

Narrow row spacing suppresses weeds more effectively than wide row spacing in mungbean

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Summary Mungbean (*Vigna radiata* (L.) Wilczek) is a nutritionally important food and feed legume crop. Its production in Australia is concentrated in the northern grains regions; characterised by summer dominant rainfall. In general, the crop is grown in wide rows of up to one metre and therefore, it is prone to heavy weed infestation. Weeds can be controlled using herbicides; however, continuous use of herbicides with similar modes of action could result in the evolution of resistance in weeds. Therefore, weed management tactics, which can make crops more competitive to weeds, are required. A field trial was conducted in the summer season of 2015 at the research farm of the University of Queensland, Gatton, Queensland, to

determine the effects of row spacing (25, 50 and 75 cm) and weed infestation period [no weeds (weed-free); weeds grown up to 3 and 6 weeks after crop planting; and weeds grown up to crop harvest] on weed growth and mungbean yield.

There were 60–70% fewer weeds emerging three weeks after crop planting in 25 to 50 cm rows, compared to 75 cm rows. In the weed-free condition, as well as in low to moderate levels of weed infestation, the grain yield of mungbean was lower when grown on 75 cm rows.

Keywords Non-chemical weed control, row spacing, seeding rate, crop competition.