

Rice Pests

A New Challenge for Central American Rice Producers

GENERAL INFORMATION

Project Name

Rice Mite-Fungus-Bacterium

Project's Lead Researcher

Ismael Camargo, PhD, Project Coordinators at IDIAP, Panama

Duration

3 years

Cost

The total investment was \$1,627,200; FONTAGRO contributed \$360,000 in financing and matching funds from organizations in terms of property, human resources, and other items for project development totaled \$1,267,200.

Strategy: Coordinated is better

Research institutes gathered information on the main pests, weeds, and diseases, as well as their impact and the damage they cause. They also assessed farmers' farming practices and how their application of pesticides to control these pests increased their costs, while the overuse of pesticides affected the environment.

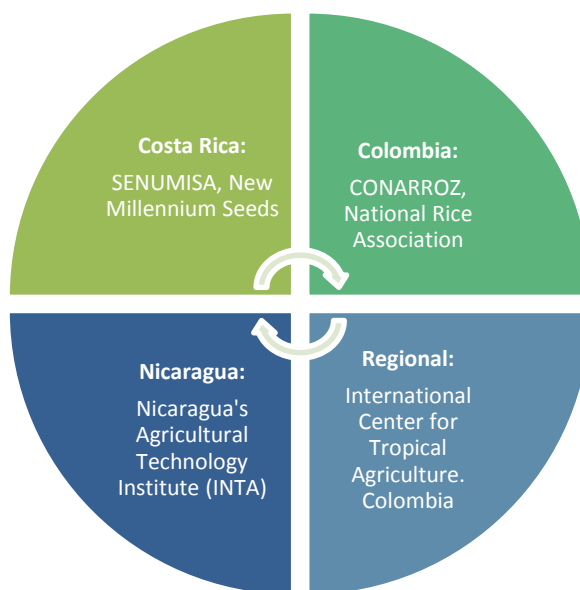
The project's strategy was to carry out a diagnosis on the presence of pests in the main rice-producing areas of the countries involved. Furthermore, planting seasons and nutritional demands for rice farming were established.



Challenge

This project faced the challenge of developing agricultural technologies to manage integrated farming in each country, thus improving grain quality, efficiency, and productivity, but mainly finding solutions to combat pests that affected grain. Mites, fungi, and bacteria pose dire threats to rice production and stability, not only in Panama, Costa Rica, Nicaragua, and Colombia, but also in other Latin American countries.

CONSORTIUM



Leader:

Panama: IDIAP Agricultural Research Institute

Regional:

Nicaragua's INTA
SENUMISA, Costa Rica's New Millennium Seeds,
CONARROZ, National Rice Association,
Colombia's CIAT.

Rice: A Staple Food

Rice provides 20% of the world's dietary energy supply and it is one of the staples in the diet of several Central American countries.

It is estimated that the region produces approximately 1,000,000 tons of rice per year, planted on 250,000 hectares, and this generates more than 300,000 jobs.

In spite of the significant progress made in rice farming research in Central America, average yields in the region are considerably low compared with those in other countries. Growing demand for this product has evidenced the urgent need to improve farming competitiveness, thus reducing production costs and improving quality. Part of the yields were severely affected by several pests, which decreased by 40% to 60% in 2004 compared with previous years, according to information provided by official organizations in several countries. This has had a significant economic impact on farming families in the region's rice sector.

Results:

Five new rice varieties with higher tolerance to pests and diseases—including a particular pest complex: the mite-fungus-bacterium—were identified and released. These new varieties improved performance and culinary quality. In Panama alone, costs for producers decreased 15% to 30%.

Once technologies had been developed, they were disseminated among extension workers and farmers. Producers had to relearn how to grow rice, casting aside old, premade recipes and other practices that had not been carried out appropriately. Through exchanges, seminars, courses, and training sessions, farmers learned about a new way of working.

Impact in Numbers

In Panama, more than 1,500 agricultural entrepreneurs guaranteed some 5,000 permanent jobs and 250,000 temporary jobs in rural areas of the country.

In Colombia, some 28,000 farmers who participated in the project were benefited.

In Nicaragua, an estimated 3,000 producers were involved. This resulted in guaranteeing at least 15,000 temporary jobs in different rice-producing areas of the country.

Knowledge at the Service of Production

An important aspect of the project was the dissemination of information and knowledge acquired. Therefore, in several countries special attention was given to publicizing the experience gained.

The project involved several professionals and specialists (such as breeders, entomologists, plant pathologists, and agronomists specialized in weeds, soil, and nutrition), as well as rice and seed farmers and extension workers. Knowledge about the integrated management of rice farming was shared with farmers, technicians, and specialists during training sessions. The exchange of experiences, courses, and training sessions ultimately led to innovating rice production systems.

Cooperation with an Impact

All stakeholders in the rice agrifood chain in different countries joined forces. In particular, rice farmers in Panama, Costa Rica, and Nicaragua have benefited from implementing integrated crop management—primarily focused on controlling the new pest complex—by using the new technologies developed. This enabled them to maintain crop competitiveness and reduce pesticide use, which results in less environmental pollution.

This project's success was the result of the effort and contribution of several stakeholders, with FONTAGRO acting as liaison, i.e., as a mechanism with the capacity to interact with several partners and mobilize the necessary funds and expertise for developing this type of project.