

# Leading the Vision

Stewardship in the Crop Protection Industry

CropLife  
INTERNATIONAL 

## Effective Management of Highly Hazardous Pesticides



By definition, crop protection products are designed to protect crops from insects, diseases and weeds. They do so by controlling pests that infect, consume or damage crops. Uncontrolled pests significantly reduce the quantity and quality of food production. It is estimated that annual crop losses could double without the use of crop protection products.

All of these products are intensively tested and regulated around the world to ensure they don't cause unacceptable adverse effects to humans, non-target wildlife or the environment. Some products are highly toxic in order to control a group of specific pests or highly threatening diseases. Risk assessment and management identify the appropriate uses for crop protection products and promote stewardship measures for their responsible use.

According to the International Code of Conduct on Pesticide Management ("Code"), Highly Hazardous Pesticides (HHPs) are pesticides that are acknowledged to present particularly high levels of acute or chronic hazards to health or the environment (see the full definition on page 4 of the Code [here](#)).

CropLife International supports the Code, which calls for regulating crop protection products based on risk, not hazard. A risk-based approach prevents the restriction or banning of effective, useful products that pose minimal risk under proper use conditions and help farmers feed a growing population.

The hazardous nature of these crop protection products alone does not make them HHPs. What really matters is their risk versus benefits under recommended use conditions. The crop protection industry is committed to ensuring that such risk is appropriately addressed and minimized so a variety of products are available to help protect crops, people and the environment. Besides, the

benefits of certain uses of HHPs may outweigh their risks by controlling pests that spread disease or threaten the food supply.

### Risk Management

The Code stipulates that "prohibition of the importation, distribution, sale and purchase of highly hazardous pesticides may be considered if, based on risk assessment, risk mitigation measures or good marketing practices are insufficient to ensure that the product can be handled without unacceptable risk to humans and the environment."

CropLife International is striving to work with the UN Food and Agriculture Organization (FAO) and other stakeholders to promote risk-based management of HHPs around the globe. This includes identifying highly toxic products for priority risk assessment per intended use and geography and to mitigate potentially unacceptable risks. Risks should be weighed against the need for the product, benefits of its use and availability of alternatives which also need to be evaluated for risks and benefits.

Certain uses of HHPs may be desirable when they benefit society by controlling pests that spread disease or threaten the food supply. For example, while no longer used in agriculture, DDT remains an important tool in reducing human exposure to malaria. Removing this major disease control agent from the market altogether would put people at greater risk. Similarly, substances to control rats and other rodents (rodenticides) protect humans against the spread of diseases.

### Risk Mitigation

The crop protection industry protects people and the environment by following very stringent product development criteria, whereby thousands of chemicals are analyzed and those with potential negative side effects are screened 

out from the very beginning. Products are then thoroughly tested according to local regulatory requirements and international standards. If they are safe for intended uses, they are delivered to the market responsibly. The industry then offers product support and stewardship training as well as promotes responsible handling practices. These necessary business operations ensure product sustainability and longevity as well as protect society.

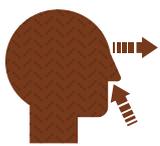
Moreover, the crop protection industry supports Integrated Pest Management (IPM), which calls for applying crop protection products only when needed, and conducts farmer training on IPM and responsible product use. In fact, the CropLife International network has carried out many initiatives around the world to promote the responsible transport, storage, use and disposal of crop protection products. Farmers who follow such guidance and label instructions protect themselves and their farms from adverse effects, as well as protect growing and harvested crops.

Finally, the industry continuously improves product formulations and packaging with human and environmental protection in mind. For example, it has put in place safety measures to prevent accidental or intentional misuse of products, such as safety seals and vomit-inducing ingredients. Liquid formulas may be switched to gels or microcapsules that don't dissolve in water to prevent spillage and make them difficult to drink. Prominent warnings on labels along with suitably-sized and easy-to-handle containers discourage decanting products into unlabeled, inappropriate containers. Coloring or adding a strong smell to products to avoid mistaken identity, child- or spill-resistant caps and built-in measuring devices also help protect farmers and their families. Finally, products may be restricted in use per application or geography and/or only be sold to professional applicators.

