

Leading the Vision

Stewardship in the Crop Protection Industry

CropLife
INTERNATIONAL

Indian Farmers Benefit From Innovative Training Programme



Farmers worldwide are challenged with rapidly growing populations and demand for more food. To address this urgent situation, they must be equipped with knowledge and tools to maximise crop production with minimal environmental impact. For farmers in the Adoni region of Andhra Pradesh, India, training on Integrated Pest Management (IPM) and the responsible use and safe storage of crop protection products has made a dramatic difference in improving production practices and farmer livelihoods.

The *Training Through Local Partnerships* programme in Adoni was the result of a 2009 collaboration between CropLife International, CropLife Asia and CropLife India and two regional Indian organisations. By training farmers to train other farmers in locally adapted ways, the Adoni project serves as an innovative model for agricultural education and training in rural communities. It incorporates activities such as inspecting crops, identifying beneficial insects, deciding if and when crop protection products are needed, properly applying them, wearing personal protection equipment, triple rinsing empty product containers and safely storing crop protection products.

“We are seeing positive impacts in Adoni,” says Paul Raja Rao, executive director of Bharati Integrated Rural Development Society (BIRDS), a local organisation responsible for evaluating the training programme. “A high percentage of farmers are attending the sessions. As a result, we are seeing better crops, new business opportunities and improved livelihoods for farmers in this area.”

Collaborating with partners who understand regional needs, CropLife International directly trains a small number of farmers to be master trainers each year. These trainers, in turn, train other farmers in their community. In just four years since the programme began, 45 master trainers were able to train

20,000 farmers, who then trained an additional 81,000 farmers. A total of 101,000 farmers were reached through this grassroots programme with exponential impact.

“Training is useful to our business and farmer community, and very important to our region,” notes N. Ashokananda Reddy, a crop protection retailer.

Farmers who received training not only gained new knowledge and improved their agricultural practices short-term, they retained what they learned two years later, boding well for long-term success. Farmer practices were evaluated immediately after training and subsequently throughout the programme with increasing positive results, including:

- 93% of farmers were able to identify beneficial insects following training and 94% two years later.
- 95% consistently understood crop protection product labels right after training and 99% after two years.
- 94% of farmers wore personal protective equipment immediately after training and 100% two years later.
- 98% consistently stored crop protection products safely immediately following training (either in a locked box or out of reach from family members) and 99% after two years.

“We observe farmers diligently putting into practice what they learned on these issues,” says Mohan Rao of EFFORT, a community development group that coordinates and implements the training programme.

Agricultural knowledge in Adoni, which is home to more than 500,000 people, has traditionally been passed on from generation to generation by farmers. CropLife International’s training programme retained this approach to education but added an organizational structure to it and updated the

information provided. Training is provided through groups in an open-air classroom, hands-on field demonstrations, house-to-house visits, cultural shows combining entertainment with education for families and school programmes for children to learn about being safe at home and on the farm. After training is done, farmers are encouraged to voluntarily establish clubs for continuing education.

“The key is finding local partners who can adapt programmes to local conditions, bring together skilled trainers and deliver effective training to the community,” says Dr. Keith Jones, director of stewardship and sustainable agriculture for CropLife International.

CropLife International aims to apply the *Training Through Local Partnerships* model to other regions around the world as part

of its “Vision 2020” global strategy for the implementation and monitoring of stewardship programmes. The vision seeks to help farmers get the most from crop protection products, while minimising any risks to themselves, their families and the environment. This will enable farmers, especially those in developing countries, to grow sustainable, high-quality crops and to improve their livelihoods and communities.

“Our future is good and we are healthy,” concludes Adoni farmer Rajoli Eranna. “The training should continue in the same way.”

For more information about the *Training Through Local Partnerships* programme, visit croplife.org/trainingthroughlocalpartnerships. 💧

Female Farmers Take Leadership Role in Adoni, India

Like all agricultural areas of India, women in the Adoni region of Andhra Pradesh are critical to crop production. In fact, they contribute 55 to 66 per cent of overall farm labour with even higher percentages in some areas, according to the Food and Agriculture Organization of the United Nations. They work alongside men in many agricultural tasks, manage difficult responsibilities like hand-weeding and look after their families as primary caretakers. That means educating women is key to improving crop production and rural communities.

In 2010, CropLife International's *Training Through Local Partnerships* programme in Adoni began to focus on putting women in leadership positions. That's when the first female master trainer and training groups for women only were put in place.

