



ROTTERDAM CONVENTION



STOCKHOLM CONVENTION

SUCCESS STORY #11

ALTERNATIVES TO ENDOSULFAN MEAN FARMS ARE SAFER AND MORE PRODUCTIVE

**Training farmers and working closely
with partners is the key to success**

The listing of the insecticide Endosulfan in the Annexes to the Rotterdam and Stockholm Conventions in 2011 paved the way for its phase-out across the world. The elimination of Endosulfan is likely to bring numerous health and environment benefits, but some farmers in developing countries may find it difficult to switch to effective and economically viable alternatives – particularly in the coffee sector.

In this context, the Rotterdam Convention Secretariat works closely with various stakeholders including non-governmental and industry organisations to identify alternatives, and to develop practical tools to assist coffee producers. Indeed, these experiences suggest that the phasing out of Endosulfan in favour of safe and cost-effective alternatives is entirely possible, both on large estates and small family farms. Monitoring pest population levels and combining two or more Integrated Pest

Management (IPM) methods, including biological controls where possible, are key elements for success.

Training and advice for farmers is essential to change practices. Farmer organisations, sustainability standards and research institutes play an essential role in replacing Endosulfan with IPM methods, while avoiding a switch to other highly hazardous pesticides. Setting agricultural development policies that favour ecologically-based farming naturally encourages more farmers to adopt IPM methods. Governments can help farmers to access local and export markets, which reward higher quality food and safer pest management.

This is why the focus for eradicating Endosulfan must be prioritised in developing countries. An excellent example

of this is the 'Growing coffee without Endosulfan' project, undertaken in Colombia El Salvador and Nicaragua. The project interviewed farmers, estate managers and technical advisors within different agroclimatic zones and coffee production systems.

The coffee borer is a very complicated pest which spends much of its life inside the coffee bean, out of reach of chemical or biological insecticides. Its population levels, economic damage and control costs vary widely from year to year and in different regions. Large farms in Colombia, where this pest will attack berries year-round, have found that careful monitoring of each field every 2-4 weeks helps keep track of borer trends, identify potential outbreaks and assess whether control actions have worked properly.

The starting point for managing this pest is good 'cultural controls'. These field hygiene

measures involve two crucial aspects: sanitary picking of any bored berries or early maturing berries before harvest; and collecting fallen berries and dried berries left on trees after the main picking season.

These practices are essential for reducing both the number of pest breeding sites and the population levels in the following season. On large estates, field hygiene needs careful planning and supervision. Farms aiming to replace chemical use with

more intensive cultural controls and biological products have found it best to have dedicated, trained workers for these tasks. It is very important to note that large- and small-scale farmers alike point out that no chemical, biological or trapping methods will work well without proper field sanitation.

Several biological pesticides are available for the coffee borer, based on the naturally occurring, insect-specific fungus *Beauveria Bassiana*. Costs reported are similar to, or slightly more expensive, than insecticide spraying. Farmer training on how to store, apply and evaluate *Beauveria* biopesticides is very important for effective use.

In conclusion, the results of the project demonstrated two things beyond any doubt: that partnership works and that sustainable alternatives are available. Farmers shared their knowledge, which meant that the experience was highly practical and authentic. Farmers were leading other farmers. The four short videos that the project produced were a highly practical way to disseminate knowledge to farmers.

Learning from successful farmers' IPM experiences, including costs and benefits, gives national decision makers the confidence that banning Endosulfan can be done in a way so as not to cause economic harm to farmers or coffee exports but rather to bring benefits for the health of farmers and consumers, as well as for the environment.



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