

## **P.48 - Role of NERICA, other lowland rice and mineral fertilizer in the integrated control of *R. fistulosa***

Zossou, N.

In 1992, IVC (Inland Valley Consortium) characterised and fitted out some inland valleys in Benin. These inland valleys are often used by the local population for rice cultivation. However, the development of a new parasite *Rhaphicarpa fistulosa* in some of these inland valleys constitutes a major constraint for the development of rice cultivation. The objectives of this research are to study farmers' perception on the damages caused by *Rhaphicarpa fistulosa* in the district of Dassa and Glazoué and on the other hand find some strategies to control the infestation caused by the parasite. For this, an experiment has been carried out in order to evaluate the potential role of some varieties of NERICAs and other popular rice varieties grown in the lowland combined with the supply of mineral fertilizer. The experimental design was a split plot. The varieties (NERICA-L-20, 32, 39, 43; IR64; TOG5681 and Gambiaka) constitute the main factor followed by a control. The sub factors were two levels of infestation (0mg and 5mg of viable seeds of *Rhaphicarpa fistulosa*) and three levels of fertilization (0 kg/ha of NPK and 0 kg/ha of Urea; 100 kg/ha of NPK and 37,5 kg/ha of Urea ; 200 kg/ha of NPK and 75 kg/ha of Urea). The parasite was only found in Dassa, Glazoué, Boukoumbé and Ouaké areas. In Dassa and Glazoué, 60% of the respondents mentioned that, the parasite can cause between 62 to 100% of lowland rice yield losses. These results show an increase of the importance of the damages caused by *Rhaphicarpa fistulosa* compared with the observations made by Gbèhounou and Assigbé (1998). It comes out from the results of the plot experiment that NERICA-L-32 and IR64 have tolerated the parasite when 200 kg/ha NPK and 75 kg/ha of Urea fertilizer are applied. This strategy, which integrates as well the variety and the supply of mineral fertiliser, may be presently the only way to control the parasite effect on the lowland rice cultivation in the studied area in Benin.