

Fall and spring treatments for dandelion control in corn. Woodburn, IN, 2003-2004. Dewell, Reece A., William G. Johnson, J. Earl Creech, and Vince Davis. A field study was conducted to evaluate various fall and spring-applied herbicide combinations for dandelion control in corn. The study was conducted on a Hoytville-Nappanee silt loam/silty clay loam soil with 3% organic matter in a cooperators field near Woodburn, IN, about 5 to 10 miles ENE of Fort Wayne, IN. Treatments were arranged in a randomized complete block with four replications. Individual plot dimensions were 10 by 30 feet. Beck's 5166 corn was planted 1.75 inches deep into a no-till seedbed on April 20 in 30-inch rows, at a population of 30,200 seeds/acre. Fall burndown (FALBD), spring burndown (SPRBD), and late postemergence (LPOST) herbicide treatments were applied with a CO<sub>2</sub> backpack sprayer delivering 15 gpa and equipped with XR8002 flat fan nozzles. A LPOST treatment of dicamba&diflufenzopyr was applied over 16 treatments, including one untreated check. Application dates, weed growth stage, and weather data are listed below:

| Date                  | Nov 17, 2003             | Apr 9, 2004              | May 20, 2004              |
|-----------------------|--------------------------|--------------------------|---------------------------|
| Treatment             | FALBD                    | SPRBD                    | POST                      |
| Temperature           |                          |                          |                           |
| Air (F)               | 52                       | 65                       | 75                        |
| Soil (F)              | 46                       | 50                       | 70                        |
| Soil moisture         | moist                    | dry                      | moist                     |
| Wind (mph)            | 4 to 5                   | 2 to 5                   | 5 to 8                    |
| Cloud cover (%)       | 100                      | 5                        | 100                       |
| Relative humidity (%) | 85                       | 30                       | 85                        |
| Precipitation         |                          |                          |                           |
| Prior week (inch)     | 0.17                     | 0.00                     | 1.10                      |
| Week 1 (inch)         | 1.54                     | 0.00                     | 1.90                      |
| Week 2 (inch)         | 0.38                     | 0.28                     | 2.18                      |
| Corn (inch)           | na                       | na                       | 4 to 6                    |
| Dandelion (rosettes)  | 2 to 16 inch             | 2 to 8 inch              | 8 to 16 inch              |
| Dandelion (density)   | 7 to 25 / m <sup>2</sup> | 8 to 90 / m <sup>2</sup> | 20 to 30 / m <sup>2</sup> |

Many treatments provided acceptable dandelion control at both rating dates. Treatments which tended to provide lower control included those which contained spring applied glyphosate and spring applied fluroxypyr or a tankmix of these herbicides, without other products which have activity on dandelion. Treatments which included fall applied 2,4-D or glyphosate followed by SPRBD or POST treatments with dandelion activity, and those which contained spring applied mesotrione followed by POST treatments containing 2,4-D, dicamba, clopyralid generally provided the best control. (Dept. Botany and Plant Pathology, Purdue University, West Lafayette, IN).

Table. Fall and spring treatments for dandelion control in corn. Woodburn, IN, 2003-2004. (Dewell, Johnson, Creech, and Davis).

