



Stewardship

Ethiopia workshop reviewed SSP pilot project

On 28 January 2019, 35 representatives of stakeholders met in Bishoftiu to conduct a national assessment of the Spray Service Provider (SSP) Pilot Project.

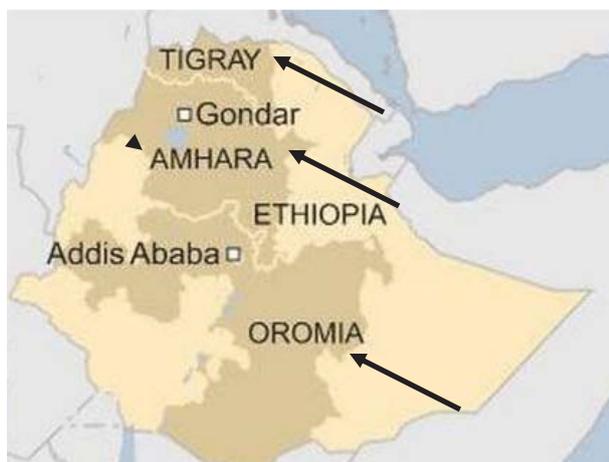
The project is supported by Feed the Future Ethiopia Value Chain Activity and implemented by CropLife focusing on maize and chickpeas.

The national workshop followed a series of three regional workshops conducted earlier in Tigray, Amhara and Oromia. Participants included trained SSPs, representatives from the Ministry of Agriculture, national regional and woreda representatives, the USAID office in Addis, other development organizations and the private sector together with local member companies and staff from the regional and national CropLife association.

In several highly interactive sessions and group work, lessons learned and ideas on how to improve a possible continuation of the project were discussed and will be considered in the final project report.

Rudolf Guyer

Ian Chesterman, Chief of Party of the FtFE VCA addressing the workshop participants.



Stewardship



Aklilu Asfaw Project Lead from CropLife Ethiopia presenting the M&E results

Faith Bartz, USAID, Addis office and Rudolf Guyer, CropLife Africa Middle East



Group picture of the FtFE VCA and the CropLife team after the Partnership Project Review Meeting



Stewardship

Fall Armyworm Training in West Africa

From the time it was first confirmed in Africa in 2016, Fall Armyworm (*Spodoptera frugiperda*) has and continues to cause ongoing damage to a variety of crops specifically maize. Annually it can destroy 20% to 50% of yields. The pest has now been confirmed in India and more recently in China and other parts of Asia.

A strategic approach to FAW management includes expert trainer of trainers being established in the relevant core African countries. With the support of CropLife International a pilot program was developed and the process kicked-off in West Africa the week of 11 February, covering the countries of Cote d'Ivoire, Ghana, Mali and Nigeria.

Based on the outcome of this intervention a second training is planned for later in the year to cover East & Southern Africa and to possibly include representatives from India and may be even China. The training was based on an IPM approach and on proven technologies.

The 3-day event included a field visit at which participants could see firsthand the devastation that this pest can cause.

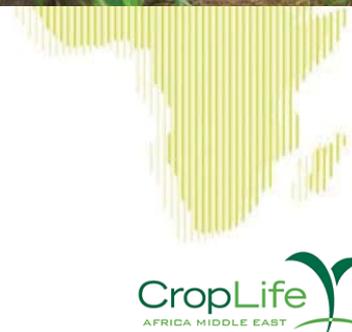
We were extremely fortunate in having Desiree van Heerden of Syngenta as the lead trainer who demonstrated the ability of preparing and coaching the trainers and moving them to a new level. Her efforts were ably supported by Victor Attuquaye Clottey of CABI, who focused on "ways of working".

The final session of the workshop was facilitated by Manon Dohmen, and covered the development of a Concept Note by the four countries in how they plan to rollout this training to CropLife members.

Les Hillowitz



Desiree van Heerden leading the field visit



Stewardship



Above: An example of the maize plants observed



Victor Attuquaye Clotey, CABI Regional Coordinator, West Africa



Group Photo



Stewardship

New SSP Initiative in Kenya

On Friday 22nd February 2019, CropLife Kenya (CLK) with stakeholders gathered at the Eka Hotel Nairobi, to launch its latest Spray Service Provider Project. The project which is a joint partnership between CLK and the USAID funded Kenya Crop and Dairy Market Systems Development (KCDMSD) project aims at developing and deploying 800 Spray Service Providers in 10 counties of Kenya. The initiative will see a 100% increase in the number of SSP's operating in Kenya. This being that 819 SSPs have already been trained since the start of the concept in the country in 2014/2015. In attendance at the launch were partners from CLK member companies, representatives from the KCDMSD Secretariat as well as delegations from horticulture export companies and cereal producers.

