Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2011. Durgan, Beverly R., Jochum Wiersma, Jim Cameron, and Douglas Miller. This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied at the 2 to 4 leaf wheat stage. 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. ‘RB07’ hard red spring wheat was seeded on May 17 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 24 ft. Application date and environmental conditions are listed below. Crop injury and weed control were visually rated and yields were measured. Data presented in the table below.

<table>
<thead>
<tr>
<th>Treatment Date</th>
<th>June 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air temperature (°F)</td>
<td>71</td>
</tr>
<tr>
<td>Soil temperature (°F)</td>
<td>60</td>
</tr>
<tr>
<td>Relative humidity (%)</td>
<td>34</td>
</tr>
<tr>
<td>Wind</td>
<td>E 10 mph</td>
</tr>
<tr>
<td>Sky</td>
<td>cloudy</td>
</tr>
</tbody>
</table>

Rainfall before Application
Rainfall after Application
Week 1 (inch) | 0.25 |
Week 1 (inch) | 0.22 |
Week 2 (inch) | 1.28 |
### Broadleaf weed control in 2 to 4 leaf spring wheat at Crookston, MN - 2011.

Durgan, Wiersma, Cameron, and Miller.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate</th>
<th>Product/A (%)</th>
<th>Yield (Bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huskie + N-Pak AMS</td>
<td>11 oz + 1.18 pt</td>
<td>99 99 100 99 99 100 83 99 100 99 99 100</td>
<td>0 0 0 58</td>
</tr>
<tr>
<td>Huskie + N-Pak AMS</td>
<td>13 oz + 1.18 pt</td>
<td>99 99 100 99 99 100 99 99 100 99 99 100</td>
<td>0 0 0 58</td>
</tr>
<tr>
<td>Huskie + N-Pak AMS</td>
<td>15 oz + 1.18 pt</td>
<td>99 99 100 99 99 100 96 99 100 99 99 100</td>
<td>0 0 0 58</td>
</tr>
<tr>
<td>Huskie + N-Pak AMS + Preference</td>
<td>13 oz + 1.18 pt + 3.2 oz</td>
<td>99 99 98 99 99 100 93 99 96</td>
<td>99 99 100</td>
</tr>
<tr>
<td>Huskie + N-Pak AMS + Axial Star</td>
<td>11 oz + 1.18 pt + 3.2 oz</td>
<td>99 99 100 99 99 100 96 98 100</td>
<td>99 99 100</td>
</tr>
<tr>
<td>Widematch + MCPA Ester</td>
<td>1 pt + 0.5 pt</td>
<td>83 99 99 83 99 100 80 98 96</td>
<td>80 99 100</td>
</tr>
<tr>
<td>Affinity Tankmix + Starane + Preference</td>
<td>0.6 oz + 0.33 pt + 3.2 oz</td>
<td>86 99 100 86 99 100 83 98 100</td>
<td>86 99 100</td>
</tr>
<tr>
<td>Affinity Tankmix + MCPA-Ester + Preference</td>
<td>0.6 oz + 0.5 pt + 3.2 oz</td>
<td>96 99 100 96 99 100 90 99 100</td>
<td>93 99 100</td>
</tr>
<tr>
<td>Wolverine</td>
<td>27.4 oz</td>
<td>99 99 100 99 99 100 93 95 95</td>
<td>99 98 100</td>
</tr>
<tr>
<td>Harmony SG + Express SG + Axial Star</td>
<td>13.69 oz</td>
<td>95 99 100 98 99 100 90 98 95</td>
<td>95 99 100</td>
</tr>
<tr>
<td>Harmony SG + Express SG + Axial Star</td>
<td>0.48 oz + 0.12 oz + 1.03 pt</td>
<td>91 99 100 91 99 100 88 98 100</td>
<td>88 99 100</td>
</tr>
<tr>
<td>Harmony SG + Express SG + Axial Star</td>
<td>0.2 oz + 0.2 oz + 1.03 pt</td>
<td>93 99 100 93 99 100 90 98 100</td>
<td>90 99 100</td>
</tr>
<tr>
<td>Orion</td>
<td>17 oz</td>
<td>85 96 90 91 99 96 85 96 87</td>
<td>95 99 100</td>
</tr>
<tr>
<td>Orion + Starane</td>
<td>17 oz + 0.33 pt</td>
<td>93 96 99 93 96 99 78 93 90</td>
<td>95 98 98</td>
</tr>
<tr>
<td>Orion + Buclrl</td>
<td>17 oz + 1 pt</td>
<td>96 99 99 96 99 99 98 99 95</td>
<td>99 99 100</td>
</tr>
<tr>
<td>Orion + Axial Star</td>
<td>17 oz + 1.03 pt</td>
<td>93 99 95 93 99 99 88 99 90</td>
<td>93 99 100</td>
</tr>
<tr>
<td>GoldSky + Preference</td>
<td>16 oz + 3.2 oz</td>
<td>87 93 93 90 93 99 77 88 87</td>
<td>92 93 98</td>
</tr>
<tr>
<td>Pulsar + Preference</td>
<td>8.3 oz + 3.2 oz</td>
<td>80 90 95 80 93 100 73 85 90</td>
<td>80 93 100</td>
</tr>
<tr>
<td>Pulsar + MCPA-Ester + Preference</td>
<td>8.3 oz + 0.5 pt + 3.2 oz</td>
<td>80 92 95 80 95 99 70 88 90</td>
<td>77 91 100</td>
</tr>
<tr>
<td>Pulsar + Affinity Tankmix + Preference</td>
<td>8.3 oz + 0.6 oz + 3.2 oz</td>
<td>94 96 98 94 96 99 87 93 90</td>
<td>90 96 100</td>
</tr>
<tr>
<td>Everest 2.0 + Newtone</td>
<td>0.75 oz + 0.8 pt</td>
<td>63 93 96 85 96 99 67 88 85</td>
<td>85 95 97</td>
</tr>
<tr>
<td>Bronate Advanced</td>
<td>0.6 pt</td>
<td>85 90 80 98 90 80 63 67 80</td>
<td>92 90 87</td>
</tr>
<tr>
<td>Bronate Advanced</td>
<td>0.8 pt</td>
<td>98 92 99 98 92 99 70 85 95</td>
<td>92 96 100</td>
</tr>
<tr>
<td>Bronate Advanced + Axial Star</td>
<td>0.6 pt + 1.03 pt</td>
<td>88 96 100 88 99 100 77 95 93</td>
<td>87 98 100</td>
</tr>
<tr>
<td>Weedy Check</td>
<td>--</td>
<td>-- -- -- -- -- -- -- -- -- --</td>
<td>-- -- -- --</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td>15 4 4 10 4 2 17 8 4 10 3 3 3 3 3 ns 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Huskie 2.08EC = pyrasulfotole & bromoxynil & safener.

