CONTROL OF VOLUNTEER GLYPHOSATE-TOLERANT COTTON WITH POSTEMERGENCE HERBICIDES J. D. Everitt J. W. Keeling M. A. Batla Texas Agricultural Experiment Station Lubbock, TX

Abstract

When glyphosate-tolerant cotton is grown in conservation or no-till tillage systems, volunteer glyphosate-tolerant cotton may become a problem. Initial studies were conducted in 2007 to evaluate postemergence (POST) herbicides for volunteer glyphosate-tolerant cotton control in glyphosate-tolerant cotton. Gramoxone Inteon, Ignite, Aim, ET, Buctril, Direx, Layby Pro, Reflex, and Valor were applied to 5 to 8 leaf (July 2) and 10 to 12 leaf (July 16) cotton. Control was evaluated 3,7,14, and 28 days after treatment (DAT) for each growth stage application. Appropriate adjuvants were applied with herbicides as required.

Excellent control (>90%) was achieved with Ignite, ET, Aim, and Buctril applied to 5 to 8 leaf cotton. Layby Pro and Valor controlled volunteer glyphosate-tolerant cotton 78 to 80%. The addition of MSMA to Direx or Layby Pro did not improve control with either herbicide. Reflex had little effect on volunteer cotton at either growth stage. When treatments were applied 2 weeks later (10 to 12 leaf cotton), less effective control of volunteer cotton was observed. Ignite, ET, Aim, and Buctril were effective when applied to small cotton, only gave 65 to 83% control of larger cotton 7 DAT, but cotton soon began to regrow and control declined by 28 DAT. Although increasing rates of Gramoxone Inteon improved control, no rate was effective at the 10 to 12 leaf stage.

These results indicate that Ignite, ET, Aim, and Buctril can control volunteer glyphosate-tolerant cotton, but should be applied no later than 5 to 8 leaf stage. If these herbicides are applied post-directed using a hooded sprayer, extreme care must be taken to avoid contact with planted cotton.