 11 company members, 24 national associations, and 1 professional organization engaged in the promotion of biotechnology solutions for the African continent.

CropLife Africa Middle East was registered as an international non-profit organization in Brussels in November 2002. The association is legally fully independent but maintains a strong link with the global CropLife network.

In order to achieve the highest impact at country and sub regional levels, a decentralized hub structure has been established:

- North Africa Middle East covering all the countries belonging to the Arab League. The Director General Rudolf Guyer also acts as Regional Coordinator for this hub and obtains needed support from the Vice President and Hub Chair, Michel Chartouni.
- West and Central Africa is managed by Yao Bama, Regional Director based in Abidjan, Cote d'Ivoire. This sub region again follows respective political groupings where sub regional regulatory harmonization and alignment is envisaged.
- East and Southern Africa is managed by Les Hillowitz, Regional Director based in Johannesburg, South Africa.
- Advocacy on regulatory matters in the region is managed by Stella Simiyu Wafukho, Director Regulatory Affairs and Stakeholder Relations, based in Nairobi, Kenya.

It is our association's mission and objective to motivate and engage with as many partners and stakeholders as possible to help in the promotion and development of state of the art technological solutions needed for productive and sustainable agricultural systems in Africa and the Middle East. Despite the fact that the membership of multinational companies in national associations is rather limited across the region, it is the ambition of our association to convince and motivate all local members to observe and implement the same international standards and apply all stewardship measures and activities as defined by the International Code of Conduct on Pesticide Management to which all members of the CropLife network are committed.



National CropLife associations and the sub regional hubs

Our company members are:

- Arysta LifeScience
- BASF
- Bayer CropScience
- Dow AgroSciences
- DuPont
- FMC
- Monsanto
- Sipcam Oxon
- Sumitomo
- Syngenta

Regulating Pesticides: Changing Times & Consumer Tastes

Throughout the past year, the association was focused on the four emerging and critical policy issues that could impact negatively on the regulation of crop protection products in the world over and specifically in the Africa and Middle East region. These policy issues included Endocrine Disrupting Chemicals (EDCs), Highly Hazardous Pesticides (HHPs), pollinator health, in particular honey bees and the implications of the International Agency for Research on Cancer (IARC) published monographs.

The discussions on emerging policy issues has been pegged on three competing arguments. First, the method(s) of assessment, second, the characterization and third the purely public perceptions. It is worth noting that pesticides are products highly subjected to rigorous scientific assessment prior to introduction into the market. They belong to a category of products that are heavily investigated and regulated before a sales permit is issued. This aspect is fully supported and complied with by association members in order to establish a legal base to introduce and sell new products, while ensuring that human and environmental health is safeguarded.

Traditionally the assessment of safety has been the preoccupation of science experts drawn from universities, research institutes and regulatory authorities in different jurisdictions, respectively. Often in these processes, both hazard and risk assessment are approaches that are used. The difference between these terms has however caused considerable confusion, sometimes used mistakenly and interchangeably. But indeed 'risk' and 'hazard' are fundamentally different. Anything that can cause harm represents a hazard, whereas risk describes the chance of harm being done – in terms of both the likelihood of harm, and the extent of that harm.

Defined in more scientific terms as adapted from the World Health Organization's International Programme on Chemical Safety in 2004, hazard refers to the inherent property of an agent or situation having the **potential** to cause adverse effects when an organism, system, or (sub) population is exposed to that agent, therefore hazard assessment is a process designed to determine the possible adverse effects of an agent or situation to which an organism, system, or (sub) population could be exposed. Risk on the other hand is the **probability** of an adverse effect in an organism, system, or (sub) population caused under specified circumstances by exposure to an agent. Risk assessment process is therefore intended to calculate or estimate the probability of the harm to a given target organism, system, or (sub) population, following exposure to a particular agent, taking into account the inherent characteristics of the agent of concern as well as the characteristics of the specific target system. This will also include the identification of attendant uncertainties.

Throughout the year therefore, the association called upon stakeholders and regulatory authorities to consider risk based approaches in regulating crop protection products in their respective regions of West and Central Africa, East and Southern Africa as well as North Africa and the Middle East. This ensures that farmers continue to have access to the tools they need to increase crop productivity.

