

Product stewardship-Progress or Promises

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Stewardship – promises or progress?

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Good afternoon!

It's about three in the morning in a little farming village near the thriving metropolis of Sao Paulo in Brazil. Miguel, a 14-year-old schoolboy is fast asleep. Miguel was worried when he climbed into bed and drew the covers up. He was concerned about his homework – not that he had not done it. But rather what he had discovered while doing it. His homework was to interview his father, a tomato farmer, about how he uses pesticides and what precautions he takes to use them safely.

Miguel has discovered that his father is a little careless and has not been following the instructions on the label properly. Later today, probably when we are drinking a beer tonight, Miguel will present his findings to the class and discover what his fellow pupils – all the children of farmers – have learned about the habits of their parents.

Miguel's project is just one of many operating in farming regions across the huge country of Brazil. We call it "The School in a Field" and it is based on the idea that if you want to talk to farmers about safety – have a word with their children first.

I'll return later to Miguel and similar projects Syngenta has started in other parts of the world.

I'm really delighted and honored to be with you today to talk about a very important issue for my business, the crop protection business. The issue is called - product stewardship - and it's about making sure that our products are transported, stored and used safely.

Another reason for taking a real pleasure in being with you today is that in the late 90's I had the privilege of working here in Korea for my company.

- In the next 30 minutes or so I want to discuss what product stewardship is. And why we need it
- I'll describe our many stakeholders and their roles in encouraging safe use.

- And I'll share the progress we have made in working with our stakeholders – to ensure that our products are used safely. Here we will return to Miguel and also hear about safe-use projects in other countries.
- I will also address the concerns of some stakeholders that the promise of stewardship is just that, a promise, with no progress.

But before I begin, I just want to tell you briefly about my company.

Syngenta is a world-leading agribusiness committed to innovative research and technology. The company is a leader in crop protection and ranks third in the high-value commercial seeds market. Sales in 2002 were approximately US\$6.2 billion. We employ more than 20,000 people in over 90 countries. Our headquarters are in Basel, Switzerland.

Our product range covers herbicides, fungicides, insecticides and professional products (e.g. for turf management and gardens), as well as seeds for field crops, vegetables and flowers.

Farmers constantly battle with pests and diseases that reduce their yields – and their incomes.

Up to 40% of the world's potential harvest is lost to pests, weeds and diseases. This can be devastating, especially for subsistence farmers who depend on their crops to feed their families.

And there is another, equally important reason why crop protection products are urgently needed, also in future. The world's population is expected to grow by half again over the next 50 years. This will place huge demands on agriculture. Our products, if correctly used, will help meet the increasing need for food.

Crop protection chemicals help to ensure an abundant supply of food, free from pest damage and disease. They help farmers get better yields, improve the quality of the harvest and reduce the amount of hard physical work needed to do their jobs.

My job at Syngenta is to lead and co-ordinate our various product stewardship programs throughout the world.

Crop protection products contain ingredients that are designed to kill weeds, fungi and insects. This is why they work well. Like many everyday products – e.g. gasoline, household bleach and medicines – pesticides bring many benefits but can harm people and the environment if they are used incorrectly.

We are aware of this. We accept that many people have legitimate concerns about our products - and we must address them.

So, what are people worried about? Their concerns include:

- Potential risks to people who use pesticides, including accidental fatal poisoning and the use of pesticides in suicides
- Potential impact on the environment, including the reduction of biodiversity and water pollution from pesticide run-off
- Indiscriminate use. This increases the potential risks to people and the environment, and raises costs for farmers.

It is clearly in our interests as a responsible company to take these concerns very seriously. We have a clear responsibility to ensure that our customers understand how to use our products safely. To protect themselves. And to protect the environment.

Broadly, we carry out our responsibility in four ways.

1. As a minimum, we comply with all laws that control the use and safety of pesticides. This is a highly regulated area and we work with the authorities to ensure we meet their requirements. We also work with governments to ensure that regulations continue to meet society's changing expectations.
2. We constantly look for ways to improve the effectiveness and safety of our products. Improved formulations, packaging and delivery systems.
3. We continuously monitor reports on safety incidents involving our products from farmers and health or other relevant authorities. These are fully investigated and where appropriate corrective action taken.
4. We work in partnership with our customers and others involved in the food chain to help them reduce risks and increase the benefits of crop protection products. Our most supportive stakeholders are those who are most directly involved in gaining benefits from our products, while understandably those who are less involved in agriculture see more risks than benefit. But communication with all those involved or concerned with the use of crop protection products is of great importance to us and that is why, as I said a

moment ago I am delighted to have this opportunity to speak to you all today.