The project targets on reaching approximately 32,000 farmers through service provision and indirectly through outreach programs associated with this. This partnership shows the confidence that the agricultural sector players in Kenya have placed in the SSP concept for the application of pesticides and incorporation of IPM principles in smallholder farming systems. During the design phase, lessons learned from earlier projects were considered and systems put in place to overcome these inadequacies.

A key shift from the norm, is the inclusion of SSPs who are in the dairy value chain for ectoparasite management. It was felt that it was important to include farmers in dairy production since this is an all year-round activity and farmers spray acaricides regularly. This market segment is bound to offer enhanced opportunities for the SSPs. In addition, the dairy farmers are also likely to be crop farmers and will therefore be aptly served.

200 Agro-dealers at grassroots level are to be recruited, trained and accredited. The agro-dealer outlets will host the SSP(s) in their respective areas and their staff will mentor SSPs in terms of product knowledge and diagnosis. Having been accredited, the selected agro-dealers are expected to stock genuine products and thereby strengthening the supply chain by eliminating counterfeits. In partnership with the SSP's and CLK member companies, the agro-dealers will set up demonstration plots for the learning and sharing with both groups.

To create awareness of the SSPs among the farming/dairy communities, a series of events are lined up. These will include caravan road shows, market storms, farmer field days, radio adverts and individual marketing by the SSP's.

Some preliminary activities have already commenced such as reaching out to County Agricultural stakeholders and the identification of producer groups from which the SSP's will be recruited. The County governments are a key stakeholder and they have already subscribed to the project and offered their support in rolling this out. Being a value chain driven project, producer groups will form a strong pillar if the target of reaching 32000 farmers is to be reached. The SSP selection criteria has been shared with them to develop a shortlist of candidates they feel would serve them well.

Environmental considerations are a key component of the project and to this end, a network of container management centres will be set up alongside the SSP and producer group networks. It is anticipated that over 5 tons of empty containers will be retrieved by the end of the long rain season once the centres are set up. Training on triple rinsing and the responsible disposal of waste will be incorporated into the farmer trainings that are part of the project.

Benson Ngigi



Mr. George Odingo- Head of Productivity at KCDMSD



(L-R) Ms. Lusenaka, Mr. Amuyunzu and Mr. Karanja follow proceedings at the launch



Above: Ms. Esther Wambua launching the SSP project on behalf of the Permanent Secretary, Ministry of Agriculture

Below: Participants at the meeting



Stewardship



Above: Participants in Kapchorwa

Below: Participants in Mbale



CropLife Uganda Partners in IFDC-REACH Project

CropLife Uganda in partnership with the IFDC-REACH project and Uganda Breweries Limited selected and trained 15 Spray Service Providers in barley from 11 -16 February 2019 in the districts of Kween and Kapchorwa. The Spray Service Providers were trained by CropLife Uganda member companies to provide application services at a fee for farmers working under the Uganda Breweries Limited umbrella. The project also equipped the 15 Spray Service Providers (SSPs') with Identity cards, record keeping ledgers, knapsack sprayers and personal protective equipment, to kick-start the application services to farmers in the Kapchorwa and Kween districts.

On 21 and 22 February, CropLife Uganda also provided a refresher course to 20 Spray Service Providers to introduce them to barley focusing on pest and disease management, and control. These Spray Service Providers, in both the Kapchorwa and Mbale districts were established under the USAID-Feed the Future project in 2016. They were also trained by CropLife member companies in Integrated Pest Management (IPM) in 2018 with the support of the IFDC-REACH Project.

Betty Atto



SSPs' assembling their knapsack sprayers.

