

# Leading the Vision

Stewardship in the Crop Protection Industry

CropLife  
INTERNATIONAL 

## Farmer Incomes Double in Honduras with Improved Pest Control

*Progress Through  
Partnerships*



Over 30,000 farmers in Honduras, the second poorest country in Latin America, have significantly increased their yields and income thanks to an industry-led partnership to improve pest management techniques and good agricultural practices.

In 2013, CropLife Latin America partnered with the United States Agency for International Development (USAID) to work with Honduran farmers to prevent and mitigate the ongoing problem of pest and disease outbreaks in their crops.

In Honduras, 60 percent of the population lives below the poverty line and for a small-scale farmer, growing a healthy crop can be the difference between prosperity and poverty. The CropLife partnership formed part of USAID's four-year project "ACCESO" to tackle the problem of extreme poverty in western Honduras.

### Fighting Pests and Caring for the Environment

A key component of CropLife Latin America's involvement in the ACCESO project was to provide crop protection experts and educational materials to train over 120 USAID field officers in good agricultural practices and the best ways to deal with crop pests and diseases. Under CropLife's guidance, these officers went into the field to teach farmers Integrated Pest Management (IPM) techniques, such as how to monitor their crops, identify pests and choose the best approach to tackle them. If this meant using crop protection products, the farmers were shown the safest way to apply them, including the right dose and timing.

A center to collect crop protection product containers was also established to protect the environment from excess waste. Farmers were trained to triple-rinse and dispose of these containers safely.

### Boosting Incomes on High-Earning Crops

The Honduran project has also encouraged farmers to focus on crops that will boost their incomes, such as strawberries. Common crops like maize and soybeans can only generate around US\$750 per hectare per year, but high-value horticultural production with basic technologies and skilled crop protection techniques can generate around US\$4,000 per hectare. Access to crop protection products and the knowledge to use them on these high-value crops has helped many farmers significantly increase their incomes.

Emiliano Domínguez, a small-scale farmer from Intibuca, Honduras, grows strawberries, maize and potatoes. He says USAID-ACCESO helped lift his family out of poverty.

*"Around six years ago, an attack of aphids destroyed my plot. I lost all the money I had invested because the damaged fruit and vegetables could not be sold. I lost around 50,000 lempira (US\$2,000). When ACCESO arrived, my life changed."* -Emiliano Domínguez

With increased production of high-value crops, such as strawberries, Emiliano has been able to pay for a new house for his family of five and he has increased the amount of land he farms six times over.



Emiliano and other farmers in the scheme are also encouraged to pass their knowledge to their neighbors. This “train the trainers” approach has a multiplier effect that changes the behavior of whole communities as one farmer passes knowledge on to the next. Then, once above the poverty line, farmers are able to become entrepreneurs and continually improve their standard of living.

## Partnering with Private Sector to Bring Training to Masses

Public-private partnerships like ACCESO are vital to tackling poverty in rural areas. With public investment in agricultural extension under pressure in Honduras, the private sector is ideally placed to join with development organizations such as USAID to help fill the gap.

“For us, the partnership with CropLife Latin America has been essential,” says Andy Medlicott, chief of party for USAID-ACCESO. “As an organization, CropLife has the cutting edge pest control knowledge, while we have the infrastructure to deliver training on a very large scale.”

Based on this model, public-private partnerships can continue to play a key role in tackling the United Nations’ Sustainable Development Goals that aim to end hunger and extreme poverty by 2030.

Other interventions in the USAID-ACCESO project include household visits from health technicians, training on nutrient-rich food production and preparation, as well as reliable links to markets to sell extra products at a better, more consistent price. The project has yielded outstanding results between 2011 and 2015:

- **6,626 households moved above the poverty line** (less than US\$1.25 per person per day)
- **2,000 families doubled their incomes** from US\$1.25 to more than US\$2.42/person/day
- **Actual sales** by farmers between 2013 and 2014 **increased by US\$28 million** from basic grains, horticulture, animal production, processing and small business activities
- **3,000 new full-time jobs were created**, mostly in off-farm microenterprises
- The **prevalence of underweight children** under 2 years old **decreased by 50 percent**

To hear more from Emiliano and other farmers involved in the USAID-ACCESO project, visit the [Progress Through Partnerships in Honduras website](#). 💧

## MEET THE HONDURAN FARMERS



*“New pests and diseases come up all the time ... they can destroy your entire crop.”*

Salomón Lorenzo Vázquez



*“I learned about agrochemicals and how they are applied. Based on that, my yield has increased three-fold.”*

Cecilia Mejía Domínguez



*“We produce more as we’ve been trained and have more knowledge. We can now afford our children’s education.”*

María Cirila Pineda



*“I’m really happy for my children because they now have all these things that I didn’t have when I was growing up.”*

Emiliano Domínguez



*“If all farmers in Honduras had this training, then all young people would be better off and we would have more profitable farms.”*

Arcadia Mejía Pinerda

# Perspective

## Communicating Insecticide Resistance to Farmers

By Russell Slater

# IRAC



Task teams, mobile device applications and videos are just a few of the newer tactics adopted by the [Insecticide Resistance Action Committee](#) (IRAC)\* in order to reach, educate and collaborate with those who need the information most – growers. IRAC works to prolong the effectiveness of insecticides, acaricides (for spiders, ticks and mites) and insect-active biotech traits by developing and promoting insecticide resistance management (IRM) strategies.