“In society, it is good that women are becoming leaders,” says Mallepogu Graceamma, the first female master trainer in Adoni. “I wish we had more female trainers. I feel what I am doing is very helpful to the farmers.”

Another female master trainer has joined Graceamma in establishing 24 farmer training groups, which represent a total of 650 women and 350 men. Some are all-women training groups.

“The female master trainer's role is very important ... very positively influencing women farmers,” notes



Ramachandra Murthy, project manager for the Adoni training programme, who is proud to help forge a new, important path for women. “As a result of training, farmers are improving their practices and achieving a higher quality of crop production.”

Female master trainers break traditional roles by becoming leaders in their community. They are inspiring other women to get involved in training and perhaps become community leaders themselves. From each other, women learn how to practice Integrated Pest Management and responsibly use and store crop protection products. They also provide leadership within their families, educating their children about general farm safety. Passing down this knowledge is planting seeds for the next generation's agricultural success and well-being.

CropLife International's training programme in Adoni has opened up new opportunities for rural women and serves as their model for improving agricultural practices and communities. As leaders in the field and at home, women are greatly expanding the reach of this programme.

For more information about *Training Through Local Partnerships* in Adoni, visit croplife.org/trainingthroughlocalpartnerships.

Sharing the Story



Carlos Palacios, head of training for Agrequima, teaches Guatemalan farmers about wearing protective clothing when spraying crop protection products.

Guatemala Pioneers Responsible Use Training

Carlos Palacios of Agrequima Explains How

Agrequima is the crop protection association of Guatemala and a member of CropLife Latin America. As a non-profit, its mission is to improve domestic agriculture under the CuidAgro™ Programme, which trains farmers on Integrated Pest Management (IPM) and the responsible use and management of crop protection products as well as certifies qualified applicators.

Agrequima also runs the CampoLimpio™ Programme, which collects and recycles empty crop protection product containers. Such programmes increase crop production, minimise input costs, improve farmer livelihoods and build communities – both literally with recycled plastic materials and figuratively with better farm management.

Twenty years ago, CropLife International

selected Guatemala as a pilot country for farmer training on crop protection product use and management and thus, Agrequima was established. In 2012, Agrequima trained approximately 50,000 farmers. It works with 14 partner organizations to reach tens of thousands of farmers annually. Carlos Palacios, head of training for Agrequima, who has been with the organization for 20 years, describes how it has been a global model in stewardship.

Q What inspired the founding of Agrequima? How has the organization grown in scope and capacity?

Agrequima was founded in 1991 with the aim of bringing together the agricultural industry and developing educational programmes that favour productivity while protecting the health and safety of farmers and the environment. Since the beginning, the aim has been to support the farmer. Agrequima has developed a number of partnerships with related organizations to reach more people. Since 1991, Agrequima has trained close to 800,000 farmers.

The association continues to respond to farmers' needs through a wide range of resources. Agrequima continuously offers new training courses and participates in everything that provides farm-

ers with support and further development of IPM, including the responsible use of crop protection products. This includes a programme targeting elementary school kids and mini collection points for empty product containers.

Q Why was Guatemala chosen by CropLife International 20 years ago as a pilot country for farmer training?

At that time, CropLife International selected three countries worldwide to set up pilot projects on the responsible use of crop protection products. In Latin America, Guatemala was chosen for several reasons: the national association was very strong and solid; the country has a great diversity of microclimates and crops; its agriculture was developed mainly by small landholders; and a large number of farmers sought training.

Agriculture continues to be the major source of employment in Guatemala; 38 per cent of all people employed here work in the agriculture sector. The main commodities are bananas, sugar cane, coffee, palm oil, rubber, pineapples, potatoes, tomatoes, mangoes, chilli peppers, corn, beans and export vegetables including peas, green beans and broccoli.

Q How did Guatemala evolve to become a pioneer in the responsible use of crop protection products?

A professional staff of agronomists helped Agrequima design its own training programmes adapted to local conditions. Courses accounted for aspects such as high illiteracy among farmers, poverty and the diversity of dialects. They also used a dynamic teaching approach (70 per cent practice and 30 per cent theory) for better, long-lasting results. In 1997, Agrequima entered into an agreement with the Guatemalan Ministry of Agriculture, Livestock and Food under which it was tasked with the responsible management and use of crop protection products at a national level. This was a major challenge that Agrequima strongly embraced and has been dedicated to ever since. Today, the demand for farmer training continues to grow thanks to continual course updates, quality control and the direct contact that Agrequima's staff has with various target audiences – they go where the farmers are. ↓

Q How has farmer training improved livelihoods and Guatemalan agriculture?