Fully equipped SSPs' during the graduation ceremony for participants from Kween and Kapchorwa on 16 February 2019



Stewardship

CropLife Kenya steps in to empower county Agro-dealer Associations

Agro-dealers are a key component of the pesticide supply chain in Kenya. They are the last link before products reach the end user. Most farmers rely on their advice on how to manage pests and diseases and such recommendations are highly regarded by the farmers. Agro-dealers are regulated by the Pest Control Products Board (PCPB) which issues licenses to allow them to operate. Various organizations have in the past made attempts at uniting the agro-dealers for streamlining operations and giving them a voice in the industry. Success at achieving this objective has however been elusive.

CropLife Kenya has over the years partnered with the PCPB in various activities targeting agro-dealers. Some of the outreach programs include trainings for staff of agrovets, accreditation programs for owners of agrovets and most recently the strengthening of regional agro-dealer associations.

In November 2018, CLK identified 16 agro-dealer associations that were operational in the country and embarked on a mission to enhance their capacity at the County level. Earlier in the year CropLife Kenya amended its constitution to accommodate agro-dealer associations as affiliate members.

In February 2019, CLK took the step of meeting regional associations from Western Kenya for the purpose of coming up with a concrete plan for the expansion and strengthening of the associations. A sequence of meetings was convened with the following agenda;

- Device a strategy for the enhanced recruitment of agro-dealers into the associations
- Identify training gaps that can be met by CLK and its partners.
- Plan for joint activities that could enhance the visibility of the associations among their respective farming communities
- Self-regulation, accreditation and the fight against counterfeits.
- Membership into CLK as affiliate members.
- Improvement of the business environment

At the end of the meetings, all the associations committed to embark on a recruitment drive for new members. It was agreed that they each form chapters for their respective County associations to ensure that coverage was enhanced and recruitment decentralized. A target for the upgrading of membership to over 70% of registered agrovets was set compared to the current 18%-24%. Training on accreditation and responsible handling of pesticides was identified as a priority especially for new entrants and this has been scheduled for May/June 2019 when their shops are less busy.

To enhance the visibility of the agro-dealer associations, a series of business to business (B2B) meetings in the 4 counties was arranged in partnership with CLK member companies, USAID, PCPB and County Governments. The meetings are set to run from 27 February to 7 March 2019. The meetings are intended to showcase products and technologies and develop new networks for some of the fledgling agrovets. The meetings are to be used as a forum for recruitment into the agro-dealer associations.

All the county associations showed willingness to join CLK as affiliate members but requested a period of time to organize their ranks. A target date of 2020 was set for them to have applied for membership to CLK. Other areas of discussion were on how to influence policy to deter the sale of farm inputs in undesignated places such as open-air markets, the formation of a Savings and Credit Cooperative that would offer soft loans to members and lobby their respective county governments on the setting up of smart farm input subsidy initiatives for farmers.

Benson Ngigi



Regulatory Advocacy

Emergency Registration of Pesticides in CropLife Africa Middle Region

Introduction

Many countries in Africa and Middle East have established an emergency registration process for authorizing pesticides to control critical pest outbreaks, or sudden plant disease epidemics when registered products do not provide sufficient control. Implementation of emergency pesticide regulations vary from one country to another, however, there are some common factors across countries. This are highlighted in the foregoing.

Common factors across countries

A well defined plant health emergency situation

A pest outbreak is characterized under the emergency registration process if a new pest invades a new geographical area; if the existing pests pressure increases significantly and products with sufficient efficacy for pest control (e.g. due to resistance) are lacking; and/or different application methods should be used due to sudden changes in abiotic factors. More generally, a plant health situation may require an emergency authorization if the threat/control balance breaks, food production is at an imminent risk and solutions exist, but they are not yet authorized. The dossier for such applications intended for the emergency situations usually includes documented evidence on why the situation should be classified as an emergency.

Stakeholder Sponsorship and support

Stakeholders affected by the pest outbreak are sometimes expected to submit letters of support, confirming the urgent need for an emergency registration. This usually include a rationale for classification as an emergency registration and s may include supporting overseas efficacy data on the pest of concern.

Timelines

Due to the urgent need for efficacious pesticide products, applications are reviewed on a fast-track basis. The applicant is also granted a period of 1-3 years (depending on pest pressure/availability) to generate data that will support a full registration of the selected solution, while the plant threat is controlled under then emergency registration.

