

**MANAGING THE TOUGH TO CONTROL WEEDS IN
WEST TEXAS ROUNDUP READY[®] COTTON SYSTEMS
S.W. Murdock and D.E. Fairbanks
Monsanto Company
Lubbock, TX**

Abstract

Russian thistle (*Salsola iberica*) is a common weed in the Texas Southern High Plains. Russian thistle has the ability to germinate and emerge all season-long, it is extremely drought tolerant, it is competitive to cotton for water, it produces large numbers of seeds, and has little leaf surface area. These characteristics can lead to high populations and may cause difficulty in controlling this weed in West Texas Roundup Ready cotton systems. The objectives of these trials were: 1) to determine the effectiveness of Roundup WeatherMAX[®] (glyphosate) in a burn-down situation; 2) to evaluate the control of Roundup WeatherMAX when Russian thistle is drought stressed; and 3) to evaluate how different spray nozzles (coverage) effect control of Russian thistle with Roundup WeatherMAX.

Excellent Russian thistle control (>99%) was achieved with 22 ounces/A in the three burn-down trials. The weeds were 4-8 inches tall and actively growing at the time of application. Two trials were established with large (16 inches tall), drought stressed (no rain in 31 days) Russian thistle. This resulted in 9, 42, 58, 76, 93, and 98% control with Roundup WeatherMAX rates of 7.3, 14.6, 22, 29.3, 36.6, and 44 ounces/A, respectively. Two trials were conducted to determine the effect of nozzles (spray coverage) on Russian thistle control with Roundup WeatherMAX at 16 oz/A. The nozzles TeeJet[®] Extended Range Flat Fan, Turbo TeeJet, and TeeJet Air Inducted, resulted in 80, 71, and 64% control, respectively.

To achieve effective Russian thistle control with Roundup WeatherMAX, the weed should be sprayed when it is small and actively growing. Drought stressed and larger Russian thistle are more tolerant and may require higher rates of glyphosate to achieve optimal control. Nozzle type did affect Russian thistle control; the nozzles that produce better spray coverage did increase Russian thistle control.