

Curly dock control in alfalfa. Wait, Jim D. and William G. Johnson. The objective of this study was to evaluate curly dock control with various herbicide combinations in alfalfa. This study was conducted at the Bradford Research Center near Columbia, MO. The soil was a Mexico silt loam. Treatments were arranged in a randomized complete block design with four replications of 5 by 35 feet plots. Herbicide applications were made with a CO₂ backpack sprayer and equipped with XR8002 flat fan nozzles.

Application data is listed below:

| Date Application | May 21 between cutting | June 25 after cut |
|---------------------------------|------------------------------|-------------------------|
| Temperature (F) | | |
| air | 58 | 79 |
| soil | 50 | 74 |
| Soil moisture | moist | moist |
| Wind (mph) | 5 | 0 |
| Sky cover (%) | 0 | 100 |
| Relative humidity (%) | 59 | 66 |
| Precipitation after application | | |
| week 1 (inch) | 0.63 | 0.28 |
| week 2 (inch) | 0.37 | 0.04 |
| Alfalfa | | |
| height (inch) | 6 | 2 |
| Curly dock | | |
| node no. | | cut |
| height (inch) | 6 | 3 |
| infestation (sq. ft.) | 14 | 12 |

Crop injury was greatest after the first cutting applications of bromoxynil, imazamox + 2,4-DB and imazamox + bromoxynil on July 9. All treatments had $\leq 3\%$ crop injury on July 29. At the August 2 rating, curly dock populations were reduced with hexazinone, 2,4-D, and imazamox + 2,4-D while all other herbicide treatments had similar or higher plant counts. (Department of Agronomy, University of Missouri-Columbia)

Table. Curly dock control in alfalfa (Wait and Johnson)

| Treatment | Rate (lb/A) | App | Injury | | 5-20 | RUMCR | |
|---|---|----------------------|-------------|------|------|------------------|-----|
| | | | 7-9 | 7-29 | | 6-20 | 8-2 |
| | | | -----%----- | | | live plants 1 m2 | |
| Flumioxazin | 0.0625 | btw cut ^a | 1 | 1 | 15 | 14 | 14 |
| Hexazinone | 1.0 | btw cut | 3 | 0 | 14 | 3 | 5 |
| Imazethapyr + AMS ^b + MSO ^c | 0.063 + 2.5 + 1.0 % | aft cut ^d | 2 | 1 | 26 | 24 | 16 |
| Imazamox + AMS + COC ^e | 0.312 + 2.5 + 1.0 % | aft cut | 3 | 0 | 5 | 18 | 8 |
| Imazamox + AMS + COC | 0.039 + 2.5 + 1.0 % | aft cut | 6 | 2 | 14 | 16 | 13 |
| Bromoxynil | 0.375 | aft cut | 11 | 3 | 11 | 15 | 18 |
| Norflurazon | 1.75 | btw cut | 2 | 1 | 6 | 20 | 21 |
| 2,4-DB | 1.0 | aft cut | 3 | 3 | 13 | 14 | 4 |
| Imazethapyr + 2,4-DB + AMS | 0.063 + 1.0 + 2.5 | aft cut | 3 | 1 | 5 | 15 | 11 |
| Sethoxydim + imazethapyr + AMS | 0.1875 + 0.063 + 2.5 | aft cut | 3 | 1 | 16 | 23 | 14 |
| Clethodim + imazethapyr + AMS + COC | 0.094 + 0.063 + 2.5 + 1.0 qt/A | aft cut | 4 | 0 | 11 | 19 | 24 |
| Imazethapyr + bromoxynil + AMS + COC | 0.063 + 0.375 + 2.5 + 1.0 % | aft cut | 5 | 0 | 9 | 19 | 21 |
| Imazamox + 2,4-DB + AMS + COC | 0.039 + 1.0 + 2.5 + 1.0 % | aft cut | 8 | 3 | 1 | 13 | 3 |
| Imazamox + bromoxynil + AMS+ COC | 0.039 + 0.375 + 2.5 + 1.0 % | aft cut | 8 | 2 | 15 | 20 | 19 |
| Untreated | | | 0 | 0 | 20 | 14 | 24 |
| LSD (0.05) | | | 5 | 3 | 1 | 1 | 1 |

^abtw cut = after first cutting, less than 2 inches regrowth^bAMS = ammonia sulfate from MFA Crop Advantage^cMSO = Soy Plus, methylated seed oil from MFA Crop Advantage^daft cult = after first cutting, 4-8 inches of regrowth^eCOC = Relay, crop oil concentrate from MFA Crop Advantage