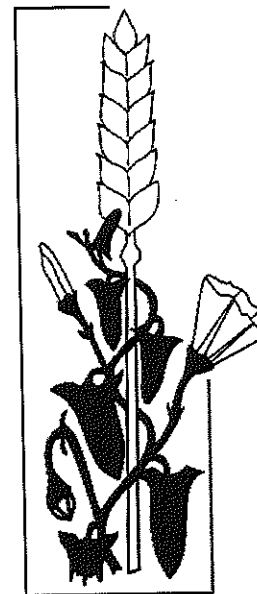


16th SYMPOSIUM

Samsun 2013

24-27 June, 2013



EWRS

*European Weed
Research Society*

PROCEEDINGS

PARASITE: An integrated research programme on parasitic weeds of rice in sub-Saharan Africa

L. Bastiaans¹, L. Akanvou², A. van Ast¹, G. Gbehounou³, S. Kabiri¹, J. Kayeke⁴, L. Klerkx⁵, M. Mourits⁶, S. N'cho⁶, A. Oude Lansink⁶, J. Rodenburg⁷, M. Schut⁵

¹*Crop and Weed Ecology Group, Centre for Crop Systems Analysis, Wageningen University, P.O. Box 430, 6700 AK Wageningen-the Netherlands*

²*Centre National de Recherche Agronomique (CNRA), Abidjan-Cote d'Ivoire*

³*Food and Agriculture Organisation (FAO), Rome-Italy*

⁴*Mikocheni Agricultural Research Institute (MARI), Dar es Salaam-Tanzania*

⁵*Knowledge, Technology and Innovation, Wageningen University, Wageningen-the Netherlands*

⁶*Business Economics, Wageningen University, Wageningen-the Netherlands*

⁷*Africa Rice Center (AfricaRice), Dar es Salaam-Tanzania*

lammert.bastiaans@wur.nl

Parasitic weeds are progressively spreading in rain-fed rice production systems in sub-Saharan Africa (SSA). This is particularly worrisome as rice is gaining in importance as a strategic crop for attaining food security in SSA. The most important parasitic weeds in rice are *Striga hermonthica*, *S. asiatica* and *Rhamphicarpa fistulosa*. Stakeholder analyses in three affected areas in West and East Africa showed that the problem is mainly affecting resource-poor farmers, which generally lack the knowledge and means to effectively control parasitic weed infestations. Extension services are not always aware of the actual extent of the problem and are often unable to backstop farmers with adequate solutions. This proved particularly true for *R. fistulosa*, which is a relatively new parasitic weed. The stakeholder analyses further showed the existence of a large time gap between the emergence of a parasitic weed problem and the start of any targeted action to control the problem. Clearly, improved communication between stakeholders and a better preparedness at farm, community and government level would help to reduce the extent and impact of any future outbreak.

The parasitic weed problem is inherently complex as it covers different dimensions and disciplines (e.g. biology, ecology, agronomy, economy, sociology) and a variety of integration levels (e.g. plant, crop, farm, national, regional). The implication is that for real impact the involvement of different groups of stakeholders is essential. This notion was used as a starting point for a collaborative programme of Wageningen University, Africa Rice Center and NARS of Benin, Côte d'Ivoire and Tanzania, funded through the Integrated Programme scheme of The Netherlands Organisation for Scientific Research (NWO-WOTRO). The research programme consists of four sub-projects that cover (1) biology and ecology, (2) agronomy, (3) economy and (4) sociology and institutional analysis. The programme expects to deliver locally adapted management strategies, and to stimulate institutional innovations and farmer experimentation to reduce the expansion and negative impacts of parasitic weeds in rain-fed rice systems in SSA. An example of the added value of the integrated approach is that control strategies are evaluated at pot (subproject 1), field (subproject 2) and farmers (subproject 3) level. Subsequently, subproject 4 provides insight in what type of institutional innovations can enable or constrain the broader dissemination of such management strategies.