WEED CONTROL IN OKRA-LEAF AND CONVENTIONAL COTTON

J.T. Staples, Jr., E. C. Murdock and J.T. Fowler, Jr.
Clemson University, Pee Dee REC
Florence, SC

Abstract

Weed control programs for standard and okra-leaf cotton were compared to evaluate the relative competitiveness of the cultivars. The field trial was conducted in 1998 at the Edisto Research and Education Center, Blackville, SC. 'DP 51' and 'Fibermax 832' were planted May 27, 1998. Weed management programs evaluated were 1) trifuralin @ 0.75 lb ai/ac (1.5 pt/ac) applied preplant-incorporated; 2) treatment 1 followed by (fb) fluometuron + pyrithiobac applied preemergence @ 1.2+0.042 lb ai/ac, respectively (1.2 qt + 0.8 oz/ac); 3) treatment 2 fb pyrithiobac applied postemergence (POST) @ 0.063 lb ai/ac (1.2 oz/ac)+surfactant; 4) treatment 3 fb prometryn + MSMA applied POST-directed @ 0.75 + 2.0 lb ai/ac, respectively (1.5 pt + 0.33 gal/ac); and 5) treatment 4 fb prometryn applied POST-directed at layby @ 1.0 lb ai/ac (1.0 qt/ac) + surfactant.

Complete control of goosegrass was observed with all herbicide treatments. Palmer amaranth was controlled 91% 8 weeks after planting (WAP) with trifuralin alone, and all other herbicide treatments provided 100% control. Trifuralin did not control sicklepod and tall morningglory. Trifuralin fb fluometuron + pyrithiobac controlled sicklepod and tall morningglory 87 and 75% 8 WAP, respectively. Sicklepod and tall morningglory control ranged from 96 to 99% for all treatments that included a postemergence herbicide. Total weed biomass in the untreated check was 3216 and 3171 lb/ac where 'DP51' and 'Fibermax 832' were planted, respectively. Weed biomass reductions were similar for standard and okra-leaf cotton. Trifuralin reduced weed biomass 36% compared to the untreated check. A 93% reduction in total weed biomass was observed with trifuralin fb fluometuron + pyrithiobac. Other herbicide systems reduced total weed biomass 99 to 100%. When postemergence herbicides were used, lint yields averaged 455 and 536 lb/ac with 'DP51' and 'Fibermax 832', respectively, and were greater than yields attained with soil-applied herbicides only.

Reprinted from the *Proceedings of the Beltwide Cotton Conference*
Volume 1:746-747 (1999)
National Cotton Council, Memphis TN