N-PaK AMS = 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).

Preference = nonionic surfactant.

Axial Star 1.15EC = Pinoxaden (0.42 lb ai/gal) & fluoroxypry ester (0.73 lb ae/gal).

Widematch 1.5E = clopyralid (0.75 lb ae/gal) & fluoroxypry (0.75 lb ae/gal).

MCPA Ester 4E.

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

Starane 1.5E = fluoroxypry.

Bronate 1.38E = fenoxaprop-p-ethyl (0.38 lb ai/gal) & pyrasulfotole (0.17 lb ai/gal) & bromoxynil octanoate (0.41 lb ai/gal) & bromoxynil heptanoate (0.42 lb ai/gal).

636 4-Way = premix from Bayer CropScience.

Harmony 50SG = thifensulfuron.

Express 50SG = tribenuron.

Orion 2.37SE = flurosulam (0.03 lb ai/gal) & MCPA (2.34 lb ae/gal).

Buclrl 2E = bromoxynil.

GoldSky 0.84L = pyroxasulam (0.11 lb ai/gal) & fluoroxypry (0.71 lb ae/gal) & florasulam (0.018 lb ai/gal).

Pulsar 1.67L = dicamba (0.7275 lb ae/gal) & fluoroxypry (0.9455 lbs ae/gal).

Everest 2.0 3.5SC = flucarbazone-sodium & cloquintocet (safener).

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

Bronate Advanced SE = bromoxynil (2.5 lb ai/gal) & MCPA (2.5 lb ae/gal).