Increasingly the association saw the characterization of especially Endocrine Disrupting Chemicals (EDCs) and Highly Hazardous Pesticides (HHPs) on the basis of hazard assessment. Different stakeholders continued to hold divergent views, with most of their definitions glorifying the hazard approach and stopping at that instead of going the full risk assessment route. Part of the confusion is the difference between Endocrine Active Substances and Endocrine Disrupting Substances. An Endocrine Active Substance is a substance that can interact with an endocrine system to cause responses that may or may not give rise to adverse effects while Endocrine Disrupting Substances refer to exogenous substances or mixtures that alter function(s) of the endocrine system and consequently causes **adverse** health effects in an intact organism, or its progeny, or (sub) populations.

Characterization of Hazard & Risk

A further challenge relating to characterization of hazard and risk that was faced during the year was the global public debate triggered by the release of the IARC monographs laced with calls to ban several pesticides. As a matter of fact, several government officials reacted to this by imposing restrictions and bans. All this happened even amidst IARC's acknowledgement that its work can be misleading and its clarification stating that "*The IARC Monographs Programme evaluates cancer hazards but not the risks associated with exposure*". These decisions, one would conclude, have been attributed to the misunderstanding of the evaluation and especially the differences between hazard and risk.

This leads us to the last issue of perception. Often public perception and acceptance of food produced using crop protection products is related to their respective value attributes. This has resulted in an emergence of a strong consumer and public interest on the decisions covering pesticide registrations and how pesticides are used in agriculture, rendering in some cases, the decisions of approving a pesticide for its use against certain pests and diseases as a political rather than a scientific one.

In other instances, associated with the debates on pollinators in the EU, US and Canada, we experienced a negative influence in our region, especially the EU's suspension of neonicotinoids which was largely seen as a ban. By and large, the issue has been politicized and hopefully the EU's call for more data may result in a review of the earlier decision.

For the region, the influence of global consumer groups, who may be viewing matters from a privileged position may, at times not provide the right balance for increasing the need for quality food amidst the shortages and the need to survive in a highly competitive global food market. Our region, Africa and the Middle East, remains one that is devastated by intense drought cycles, pest and disease attacks on crop production, a situation that requires solutions through science whilst balancing the changing consumer perceptions and regulatory decisions around emerging policy issues.

$$\text{RISK} = f(\text{HAZARD} \times \text{EXPOSURE})$$



Participants at the NAME Hub & Regulatory Meeting held in Cairo in October 2015

Explaining these differences remains the industry's focus during hub and regional meetings' deliberations with the various stakeholders on the need to stick to the risk assessment approach as a basis to regulate pesticides. This takes into account the huge amount of information available on the substances such as exposure, dosage and potency. This is in line with the Paracelsus' principle, the father of toxicology, that "the dose makes the poison": a product or substance only produces a harmful effect when its dose exceeds a living being's ability to cope with it. This was expressed in industry's participation, among other stakeholders, earlier in the year, in the European Union's public consultation process that is about establishing criteria to define endocrine-disrupting properties. Although the process of the assessment is not finalized, the implications to the agri food value chain remain a key concern for the association. Moreover, other regulatory authorities have different views including the fact that this is not a new area of regulation, leaving our region on the receiving end as Europe remains a key destination market for export agricultural commodities.



President & SAICM Secretariat – Photo by IISD during ICCM4 28 September – 2 October 2015

Additionally, the industry saw the insistence on using hazard based approaches rather than risk based approaches in the definition and management of Highly Hazardous Pesticides (HHPs) and the monographs released by the International Agency for Research on Cancer (IARC), the specialized cancer agency of the World Health Organization (WHO), in March and June respectively, of great concern. The characterization of HHPs remains divergent among stakeholders, with some exalting hazard assessment. Throughout the year, CropLife International spearheaded a continued commitment of members and other partners to identify, assess and mitigate risks from pesticides that meet the criteria for HHPs set out in the International Code of Conduct on Pesticide Management and building capacity in risk assessment.

