

**ROUNDUP READY COTTON WEED CONTROL
SYSTEMS IN WEST TEXAS**

P.A. Dotray

**Texas Agricultural Extension Service
Texas Agricultural Experiment Station
Texas Tech University**

Lubbock, TX

J.W. Keeling and T.S. Osborne

**Texas Agricultural Experiment Station
Lubbock, TX**

ultra narrow row PM 2200RR cotton, Treflan plus Caparol plus Roundup PT controlled Palmer amaranth and puncturevine at least 97%. In conservation tillage, Treflan plus Caparol plus Roundup Ultra controlled common cocklebur, lanceleaf sage, and Russian thistle at least 95%. These studies showed that the use of Roundup Ready Cotton significantly improved overall weed control systems across the Texas Southern High Plains.

Abstract

The use of Roundup Ultra in Roundup Ready Cotton has provided new opportunities to control many troublesome weeds. Experiments were conducted at Lubbock and New Deal, TX to investigate cotton tolerance, weed control, and yield in Roundup Ready Cotton. Roundup Ultra at 0.75 lb ae/A was applied postemergence-topical (PT) at the 1- or 4-leaf stage or postemergence-directed (PD) at the 10- or 14-leaf stage in 1996 or PT at the 2- or 4-leaf stage or PD at the 6- or 8-leaf stage in 1998. Sequential applications of two, three, and four applications were made each year. In separate studies, Roundup Ultra was applied at 8 nodes above cracked boll (NACB), 4 NACB, and at 20% open boll. Plots were kept weed free and managed intensely for insects.

No visual crop injury was observed following any Roundup Ultra application. No differences in plant height, nodes per plant, first position bolls, or first position bolls at fruiting branch one to five was observed following any Roundup Ultra application as compared to the non-treated PM 2326 RR or PM 2200 RR. No Roundup Ultra application adversely affected cotton yield.

In weed control studies conducted from 1996-98 at several locations across the Texas Southern High Plains, Roundup Ultra was evaluated alone or as part of a weed control program with Treflan at 0.75 lb ai/A applied preplant incorporated, Caparol applied preemergence (PE) at 1.2 lb ai/A, or Treflan plus Caparol.

The addition of Roundup Ultra improved the control of Palmer amaranth (*Amaranthus palmeri*), devil's-claw (*Proboscidea louisianica*), Russian thistle (*Salsola iberica*), lanceleaf sage (*Salvia reflexa*), common cocklebur (*Xanthium strumarium*), puncturevine (*Tribulus terrestris*), and silverleaf nightshade (*Solanum elaeagnifolium*). In 1998, Treflan plus Caparol plus Roundup PT and PD controlled Palmer amaranth and devil's-claw at least 96%. Treflan plus Caparol controlled Palmer amaranth 95% and devil's-claw 23% and Roundup Ultra applied PT plus PD controlled Palmer amaranth 60% and devil's-claw 90%. In