Rice blast networking.

Preparing an international networking project on rice blast diversity.

ABSTRACT

The objectives of this project were to set up contacts and initiate collaboration with partners in Continental South Asia to identify valuable partners to prepare a future collaborative project on rice blast diversity. The final goal is to develop a network of partners and an international platform to study the diversity of the most damaging fungal pathogen of rice, Magnaporthe oryzae. We contacted more than 20 partners to explore the possibility of setting up collaborations. We realized prospective missions to Yunnan province of China, Laos, and Nepal to visit different preselected research groups working on rice and/or rice blast. These missions were followed by a collaborative work, that consisted in obtaining rice diseased samples, isolating rice blast strains, and characterizing their fertility and genetic diversity with molecular markers. This resulted in the isolation of 335 strains and characterization of 235. Among these samples, we identified a particular population that show all characteristics of a sexually reproducing population. This is the first time that such a population is unambiguously identified for the rice blast fungus. We could welcome a Nepalese colleague in Montpellier and train him to our biological and molecular methods of characterization. We also realized a mission to the Philippines to try to involve IRRI in the network construction.
The expected output to submit to funding agencies an ambitious international collaborative project could not be reached because there were no appropriate calls for proposals. But, the prospective missions allowed us to identify valuable partners and to initiate collaboration. The preliminary data obtained orientated the choice of geographic areas to further investigate. The results were presented in different national and international conferences and part of them are presented in a paper submitted for publication in international peer-reviewed journal.

Keywords : Plant, Bio-aggressor, Invasive species, Diversity/variability, Rice

Year : 2008
Project number : 0802-006
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Project type : AAP
Research units in the network :
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End date : 2011-03-07
Flagship project : no

Project leader : Didier Tharrau
Project leader's institution : CIRAD
Project leader's RU : BGPI-PHIM

Budget allocated : 20800 €
Total budget allocated (including co-financing) : 20800 €
Funding : RTRA

PERSPECTIVES

The project has generated effective collaboration and promising scientific results. We aim at strengthening collaboration and at conforting the scientific results. We will maintain our efforts to set up new collaborations Continental South Asia. We will go on looking for calls for proposals that would support either bilateral cooperation or networks on rice blast diversity in this area.