Deliberations on EDs and HHPs reached a climax during the Fourth International Conference on Chemicals Management (ICCM 4) held in Geneva in September. There was a call for the restriction and phasing out of HHPs, of course based on the hazard criteria. However, the resolutions reached by the conference included the support of the concerted action on HHPs, welcoming of the FAO/WHO proposed strategy, encouragement of stakeholders in strengthening regulatory capacity to conduct risk assessment and risk management, among others. On EDs, consideration was given to the needs of developing countries and countries with economies in transition to cope with endocrine-disrupting chemicals throughout their complete lifecycle. The conference also welcomed the key objective of awareness-raising and information sharing on issues related to endocrine-disrupting chemicals and called for continued actions by all stakeholders to attain the objectives of the Strategic Approach to International Chemicals Management (SAICM).

Stewardship: “From Individual to Community”

Quoting from the CropLife International document, Vision 2020, Stewardship is often described as the life-cycle approach to product management. It is the ethical way to manage crop protection products from their discovery and development, to their use and final disposal of any waste and phase out.

CropLife International and its member companies and associations are committed to promoting effective stewardship in and away from the field, and believe that the appropriate management and use of our products helps underpin sustainable agriculture and safeguards the environment and public health.

As a refresher, CropLife’s Stewardship guidance document addresses the pillars of IPM / Responsible Use, Container Management, Obsolete Stocks, Upholding the International Code of Conduct on Pesticide Management and Resistance Management. CropLife Africa Middle East has found that the Spray Service Provider concept (SSP) is an excellent tool with which to address these 5 pillars. During the past year several donor agencies realized the benefits that the concept brings with it and are partnering with us. An important breakthrough was the signing of an agreement late in the year with SNV, the Netherlands Development Organization covering the IPM component of their Horti-Life project in Ethiopia aimed at reaching in excess of 30,000 smallholder farmers.

The move by CropLife Africa Middle East this past year to introduce IPM into the SSP projects already in place in countries such as Ghana, Cote d’Ivoire, Nigeria and Zambia has certainly raised the IPM agenda as the over-riding strategy that includes responsible use of crop protection products as an essential tool in its implementation.

Another highlight during the year was the CropLife Container Management Project Team meeting with “Mature Programs” and “African Programs” which took place in Cape Town, South Africa. Within CropLife Africa Middle East we currently have one mature and 9 pilot programs in place, and all ten countries presented at this intervention. Two additional pilot projects are expected to be added in the coming year.



*Meeting of the global Container Management Project Team in Cape Town
Participants visiting a collection site*

What's new on the SSP program?

In 2015, the Spray Service Provider (SSP) concept was taken to another level with the introduction of Integrated Pest Management (IPM) training for SSPs. So far, approximately 520 SSPs in Côte d'Ivoire, Ghana, Nigeria, Kenya, Uganda, Egypt, Malawi and Zambia have followed a special 2-day course on IPM.



IPM training for SSPs in Zambia

The target group for the training program were SSPs who received their initial SSP training more than 2 years ago and are still actively selling their services. It was reasoned that this group has sufficient experience to understand the benefits of the IPM concept and to be able to apply the knowledge acquired during the training program.

CropLife Africa Middle East developed an IPM-training course for SSPs which is an adaption of the IPM course that was created a few years ago by CropLife International. The IPM SSP course is highly practical and participants learn about pest control and pest management, the IPM circle, and IPM strategies on specific crops such as mirids/capsids, stem borers, and black pod on cocoa farms. All sessions take place on a farm to enable participants to take what they have learned and put this into practice during exercises.

The SSPs were enthusiastic to learn about the basic principles of IPM. They soon realized that they were already implementing some of the topics discussed but were not really aware of the importance in managing pests. As participants, they already had the experience in the application of pesticides, so it was easier for the trainers to transfer the new insights and skills on IPM.

The activities were made possible through a grant from the Stewardship Steering Committee of CropLife International. In 2016, the four country associations plan to rollout the training to those SSPs who were not trained in 2015.

