The development of chickpeas as a viable grain legume crop for the Victorian Wimmera

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The decline in legume-based pastures has led to an increasing adoption of grain legumes by growers throughout Victoria. As lupins are ill-adapted to the alkaline grey clays of the Wimmera, the suitability of chickpeas as an alternative to the more traditional field pea has been under investigation since 1977. The experiments are being carried out at Dooen, which has an average annual rainfall of 400 mm with 250 mm falling in winter-spring (May to October).

Varieties

The material originated from the Wagga Wagga programme and some lines have performed well in the Wimmera.The main selection criteria have been yield and suitability for machine harvesting and both desi and Kabuli types are being evaluated. Yields have averaged 2,000 kg/ha with individual varieties yielding up to 3,400 kg/ha in 1979 (l).

Time of Seeding

Optimum seeding time was investigated in 1978 and 1979 by sowings in May, June, July and August. Yield from May and June sowings in 1978 were similar and appreciably greater than from later plantings, whereas, in 1979,

May sowings were the highest yielding (2). Plant density x sowing date interactions are being investigated.

Inoculation

Higher yields were obtained from inoculated (commercial inoculum) than uninoculated seed grown on ground previously sown to inoculated chickpeas and then fallowed, despite the fact that establishment and nodulation appeared to be similar. This is being further investigated.

Disease

The 'wilt complex' is recognised as a potential problem in chickpeas and the causal agents are being investigated. To date, fungicides applied to seed before sowing have not resulted in increased yields (3).

Weed Control

Because of the slow early growth of chickpeas, weed control is the major problem in their commercial development as a crop. Most weeds on these soils can be controlled with trifluralin-tri-allate mixtures, but control of cruciferous weeds has been poor (4). Experiments with oxyflurofen, MCPA and potential new products are continuing.

After four years' evaluation it is concluded that chickpeas have great potential as an alternative grain legume for the Wimmera, provided that weeds and diseases can be controlled.

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3. Bretag, T. W. 1980. Proc. Grain Legume Workshop, Longerenong Agricultural College, Dooen, Victoria.

4. Mahoney, J. E. 1980. Proc. Grain Legume Workshop, Longerenong Agricultural College, Dooen, Victoria.