CuidAgro™ teaches farmers how to farm more efficiently. This results in higher productivity while protecting the farmer's health and the environment. Surplus crops from increased productivity can be sold and increase household income. In addition, farmers who complete responsible use training earn a certificate from Agrequima that attests to their crop protection product management skills and makes them more competitive in the market. This "diploma" allows farmers to prove to an international certification body and export companies that they are qualified personnel and their skills have been tested.

Q What are the results of farmer training programmes?

After training, we see a change on two levels. First, the farmer improves his and his family's personal safety as he learns how to manage crop protection products and apply them properly. Second, he is capable of reducing production costs as the IPM training helps him identify pests, their lifecycle and, more importantly, if and when it is critical to apply crop protection products. This helps reduce costs and improve efficiency in the use of inputs among small farmers. Overall, we see:

- More effective use of crop protection products and a decreasing number of accidents
- Increased productivity
- Proper use of personal protective equipment
- Sound storage practices
- Application equipment in better condition
- Correct disposal of crop protection product containers
- Improvements in the farmers' handling of crop protection products

Q What are results of the container management programme?

In the past 20 years, more than 24 million empty crop protection product containers have been collected in Guatemala under CampoLimpio. The annual average plastic collection is 300 tonnes, accounting for 65 per cent of all crop

Partnership Profile

Protecting West African Cocoa



Who:

CropLife Africa Middle East
World Cocoa Foundation

Where:

Cameroon, Côte d'Ivoire, Ghana
and Nigeria

When:

February 2013-December 2014

What:

A programme to train small-scale cocoa farmers and registered crop protection product dealers as Spray Service Providers (SSPs) in West Africa. SSPs receive special training to properly apply crop protection products, who then hire out their services to fellow farmers. With an initial investment of \$600,000 USD from the World Cocoa Foundation, CropLife Africa Middle East expects to train about 3,200 SSPs. These SSPs, in turn, will help 40,000 farmers increase their crop production. By the second quarter of 2013 alone, CropLife Africa Middle East reported reaching 10 per cent of its training number goal.

The objectives of the training are to 1) improve the safe handling and responsible use of crop protection products by establishing a network of SSPs; 2)

improve farmer accessibility to these services and inputs by linking SSPs to crop protection product dealers; 3) properly plan and manage stocks of crop protection products to avoid buildup of obsolete inventory; and 4) provide a network to implement container management programmes.

Why:

Crop protection products are critical to the management of pests in cocoa crops in West Africa, which produces about 70 per cent of the world's cocoa. Certain types of pests have been a serious threat to the continued cultivation of cocoa crops for over a century and many of these insects and diseases can only be controlled with crop protection products.

The responsible use of these products is important to help farmers maximise crop production while minimising product use and waste. Spraying fields requires specific skills and farmers need training on how to do so or access to individuals who can spray for them.

For more information, contact Bama Yao Octave at CropLife Africa Middle East at bama@croplifeafrica.org.



Carlos Palacios (right), head of training for Agrequima, tells Guatemalan farmers how to identify crop pests and when to spray for them.

protection product containers used in the country per year. Guatemala is second in Latin America in terms of empty container collection.

End uses for recycled crop protection product containers include garbage bags, broom parts (where the bristles are attached) and plastic timber that is used as raw material to build docks in various locations.



Palacios (right) teaches Guatemalan farmers how to properly set up crop protection product spraying tanks.

Q How many collection centres exist nationwide and what are future goals for the recycling programme?

There are three collection centers and more than 350 mini collection points that are well used by farmers. In 2012, we began replacing all the metal mini collection points with plastic ones. The new centres have been built with recycled plastic collected under the programme. This initiative aims to publicly show the final destination of the recycled plastic and to encourage farmers to continue returning empty crop protection product containers to CampoLimpio.

While Agrequima currently recovers 65 per cent of the plastic shipped into the market by the industry, the goal is to reach 75 per cent over the next five

years. This shows Agrequima’s commitment to increasing the numeric, visual and environmental impacts of CampoLimpio in the short and long term.

Q How many and which types of organizations support CampoLimpio?

At the moment, there are up to 200 organisations that directly support CampoLimpio, including individual farmers, agro-exporters and local authorities such as the Ministries of Agriculture, Health and Environment. Their support includes raising awareness about environmental responsibility, donating infrastructure for collection points, and providing staff and technical training.

Q What are key results of Agrequima-supported initiatives?