Overview of existing practices in AME

Country& specific registration pesticides	Region with emergency regime for	Common Data requirements of the local emergency authorization	*Typical validity of the authorization	Can emergency use of new actives not registered in the country previously be allowed?
Benin	Yes	<ul style="list-style-type: none"> Reasons for emergency authorization, and socio-economic impact of denial of the application 	1 year	Yes, on condition of supporting data from OECD member countries
CILSS	Yes		1 year	Yes, on condition of supporting data from OECD member countries
Egypt	Yes	<ul style="list-style-type: none"> How will the product be utilized {GAP}? 	1 year	Yes, on condition of supporting data from OECD member countries
Ivory Coast	Yes	<ul style="list-style-type: none"> Other alternative products/ remedies (if applicable) 	1 year	Yes, on condition of supporting data from OECD member countries
Kenya	Yes	<ul style="list-style-type: none"> Sponsor/Letter of support Proposed emergency use Label 	3 years unless explicitly stated by PCPB to be temporal registration which is 1 year	NO, but the registration can be fast-tracked provided the actives are registered elsewhere for the same pest.
Nigeria	Yes	<ul style="list-style-type: none"> Efficacy data (from other countries, if available) 	1 year	Yes, on condition of supporting data from OECD member countries
South Africa	Yes	<ul style="list-style-type: none"> Health/Environmental safety data from other countries 	1-3 years	NO

*Average period the applicant is granted to generate efficacy/residue

Regulatory Advocacy

Common challenges experienced in implementation of Emergency Uses

Regulatory authorities appropriately apply different criteria to ensure that emergency use registration procedures are not abused as means of getting pesticide products faster to the market without clearly identified emergency situations. Nevertheless, there are sometimes challenges encountered in the process of registration of pesticide products under emergency use guidelines. Some of the common challenges encountered include:

Unclear guidelines:

Guidelines may not be clear, or up-to-date, and sometimes do not exist. When guidelines don't exist, rules may change according to various factors outside the control of the applicant, or even the regulator and this creates uncertainty in the entire registration process. The validity of emergency registration is not always clear, whether 2 or 3 years but this can be specified in the guidelines.

Effective management of pest resistance:

Emergency situations may not develop over short periods of time. They may result from several years during which resistance develops and progressively erodes the efficacy of registered products to control the problem. Since assessing the socio-economic impact of resistance is a long process and may not be completed before an emergency decision is due, economic losses may result from the applicant's inability to document the situation in time. It is therefore ideal for authorities to carefully examine the evidence provided in letters of support usually included in the dossier. Indeed, stakeholders that provide those letters have first-hand experience and suffer the most from the lack of effective control options.

Registration of new active substances:

Sometimes authorities in AME require comprehensive toxicological review using local experts when new active substances are filed under the emergency registration process, and in some cases new molecules are not considered for emergency uses at all. This process usually takes a few years, irrespective of the fact that the concerned molecule may currently be widely used by many OECD member countries and may have been cleared for safety purposes by many toxicologists and regulatory authorities globally. Such situations should be reviewed on case-by-case basis and merits of granting an emergency authorization to a new active substance that has not yet been fully evaluated locally should be considered as appropriate as solutions to emergency situations may lie in new molecules tested elsewhere.

Handling emergency pest situations such as the FAW requires pragmatism on the part of regulatory authorities and other stakeholders in developing guidelines/emergency use regulations where they do not exist. Successful handling of plant health emergency situations requires regular engagement on various regulatory policy matters related to emergency pest situations, looking at similar experiences in other parts of the world and updating of requirements

Management of FAW: Emergency and Long-term

The pest was first detected in West Africa in January 2016 and has quickly spread to 44 countries across sub-Saharan Africa. In 2018, the pest [spread to India](#) and the [FAO warned it could threaten the food security](#) and livelihoods of millions of small-scale farmers in Asia as the pest is likely to spread further, with South East Asia and South China most at risk. It is thought the pest could also [spread to Europe](#).

Based on data from Africa, [CABI estimates FAW will reduce annual maize production by 21%-53%](#) in the absence of pest management.

