

# REPROCROP

## Assessment of farmer's traditional and botanical knowledge regarding the reproductive biology of some of their crops (cassava, cocoa, coconut, banana)

### ABSTRACT

Against the backdrop of a decline in pollinators and rapid agricultural change, the ReproCrop project studies the traditional and botanical knowledge of farmers regarding the mode of reproduction of five of their crops (banana, cocoa, coconut, cassava, and oil palm). Understanding farmers' agricultural practices and the knowledge systems in which they are embedded thus seems crucial for explaining the present dynamics of crop evolution.

**Keywords :** Developing the plant of the future, Society, Varietal improvement, Agrobiodiversity, Family agriculture, Breeding, Conservation, Diversity/variability, Farmers/farmer's practices/stakeholders, Participatory, Socioeconomic factors, Coconut, Cacao, Banana, Manioc

**Year :** 2014

**Project number :** 1403-025

**Type of funding :** AAP OS

**Project type :** AAP

**Research units in the network :** INNOVATION

**Start date :** 2014-12-01

**End date :** 2016-02-28

**Flagship project :** no

**Project leader :** Roland Bourdeix

**Project leader's institution :** CIRAD

**Project leader's RU :** AGAP

**Budget allocated :** 27102 €

**Total budget allocated ( including co-financing ) :** 27102 €

**Funding :** Labex

### GOAL

The overall objective of ReproCrop project is to strengthen the role of farmers from developing countries regarding in situ conservation, participative breeding and involvement in producing locally good planting material. The specific objective of this project was to assess the farmer's traditional and botanical knowledge regarding the reproductive biology of some of their crops. Our working hypothesis was that farmer's knowledge and beliefs regarding crop reproduction are impacting the way they select, breed and conserve crop genetic resources.

### ACTION

A semi directed questionnaire, now fully available on line, was built by using an iterative process with farmers.

300 men and women farmers (100 more than initially planned) were interviewed in three regions of Côte d'Ivoire

A movie was shot in the Grand Lahou region, where coconut palms are decimated by the lethal yellowing disease.

## RESULTS

A blend or a layering of four main beliefs was observed, by order of decreasing frequency: 1) 'it is God's will' or 'I don't know'; 2) elements of nature, such as rain, animals, sun or soil fertility are the causal agents of plant reproduction; 3) a conception close to the botanical and scientific version of plant reproduction, or views parallel to this; 4) the role of roots and/or soil is not only nurturing; they play an active role in a sexed reproductive process. Only 18 % of interviewed farmers were aware of, and believed in the botanists' version of plant reproduction. Responses show strong differences by gender, ethnic groups, region and cultivated crops. Women more often referred to natural forces than did men, whose explanation more closely approached the scientific understanding.

## PERSPECTIVES

The great diversity of responses may indicate a diverse and rapidly changing society, where women farmers remain disadvantaged, with limited access to formal schooling and agricultural extension services. ReproCrop results have recently permitted to obtain a larger project (260 000 USD) dealing with massive micro-distribution of planting material (coconut and cassava) and training for farmer's empowerment.