

WEED TURNS RICE PLANT INTO SLAVE

***Rhamphicarpa fistulosa* looks harmless but it behaves like a real slave driver when it gets among rice plants. PhD candidate Stella Kabiri is investigating the growth strategy of this parasitic weed, which is a threat to rice production in Africa.**

Kabiri grew rice plants in pots, added different amounts of the weed's seeds and carried out regular measurements to find out how *R. fistulosa* inhibits the growth and production of rice plants. She concludes that the weed affects the rice plant's photosynthesis and reduces growth by between 22 and 71 percent. Moreover, the number of rice grains declines by as much as 78 to 100 percent. 'The parasitism eventually causes growth to come to a complete standstill in the rice plant, with the plant only making nutrients for the parasite,' writes Kabiri this month in the *Annals of Applied Ecology*. 'After the parasite has infected the rice plant, it behaves like a real slave driver that completely dominates the host plant.'



PHOTO: DINESH VALKE, WIKIMEDIA

R. fistulosa, which the Africans call the rice vampire weed, is found in nature in low-lying wet areas of Africa, where rice production has increased in recent years. Researchers at the Centre for Crop Systems Analysis in Wageningen and the Africa Rice Center in Côte d'Ivoire, who supervised Kabiri, therefore expect this weed to be an increasing problem.

Kabiri's research offers possibilities for combating it. To start with, African rice farmers need to create a 'false seedbed' prior to planting. Some of the weed seeds will germinate then, letting the farmer remove them. Improving soil fertility will also help as the parasite thrives mainly in poor soils. **BS**