Health of plants in their socio-ecological ecosystem

OBJECTIFS

We have gathered a community of researchers with complementary skills from various disciplines (biological sciences, epidemiology, plant pathology, microbiology, ecology, evolution, agronomy, social sciences, economy, ethnology) belonging to 8 units from the Agro Labex. The present project was co-constructed by the whole group during 8 months (Nov. 2020 – May 2021). Building on the strengths already present within the group, the objective of the Plant Health project is double:
1) to create, structure and animate an interdisciplinary consortium centred on Plant Health within the Agro Labex community;
2) to conduct “proof-of-concept” interdisciplinary research on specific survey sites (two countries, three crops) targeting the definition of new indicators and criteria of plant health, and identifying virtuous agronomic practices that foster plant health, especially by deciphering the microbiota in order to identify its beneficial members or interactions and to promote them, thereby reducing the use of pesticides.
These two objectives will be tackled in parallel and will feed each-other. The project is organized in four work-packages, the first three being dedicated to field research, and the last one dedicated to the building, structuration and animation of the interdisciplinary consortium and to the project management.
We collectively choose to focus the research part of the project on three specific crops distributed on two survey sites: rice in Cambodia, cacao and banana in Ivory Coast. These three situations were selected because working forces and local collaborations were already available through various ongoing projects.

ACTIONS

WP1: Building global indicators of plant and agroecosystem health
WP2: Crossed analysis of field practices with assessment of plant health indicators in order to identify virtuous practices
WP3: Understanding the processes (microbiome dynamics & socio-cultural processes of innovation) allowing the optimization of plant and agro-ecosystem health
WP4: Project management and Interdisciplinary dynamics through transversal activities

Responsable :

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