Promotion of IRM to a wide group of stakeholders has always been the focus of IRAC since it was formed in 1984 and the organization has published a wide range of materials on the causes of resistance and strategies to manage it. Historically, as a cross-industry group, IRAC provided information to scientific organizations, research institutes and companies – those who already understood resistance management. But today, IRAC's emphasis is increasingly to provide practical IRM recommendations to farmers and urban pest controllers and promote their implementation in the field in cooperation with national CropLife associations and local stakeholders.

In order to get regional- and country-specific recommendations, IRAC has adopted a strategy of holding local “task team” workshops. The first of these was held in Brazil in early 2015. This was aimed at developing IRM recommendations for the region's three major crops (cotton, soybean and corn) in conjunction with local stakeholders, including the Brazil Ministry of Agriculture, scientific advisory groups and universities. The stakeholders helped determine the current status of IRM, how best to tackle it and provide a single set of recommendations for promotion in the field. Similar workshops will be held in other regions across the world.

With more direct communication in mind, IRAC is developing a leaflet explaining the basic principles and benefits of IRM in non-scientific language that is easy to understand. The leaflet will be distributed to crop protection dealers, extension professionals and other stakeholders, who have direct contact with farmers. It will also be used within training programs on Integrated Pest Management, which are regularly undertaken in dozens of countries each year.

The template will be made available on IRAC's website, where IRAC member companies, CropLife national associations and other stakeholders can download and translate it into local languages, increasing the reach even further.

On the multimedia front, IRAC developed an online tool to identify an insecticide's mode of action. Users search by chemistry to determine the product's mode of action group and ensure that the next product applied is a different classification than the last – an important principle of IRM. In order to simplify access for advisors and farmers, this tool is also available as a mobile application on a tablet, iPhone or Android device. Along with appropriate training to understand resistance and its management, the online tool helps to ensure the widespread adoption of IRM.

A short cartoon video is soon to be launched explaining how insect resistance occurs and can be managed. The video provides basic information and warns against the larger dangers of product resistance – beyond the field to household pests, for example – with the goal of promoting IRM to growers and urban pest controllers.



Mode of Action online tool

These types of initiatives are helping to address IRAC's biggest challenge: communicating IRM messages to millions of smallholder farmers. IRAC's website houses an extensive library of posters, presentations and other materials, and the organization continues to actively communicate with scientists and the industry. But to reach growers – those who make the most difference when it comes to IRM – speaking their language in direct ways is critical. To address this, CropLife International and its regional and national associations, along with IRAC, continue work in partnership with other stakeholders to provide information, training and support to farmers. 💧

*Russell Slater is chair of IRAC and global technical manager at Syngenta Crop Protection in Basel, Switzerland.*

\*IRAC is a CropLife International expert group. Its members are BASF, Bayer CropScience, Cheminova, Dow AgroSciences, DuPont, FMC, Makhteshim Agan, Monsanto, Nihon Nohyaku, Nufarm, Sumitomo Chemical, Syngenta and Vestergaard Frandsen.

## Partnership Profile

### Vietnam Rice Farmers Benefit from Collaboration



#### Who:

CropLife International has partnered with GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit — the German Agency for International Cooperation), the Vietnamese Plant Protection Department (PPD), Southern Regional Plant Protection Center (SRPPC) and Department of Agriculture and Rural Development in Vietnam (DARD).

#### What:

A training program for farmers and crop protection product retailers called “Promotion of Integrated Pest Management (IPM) to Address Plant Hopper Outbreaks” will take place in three provinces. The program is being implemented by the GIZ-led Better Rice Initiative Asia and aims to train at least 15,000 farmers and 300 retailers in IPM, including the effective and responsible use of chemical and biological crop protection products by the end of 2017.

#### Why:

Large outbreaks of rice plant hoppers are a continual threat to rice production in Southeast Asia. Outbreaks are not controlled due to a combination of poor agronomic practices and insufficient pest management. The program aims to demonstrate the proper application of IPM, based on a sound knowledge of the agro-ecological situation, to protect rice from plant hopper infestations.

