



CLIMA Media Release

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EXIT MOULD

Botrytis Grey Mould (BGM) is under the spotlight following the return of Australian scientists from Bangladesh, where they viewed BGM screening nurseries and integrated management solutions for the chickpea disease threat.

Bill MacLeod of the Department of Agriculture and Centre for Legumes in Mediterranean Agriculture (CLIMA) Director Kadambot Siddique inspected the international project and collected BGM samples for molecular testing in Australia.

Although the warm, humid climate of Bangladesh is a hemisphere away from the growing regions of Australia, both countries are eager to address BGM.

“A potentially lucrative export crop and an excellent alternative to lupins in rotation in Australia, chickpea is also a low cost protein and carbohydrate source in Bangladesh,” Professor Siddique said.

“BGM has all but wiped out chickpea crops in Bangladesh and sporadic outbreaks in Australia showed it can cut yields by 10 to 90 per cent and diminish seed quality.”

With field experiments for BGM in Australia likely to be hindered by the presence of Ascochyta blight, a disease not found in Bangladesh, CLIMA is basing its BGM project on the sub-continent.

While agronomic strategies are being trialled to formalise a management system for BGM when it exists, genetic sources of BGM resistance are being researched.

“Nearly 500 chickpea breeding lines were assembled for field screening in BGM disease nurseries at Jessore and Ishurdi in Bangladesh, with 422 lines contributed by Australian breeding programs,” Professor Siddique said.

“The natural disease pressure in Bangladesh helped establish the best prospects for incorporating resistance to BGM in breeding programs, with preliminary data showing useful resistance within germplasm already tested as part of the project.”

Trials and demonstrations in Bangladeshi farmer fields demonstrated crop management factors that could reduce BGM severity: using disease-free seed and a less susceptible genotype; maintaining open crop canopies, which are less susceptible to BGM, by delaying sowing, lowering seed rates, planting in spaced rows,

intercropping, mixing cropping and trimming the canopy; and treating seed or infected canopies with fungicides.

“Future disease screening will continue in Bangladesh using new breeding and parental lines,” Professor Siddique said.

Best bet disease management packages will then be further developed and demonstrated to farmers in Bangladesh and Australia.

Funded by the Australian Centre for International Agricultural Research (ACIAR), the project has international support from the International Crops Research Institute for Semi Arid Tropics (ICRISAT), India and the Bangladesh Agricultural Research Institute (BARI).

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