Celebrating a decade plus in Partnerships

CropLife Africa Middle East has over the years embraced partnerships as an approach to the effective implementation of stewardship activities in the region. One such collaboration is now thirteen years and going strong, this is with the International Fertilizer Development Center (IFDC). In this report we highlight what Mr. Raphael Vogelsperger, Deputy Chief-of-Party of the Toward Sustainable Clusters in Agribusiness through Learning in Entrepreneurship (2SCALE) project of IFDC had to say about this partnership. He was involved from the inception in what would turn out to be not only one of the most fruitful partnerships, but also the first that CropLife Africa Middle East had with a development organization. Manon Dohmen interviewed Raphael Vogelsperger.



Raphael Vogelsperger, partner and key driver in establishing the long term cooperation between IFDC and CropLife Africa Middle East

Raphael clearly sees the advantages of a strong partnership between CropLife Africa Middle East (AME) and IFDC. He explains: *"Both IFDC and CropLife AME contribute to food and nutrition security in sub-Saharan Africa, but alone we could never achieve this. We need to build partnerships. IFDC has a unique expertise in sound crop nutrient technology and in linking smallholder farmers to input and output markets. On the other hand, CropLife AME represents a network of national associations and companies that are innovative in the crop protection area. CropLife AME and IFDC have complementary expertise and capacities that can be reinforced through collaboration."*

The collaboration between IFDC and CropLife AME in West Africa started in August 2003, just one month after Raphael joined IFDC. He remembers: *"From my previous jobs in the crop protection industry, I already knew of CropLife AME. When I met Bama Yao (Regional Director of West and Central Africa for CropLife AME) at the IFDC office in Lomé in 2003 during a meeting, we were able to quickly identify areas for possible collaboration. At IFDC, I was in charge of the agro-input private sector under the Dutch-funded Marketing Inputs Regionally (MIR) project. Together with Bama Yao we proposed to collaborate on training agro input-dealers in the responsible use of pesticides, and on the strengthening of national CropLife and other input-related associations."*

Signing of the initial MoU between IFDC and CropLife Africa Middle East



Yves Demeure and Rob Groot in 2004 in Bamako

The meeting in Lomé did not remain simply as promises on future collaboration, as both Bama and Raphael actively encouraged their respective organizations towards a formal partnership. The result was the signing of a 5-year Memorandum of Understanding (MoU) in April 2004 in Bamako by Yves Demeure, Chairman of CropLife West and Central Africa hub, and Rob Groot, Director IFDC Africa. The first combined activity of CropLife and IFDC was the facilitation of the Training-of-Trainers (ToT) program in "training and facilitation skills" for field staff of member companies. The training coordinator of CropLife, Peter Mills, did not speak French, and because of the common interest to strengthen the capacity of importers and distributors, IFDC agreed to facilitate the ToT programs in Francophone countries. The ToTs were facilitated by Raphael and his colleague Manon Mireille Dohmen, who at that time worked as a training coordinator for IFDC (and who since 2010 became the training coordinator of CropLife Africa Middle East).



Manon Dohmen and Raphael Vogelsperger facilitating an early ToT in Mali on Safe Use

Raphael notes: "Manon and I facilitated dozens of ToTs in West Africa and also in Madagascar, Morocco and Tunisia. I translated the ToT manual into French and together we developed a ToT follow-up program. Manon developed a manual for association management and together with Bama, we organized programs in organizational strengthening for national CropLife associations of Côte d'Ivoire, Ghana, Mali, Nigeria and Senegal."

Renewal of the long term MoU in 2009



Marjatta Eilitta, Rudolf Guyer and Bama Yao in 2009 in Accra

Over the years, through the IFDC projects MIR (2003-2008) and then MIR Plus (2009-2013), the collaboration broadened to support regional economic communities UEMOA and ECOWAS, in collaboration with CILSS, to develop harmonized regional policies and regulations governing crop protection products. On June 03 2009, a new MoU was signed for a further five years. In that same year, IFDC together with CropLife AME developed the training manual, Product Knowledge & Marketing of Agri-Inputs, which is still widely used by both organizations when training agro dealers.

At the moment, CropLife AME and IFDC mainly collaborate in setting up Spray Service Provider (SSP) programs with specific IFDC projects such as the 2SCALE project in Ethiopia, Ghana, and Nigeria; and the Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability (CATALIST) project in Uganda. Raphael was personally involved in activities in Ghana where the SSP concept was introduced with 2SCALE in mangoes, pineapples, and soybeans.

