

Weed management in no-till winter wheat (*Triticum aestivum* L.)

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abstract

In general, effective weed control in no-tillage systems is based on the use of herbicides. However, the development of appropriate weed management strategies can help to reduce the amount of herbicides applied.

In this study weed management in common wheat under no-till was analyzed. The experiment was carried out under Mediterranean conditions on a Luvisol, during two growing seasons (1996/1997 and 1999/2000). A split-plot design with four replications was used. The main plot was weed emergence before wheat sowing (with and without weed emergence) and the subplot was the post-emergence weed control (with and without post-emergence herbicide).

The density of the weeds was significantly reduced when the wheat crop was sown after a considerable part of the weeds had emerged and controlled by a pre-sowing herbicide (non-selective, systemic and non-persistent). Without weed control in post-emergence treated plots, the number of grains and the yield was increased significantly, compared to sowing without weed emergence. It can be concluded that under Mediterranean conditions, it is possible to reduce or even avoid the application of post-emergence herbicides in wheat under no-till, as weeds can be efficiently controlled before sowing.

Keywords: No-till Wheat Weed density Weed control Weed emergence

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