

Can narrow row spacing in cotton reduce impact of weeds on crop yield?

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Summary Cotton is the most important fibre crop of the world and covers an area of 2.5% of world arable land. Weeds are one of the major threats to the successful production of cotton, which can severely reduce its yield. In Australia, cotton is generally grown on 1 m rows. A study was conducted at the Gatton farm of the University of Queensland to evaluate the impact of row spacing (50 cm and 100 cm) and weed infestation period [no weeds (weed-free); weeds growing up to 3, 6, 9, and 12 weeks after planting; and weeds growing

up to crop harvest) on the yield of glyphosate-tolerant cotton. The experiment was laid out in a split-plot design with crop rows as the main plots and weed infestation periods as the sub-plots. Each treatment was replicated thrice. Results revealed a marked difference in weed density and weed biomass between the two spacings. Lower weed density and weed biomass were observed in the narrow row spacing.

Keywords Cotton, weed control, herbicides, row spacing, weed crop interference.