It is this partnership work that I want to share with you today. We call this product stewardship.

So, what exactly do we mean by product stewardship?

Product stewardship is the responsible and ethical management of a product from invention through to ultimate use and beyond. It means making safe use a priority at all stages in a product's life cycle.

Our Health, Safety and Environment (HSE) management systems ensure that we protect our employees (20,000, in 90 countries) and the communities where we operate. These controls cover activities on Syngenta premises that are within our direct control, such as research, product trials and manufacturing.

Encouraging safe handling and use becomes more challenging when our products leave the factory. The products are used in 140 countries worldwide by millions of people, from subsistence farmers and independent smallholders to large commercial growers. We work hard to ensure that our products do not cause harm to people or the environment when they are handled or used. This includes activities that are outside our direct control, in transport, use and disposal.

This slide shows the route our products take when they leave the factory. And it also shows the many stakeholders who are involved as the products make their way from the factory to the field.

We know we can only achieve safe use if we work in close, creative partnership with our stakeholders. Wherever possible, we work with governments, regulatory bodies, food companies, non-governmental organizations – NGOs - and farmers to make sure that our product stewardship programs address their concerns. These partnerships extend the reach of our programs, ensure that we understand local conditions and improve transparency and credibility.

We have developed four areas of product stewardship that follow the route our products take from our factories to the farmers. These are:

- Packaging and labeling

- Transport and storage
- Safe and effective use including sustainable use.
- Safe disposal of containers

Packaging and labeling

Product labels are the first source of safety information for farmers. All our products carry labels with instructions on how to store and use them safely and how to dispose of empty containers correctly. In many countries regulators prescribe the content of the labels as part of the product approval process.

Crop protection products are heavily regulated across the world and must meet high safety standards. Before they can be sold and used, pesticides are evaluated, registered and authorized by government regulators, such as the Environmental Protection Agency in the USA, the EU Commission's Standing Committee on Plant Health and the Pesticides Safety Directorate in the UK. Here in Korea the Rural Development authority is the government agency charged with the task of regulating crop protection products in Korea.

A broad range of safety investigations are conducted, across all areas in which there may be potential hazards to human health or the environment. The approval process is detailed and thorough – for example for the majority of regulatory schemes each product must undergo more than 100 tests to ensure that the necessary margins of safety demanded by the regulatory process can be met.

Authorization for the use of a product will only be given if safety can be demonstrated.

A new chemical's registration dossier includes a proposed product label showing how to use it safely and effectively. This label is used in all countries where the product is sold, even if law does not require this.

Some countries, particularly in the developing world, do not have the capacity to evaluate and regulate pesticides. To maintain consistent standards of safety, we ensure that all Syngenta products are approved by an OECD country, usually the US or EU, before they are sold in developing countries.

We work with many other people in Syngenta to ensure that products are packaged and labeled correctly. And that labels are attached securely and are in the right language for the destination country. All Syngenta products carry a 24-hour emergency telephone number on their label. In the event of an accident, callers can be put through to a doctor for medical advice within minutes.

In the developing world some farmers may be illiterate and cannot read standard product labels. To help them, Syngenta has developed pictograms – picture diagrams that show how to prepare and use our pesticides safely. Pictograms are now used on most products sold in developing countries.

On-pack leaflets are used to provide more detailed safety information. We change the look of the leaflets regularly, to keep them interesting, adding new additional information that farmers find useful.

Transport and storage

Transport contractors deliver Syngenta products from our factories to distributors. We work with them to make sure our products are transported and stored safely.

Our transport contractors must comply with our 'Distribution Safety Policy'. Special labels are attached during transportation and where necessary Transport Emergency Cards provide advice on what to do in the event of an accident.

We have drawn up warehouse standards for our contractors to prevent fires and spills from warehouses where our products are stored. They are based on guidelines issued by CropLife International and the UN Food and Agriculture Organization (FAO). The guidelines cover the siting and design of warehouse buildings, the safe storage of pesticides, how to draw up an emergency plan and safety training for all warehouse employees.

We also provide guidance for all other customers, such as retailers and farmers, on storing our products safely.

Safe and effective use

Education and training are an essential part of product stewardship and we run practical training programs worldwide. These show farmers how to use our products safely and effectively.

Training programs are based on Syngenta's five golden rules of product stewardship (see box), covering accurate spraying, dose levels, protective clothing and the maintenance of spray equipment.