Raphael is clearly enthusiastic about the SSP concept:

"The SSP concept is an innovative approach to promote responsible use of crop protection products in sub-Saharan Africa. For several decades the private sector and donor-funded projects trained hundreds of thousands of individual farmers, with limited results in my view, at least in West Africa. The misuse of products and also the application of non-registered or adulterated products, are still very common practices in the region, putting farmers, consumers and the environment at risk. Even nowadays most Ghanaian consumers do not consume locally produced vegetables for fear of chemical residues, and similar reactions are observed in other West African countries. The SSP concept offers a solution through an approach that recognizes that applying pesticides requires specific qualifications and is better handled by certified professionals than by smallholder farmers. It also creates jobs for youth in rural communities."

According to Raphael, the SSP concept fits in very well with the 2SCALE activities: *"By creating jobs for young men in rural communities, and by professionalizing crop protection, the SSP concept contributes to form competitive agribusiness clusters. It's also a private business-driven approach that is well aligned with the 2SCALE approach to inclusive agribusiness. Moreover, the SSP concept is interesting from a gender perspective: SSPs can be mobilized by women farmers who must not spray pesticides, but still need to use herbicides on their plots to reduce the time-consuming burden of hand weeding, or using fungicides and insecticides to prevent crop damage."*



Training session on Application Equipment for SSPs in Ghana

Just as with earlier joint activities, the collaboration between CropLife AME and the 2SCALE project is very smooth. As Raphael says: *"I particularly enjoy collaborating with CropLife AME, as 2SCALE believes that business-driven initiatives, like the SSP concept, are key to improving the competitiveness of supply chains and spurring the integration of smallholder farmers into these chains. With CropLife AME, we are learning by doing, not afraid to adjust plans on-the-go, and I really appreciate such flexibility and focus on results."*

Of course there is always room for improvement. During the implementation of activities in Ghana, CropLife AME, together with the 2SCALE team, saw that a good selection of farmers to become SSPs is crucial and that time should be spent on the selection procedure. Therefore, in the projects that will be implemented in Ethiopia and Nigeria this year, the selection of SSPs is indicated as a separate activity. Raphael also would like to see more financial commitment from member companies of the national CropLife associations: *"CropLife member companies are expected to benefit from increased sales through SSPs, and thus could co-invest more in SSP schemes. When they co-invest we can reach more farmers."*

Raphael foresees a continuous collaboration between IFDC and CropLife AME and has some ideas on how this collaboration might look: *"IFDC and CropLife AME may want to think about how they could go beyond punctual collaboration under specific programs, to improve access to quality agro-inputs for smallholder farmers and help them use these inputs in an efficient and safe way. The collaboration between IFDC and CropLife AME has been very fruitful since this started in 2003, and it is a natural one. While they have complementary areas of expertise, both organizations seek to contribute to meet the caloric and nutritional needs of the growing population, in a sustainable way. At IFDC and CropLife AME, we speak the same language."*



International Fertilizer Development Centre (IFDC) is a public international organization that was established in 1974 and is known for its expertise in fertilizers that service developing countries. IFDC has focused on increasing and sustaining food security and agricultural productivity in over 100 developing countries through the development and transfer of effective and environmentally sound crop nutrient technology and agribusiness expertise. At the moment, IFDC is active in 19 African countries. (www.ifdc.org).

2SCALE is a Public-Private Partnership intervention funded by the Dutch ministry of Foreign Affairs, designed as an incubator for inclusive agribusiness, active in 10 countries in sub-Saharan Africa. It supports international and local agri-food companies in overcoming barriers to creating profitable business models and strategies that also create value for smallholder farmers, small rural enterprises and poor consumers. 2SCALE does so by linking selected lead firms in target agricultural value chains to smallholder farmers and rural entrepreneurs organized in competitive agribusiness clusters.

