

## Chips are Down for Potato Pests

The Mesothermic Valleys in Bolivia are a key horticultural production zone, supplying both local and national markets. Potatoes are the primary crop, usually cultivated in rotation with onion, tomato, maize, strawberry and beans (*Vicia faba* and *Phaseolus vulgaris*).

Numerous pest constraints affect this potato-based cropping system, but precise information on the major pests and the yield losses they cause is lacking. There is an urgent need to fill this gap so that an integrated crop management (ICM) strategy for potato can be developed from a sound scientific basis. The CPP is funding a project (R7462), led by the Centro de Investigación Agrícola Tropical (CIAT), to meet this need.

Pest surveys have identified a number of expected pests, but also some unexpected ones, and some which are less significant than was thought. Unexpected pests that have not previously been reported in the Valleys include the potato cyst nematode (*Globodera* spp.), the root knot nematodes (*Meloidogyne* spp.), the potato tuber moth (*Symmetrischema* sp.) and an unknown phytoblastoma.

Current research is assessing yield losses caused by all the pests identified, and addressing the impact of farmer practices on pest incidence. Existing control recommendations are being adapted to suit local conditions and, where no appropriate control options exist, preliminary research is being initiated to tackle priority pests.

Implementation of the research involved the setting-up of local capability in plant pathology



*Fusarium seed dry rot is a common disease of seed potato*

in the Valleys through the establishment of a plant clinic in Comarapa municipality. Plant clinic personnel received training in fungal, bacterial, nematode and viral isolation methods and identification, and technical backstopping expertise is provided by CABI Bioscience, IACR-Rothamsted and CIP (Centro Internacional de la Papa). The laboratory soon became known and valued as a unique resource for local farmers, and the project built on this success by initiating a mobile plant clinic which provides a diagnostic and advisory service to neighbouring communities. Recently, a radio telephone link has been established between Comarapa and another municipality, Saipina, giving wider access to the plant clinic's services.



*The plant clinic in Comarapa has become a valuable resource for farmers*

Local municipality councils are looking to maintain the laboratory and its staff after the completion of the project by charging a small fee for services, as well as through continued municipality funding, providing a model for other regions to follow. Municipalities are also acting on other project outputs. On the basis of survey findings, disease alerts have been issued and systems implemented to control the introduction of seed tubers. The project has also raised awareness of pests, diseases and their control amongst farmers and NGOs, through demonstration plots, leaflets, local radio and television.

**R7462:** *Integrated management systems for pests and diseases in potato farming systems in the mesothermic valleys of Bolivia, J. Smith, CAB International*