<u>Wild oat control with Rimfire alone, with broadleaf herbicides, and various adjuvants</u> <u>at Crookston, MN - 2007.</u> Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas Miller. The objective of this experiment was to evaluate wild oat control with Rimfire (propoxycarbazone & mesosulfuron) alone and in various combinations with broadleaf herbicides and several adjuvants. 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 of the following year, the experimental area was disked and harrowed. 'Alsen' hard red spring wheat was seeded on April 25 at 1.5 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 16 ft. Application data and environmental conditions are listed below. Crop injury and wild oat control were visually rated. Yields were measured. All data are presented in the table below.

| Treatment Date | May 25 | | | |
|---|---|--|--|--|
| Wheat stage Wild oat stage | 4.5 leaf 4 – 4.5 leaf | | | |
| Air temperature (°F) Relative humidity (%) Soil temperature (°F) Wind Sky | 58 40 50 E 0-1 mph overcast | | | |
| Rainfall before Application Week 1 (inch) Rainfall after | 0.48 | | | |
| Application Week 1 (inch) Week 2 (inch) | 1.18 1.47 | | | |

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| Treatment | Rate | Wild Oat Control | | Wheat Injury | | | Wheat |
|---|-----------------------------------|------------------|-----|--------------|------|-----|--------|
| | | 6/28 | 7/5 | 6/8 | 6/28 | 7/5 | Yield |
| | Product/A | (%) | (%) | (%) | (%) | (%) | (Bu/A) |
| Rimfire | 1.76 oz | 90 | 83 | 0 | 0 | 0 | 52 |
| Rimfire + Destiny | 1.76 oz + 1.5 pt | 89 | 83 | 0 | 0 | 0 | 53 |
| Rimfire + Huskie + Destiny | 1.76 oz + 11 oz + 1.5 pt | 83 | 82 | 0 | 0 | 0 | 51 |
| Rimfire + Quad 7 | 1.76 + 0.8 pt | 94 | 89 | 0 | 0 | 0 | 53 |
| Rimfire + Huskie + Quad 7 | 1.76 + 11 oz + 0.8 pt | 91 | 82 | 0 | 0 | 0 | 60 |
| Rimfire + Preference + N-Pak AMS | 1.76 oz + 0.4 pt + 3.5 pt | 89 | 88 | 0 | 0 | 0 | 59 |
| Rimfire + Huskie + Preference + N-Pak AMS | 1.76 oz + 11 oz + 0.4 pt + 3.5 pt | 84 | 83 | 0 | 0 | 0 | 44 |
| Rimfire + Destiny | 1.76 oz + 0.8 pt | 92 | 93 | 0 | 0 | 0 | 54 |
| Rimfire + Affinity Tankmix + Destiny | 1.76 oz + 0.6 oz + 0.8 pt | 87 | 83 | 0 | 0 | 0 | 46 |
| Rimfire + Newtone | 1.76 oz + 0.8 pt | 92 | 90 | 0 | 0 | 0 | 52 |
| Rimfire + AG 05006 | 1.76 oz + 0.4 pt | 95 | 91 | 0 | 0 | 0 | 56 |
| Rimfire + AG 05006 | 1.76 oz + 0.6 pt | 89 | 91 | 0 | 0 | 0 | 55 |
| Rimfire + AG 05055 | 1.76 oz + 1.2 pt | 92 | 93 | 0 | 0 | 0 | 54 |
| Rimfire + AG 05055 | 1.76 oz + 2 pt | 97 | 93 | 0 | 0 | 0 | 50 |
| Rimfire + AG 06052 | 1.76 oz + 0.8 pt | 93 | 88 | 0 | 0 | 0 | 56 |
| Rimfire + AG 7040 | 1.76 oz + 0.2 pt | 95 | 93 | 0 | 0 | 0 | 60 |
| Rimfire + Class Act NG | 1.76 oz + 2 pt | 90 | 84 | 0 | 0 | 0 | 47 |
| Puma | 0.5 pt | 96 | 96 | 0 | 0 | 0 | 57 |
| Discover NG | 8 oz | 99 | 98 | 0 | 0 | 0 | 55 |
| Weedy Check | | | | 0 | 0 | 0 | 6 |
| LSD (0.05) | | 7 | 6 | ns | ns | ns | 12 |

Rimfire 10.2 WDG = propoxycarbazone (8.14%) & mesosulfuron (2.03%).

Destiny = methylated soybean oil and nonionic surfactant blend.

Huskie 2.08 EC = pryrasulfotole & bromoxynil & safener.

Quad 7 = ammonium salt, buffering agent, and surfactant blend.

Preference = nonionic surfactant.

N-Pak AMS = ammomium sulfate solution.

Affinity Tankmix 50SG = thifensulfuron (40%) & tribenuron (10%).

Newtone = ammonium salt, buffering agent, and surfactant blend.

AG 05006 = experimental adjuvant from Agriliance.

AG 05055 = experimental adjuvant from Agriliance.

AG 06052 = experimental adjuvant from Agriliance.

AG 07040 = experimental adjuvant from Agriliance.

Class Act Next Generation = water conditioning agent and nonionic surfactant blend.

Puma 1EC = fenoxaprop and safener

Discover NG 0.5 EC = clodinafop and cloquintocet (safener).