MANAGING MORNINGGLORY IN SOUTHWEST OKLAHOMA T. S. Osborne and J. C. Banks Oklahoma State University Altus, OK

Abstract

Field experiments in 2000 were conducted at Altus evaluating weed control using residual herbicides in both Roundup Ready and BXN systems in two The benefit of postemergence-directed (PD) independent trials. applications of Direx (diuron) in a Roundup Ready system was evaluated in the first experiment. The treatments observed included Roundup Ultra (glyphosate) applied either once or twice early postemergence-topical (EP) at 1 qt/A followed by (fb) Roundup Ultra applied PD at 1 qt/A alone or tankmixed with two different rates (1 or 1.5 pt/A) of Direx at the 6-8 leaf or 10-12 leaf cotton stage. The second experiment attempted to assess the benefits of Caparol (prometryn) applied preemergence (PRE) and Staple (pyrithiobac) applied postemergence (POST) in a BXN system. These treatments included Buctril applied POST alone at 1 pt/A, Caparol applied PRE at 3.2 pt/A fb Buctril applied POST at 1 pt/A, Buctril at 1 pt/A plus Staple at 0.6 oz/A applied POST, and Caparol PRE at 3.2 pt/A fb Buctril at 1 pt/A plus Staple at 0.6 oz/A applied POST. All POST treatments in the BXN trial were intended to be applied on an "as needed" basis.

Results from the first trial indicated that the addition of Direx to Roundup Ultra applied early PD did not increase early season pitted morningglory control compared to Roundup Ultra alone. However, late-season observations indicated that an EP application of Roundup Ultra fb Direx plus Roundup Ultra applied PD controlled pitted morningglory 80-93%, which was more effective than Roundup Ultra EP fb Roundup Ultra PD alone (67-68%). No difference in pitted morningglory control was observed when the rate of Direx was increased from 1pt/A to 1.5 pt/A.

Results of the BXN trial indicated that Caparol applied PRE fb Buctril applied POST controlled entireleaf morningglory 93% which was similar to no PRE fb Buctril plus Staple applied POST early in the season. Late season evaluation revealed that three applications of Buctril applied POST alone with or without Caparol applied PRE controlled entireleaf morningglory 68-75%, which was less effective, compared to two applications of Buctril plus Staple applied POST, which controlled entireleaf morningglory 85%.

These results indicate that the addition of residual herbicides to either Roundup Ultra or Buctril increased late season morningglory control in both transgenic cotton systems. Tankmixing with either Direx or Staple reduced the total number of Roundup Ultra and Buctril applications within each system.