

PARASITE Programme

A research programme to support the African rice sector in dealing with parasitic weeds

Project partners:



Funded by:



Background

The PARASITE Programme is a research collaboration between Wageningen University and AfricaRice (lead centres) and the national agricultural research institutes of Benin (INRAB), Cote d'Ivoire (CNRA) and Tanzania (MARI). The programme is funded through the Integrated Programme Scheme of NWO-WOTRO and the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS).

Objective

The objective of the PARASITE Programme is to support the rice sector in sub-Saharan Africa in preventing and controlling increased parasitic weed infestation (*Striga spp.* and *Rhaphicarpa fistulosa*). Research activities take place in the Netherlands, Tanzania, Benin and Cote d'Ivoire between 2011 and 2015

Research approach

The PARASITE Programme is an interdisciplinary, integrated research programme, consisting of three PhD projects and a postdoc project (Fig. 1).

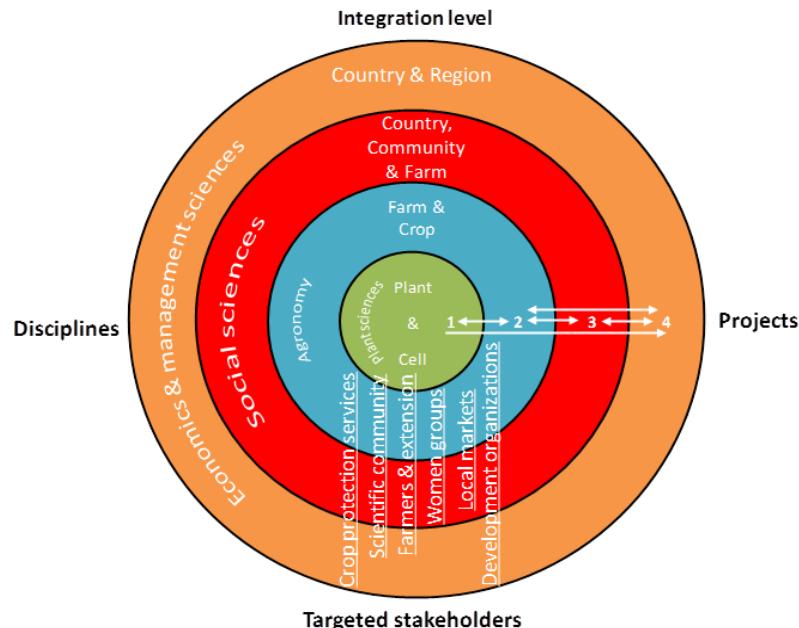


Figure 1. The PARASITE Programme integrated research approach

PhD project 1: Biology and ecology

Objective: Obtain insights in how local environmental conditions determine the presence of parasitic weeds and study the mutual interaction between host and parasitic weed.

Methods: Greenhouse and field experiments.

PhD project 2: Agronomy

Objective: Develop locally adaptable and socially and economically acceptable management strategies for prevention and control of parasitic weeds in rain-fed rice production systems.

Methods: Farmer surveys, field experiments, demonstration trials and participatory technology testing.

PhD project 3: Economics

Objective: Assess current and future socio-economic impacts of parasitic weeds in rice.

Methods: Multi-stage stratified and random sampled farmer interviews, plot observation and data collection and econometric modelling and analyses.

Postdoctoral project: Sociology

Objective: Analysis of crop protection and extension systems. Contribute to institutional innovations to enhance the prevention and control of parasitic weeds in rain-fed rice farming.

Methods: Semi-structured interviews, secondary data analysis, farmer-extensionist questionnaires and multi-stakeholder workshops.



Photo 1. Experiment in Wageningen 2012 on rice - *Rhaphicarpa fistulosa* interaction



Photo 2. Multi-stakeholder workshop in Tanzania in October 2012

Expected results

The PARASITE Programme expects to deliver control and prevention strategies, and stimulate institutional innovations to reduce the expansion and negative impact of parasitic weeds in rainfed rice farming in sub-Saharan Africa. More specific results are:

- Insights in environmental effects on parasitic weed success and parasite-host interactions.
- Information on the cost-effectiveness and culturally and socially acceptability of parasitic weed management strategies.
- Insights in the (in)direct economic losses caused by parasitic weeds.
- Recommendations for institutional innovations to enhance prevention and control of crop protection problems.



More information

- Website: www.parasite-project.org
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