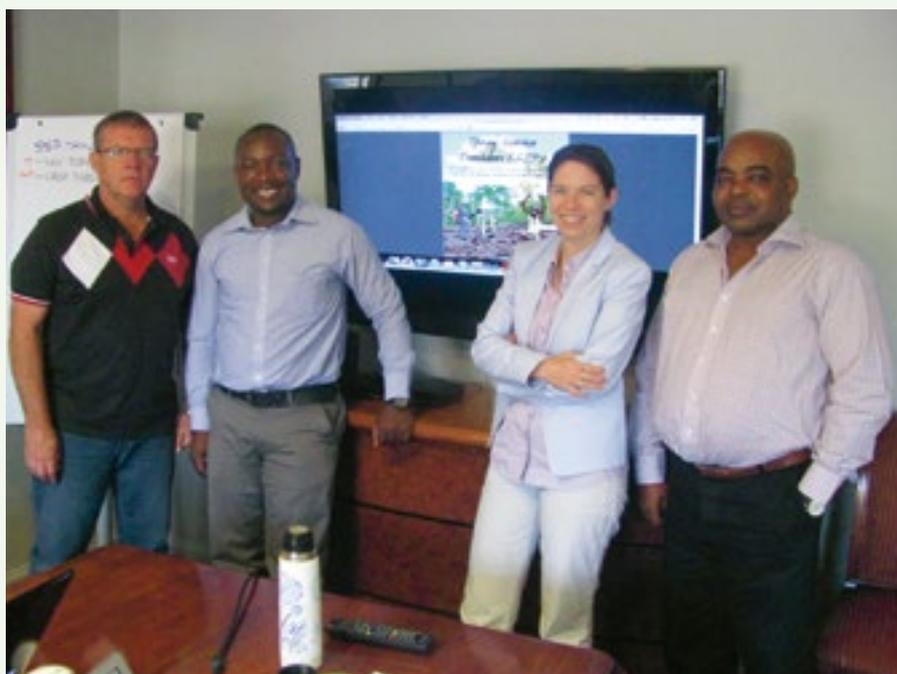
Association Management: Growing, Learning, Sharing and Leading

CropLife national associations in Africa and the Middle East are steadily growing in their role of representing the plant science industry and implementing activities that increase the visibility of the entire network. At the moment, CropLife Africa Middle East has 24 registered national associations. In 2015, several programs were organized to build the capacity of these associations, especially in project management.

One of the main activities in 2015 was the development of a set of Standard Operating Procedures (SOP) for the implementation of Spray Service Provider (SSP) programs. Due to the fact that more and more national associations are taking on the management of SSP projects and with CropLife Africa Middle East wanting to guarantee the quality of these programs, it was decided to develop a document that outlines all procedures and formats to be followed during a SSP program. The document was presented in November 2015 when 12 national associations met in Cape Town. Comments were provided with the aim that the document could be finalized during 2016.

CropLife Africa Middle East assisted CropLife Ethiopia in setting up projects with the Netherlands Development Organization (SNV) and the International Fertilizer Development Centre (IFDC), and in the recruitment of a new staff member. Several meetings were organized with the Executive Council of CropLife Ethiopia to discuss all the steps in the process of project management. In Zambia, a meeting was organized with the Executive Council to discuss project management.

Employees of CropLife Ghana and Nigeria were mainly supported with reporting and accounting expertise, and a few face-to-face sessions were organized to review the formats and requirements of CropLife Africa Middle East when managing a project. CropLife Uganda was also supported with reporting and accounting coaching. In Nigeria several meetings were organized with potential partner organizations to discuss new projects, which resulted in 2 agreements materializing.



Herman Louw, CropLife Namibia, Perry Ngoma, CropLife Zambia, Manon Dohmen and Tom Mabesa, CropLife South Africa discussing The updating of SSP manuals

Intellectual Property Rights & Anti-Counterfeiting: Gaining Ground



Officials from Customs, Police & the Pesticide Inspectorate during training in identification of counterfeit and illegal pesticides, Ivory Coast September 2015

Tackling counterfeit and illegal pesticides is essential to the safeguarding of innovation, investment in stewardship and regulatory initiatives by the CropLife network. Good ground was gained in this regard during 2015 with the focus on sensitization, awareness creation and capacity building for key stakeholders. This was to provide a foundation for sustainable solutions and for efficacy of the anti-counterfeiting operations.

