

Mustard Cover Crop for Early Season Weed Control in Chile Pepper

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The objective of this study was to determine the optimum time for terminating a mustard cover crop before seeding chile pepper. To accomplish this objective, a mixture of *Brassica juncea* and *Eruca sativa* was seeded at 14 kg ha⁻¹ and the standing biomass was incorporated into soil at 8, 6 and 4 wk before crop seeding. The study also included a non-cover control treatment. For each cover-crop treatment, pre-emergence herbicides clomazone or napropamide were applied at full label rates at crop seeding. At 14-d intervals after crop seeding, weed densities were determined. Hand hoeing times were determined at 28 and 56-d after crop seeding (DAS). Results indicated that cover crop termination time effects on weed densities and hoeing were conditioned by herbicide. For napropamide, cumulative weed densities and hand-hoeing times at 28 DAS were less than the non-cover control only when mustard was terminated 6 wk before chile pepper seeding. For clomazone, weed densities and hand hoeing times at 28 DAS were similar between the non-covered control and mustard treatments. At 56 DAS, cumulative weed densities and hand hoeing times were not affected by cover crop treatment. These results suggest (1) weed control benefits derived from mustard cover crops are conditioned by pre-emergence herbicide and cover crop termination time, and (2) those benefits diminish after early phases of chile growing season. A mustard cover crop terminated 6 wk before crop seeding, followed by napropamide applied at crop seeding, is a promising strategy to reduce early season weeds in chile pepper.