

□ **04:40PM** - Wednesday June 5, 2013

Session 4: Horticultural practices / S4-06

Integrated mango production in Brazil to enhancing production systems, quality, and safety of fruit

Lopes, P.R.C.⁽¹⁾; Oliveira, J. E De M⁽¹⁾; Assis, J. S. De⁽¹⁾; Oliveira, I.V. De M.⁽²⁾

⁽¹⁾ Researchers of the Brazilian Agricultural Research Corporation, Embrapa Semárido, Petrolina-PE, Brazil (Paulo.roberto@embrapa.br). ⁽²⁾ Doctor in Vegetal Production (inezvilar@yahoo.com).

Abstract

The development and implementation of ecosystem-based technologies in plant protection have been important objectives of the International Organization for Biological Control (IOBC). Integrated Production/Integrated Farming is a system that produces high quality and safe food and other products by using natural resources and regulating mechanisms to replace polluting inputs and to secure sustainable farming. The objectives and principles of Integrated Production (IP) are based in a holistic view of the system, combining strategies such as Integrated Pest Management (IPM), safety, fertilization, and agronomic measures to enhance their effectiveness. It relies on ecosystem regulation, food safety, the importance of animal welfare, and on the preservation of natural resources. The expansion of the mango growing area in Brazil depends on the generation and adaptation of production technologies, as well as on consumer market tendencies that currently require better quality fruit. Brazil needs to adjust itself to agricultural production systems like Integrated Mango Production (IMP) that has the objective economically producing high quality fruit obtained by ecologically safer methods, which minimizes the collateral undesirable effects of the use of pesticides, increasing environmental protection and improving human health. The IMP System in the São Francisco River Valley began in 2000, with the elaboration of an environmental diagnosis of the region followed by the monitoring of insects and diseases, training of technicians and farmers, study of the production chain, and elaboration of data bases and procedures for integrated mango production. This program is based on the integration of scientists, farmers, consultants, and extension people, both from public and private institutions. Research studies are being carried out in order to generate and diffuse new technologies, products, and services that can be adapted to the situation of the Brazilian mango farmers. We collected information on the application of pesticides during crop cycles, using the data recorded in field notebooks of ten parcels of mango, regarding the application of pesticides in 2001 (plots, did not participate of the IMP system) from 2002 to 2009. In the years 2007, 2008 and 2009, all herbicide applications were eliminated. The use of insecticides decreased on average only 31.5% compared to levels applied prior to deployment. The reduction of the application of fungicides has an average of 69.6% and acaricide was 100%. Based on data obtained, it can be stated that the adoption of the Integrated Mango Production gave a considerable reduction in the number of pesticide applications, compared to conventional production system (control).

□ **05:00PM** - Mango Working Group - ISHS