Insecticides are one of the few proven and effective tools for the management of FAW and their deployment should be given balanced consideration – through both foliar applications and seed treatments. A practical approach for small-scale farmers would be the provision of guidance focused on:

- a. the use of in-country registered pesticides
- b. the avoidance of illegally traded pesticides and/or counterfeits
- c. the avoidance of WHO class 1a acute toxic pesticide or only use them where farmers are trained and use respective precautions (or as a last resort);
- d. pesticide procurement that follows demand and requirement, and has appropriate measures in place to ensure obsolete stocks do not result;
- e. Establishment of guidance to avoid build-up of resistance. For instance, an [Insect Resistance Management guide for FAW](#) has been developed by the CropLife International Insect Resistance Action Committee
- f. Establishment of processes to enable emergency registrations to ensure modern and safer pesticides become available to farmers

1. United Nations Food and Agriculture Organization
2. Centre for Agriculture and Biosciences International
3. World Health Organization

Kulani Machaba, Corteva Agriscience & Stella Simiyu Wafukho



Regulatory Advocacy

Ghana-EPA launches GHS labelling discussion in Ghana

In late January, the Environmental Protection Agency (EPA) commenced with stakeholder discussions on designing a roadmap to implement the Globally Harmonised System (GHS) on the classification and labelling of chemicals in Ghana.

The GHS, introduced by the United Nations in 1992 and adopted in 2002, is a system for harmonising hazard classification criteria and chemical hazard communication elements worldwide. Stakeholders at the two-day introductory workshop in Accra noted that the GHS would ensure that labelling and classification of chemicals are synchronised and harmonised worldwide.

A fully enrolled GHS program would protect man and the environment from harmful chemicals since symbols and labels would communicate the dangers better for the understanding of all.

The success of the implementation of the GHS label classification in Ghana would reduce the need for multiple testing and evaluation in the sub-region and globally.

Amongst the stakeholder's present at the workshop were CropLife Ghana, PPRSD/MoFA, Transporters, Paint Manufacturers and other industry sectors.

The Deputy Minister of Environment, Science and Innovation, Madam Patricia Appiagyei said in her address, that the implementation of the GHS in Ghana would contribute towards achieving the Sustainable Development Goals on sustainable chemistry, which offers a broad spectrum of products and services essential to daily living that are safe, sustainable and environmentally sound.

Fred Boampong



Participants at the launch of the GHS label classification workshop, Accra-Ghana



Fred Boampong & Bob Adjakloe of CropLife Ghana at the workshop



CropLife
AFRICA MIDDLE EAST

Anti-Counterfeiting Activities

Ghana Police Arrest Counterfeiters of Pesticides

In collaboration with the Plant Protection & Regulatory Services Directorate of the Ministry of Food & Agriculture (PPRSD/MoFA) and the Environmental Protection Agency (EPA), CropLife Ghana contributed to the arrest of three counterfeiters of pesticides in Tema and Kumasi in January 2019.

This is in line with the objectives of CropLife Ghana in tackling the issue of counterfeiting and substandard agri-inputs in Ghana.

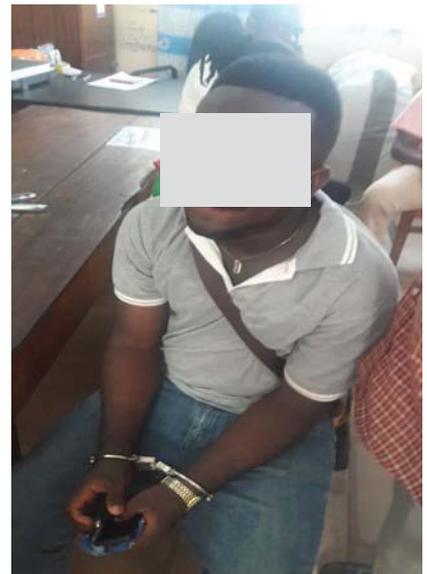
The arrests were in response to reports received by the CropLife Ghana secretariat from the member companies affected. The regulators were immediately informed and responded speedily in arresting the culprits and processing them for prosecution. Currently the culprits are out on bail awaiting trial.

CropLife Ghana intends on intensifying its media outreach and sensitization programs on anti-counterfeiting of pesticides in Ghana. The judiciary and enforcement agencies are to be included in this year's activities.

CropLife Ghana will begin this year to engage with the Ghana Standards Authority (GSA) and EPA for random testing/sampling of agrochemical products. Products from companies that fall short of the standards required are to be named and shamed appropriately.