(Slide)

Syngenta's golden rules for the safe use of pesticides

Users of our products are encouraged and taught to:

- 1. Exercise caution at all times**
- 2. Understand the product label**
- 3. Practice good personal hygiene**
- 4. Maintain application equipment**
- 5. Use of appropriate personal protective clothing and equipment.**

Our programs also cover integrated pest management (IPM) techniques. IPM involves a more rational approach to crop protection and ensures agricultural measures and pesticides are combined in the most effective way. For example, farmers are trained to identify pests and diseases and then to select the correct product and dosage to deal with the level of threat. We encourage farmers to view pesticides as one weapon in their armory – others include the use of pest-resistant crop varieties and regular monitoring of crops. IPM helps farmers to better target pests and diseases. This helps reduce the amounts of pesticide used, which can cut costs for farmers and minimize the potential for environmental harm.

For example, we have been working in partnership with NGOs and others in India's cotton growing state of Andhra Pradesh to spread the use of IPM. In 2000 the partnership worked with 250 farmers in 18 villages to compare IPM with common farming practices. This showed clearly that IPM improved cotton yields while reducing insecticide use. This cut costs, improved profitability and reduced environmental harm.

IPM makes economic sense for Syngenta too. We invest considerable time and resources to research, develop and register our products - on average nine years and \$184 million for each product¹. The over-use of pesticides can increase resistance among pests and render our products ineffective. This means we may fail to get an adequate return on our investment.

Each year our trainers work with many farmers personally. For example, in Vietnam over 100,000 small farmers took part in games and competitions at our traveling 'Safe Use Roadshow' where actors were used to convey the message. Radio and TV programs have also been used to reach farmers in remote areas.

But we reach an even wider audience through our 'train-the-trainer' programs for government officials and rural health workers. After

¹ European Crop Protection Association www.ecpa.be/library/reports.html

training they are able to run their own courses for farmers. This significantly increases the number of farmers who are trained each year.

For example, in many countries the agriculture ministry provides advice to small farmers and commercial growers. We help to train government advisers who can then pass on their knowledge to farmers in rural areas.

Most farmers rely on their pesticide suppliers for advice on crop protection products and how to use them. By training wholesalers, dealers and retailers, we can help ensure they provide good guidance and sound advice to farmers. We also train health workers and doctors in the diagnosis and treatment of exposure to crop protection products. We work in partnership with schools, such as the one Miguel attends in Brazil.

All our training programs are based on recommendations from CropLife International, the plant science industry organization, and comply with the International Code of conduct on the Distribution and Use of Pesticides, issued by the FAO. Some are designed to fulfill the requirements of external organizations such as national governments, the ISO 14000 series or the Euro Retailer Produce Working Group (EUREP).

Syngenta also works with organizations to help develop suicide prevention programs. Many believe that most significant health public issue for crop protection products are their use for self-harm. Our products are designed for use as crop protection products and they fulfill that role very effectively. Suicide is a very regrettable and complex social problem but it is a social problem and not related to correct and safe use.

What are we doing in this area? Promoting safe and secure storage. A key message in our safe training is to ensure access only to legitimate users.

Supporting research in the development of prevention messages of prevention.

And working in partnership with the medical community to help diagnosis and treatment of those who attempt the act of suicide with crop protections products.

We also look at ways of making our products safer

Safe disposal of containers and obsolete stocks

Product containers, which contain small amounts of unused chemicals, can pose a risk to health and the environment if they are not disposed of correctly.

Because the containers are strong and well made, people sometimes are tempted to use them again in the home, for example to carry and store water. All Syngenta training programs and product labels include guidance on how to dispose of empty containers. For example, those containers disposed of on the farm should be rinsed three times and deliberately damaged to prevent their re-use.

We support the safe disposal of packaging. For example, we are taking part in the CropLife project in Guatemala, called 'Let's Clean our Fields'. Syngenta has helped set up processing centers around Guatemala for used pesticide containers. Farmers are encouraged to take their used containers to one of these centers rather than burying them on the farm. The containers are then reduced to pellets and sent for disposal in cement kilns.

In 2001, 133 metric tonnes of used pesticide containers were disposed of in this way.

We help our customers to manage their product inventory so they buy the right quantity of pesticides to suit their needs. In the past, many developing countries held large stocks of obsolete pesticides. Syngenta has worked with CropLife International and government agencies to collect and dispose of stocks held in some developing countries.

For example, in the 1990s many developing countries were holding stocks of obsolete pesticides. Many of these had been given as aid by western countries to combat threats such as locust plagues. So much pesticide was donated that it could not be used before its expiry date.

In many countries storage facilities were inadequate so that the pesticides posed a serious risk to the environment and people's health. In the west African state of the Gambia, for example, Syngenta has helped to clear and dispose of stocks of expired rodent bait.