Training workshops were organized in the key countries to provide both knowledge and tools to involved stakeholders to identify illegal pesticides on, or entering markets. Enforcement authorities and security agents, including customs officials, the police and pesticide inspectors could then conduct seizure operations. The organization of special workshops and seminars and the support of third party activities such as agricultural fairs and programs organized by Interpol, USAID and the World Customs Organization were very successful.

These events provided opportunities at both country and regional levels to discuss the issue and propose adequate solutions for the fight against counterfeiting and the illegal trade of pesticides. The two Anti-counterfeiting flagship programs being implemented in Egypt and Kenya were on the forefront and highlighted the strong engagement of CropLife Africa Middle East to combat these criminal activities. Other important programs were undertaken in Cote d'Ivoire, Ghana, Uganda, and Zambia.

Key messages

- One of the gaps identified in the "Gap Analysis" process (see Editorial) was the **inadequate protection and enforcement of Intellectual Property Rights** (IPR with patent and trademark rights, Confidential Business Information (CBI) and Data Protection). The **weak IPR protection** in Africa and the Middle East is the **main reason why multinational companies delay the introduction of patent protected and modern solutions** to the African market. **IPR legislation is now progressing**
- Legal frameworks related to the trade of pesticides are being improved
- Illegal trade involves organized criminal groups thereby requiring crossborder investigations and cooperation among public agencies and the private sector
- Health and environmental threats associated with illegal pesticides
- Need for cooperation among law enforcement agencies, customs, regulatory authorities, private sector partners including trade associations and other institutions, for the storage and possible destruction of hazardous materials.

Plant Biotechnology in Africa: Embracing the Challenges

The first generation of plant biotech products in Africa have been localized adaptations of technologies that are commercially available in other regions of the world. In contrast, the second generation of biotech products that will be introduced in coming years will provide traits to important African staple crops and will have been jointly developed by national research institutions in Africa. Over the past year, the African research community continued to gain valuable experience in plant biotech research and development, and product development through collaborations with private and public sector counterparts around the world. The combination of first and second generation biotech products developed internationally, locally, and through public-private partnerships will provide African farmers with a wide breadth of sustainable agricultural tools which will help increase productivity and improve farmer livelihoods and communities. Cameroon, Ghana, and Malawi moved closer to commercializing biotech cotton as it continued field trials of the insect-tolerant variety in 2015. Kenya's National Biosafety Authority continued to consider the commercial approval of a biotech insect-resistant variety developed through the Water Efficient Maize for Africa (WEMA) Program. This variety, combining biotech insect-resistance and conventional drought-tolerance traits, was developed cooperatively by local and international researchers and will help farmers cope with a wide range of growing challenges.

