**Control of emerged kochia in a spring burndown**

The objective of the study was to evaluate emerged kochia control in a spring burndown. Treatments were applied May 21 to 0.5-4 inch kochia. Kochia at this site is suspected to be glyphosate resistant as control has been poor.

In previous studies, products containing sulfentrazone (e.g., Spartan, Spartan Charge, Authority MTZ) provided excellent control of emerged kochia when applied with MSO. In this 2015 study, these products provided only poor to fair kochia control. However, other products did not perform as well as in other years either such as Sharpen and Gramoxone.

It is possible that kochia control with these contact-type herbicides may have been affected by low temperatures prior to application. The treatments were applied soon after a period of 12 days where nighttime temperatures were primarily in the mid to low 30's and daytime temperatures were primarily in the 40's and 50's.

Table. Control of emerged kochia in a spring burndown. (1507)

| | | | Kochia control | | | |
|---|---|---|---|---|---|---|
| Treatment | Rate | Timing[e] | May-29 | Jun-13 | Jun-22 | Jul-3 |
| | | | ----------%---------- | | | |
| Untreated | | | 0 | 0 | 0 | 0 |
| Glyphosate[a] | 22 oz | PRE | 57 | 58 | 50 | 37 |
| Sharpen[b] | 2 oz | PRE | 73 | 72 | 68 | 60 |
| Gramoxone[c] | 2 pt | PRE | 83 | 77 | 72 | 63 |
| Liberty[d] | 29 oz | PRE | 80 | 72 | 63 | 55 |
| Spartan[b] | 4 oz | PRE | 60 | 67 | 68 | 60 |
| Spartan Charge[b] | 5 oz | PRE | 76 | 81 | 81 | 73 |
| Spartan + Sharpen[b] | 4 oz + 1 oz | PRE | 80 | 89 | 89 | 83 |
| Authority MTZ[b] | 8 oz | PRE | 58 | 68 | 68 | 60 |
| Authority MTZ[b] | 10 oz | PRE | 65 | 77 | 76 | 67 |
| Metribuzin[b] | 0.5 lb | PRE | 50 | 60 | 62 | 53 |
| Metribuzin + Aim[b] | 4 oz + 1 oz | PRE | 78 | 82 | 82 | 73 |
| LSD (0.05) | | | 6.7 | 10.7 | 13.7 | 15.4 |

[a] *Applied with AMS (2.5 gal/100 gal)*

[b] *Applied with AMS + MSO (2.5 gal/100 gal + 1%)*

[c] *Applied with NIS (0.25%)*

[d] *Applied with AMS (8.82 gal/100 gal)*

[e] *Applied May 21 to 0.5-4 inch kochia*