### Regulation of HHPs

Like all crop protection products, HHPs must be regulated by national

Examples of Risk Mitigation

PACKAGING		
 Child-resistant caps	 Built-in measuring devices	 Suitable, easy-to-handle container size
PRODUCT		
 Changes in formulation to prevent spillage	 Vomit-inducing ingredient in case of ingestion	 Strong odor or color for identification
RESTRICTED USE		
 Approved crops	 Specific geographic locations	 By licensed professional applicators
TRAINING AND EDUCATION		
 Responsible use of crop protection products	 Integrated Pest Management	 Proper disposal of empty product containers

governments to ensure there are no unacceptable risks to human or environmental health at the local level. The crop protection industry adheres to these regulations. In addition, CropLife International members are voluntarily committed to managing potential risks posed by HHPs by:

- reviewing their product portfolios regularly to identify products that meet HHP criteria;
- conducting use assessments on products/formulations under various conditions of use in specific geographies;

- taking measures to manage any HHP risks, which may include several mitigation measures or individual companies choosing to withdraw a product or use(s);
- encouraging global stakeholders to adhere to similar risk management measures; and
- building capacity for risk assessment in developing countries. 💧

Click [here](#) to download more information about CropLife International's approach to risk management of HHPs.

# Perspective

## Canada Shows How to Put Stewardship First

Russel Hurst



In the early 1980s, crop protection product warehouse fires posed significant environmental and financial risks in Canada. Many products were being stored in inadequate facilities with poor building quality, low levels of spill containment and emergency preparedness, leading to an average of two fires per year.

As an industry, Canada's crop protection companies agreed this could not continue and led the way to the implementation of crop protection product warehousing standards – the first of many initiatives under a program now called [StewardshipFirst](#).

This program promotes the responsible use of crop protection products throughout their lifecycle from their inception to end of use. All member companies of CropLife Canada are required to take an active role in various StewardshipFirst initiatives.

Results are impactful. For example, since the full implementation of warehousing standards in 1995, there have only been five isolated fires in about 1,800 warehouses nationwide – a reduction of 90 percent.

Crop protection products are stored in dyked, properly ventilated facilities with cement floors and must meet rigorous health, safety, emergency response and building code protocols. Facilities are audited and re-certified every two years by one of 30 approved, third-party auditors. Importantly, CropLife Canada members enforce the warehousing standards through a “no certification/no ship” policy: companies will only ship products to distributors or retailers that are in full compliance with the code.

This type of industry-driven and -funded initiative characterizes StewardshipFirst. Member companies embrace their corporate responsibility as it is critical to their continued success as businesses and for every part of the value chain. StewardshipFirst folds many stakeholders into the process: crop protection companies, agricultural retailers, growers, government and food companies.

The program's success has led other national CropLife organizations to adopt it. For example, CropLife Australia and CropLife America launched their own versions of StewardshipFirst in 2012 and 2014, respectively. Like the original program in Canada, both of the newer programs promote the responsible use of crop protection products throughout

their lifecycle and use StewardshipFirst as a banner under which to group stewardship activities.

### Stewardship Success

A standout example of a StewardshipFirst program is the CleanFarms initiative, established by CropLife Canada in 1989 to manage crop protection product container recycling and later in the 1990s the disposal of obsolete stocks.

CleanFarms has established over 1,000 collection points for empty crop protection product containers nationally as well as set up hundreds of depots for growers to safely dispose of outdated or unwanted products free of charge. Since CleanFarms was launched in Canada, more than 100 million empty containers have been collected and recycled, and more than two million kilograms of obsolete products have been safely disposed of via high-temperature incineration.

CleanFarms, like the other StewardshipFirst programs, is an industry-led and -funded initiative developed in collaboration with the entire value chain, including government regulatory bodies. Such teamwork is a critical component to the success of StewardshipFirst as it allows the industry to adapt in a proactive manner to rapidly changing technologies.

