

## Better Beans

Whitefly-transmitted diseases of crops such as cassava, sweet potato, beans and vegetables are a serious problem in many countries of Africa and Latin America. In April last year the DFID-funded project R8041 on sustainable management of whiteflies and whitefly-transmitted geminiviruses in the tropics was initiated. This project aims to improve the livelihoods of resource-poor farmers by developing improved management strategies for controlling these diseases/whiteflies and the plant viruses they transmit, and is led by the Centro Internacional de Agricultura Tropical (CIAT). It forms part of the project on sustainable integrated management of whiteflies as pests and vectors of plant viruses in the tropics (SP-IPM Whitefly project) which received core funding from Danida with support from a consortium of donors.

yellow mosaic virus (BGYMV)-resistant lines combining up to three different sources of resistance. One particular line, developed by Juan Carlos Rosas in El Zamorano, Honduras, combines three of our sources of BGYMV-resistance (various DOR lines and Garrapato) and another source of resistance identified in the Dominican Republic. This line also has the desirable red color of the original 'Rojo de Seda' and, thus, farmers like it a lot already. These trials have been established with only one application of the insecticide, imidacloprid, at sowing time. In the past, although bean farmers were making up to 20 applications of methomyl, methamidophos and imidacloprid, the virus still caused economic losses in their local bean varieties.



*Beans that resist disease such as bean golden yellow mosaic virus growing in the Valley of Zapotitán*

Encouraging results on recovering bean production are emerging from the Valley of Zapotitán in El Salvador. After being considered the 'granary' of the capital and surrounding cities of El Salvador, the Valley of Zapotitán had to be converted to sugarcane production due to the severe damage caused by whitefly-transmitted viruses to beans and many horticultural crops. The damage was particularly serious during the dry season (December–April), when whitefly populations peak. Through this DFID-funded System-Wide IPM project, CENTA and CIAT have been able to show farmers in the valley that it is possible to grow beans again in the dry period, thanks to the availability of new bean golden

This is a new area of whitefly research for the CPP but earlier whitefly projects in sub-Saharan Africa are achieving significant impact for poor farmers. Exciting opportunities for large-scale impact through this multi-donor donor project – and promotional strategies developed by the CPP – are anticipated.

**R8041:** *Sustainable integrated management of whiteflies as pests and vectors of plant viruses in the tropics. Phase 2 – Network strengthening, pest and disease dynamics and IPM component research*  
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