

Performance of alternative herbicides to glyphosate on weeds in glyphosate-tolerant cotton

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Summary Today, the world uses more cotton than any other fibre. It is a leading cash crop in the world and contributes directly in the world's economy. Weeds are one of the most important biological constraints to the successful production of cotton which can severely reduce its yield. The risk of development of herbicide resistance in weeds has increased in glyphosate-tolerant cotton. A study was conducted at the Gatton farm of the University of Queensland to evaluate the performance of different herbicides on weed control in glyphosate-tolerant cotton. The experiment was

laid out in a randomised complete block design with three replications. Different herbicide treatments were weedy (control), glyphosate applied once, glyphosate applied twice, metolachlor, glyphosate + metolachlor, pendimethalin, glyphosate + pendimethalin, and glyphosate + haloxyfop. Significant differences were observed in herbicide efficacy. Soil residual herbicides pendimethalin and metolachlor provided effective weed control as compared glyphosate alone.

Keywords Cotton, herbicide, glyphosate, weed control.