CropLife Ghana took the opportunity to thank both, the MOFA/PPRSD/MoFA and EPA/CCMC, for their valued collaboration to clear the country of all fake products and suppliers of sub-standard pesticides and fertilizers.

Fred Boampong



The results of a raid on counterfeit products parked at the police station with the alleged culprit in police custody in Kumasi



Association Management

CropLife Côte d'Ivoire Holds AGM

Guy Liabra was re-elected Executive President at the AGM of CropLife Côte d'Ivoire on January 25. The meeting covered various topics aimed at strengthening the association. Activity reports by both the President of the Consultative Council and the Executive President focused on the successes of the past two years.

The financial report was covered by the Vice-President. All three reports were unanimously adopted. The team was congratulated for the tremendous work carried out over the two terms which made the association more visible and credible towards the key stakeholders involved in pesticide issues, both in, and outside the country.

The executives were discharged in line with the constitution and a new election took place on the basis of the articles and by-laws of the association. Guy Liabra, was unanimously reelected for a further two-year term. The other positions related to the Vice-Presidency, the Presidency of the Consultative Council and the Auditors were also duly completed.



Bama Yao

Left & Below: The outgoing Executive President, G. Liabra and the President of the Consultative Council, Bruno Bernos (L-R, respectively) addressed the AGM on the achievements as well as the difficulties during their term of office. Courtesy CropLife CI



Below: G. Liabra, the reelected Executive President (3rd L-R) with the new members of the Executive Committee of CropLife Côte d'Ivoire. Courtesy: CropLife CI.



Association Management

CropLife Morocco holds Annual General Meeting

Members of CropLife Morocco held their annual general meeting for the period 2017/2018, under the chairmanship of Karim Ben Brahim, in the presence of Samira Amellal, Director General of CropLife AME. This took place on Tuesday, 29 January 2019 at the hotel Vichy Célestins, Bouznika, near Rabat.

The agenda covering the General Assembly included the following:

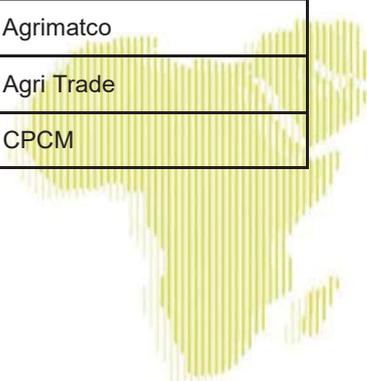
- Presentation of the annual report for the year 2017/18
- Presentation of the management report for the year 2017/18
- Presentation of the financial report for the year 2017/18

Following discussions and an exchange of views, the Assembly approved the following:

- Annual report of the President related to the 2017/2018 period.
- Management report of the Executive Director for the year 2017/2018
- Financial report related to the period from October 31, 2017 – December 31, 2018

New members of the Board were elected as follows:

Member	Function	Company
Mohamed Chetouani	President	BASF
Mounir Sefiani	Vice-President	Amaroc
Rida Boufettas	Vice-President	Promagri
Fayçal El Houssaini	General Secretary	Alfachimie
Ibrahim El Ouafi	Deputy General Secretary	SAOAS
Nabil Sedrati	Treasurer General	SIPP
Mahfoud Jalab	Assistant Treasurer	Socaprag
De Herce Ronan	Assessor	Syngenta
Laurent Perrier	Assessor	Bayer
Karim Ben Brahim	Assessor	Marbar Chimie
Mohamed Miloudi	Assessor	Agrimatco
Adil Yattaf	Assessor	Agri Trade
Mohamed Benslimane	Assessor	CPCM



Association Management



Mohamed Chetouani, the new President of CropLife Morocco

Mohamed Chetouani, BASF Regional Manager Crop Protection, North Africa, was elected as the new President of CropLife Morocco at the AGM held in Bouznika on January 29, 2019.

After graduating as an Agronomic Engineer in 1986 from "Institut Agronomique & Vétérinaire Hassan II, Rabat", M. Chetouani started his career responsible for Plant Protection Services in ORMVA El Jadida, and 8 years later, joined BASF, where he held several positions including responsible for Regulatory and Technical Development, Marketing Manager, Country Manager. He then took on a new and important role, becoming the Regional Manager of the Agricultural Solutions Division for North Africa.