The clear up operation in the Gambia involved Syngenta, the FAO, CropLife International, The Gambia National Environmental Agency (NEA) and Gambia's State Department of Agriculture.

The environment agency retrieved all the obsolete pesticide (over 13 tonnes) from storage and transported it to a central warehouse close to the port of Banjul. The pesticide waste was packed in UN-

approved containers and shipped to the UK where it was destroyed in high temperature incinerators.

(Pause)

I've described the concerns and the way we address them through our product stewardship programs. But are we successful? We know that we can always do better – and we certainly want to. But we also know that we are making progress.

Surveys and government statistics show that our programs are widespread and effective. In Asia and Latin America, for example, we estimate that over one million farmers attended meetings organized by Syngenta. While all of these are not dedicated training events, the principles of safe and effective use are always addressed. Over 150,000 farmers attended specific safe-use training courses in Asia and Latin America during 2002.

In several countries, training is extensive and has helped bring about a significant fall in the number of accidental and occupational pesticide poisoning incidents.

Andean and Caribbean. Since 2000, over 20,000 farmers and advisers (including 2,000 medics) have been trained in the safe use of pesticides.

Brazil. A project, launched in 1991 to train school children in the safe use of pesticides – the one Miguel is involved with – has led to the training of some 270,000 pupils between the ages of 12-14 years. If each child influences two family members, the project could have helped improve safe use among 500,000 farmers.

China. Working with the agriculture ministry and CropLife China, over 500,000 small farmers are trained in safe use techniques a year.

Dominican Republic. According to the Office Of The Secretary Of State For Agriculture in the Dominican Republic

Training programs have helped reduce occupational pesticide poisoning incidents by 90% over the last 10 years

Guatemala. Department of Preventive Medicine estimates that training and education programs have reduced pesticide-poisoning incidents from 500 a year in 2000 to 113 a year in 2002. Poisoning incidents, reported to the department, involving Gramoxone, a Syngenta product, have fallen from 35 to 10 over the same period. Between 1992 and 2001, 423,000 had been trained, including 250,000 farmers, nearly 10,000 doctors and paramedics.

Malaysia. Since our training programs began in 1986 the number of poisoning incidents involving Gramoxone, have fallen by 78%, from approximately 850 to 187 in 2000.

Mexico. A continuing project launched in 1987 has led to the training of half a million farmers over a 16-year period to 2002.

Nicaragua. In 1995 Syngenta started working with the health ministry to reduce incidents of pesticide poisoning. In 2002 the ministry reported that occupational poisoning incidents had fallen by 50% since 1995.

Thailand. Since 1998 Syngenta has worked with the agriculture ministry, local NGOs and CropLife Asia to train small farmers. In 2002, 1,034 leader farmers and a further 47,000 small farmers were trained. The project aims to train 800,000 farmers to use pesticides safely. Syngenta also provides safe-use training for its own products and since 2001, 25,000 farmers have attended courses.

Philippines. Since 1992 the Syngenta Crop Productivity and Farmer Training Center in central Luzon, has trained over 12,000 local farmers.

The Future

To increase the effectiveness of our product stewardship programs we aim to extend them in partnership with others. Our plans include:

- Working in cooperation with governments and other stakeholders to set up certification schemes – to train and certify pesticide users and distributors before they are allowed to work with crop protection products. We do this already in Costa Rica and the Philippines.
- Monitor farming practices to identify existing safety issues and adapt our product stewardship programs and improve our training

- Working with governments and others in the food supply chain such as food companies to develop guidelines for sustainable agriculture, including protocols to optimize the use of crop protection products, and maintain the good quality of our food
- Introducing new technologies such as the lightweight knapsack sprayer and improved packaging

We know that we will have to be more meticulous in the way we monitor our progress. Many of our critics are skeptical of our commitment and progress. Some – quite wrongly – see product stewardship as a public relations exercise.

We think differently because we know that our customers have a wide choice. We want them to choose our products and we know they will if we can keep their trust. Trust that we spend enough on research and development to make safe and effective products. Trust that we provide the back up to help them use our products properly. Trust that we will be there to support them next season – and the next – when they need us again.

In short, our success depends as much on our scientific innovation as on our reputation as a successful company that takes its long-term responsibilities very seriously. That is why we believe product stewardship is good for our customers, good for the environment and good for our business. That's why we believe it's important to make real progress for real people

Progress for Miguel and his family. By talking to Miguel – and the thousands of other children like him – we have helped farmers make the best – and safe – use of our products.

I certainly hope that Miguel's father now follows the instructions on the label. I fell certain that Miguel would - when he starts to help on the family farm.

Thank you.