



CLIMA Media Release

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BGM A 'BLIGHT' ON CHICKPEAS

Fungicides applied to manage *Ascochyta* blight are also effective against *Botrytis* Grey Mould (BGM) in chickpeas, but as a consequence of the 2005 release of two new *Ascochyta* resistant kabuli chickpea varieties, the risk of BGM epidemics in Australia has significantly increased due to reduced fungicide usage.

With the release of 'Almaz' and 'Nafice', 100,000 hectares of kabuli chickpeas could be growing across Australia by 2008, worth \$75 million to the grain industry.

Additional to substantial rotational advantages, chickpeas can provide financial benefits with high gross margins. On average, good quality kabuli chickpeas fetch \$500 to \$700 per tonne and desi chickpeas \$300 to \$400 per tonne.

Senior Plant Pathologist, Dr Ashwani Kumar Basandrai of CSK Himachal Pradesh Agriculture University, India, said that after *Ascochyta* blight, BGM is the second most important foliar disease of chickpeas in Australia.

Dr Basandrai visited the Centre for Legumes in Mediterranean Agriculture (CLIMA) on a Crawford Fund International Training Fellowship.

"The risk of a BGM epidemic in WA is of major significance and the cultivation of a resistant variety is one of the sustainable options," Dr Basandrai said.

He has collaborated with Bill Macleod and Dr Harmohinder Dhammu of the Department of Agriculture and Professor Kadambot Siddique, Director of CLIMA.

They found that commonly used herbicides showed more phytotoxic effects in *Ascochyta* and BGM-affected plants, which has implications for tank mixing of fungicides and herbicides for disease and weed management in chickpeas.

Dr Basandrai has been working on a host-pathogen interaction system of two chickpea fungal pathogens, BGM and *Ascochyta* blight and has identified pathogenic variability in WA BGM populations.

"We've identified two chickpea breeding lines and a number of wild *Cicer* accessions that are resistant to most prevailing isolates," he said.

Mr MacLeod noted that while BGM had almost wiped out chickpea crops in Bangladesh and parts of northern India, sporadic Australian outbreaks showed it could cut yields by 10 to 90 per cent and diminish seed quality.

“Chickpeas are a potentially lucrative export crop and an excellent alternative to lupins in rotation, however a BGM outbreak would hinder the development of WA’s chickpea industry,” he said.

Professor Siddique said Dr Basandrai’s training at CLIMA would enable him to use epidemiological and molecular techniques in his legume pathology research in India.

“Dr Basandrai’s visit highlighted and strengthened the benefits of collaboration on legume research between India and CLIMA,” he said.

Caption: Dr Harmohinder Dhammu (DAWA), Dr Ashwani Kumar Basandrai and Bill MacLeod (UWA/DAWA) examining chickpea plants for diseases, in glasshouses at DAWA’s Centre for Cropping Systems, Northam.

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