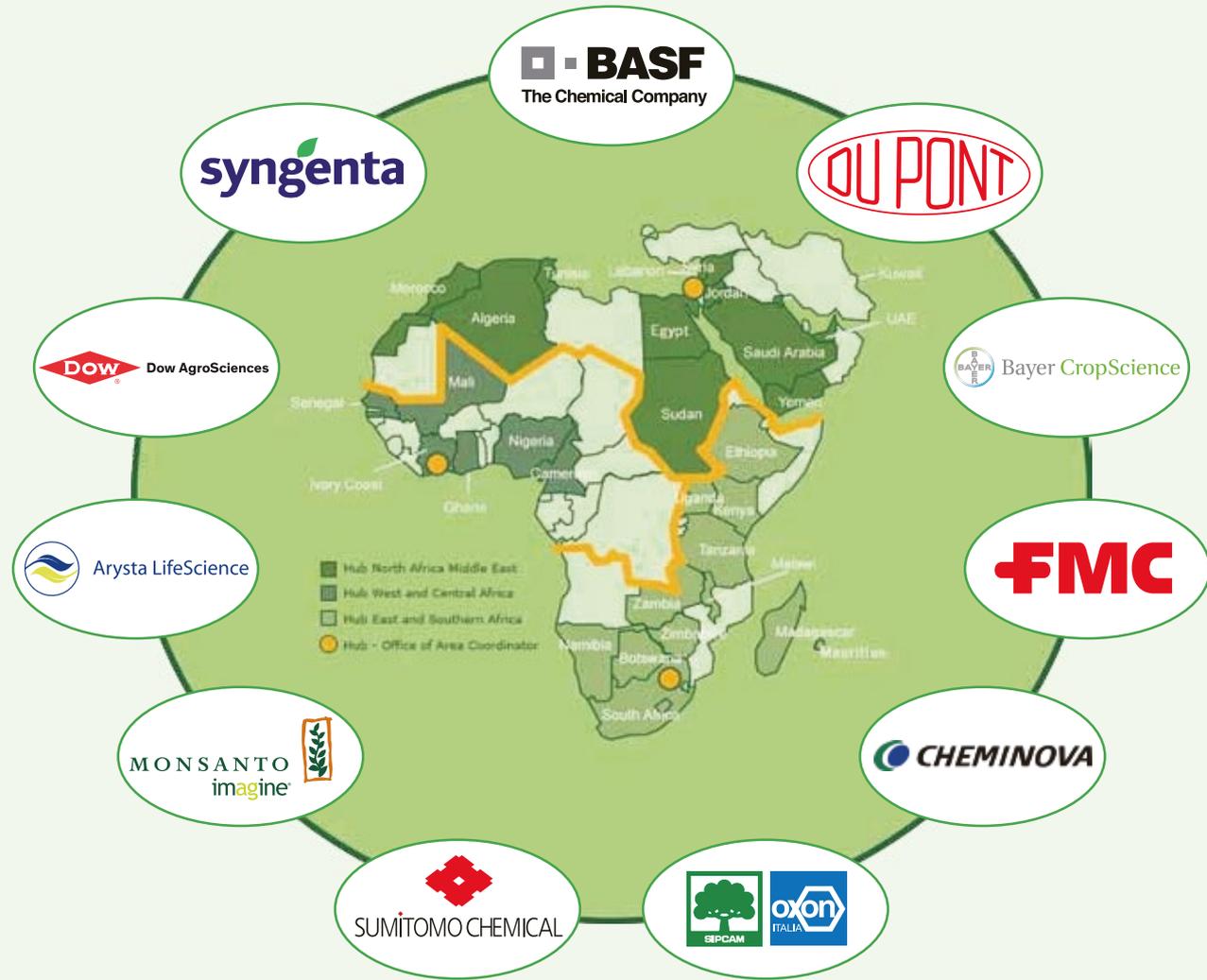
Research into African staple food crops continued in both West and East Africa. In West Africa, field trials and efficacy tests showed that insect-resistant biotech cowpea is highly effective at controlling the extremely destructive *Maruca Vitrata* insect, which, if uncontrolled, can reduce production by up to 80 percent. Public sector technology developers believe this insect-resistant variety could be in the hands of farmers in Burkina Faso, Ghana, and Nigeria in the next three to four years. Public-private research initiatives in East Africa have focused on developing disease-resistant and biofortified biotech varieties of cassava and banana, both food staples for some of the most marginalized and food-insecure farmers in the region. Both crops have been plagued by persistent diseases, including cassava brown streak and bacterial wilt in both cassava and bananas. East African research teams have conducted field trials of virus-resistant varieties of cassava and bananas with favorable results.



Single cowpea plant yield for a farmer's variety and two biotech varieties under heavy insect pressure in Burkina Faso. Photo credit: TJ Higgins, Commonwealth Scientific and Industrial Research Organisation (CSIRO)

During the **World Food Day celebration** at the National Agricultural Research Organization's Zonal Agricultural Research and Development Institute in Rwebitaba, Kabarole district, Uganda on October 16, 2015, The President of Uganda, H.E. Yoweri Museveni, asked Members of Uganda's Parliament (MPS) to „modernize their thinking“ towards new scientific innovations and technologies, including modern biotechnology. In his speech, he also asked Members of Parliament to approve passage of the National Biotechnology and Biosafety Bill to enable scientists to release their research products to farmers for testing. He went on to say that scientists should not be „frustrated“ but rather allowed to innovate so that they contribute to helping rural communities to become resilient to negative effects of climate change and to produce more food for their families and for the country.

Three African countries continued to grow biotech crops in 2015 – Burkina Faso, South Africa & Sudan – while Cameroon, Ghana, and Malawi continued field trials of insect-resistant biotech cotton, and even more countries engaged in research on biotech varieties of African staple food crops.



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