Seed treatment technology, for example, is an emerging innovation in Canada. Working with stakeholders across the industry, CropLife Canada released voluntary commercial seed treatment standards in 2014 to proactively address issues such as appropriate product warehousing, operator safety in treatment facilities and proper waste management. Companies that treat seed can now elect to be audited according to these new standards as an educational step to better understand their operation's potential risks; there are no repercussions for failing the initial audit. However, by 2017, companies will be required to pass the audit and StewardshipFirst members will help it enforce it through a “no ship” policy.

StewardshipFirst is dedicated to real, tangible and actionable initiatives for the crop protection industry's products throughout their lifecycle. Our members are committed to the responsible management of their products as they seek to help farmers worldwide produce safe, abundant and high-quality food for all.

*Russel Hurst is executive director of sustainability and stewardship at CropLife Canada in Etobicoke, Ontario.*

STEWARDSHIPFIRST  
IN AMERICA

The success of CropLife Canada's StewardshipFirst brand is catching. Three years ago CropLife Australia launched its *stewardshipfirst* program and last year *StewardshipFirst America* was set up by the CropLife Foundation, the research and stewardship arm of CropLife America.

"The industry is doing a lot for crop protection management and we want to be able to tell a story of what it's doing with examples of good stewardship around the country," says Sarah McLallen, executive director for the CropLife Foundation. "StewardshipFirst is a banner under which to pool resources, publicize events and advocate with state and federal regulators."

By default, all members of CropLife America have a commitment to stewardship but they also have the opportunity to participate in StewardshipFirst. [Participants](#) must annually pledge to support the U.S. program's six guiding principles:

1. Optimize the use of natural resources for public good.
2. Work to continually improve and modernize stewardship practices.
3. Use the best available science as a basis for decision-making.
4. Reinforce proper use and disposal information for crop protection materials.
5. Participate actively in crop protection industry stewardship efforts.
6. Provide education for regulators and key stakeholders on the voluntary industry stewardship.

Program compliance is then assessed based on evaluations of company stewardship practices in three areas: responsible product use education, warehouse accreditation and container management. 💧

## Partnership Profile

## Phone App Connects Australian Beekeepers and Farmers

**Who:**

CropLife Australia partnered with the **Australian Honey Bee Industry Council** and with support from national farming organizations launched a smartphone application that helps farmers and beekeepers coordinate their activities throughout the country.

**What:**

The first app of its kind in the world, BeeConnected enables two-way communication between farmers and beekeepers while maintaining personal privacy via an in-app messaging system. Farmers can log the location of their property via GPS coordinates in Google Maps and beekeepers can do the same to show present and future beehive locations. When a beehive is located near a farm or a crop protection activity is proposed, both the beekeeper and farmer receive an automatic alert. They can then communicate further through the secure internal messaging service. BeeConnected was launched in September 2014.

**Why:**

It is thought 65 percent of Australia's crops are dependent on the honey bee population for pollination and the financial value is estimated at approximately US\$3 to US\$5 billion annually, making their survival crucial to plant production. Improved communication between users of crop protection products and beekeepers can reduce the risk of unintended exposure of bees to any products that may have the potential to negatively impact their health.

**How:**

All of Australia's state farmer organizations and a number of key agricultural producer groups have joined the BeeConnected initiative as official supporters and promote use of the app among their members. To date, about 1,000 users have registered with an even split of beekeepers and farmers/contractors and feedback indicates that registrants find it convenient and easy to use, while feeling that their privacy is protected. The app can be downloaded for free for iPhones or Androids as well as accessed on a computer [here](#).

**What Next:**

Following the success in Australia, several international partners such as CropLife Canada, CropLife America, CropLife Latin America, CropLife Asia and ANDEF (national crop protection organization in Brazil) have expressed interest in making BeeConnected available in their own countries and respective languages. CropLife Australia is working with them to make it possible.

