

Broadleaf weed control and wheat tolerance to Aim at Crookston, MN - 2001.

Durgan, Beverly R., Jim Cameron, Douglas Miller, and Krishona Martinson. This experiment was designed to evaluate broadleaf weed control and wheat injury with Aim (carfentrazone-ethyl). The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was fall plowed. In the spring the experimental area was disked and harrowed. '2375' hard red spring wheat was seeded on April 29 at 1.75 Bu/A. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. The experimental design was a randomized complete block with three replications and plot size was 10 by 24 ft. Application date and environmental conditions are listed below. Crop injury and weed control were visually rated and are data presented in the table below. Wheat yields were not measured due to stand losses resulting from wind and heavy rain.

| | |
|-----------------------------|------------|
| Treatment Date | June 7 |
| Target weed or crop stage | 2-4" weeds |
| Wheat Stage | |
| leaf stage | 3-4 |
| height (inch) | 4-5 |
| tiller number | 1-2 |
| Weeds | |
| leaf stage | 3-4 |
| height (inch) | 3 |
| Air Temperature (degrees F) | 76 |
| Humidity (%) | 35 |
| Wind | E, 6 mph |
| Cloud cover | cloudy |
| Rainfall before Application | |
| Week 1 (inch) | 0.64 |
| Rainfall after Application | |
| Week 1 (inch) | 0.36 |
| Week 2 (inch) | 0.63 |

Table. Broadleaf weed control and wheat tolerance to Aim at Crookston, MN - 2001 (Durgan, Cameron, Miller, and Martinson).

| Treatment | Rate (lb ai/A) | Wheat Injury | | Wimu Control |
|--|---------------------------------------|---------------|------|--------------|
| | | 6/14 | 6/21 | 6/21 |
| | | ----- % ----- | | |
| Carfentrazone-ethyl + NIS ¹ | 0.008 + 0.25% | 0 | 2 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester | 0.008 + 0.25% + 0.375 | 3 | 5 | 99 |
| Carfentrazone-ethyl + NIS + MCPA ester | 0.008 + 0.25% + 0.375 | 2 | 0 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + dicamba | 0.008 + 0.25% + 0.25 + 0.0625 | 5 | 7 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + dicamba | 0.008 + 0.25% + 0.25 + 0.094 | 17 | 13 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + fluroxypyr | 0.008 + 0.25% + 0.375 + 0.125 | 5 | 7 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + fluroxypyr | 0.008 + 0.25% + 0.375 + 0.094 | 8 | 7 | 99 |
| Carfentrazone-ethyl + NIS + fluroxypyr & 2,4-D ester ² | 0.008 + 0.25% + 0.09 & 0.38 | 3 | 7 | 99 |
| Carfentrazone-ethyl + NIS + fluroxypyr & MCPA ester ³ | 0.008 + 0.25% + 0.09 & 0.38 | 2 | 2 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + thifensulfuron | 0.008 + 0.25% + 0.375 + 0.014 | 2 | 2 | 99 |
| Carfentrazone-ethyl + NIS + 2,4-D ester + thifensulfuron & tribenuron ⁴ | 0.008 + 0.25% + 0.375 + 0.009 & 0.005 | 3 | 3 | 99 |
| Carfentrazone-ethyl + NIS + bromoxynil & MCPA | 0.008 + 0.25% + 0.25 & 0.25 | 2 | 2 | 99 |
| Carfentrazone-ethyl + NIS + bromoxynil & MCPA + thifensulfuron | 0.008 + 0.25% + 0.25 & 0.25 + 0.014 | 5 | 3 | 99 |
| Thifensulfuron + MCPA ester + NIS | 0.014 + 0.25 + 0.25% | 3 | 3 | 99 |
| Bromoxynil & MCPA ⁵ | 0.25 & 0.25 | 2 | 7 | 99 |
| Thifensulfuron & tribenuron + MCPA ester + NIS | 0.009 & 0.005 + 0.25 + 0.25% | 3 | 2 | 99 |
| Fluroxypyr & 2,4-D ester | 0.09 & 0.38 | 3 | 3 | 99 |
| Fluroxypyr & MCPA ester | 0.09 & 0.35 | 0 | 2 | 99 |
| Weedy check | | 0 | 0 | --- |
| LSD (P=.05) | | 5 | 5 | ns |

¹ NIS = Class Preference nonionic surfactant.

² Premix = Starane + Salvo 3.75E.

³ Premix = Starane + Sword 3.55E

⁴ Premix = Harmony Extra 75DF.

⁵ Premix = Bronate 4E