- Helping small farmers become exporters
- Producing safe crops to improve local market revenues
- Fighting poverty by providing better opportunities to small farmers
- Offering training programmes certified by accreditation bodies
- Inspiring behavioral changes of new farmer generations



Palacios (center in white shirt) shows Guatemalan farmers how to identify crop pests.

Other results we see are enhanced protection of water sources, growth in productivity and increased income due to surplus crops.

For more information about Agrequima, contact Rolando Zamora at rolando.zamora@croplife.org.

CuidAgro™ and CampoLimpio™ are registered service marks of CropLife Latin America.

Vision 2020
Leadership Through Stewardship



Keith Jones, Ph.D.

Stewardship is the responsibility of all of us – from national and local authorities, crop protection product manufacturers and dealers to farmers – as the cornerstone of sustainable agriculture. It helps ensure the production of safe, abundant and affordable food. The crop protection industry is not just about making useful products available to farmers to optimise production, it is about looking after our farming communities and our planet for generations to come.

In recent years, the effective and responsible use of crop protection products has become a much discussed issue from the farm gate to mass media. The crop protection industry, however, has demonstrated leadership in stewardship for decades. CropLife International’s stewardship programmes go back to 1991, when three pilot projects were launched in Guatemala, Thailand and Kenya to train farmers on how to properly apply crop protection products. (Read about the growth of Guatemala’s programme on page 3.) The success of these projects led to additional investments over time in such training around the world. Today, the CropLife International network invests millions of dollars to educate hundreds of thousands of farmers annually on the responsible management of crop protection products and empty product containers.

In 2011, CropLife International held a workshop to continue developing its global stewardship strategy, resulting in Vision 2020. The five priority areas ↓

remain the same as our predecessor guidance document, Vision 2010: 1) Integrated Pest Management (IPM) and the responsible use of crop protection products, 2) management of empty product containers, 3) prevention and management of obsolete stocks of crop protection products, 4) implementation of the International Code of Conduct on Pesticide Management and 5) resistance management. Vision 2020 builds on these priorities to identify where the crop protection industry can increase its impact, outreach and monitoring of stewardship programmes based on successes and lessons learned.

What's new in Vision 2020 versus 2010 is a greater emphasis on resistance management strategies. The need to vary chemistry to address insect pressure is clear. Farmers should only use products as directed at effective doses and rotate use or mix active ingredients with different modes of action (acting on different parts of pests).

Vision 2020 also calls for more partnerships with public and local institutions. Such partnerships can add experience and expertise to increase the impact and outreach of our programmes.

Ultimately, Vision 2020 strives to involve the entire CropLife International network in stewardship programmes and clearly communicate to the public what our industry is doing and how crop protection products should be managed. We wish to enhance public understanding of the industry's stewardship efforts and how they contribute to sustainable agriculture, food security and food safety. We also hope to promote the industry's expertise and measurable impacts in stewardship.

To these ends, Vision 2020's strategies to accomplish its five main goals are to:

- update training materials for all regions, integrating new delivery technologies;
- increase global participation in container management programmes;
- work with partners to dispose of obsolete crop protection products;
- ensure that the global network understands and adheres to the International Code of Conduct on Pesticide Management; and
- develop a global strategy for resistance management that is integrated into farmer training programmes.

Stewardship is essential to sustainable agriculture, protecting the environment and public health. With Vision 2020, CropLife International and its member companies again demonstrate commitment to promoting stewardship in and out of the field now and for decades to come.

Keith Jones, Ph.D., is director of stewardship and sustainable agriculture for CropLife International. He is based in Singapore. 💧

VISION 2020 FIVE-POINT FOCUS



The following five priority areas under Vision 2020 each have their own goals:

Integrated Pest Management/Responsible Use

Vision: To have industry-led IPM/RU programmes recognised as essential elements of sustainable agriculture and partnerships actively sought to spread and implement these programmes.

Container Management

Vision: To have empty crop protection product containers safely and responsibly managed worldwide and the crop protection industry recognised as a leader in these efforts.

Obsolete Stocks

Vision: To have a world free of obsolete stocks with measures to prevent their reoccurrence and the crop protection industry recognised as a key partner in this achievement.

International Code of Conduct

Vision: To have all members of CropLife International know, follow and promote internally and externally the International Code of Conduct on Pesticide Management.

Resistance Management

Vision: To position resistance management as an integral part of stewardship and pest control with an emphasis on voluntary resistance management strategies.

Detailed goals in each of these areas are available at croplife.org.

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