CONTROL OF FRUIT FLY DOES NOT STOP AT NATIONAL BORDERS

WORKING FOR Central American farmers facing fruit and vegetable export restrictions

WORKING TO control horticultural pests and facilitate access to lucrative export markets

WORKING WITH Central American horticultural industry, governments, international organizations

WORKING THANKS TO Local public and private sectors, Mexico, IICA, OIRSA, USA

The seven countries of Central America approached the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in 2001 for help in reducing fruit fly prevalence in their region. This was important for the export of fresh agricultural product exports. Pilot projects developed as teaching tools for Central American farmers proved so successful that, instead of being used only as demonstrations, they became a critical part of export-import agreements. A major importing country accepted the results of the demonstrations as validation that the project areas had low pest prevalence, and proof that these areas could be used as part of a systems approach to meeting phytosanitary import requirements.

Traditionally, Central American countries mainly produced crops such as coffee, banana and sugarcane – crops not affected by the Mediterranean or other types of fruit fly pests. Thus growers never had to meet the strict export phytosanitary standards required for many high-value tropical crops that are fruit fly hosts. However, since the 1990s, growers have dealt with the frustration of fluctuating international markets and increasingly lower prices for their traditional commodities. In response, they diversified their production to grow more high-value horticultural commodities such as tomatoes, bell peppers and papaya for export.

This created a new problem. These crops are hosts for fruit flies, meaning that the growers needed to meet standards for exporting to countries free of such pests. These importing countries simply would not accept fresh produce without proof that fruit flies would not accompany the shipments. This meant that investment in these new crops would remain very restricted, as long as this phytosanitary problem could not be overcome.

FRUIT FLY CONTROL SUCCEEDS WITH COMPLETE TECHNICAL PACKAGE

The Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture knew, from experience with other fruit fly eradication and containment projects in the region, that success would require more than just releasing sterile fruit flies. Such a regional project would require coordination, with Central America taking a holistic approach to problem solving and establishing complementary phytosanitary policies in the region. The Joint FAO/IAEA Division proposed an initiative that focused on an integration of pest-management methods in an area-wide approach, including use of the sterile insect technique (SIT) where necessary. Pilot areas of low pest-prevalence would be created, as the basis to further develop a

Countries set up export-import arrangements, private sector entrepreneurs invested in tropical fruit and vegetable production.

specific system approach for each product. The initiative also called for cooperation among governments, fruit growers, fruit exporters and international organizations in Central America.

The project, launched in 2001 with the support of the Joint FAO/IAEA Division, offered a complete technical package. Growers first learned to measure the size of the fruit fly populations in their fields and adjacent areas, and how to suppress the populations with measures other than SIT as part of an integrated pest-management approach. They also learned the steps for successful SIT application, how to monitor and measure the resulting levels of insect prevalence, how to establish database systems for proving they actually had achieved low prevalence, how to inform the World Trade Organization (WTO) and the International Plant Protection Convention (IPPC) of their results, and how to negotiate export agreements with importing countries, based on systems approaches as the best option to pest risk management.

The project also invited a major importer, the United States of America, to check the pilot areas in the different countries where the work was under way and to participate in outlining systems-approach work plans for export. This enabled the countries to move immediately into exporting their produce, since the United States of America was able to validate the results in the pilot areas, with systems approaches becoming the basis for actual export-import agreements.

FAO/IAEA PEST CONTROL SUCCESS LEADS TO INCREASED INVESTMENT AND EMPLOYMENT

When the project started in 2001, the Joint FAO/IAEA Division experts working on the pilots were aware that the IPPC was in the process of preparing standards for fruit fly areas of low prevalence and fruit fly systems approaches. They anticipated that the phytosanitary rules might change in the middle of the project and prepared for this possible outcome. So in 2008, when the IPPC issued a standard allowing "low-pest prevalence for fruit flies", the Central America project already had been working in that direction for several years.

When the pilot project ended in 2007, the Joint Division enhanced its activities in two or three locations per country, aiming towards establishing low-prevalence areas and to further developing systems approaches. As a result, countries set up export-import arrangements while private sector entrepreneurs invested in tropical fruit and vegetable production, expanded growing areas and hired more rural workers. In most cases, 80 percent of the workers are women who work in processing, packing and quality control, and 20 percent are men who work in the field. Now, other support industries are springing up, such as fresh fruit and vegetable packing and transport companies, ensuring local growers can meet increased export demands that have resulted from meeting the low pest-prevalence and systems approaches standards.

Sterile insect technique (SIT)

SIT calls for rearing enormous numbers of male insects and sterilizing them in ionizing radiation chambers, then releasing them into target areas. They mate with wild fertile females but produce no offspring. This method has been used with great success since the 1970s as an environmentally friendly, chemical-free method for controlling populations of insect pests.