

**EVALUATION OF NEW CULTIVATION TOOLS FOR WEED CONTROL IN NEWLY
PLANTED STRAWBERRIES**
Progress Report

Principal Investigators: Marvin Pritts and Robin Bellinder, Dept. of Fruit and Vegetable Science, Cornell University, Ithaca, NY 14853

Introduction

Weed control is the most significant challenge for strawberry growers; only one herbicide (Devrinol 5 lb/A) is labeled for use at planting and it has only 6 weeks or less of residual activity. Herbicide use plus cultivation and hand-weeding are currently employed by growers, but handweeding is expensive and currently used cultivation tools (rototillers) diminish soil structure. Low cost, effective methods of weed management are desperately needed by strawberry growers.

Three new cultivation tools were evaluated for their efficacy in new strawberry plantings. These implements are very different from standard cultivation tools they disturb only the top few centimeters of soil. Furthermore, unlike a rototiller, they cultivate within the plant row as well as between rows. If these tools prove to be efficacious in strawberries, they will provide an important new component in an integrated weed management strategy.

Methods

A perennial matted row strawberry field cv. Jewel was established at the Vegetable Crops Research Farm in Freeville, NY. Nine treatments were established and replicated 4 times in plots that were 12 m long and 2.5 m wide. One set of treatments was use of a flex-tine harrow, a brush hoe, and a finger weeder. At the point in the season where implements began affecting runner rooting, plots were split and Devrinol (5 lb/A 50DF) was applied to half the plot. The herbicide-only treatment received an initial application at planting (Devrinol 5 lb/A 50 DF), then this plot was split as well. After 6 weeks when weeds began to grow, half of the plot was handweeded for the remainder of the season. The ninth treatment was total reliance on a rototiller for weed control throughout the season.

For a printed copy of the entire report, please contact the NYS IPM office at:

IPM House
630 W. North St.
New York State Agricultural Experiment Station
Geneva NY 14456
315-878-2353