BEYOND THE GREY UNKNOWN

Australian scientists have returned from international disease hotspots where they are investigating the enigma of plant diseases, Botrytis Grey Mould (BGM), to boost grower confidence in chickpeas, a potentially lucrative crop in Australia.

In sporadic domestic incidents, BGM robs up to 90 per cent from chickpea yields in years when infection sources are available and spring conditions suit development.

“Chickpeas are one of the few pulses with an established human consumption market, with Australia annually exporting more than 250,000 tonnes to the Indian sub-continent,” Bill MacLeod of the WA Department of Agriculture explained.

After returning from disease nurseries in the warm, humid climate of Bangladesh, where diverse chickpea populations are tested for BGM resistance, he said Australia must overcome disease threats to reliably satisfy export market opportunities.

“Chickpea gives an income and is an excellent rotation option in many areas where soils don’t suit lupins, but growers overlook it due to disease concerns such as BGM.”

Confronting fears limiting chickpea’s adoption involved linking with researchers in Bangladesh, Nepal and India, where BGM also sapped farmer confidence in the crop.

The UWA-based Centre for Legumes in Mediterranean Agriculture (CLIMA) heads the project and collaborates with the WA, Victorian and NSW Departments of Agriculture and the University of Melbourne in what is, effectively, a two-pronged assault on BGM. Dr Paul Taylor, University of Melbourne, went to Bangladesh with Mr MacLeod to investigate the genetic diversity of the fungus which causes BGM.

While agronomic strategies are trialled to formalise a best-bet management system for BGM when it is present, simultaneous research is screening more than 500 chickpea lines for genetic sources of BGM resistance.

“More than 400 lines from Australian chickpea breeding programs will be screened in Bangladesh this year and sources of potential resistance further tested. The naturally severe development of diseases in Bangladesh and Nepalese nurseries will help vet out all but the best prospects for incorporating resistance to BGM into breeding programs. Preliminary data indicates there is useful resistance available within the germplasm tested this season in Bangladesh and Nepal,” Mr MacLeod said.
While salvaging production potential in developing nations such as Bangladesh, India and Nepal, where chickpea is a dietary staple, better BGM resistance and management offers Australian growers new income streams and fortifies farming system choices.

Funded by the Australian Centre for International Agricultural Research (ACIAR), the project’s international collaborators are the International Crops Research Institute for Semi Arid Tropics (ICRISAT), India and the Bangladesh Agricultural Research Institute (BARI).

ENDS

Authorised by CLIMA and issued on its behalf by Brendon Cant & Associates
Tel 08 9385 7779, Mobile 0417 930536.

MEDIA CONTACT: Bill MacLeod, Tel 08 9690 2172 or 08 9380 3784
CLIMA/bgm.doc