| Treatment <sup>a</sup>                                                                                  | Rate<br>(lb/A)                                   | Application <sup>b</sup> | TAROF            |                   |
|---------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------|------------------|-------------------|
|                                                                                                         |                                                  |                          | 6/4 <sup>c</sup> | 6/18 <sup>d</sup> |
| Simazine + 2,4-D(EH) + AMS/<br>+s-metolachlor&mesotrione&atrazine&benoxacor<br>+atrazine+COC+AMS        | 1.0+0.5+2.5/<br>+1.7&0.17&0.63<br>+1.0+1.0%+2.5  | FALBD/<br>SPRBD          | 73               | 84                |
| Glyphosate(TDT) + 2,4-D(EH) + AMS/<br>+s-metolachlor&mesotrione&atrazine&benoxacor<br>+atrazine+COC+AMS | 0.59+0.5+2.5/<br>+1.7&0.17&0.63<br>+1.0+1.0%+2.5 | FALBD/<br>SPRBD          | 99               | 99                |
| Glyphosate(WMAX) + 2,4-D(EH) + AMS                                                                      | 0.77+0.5+2.5                                     | FALBD                    | 95               | 96                |
| Rimsulfuron&thifensulfuron + 2,4-D(EH)<br>+COC + AMS                                                    | 0.0156&0.0078+0.5<br>+1.0%+2.5                   | FALBD                    | 78               | 85                |
| Simazine + rimsulfuron&thifensulfuron<br>+2,4-D(EH) + COC + AMS                                         | 1.0+0.0103&0.00517<br>+0.5+1.0%+2.5              | FALBD                    | 87               | 92                |
| Tribenuron + rimsulfuron&thifensulfuron<br>+2,4-D(EH) + COC + AMS                                       | 0.0047+0.0103&0.00517<br>+0.5+1.0%+2.5           | FALBD                    | 91               | 93                |
| Tribenuron + 2,4-D(EH) + COC + AMS                                                                      | 0.0155+0.5+1.0%+2.5                              | FALBD                    | 92               | 90                |
| S-metolachlor&benoxacor + isoxaflutole + atrazine<br>+COC + AMS/                                        | 1.6+0.0625+1.5<br>+1.6pt+2.5/                    | SPRBD/<br>LPOST          | 89               | 98                |
| S-metolachlor&benoxacor + isoxaflutole + atrazine<br>+2,4-D(EH) + COC + AMS/                            | 1.6+0.0625+1.5<br>+0.5+1.6pt+2.5/                | SPRBD/<br>LPOST          | 94               | 99                |
| S-metolachlor&mesotrione&atrazine&benoxacor<br>+COC + AMS/                                              | 2.0&0.2&0.75<br>+1.6pt+2.5/                      | SPRBD/<br>LPOST          | 100              | 100               |
| S-metolachlor&mesotrione&atrazine&benoxacor<br>+2,4-D(EH) + COC + AMS /                                 | 2.0&0.2&0.75<br>+0.5+1.6pt+2.5/                  | SPRBD/<br>LPOST          | 100              | 100               |
| S-metolachlor&mesotrione&atrazine&benoxacor<br>+paraquat +COC + AMS /                                   | 2.0&0.2&0.75<br>+0.5+1.6pt+2.5/                  | SPRBD/<br>LPOST          | 99               | 99                |
| S-metolachlor&mesotrione&atrazine&benoxacor<br>+paraquat + 2,4-D(EH) + COC + AMS/                       | 2.0&0.2&0.75<br>+0.5+0.5+1.6pt+2.5/              | SPRBD/<br>LPOST          | 99               | 100               |
| S-metolachlor&atrazine&benoxacor<br>+2,4-D(EH) + COC + AMS/                                             | 1.27&1.63<br>+0.5+1.6pt+2.5/                     | SPRBD/<br>LPOST          | 65               | 93                |
| S-metolachlor&atrazine&benoxacor<br>+paraquat + COC + AMS/                                              | 1.27&1.63<br>+0.5+1.6pt+2.5/                     | SPRBD/<br>LPOST          | 73               | 98                |
| S-metolachlor&atrazine&benoxacor<br>+paraquat + 2,4-D(EH) + COC + AMS/                                  | 1.27&1.63<br>+0.5+0.5+1.6pt+2.5/                 | SPRBD/<br>LPOST          | 78               | 96                |
| Acetochlor&atrazine&glyphosate<br>+COC + AMS/                                                           | 2.0&1.5&0.56<br>+1.0%+2.5/                       | SPRBD/<br>LPOST          | 88               | 95                |
| Acetochlor&atrazine&glyphosate<br>+2,4-D(EH) + COC + AMS/                                               | 2.0&1.5&0.56<br>+0.5+1.0%+2.5/                   | SPRBD/<br>LPOST          | 94               | 100               |
| S-metolachlor&atrazine&benoxacor<br>+clopyralid&2,4-D + AMS + COC/                                      | 1.27&1.63<br>+0.095&0.5+2.5+1.0%/                | SPRBD/<br>LPOST          | 96               | 100               |
| S-metolachlor&atrazine&benoxacor<br>+dicamba + AMS + COC/                                               | 1.27&1.63<br>+0.5+2.5+1.0%/                      | SPRBD/<br>LPOST          | 76               | 97                |
| S-metolachlor&atrazine&benoxacor<br>+flumetsulam&clopyralid + COC + AMS/                                | 1.27&1.63<br>+0.035&0.093+1.6pt+2.5/             | SPRBD/<br>LPOST          | 56               | 96                |
| S-metolachlor&atrazine&benoxacor<br>+flumetsulam&clopyralid<br>+2,4-D(EH) + COC + AMS/                  | 1.27&1.63<br>+0.035&0.093<br>+0.5+1.6pt+2.5/     | SPRBD/<br>LPOST          | 92               | 99                |
| Acetochlor&atrazine&dichlormid<br>+glyphosate(GF) + COC + AMS                                           | 2.0&1.5<br>+0.375+1.0%+2.5                       | SPRBD                    | 58               | 65                |
| Acetochlor&atrazine&dichlormid<br>+fluroxypyr + COC + AMS                                               | 2.0&1.5<br>+0.126+1.0%+2.5                       | SPRBD                    | 24               | 23                |
| Acetochlor&atrazine&dichlormid<br>+fluroxypyr&clopyralid + COC + AMS                                    | 2.0&1.5<br>+0.125&0.125+1.0%+2.5                 | SPRBD                    | 56               | 62                |
| Acetochlor&atrazine&dichlormid<br>+glyphosate(GF) + fluroxypyr&clopyralid<br>+ COC + AMS                | 2.0&1.5<br>+0.375+0.125&0.125<br>+1.0%+2.5       | SPRBD                    | 78               | 84                |
| Acetochlor&atrazine&dichlormid<br>+glyphosate(GF) + fluroxypyr + COC + AMS                              | 2.0&1.5<br>+0.375+0.126+1.0%+2.5                 | SPRBD                    | 61               | 58                |
| LSD (0.05)                                                                                              |                                                  |                          | 17               | 16                |

<sup>a</sup> Treatments: 2,4-D(EH) = ethylhexyl ester; AMS = S-Sul sprayable ammonium sulfate from Agrilience, LLC.; COC = Prime Oil crop oil concentrate from Agrilience, LLC. (83% paraffin base petroleum oil); Glyphosate(TDT) = Touchdown Total from Syngenta; Glyphosate(WMAX) = Roundup Weathermax from Monsanto; Glyphosate(GF) = GF-1279 from Dow Agrosciences; Fluroxypyr&clopyralid = GF-1203 from Dow Agrosciences

<sup>b</sup> Late postemergence (LPOST) application was made on 05/20/2004 to 16 treatments, including one nontreated check: dicamba&diflufenzopyr (0.125&0.05 lb/A) + NIS (0.25% v/v) + AMS (2 lb/A)

<sup>c</sup> Evaluation (June 4) is 200 DAT – FALBD, 56 DAT – SPRBD, and 15 DAT – LPOST

<sup>d</sup> Evaluation (June 18) is 214 DAT – FALBD, 70 DAT – SPRBD, and 29 DAT – LPOST