Aside from his day-to-day activities at BASF, M. Chetouani has been the company representative at CropLife Maroc for more than 20 years. In this, he occupied several important positions, including Secretary General in 2012 and General Treasurer in 2015.

M. Chetouani has consistently demonstrated professionalism, integrity and a commitment to doing what is best for Moroccan agriculture and is well-respected by stakeholders across Morocco and, indeed, throughout the CropLife Africa and Middle East community. During his successful career, Mohamed received much recognition for his active participation and contribution to the improvement of the plant protection in Morocco.

We congratulate Mohamed Chetouani on his new election and wish him every success in his term of office.

Boubker El Ouilani



Group Photo



Plant Biotechnology

A Comprehensive Review of the Environmental Safety of Bt Crops Now Published

A comprehensive review authored by scientists from Switzerland and the United States summarized the existing literature on Bt crops from laboratory and field-based studies. The authors, Jörg Romeis, Steven E. Naranjo, Michael Meissle, and Anthony M. Shelton highlight the contribution of Bt crops to conservation biological control.

The paper published in the journal *Biological Control* reports that Bt crops have been grown on more than 1 billion acres over the last 20+ years, and on 100 million hectares in 2017 alone. A major concern related to this technology is that the proteins could harm non-target organisms, specifically those that provide important ecosystem services such as biological control. However, studies have proven that proteins from Bt crops did not harm natural enemies. Furthermore, Bt crops support the conservation of natural enemies and contribute to more effective biological control of both target and secondary pests and lead to a reduction in insecticide use.

The paper concludes that the efficacy of Bt crops in controlling important target pests has been very high. The large-scale adoption of Bt crops in some parts of the world has led to area-wide suppressions of target pest populations that benefited both the farmers that adopted the technology and those that did not.

ISAAA



Biofortified Cassava Shows Higher Levels of Iron

Iron-deficiency anemia impacts the immune system of children, causing stunted growth and impaired cognitive development. One of the strategies to combat this health problem is the biofortification of staple food through biotechnology tools. Researcher Narayanan from Donald Danforth Plant Science Center and colleagues developed biofortified cassava with higher levels of iron as reported in *Nature Biotechnology*.

The research team overexpressed *Arabidopsis thaliana* vacuolar iron transporter VIT1 in cassava, which led to accumulation of iron in the storage root, and was found to be 3 to 7 times higher than the iron levels in non-transgenic control. Plants engineered to co-express a mutated *A. thaliana* iron transporter (IRT1) and *A. thaliana* ferritin (FER1) accumulated iron levels 7-18 times higher and zinc levels 3-10 times higher than those in non-transgenic plants. There were no significant effects found in the growth parameters and storage root yields.

According to the researchers, iron and zinc in processed transgenic cassava (IRT1 + FER1) could provide 4050% of the estimated average requirement for iron and 6070% of the estimated average requirement for zinc in 1- to 6-year-old children and non-lactating, non-pregnant West African women

ISAAA



New Chocolate has Its Own Pro-GMO Label to Promote GMO Farming

Newly-released brand Ethos Chocolate has a line-up of irresistible chocolates that proudly bears a pro-GMO label. The brand boasts of its new label and aims to promote GMO farming as a sustainable solution to save the cacao tree, which scientists predict will be extinct as early as 2030 due to climate change and plant disease.

Ethos Chocolate is produced by SPAGnVOLA, a single-estate artisanal chocolatiers and family-run cacao farm in the Dominican Republic. They feature four kinds of chocolates, each one representing a fruit associated with a GMO success story. These are: (1) *The Optimist*, representing the cacao tree and the international initiative to save it through GMO farming; (2) *The Survivor*, representing the Rainbow Papaya that saved Hawaii's papaya industry in the late 90s; (3) *The Trendsetter*, representing the Arctic Apple® whose breakthrough technology allowed apples to stay appetizing even when sliced or bruised; and (4) *The Hero*, representing the orange which, like the cacao, is endangered by plant disease. But through research, a new variety is being developed to save the Florida staple fruit through GMO farming. Read more about these enticing chocolates in A Fresh Look and Well and Good.

ISAAA



CropLife
AFRICA MIDDLE EAST



**CropLife Africa Middle East
International Association AISBL
Rue Théodore de Cuyper 100
B-1200 Brussels**

www.croplifeafrica.org

