

## Factors affecting silvergrass (*Vulpia* spp) control with direct drilling

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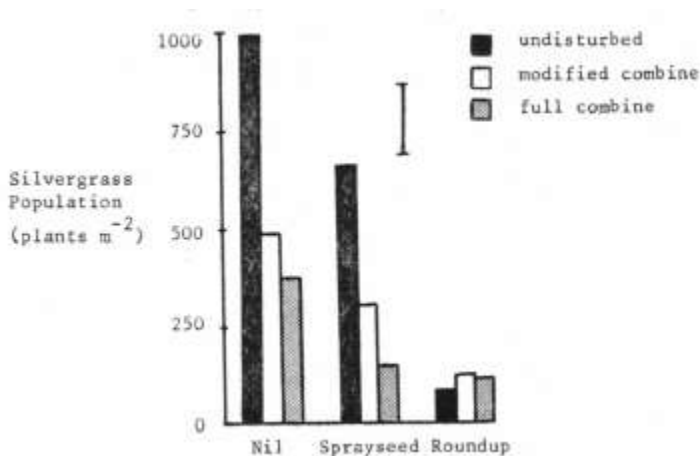
Reports of the problem of silvergrass (*Vulpia* spp) invasion of direct-drilled crops have been reported widely in the scientific and popular press (1). However, despite abundance of silvergrass in the buffer strips of a long-term tillage experiment previously reported (2), no problems have been experienced with this species in any cultivation treatment. An experiment was undertaken to identify why such problems have not been experienced.

### Method

Three treatments, Roundup (1 L ha<sup>-1</sup>), Sprayseed (1.5 L ha<sup>-1</sup>) and a control were imposed on plots 8m x 2m on May 15, 1984. Application volumes were 70 L ha<sup>-1</sup>. Split-plot treatments of nil cultivation, full combine and modified combine were imposed on May 17, 1984. Plant counts were taken on June 14, 1984.

### Results and Discussion

Populations of *Vulpia* spp as affected by treatments are shown in Figure 1.



**Figure 1. Population of *Vulpia* spp (plants m<sup>-2</sup>) as affected by broad- spectrum herbicides and sowing implement.**

Roundup herbicide had a significantly greater impact ( $P < 0.05$ ) than Sprayseed on silvergrass control. Sprayseed application was successful, however, but required the "double-knock" effect - that is, the chemical plus full soil disturbance which is provided by a full combine. The long-term tillage experiment (2) has always used a full combine at sowing and has used Sprayseed on four occasions and Roundup on three occasions depending on circumstances at sowing. It should be noted that conditions at time of spraying in this experiment were less than ideal with hard and dry surface soil negating to some extent the normal effect of the full combine. These results, however, are consistent with other findings on soil disturbance for silvergrass control (2).

1. Forcella, F. (1984). Australian Weeds. 3(1):3-5.

2. Pratley, J.E. and McNeill, A.A. (1982). Proceedings 2nd Aust.Agron.Conf. Wagga Wagga:201.