*For more information, and to download the app, visit [www.croplife.org.au/beeconnected](http://www.croplife.org.au/beeconnected)*



## Sharing the Story

### Meet Custodio: The Star of Stewardship

For the last two decades, CropLife Latin America's CuidAgro program has promoted the responsible use of crop protection products across the region and trained millions of farmers, product retailers and other stakeholders. An increasingly familiar figure in this education outreach is Custodio, a cartoon character originally developed by Chile's crop protection association, AFIPA A.G., to help convey messages about the responsible use of crop protection products. CropLife Latin America later adopted this teaching tool as its own and today Custodio is the official global mascot for CropLife International's stewardship materials. He is featured in multiple posters and animated videos, and his "voice" has been translated into eight languages.

Rolando Zamora, CropLife International's stewardship manager, and Gabriela Briceño, stewardship programs manager at CropLife Latin America, tell us more.

#### **Q** Who is Custodio and what's his appeal?

**Rolando Zamora (RZ):** In the early days, the cartoon had no name, he was just a character. When I was working for CropLife Latin America, we named him Custodio, which in Spanish means "custodian." *Custodiar* is a verb that means to take care of something.

One of the reasons he's effective is the simplicity of his messages. He uses everyday terms to explain high-level concepts. He's like somebody out of the crowd.

**Gabriela Briceño (GB):** Also, Custodio is a farmer. He is friendly and has a message that other farmers can relate to.

#### **Q** How is Custodio used in responsible use training programs?

**RZ:** In developing countries, like anywhere else, farmers must protect themselves properly when they apply crop protection products. We provide the

regions with training materials, such as posters featuring Custodio and messages on responsible use, to help raise awareness. We have developed seven posters featuring Custodio on various aspects of responsible use, including how to store products, wear personal protective equipment (PPE), administer first aid in case of an incident, read product labels, maintain sprayers and triple-rinse empty product containers.

The Custodio posters can be used in a number of places such as at crop protection product retailers, but they are also specifically designed for use in training activities. We strive for training that has a practical and "learning by doing" approach. For example, in a session on PPE, farmers will follow Custodio's example to wear the recommended PPE, learn what kind to buy in the market and when they are supposed to use it. The posters also serve a good, stand-alone purpose when farmers take them home and put on their wall as a reminder of what they learned in the training session.

**GB:** Interactivity helps. In some places, farmers watch a training video and discuss it or make a skit to help them remember it. In one video, for example, Custodio sings. He's not a professional singer - in fact, he sings really badly! But people remember that and we want the messages to remain.

#### **Q** Where in the world is Custodio used as a teaching tool?

**RZ:** In addition to CropLife Latin America, he's been used by CropLife Africa, CropLife Asia and in Europe. The triple-rinse poster has been translated into Serbian, Thai, Telugu and other languages to train farmers on empty container management.

**GB:** We can also use Custodio as a visual tool where people don't speak the dominant language. For example, in the Dominican Republic, we have found out that a really high percentage of the labor is based on people from Haiti and they speak Creole, not French. In Peru, you have the Quechua language, and in Guatemala, Quiché. We try to keep Custodio's messages visual so everybody can understand.

#### **Q** What's next for this program?

**RZ:** There are three new posters featuring Custodio coming out soon. One is on seed treatment, one on container recycling and another on counterfeit and illegal products. I think Custodio will be with us for a long, long time. He's been a very important tool for training. We hope he continues.

**GB:** We are very excited about using Custodio in animated videos. This year, we will be releasing three additional videos on triple-rinsing, Integrated Pest Management and application equipment. In some cases, farmers cannot read or write so we have to look for new avenues to convey messages. With video, in less than two minutes, you can get Custodio's messages across. In training programs in Africa or India, for instance, it was amazing - people were actually memorizing the video and singing. Custodio is our mascot and he's going to stay. This is perhaps one of the most visible resources that we have for stewardship. 💧

## CUSTODIO IN ACTION

#### **Videos:**

[Personal Protective Equipment](#)  
[How to Prevent Intoxication](#)

#### **Posters:**

[How to Store Pesticides](#)  
[Always Read Pesticide Labels](#)  
[First Aid for Pesticide Contamination](#)  
[Sprayer Maintenance](#)  
[Personal Protective Equipment](#)  
[9 Steps for Responsible Use](#)  
[Triple Rinse Used Containers](#)

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Helping Farmers Grow