#### How:

Training modules developed by CropLife International are being adapted to local conditions by rice and pest management experts from Can Tho University and the Cuu Long Delta Rice Research Institute. Using the training model developed and tested by CropLife International in Adoni, India, 39 master trainers from PPD, SRPPC and DARD will first undertake a train the trainers course. Thirty of them will each train 100 farmers using a 12-module curriculum. Each of these directly trained farmers will then train four other farmers. The remaining nine master trainers will provide oversight and support as well as directly train crop protection retailers.

#### What Next:

The first phase of the program — training of the trainers — is underway, soon to be followed by farmer and retailer training. Impact assessment will be integral to the program to demonstrate its effectiveness. Upon completion of its initial phase, the program may be expanded to other regions in Vietnam and countries in Southeast Asia. 💧

## Sharing the Story

### Spray Service Provider Program Expands in Africa

In 2008, CropLife Africa Middle East launched its Spray Service Provider (SSP) program to promote the responsible use of crop protection products among small-scale farmers. Beginning with pilot programs in Zambia, Egypt, Madagascar and Uganda, the project has grown substantially. SSPs are farmers who, after receiving special training in the application and handling of crop protection products, provide their services to spray crops professionally for other local farmers. We talked to Les Hillowitz, area coordinator for east and south Africa of CropLife Africa Middle East, about the continuing success of the SSP concept.

#### Q When and where did the SSP concept begin?



We began in Zambia in 2008. CropLife Zambia collaborated with “Production, Finance and Improved Technology” (PROFIT), a United States Agency for International Development (USAID) project to introduce the SSP concept to five districts in Zambia. The idea was to train the trainer - CropLife trained 28 trainers, who in turn trained more than 2,700 SSPs over two years. As farmers realized the value of hiring SSPs, demand increased for their services. By 2014, the program had spread to 30 districts in Zambia, with SSPs serving 72,000 farmers. ⤵



When everyone involved — from growers to SSPs, CropLife member companies and donors — reported positive outcomes from this first project, we realized it was a practical, self-sustaining and cost-effective way of using crop protection products on small-scale farms.

### **Q What exactly does an SSP do?**

SSPs are professionally trained individuals that can identify problematic pests and diseases, know when to spray, how to spray, what product and application rate to use, and what personal protective equipment to wear. They hire out their services to farmers and also help educate individual farmers on the importance of Integrated Pest Management (IPM) and responsible use of crop protection products. Because SSPs use the correct product and only spray when needed, they can help farmers manage resistance to crop protection products. SSPs are also trained to triple-rinse containers, which is a starting point for any container management program.

### **Q How has the SSP concept expanded?**

The SSP concept started in Zambia, but the big leap forward came from West Africa, where CropLife Africa Middle East partnered with the World Cocoa Foundation and its African Cocoa Initia-

tive (ACI) to train SSPs in Ivory Coast, Ghana, Nigeria and Cameroon. These are four of the largest cocoa producers in the world, but all had declining yields over recent years due in part to pests and disease. The ACI set a regional goal for SSPs to reach 40,000 smallholder cocoa farmers over two years. At the close of the project in 2014, we'd trained more than 3,000 SSPs and reached more than 50,000 farmers — a huge success.

### **Q What impact do SSPs have on crop yields?**

SSPs have a very positive impact on yield. In cocoa, yields have gone up significantly, with many farmers reporting record yields after hiring an SSP. In Zambia, where the concept was applied to maize, yields tripled from 1.5 tons per hectare to 4.5 tons per hectare.

### **Q Are there social benefits of the SSP program?**

Yes, female farmers in particular are seeking out and hiring SSPs to control weeds rather than doing so by hand which is both time-consuming and backbreaking work. Meanwhile in West Africa, female cocoa farmers have seen a huge boost to their yield and income by using SSPs to identify and control insect infestations. Research has shown that female farmers are far better at reinvesting their profits back into the

family to pay for children's health and education, so this also has a significant social benefit.

### **Q Is the SSP business model viable in the long-term?**

Yes! Some SSPs are even starting to employ others. In Zambia, for example, there's an SSP who started out in 2008 by himself. Today he has a number of people working for him, bigger application equipment and it's a nice business.

### **Q How does the SSP concept contribute to your overall goals as an organization?**

Full and effective stewardship requires the responsible and ethical management of plant protection products through their entire lifecycle. CropLife Africa Middle East aims to promote these practices, which are key to sustainable agriculture.

The SSP concept is a great success because it carries these stewardship messages right down to the farm level, teaching efficient crop protection, IPM, container management, responsible use and more.

### **Q What's next for the SSP program in Africa?**

Additional SSP projects are planned in Zambia for cotton, tomatoes and maize; Uganda for soybean, sunflower and potatoes; Malawi for cotton; Ethiopia for vegetables; and Kenya for French beans. The challenge ahead is resources, but the momentum is growing and the future looks promising. 💧

