This experiment was designed to evaluate broadleaf weed control and wheat injury with broadleaf herbicides applied to tillering wheat. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the standing residue was shredded and, after receiving 100 lbs/A as urea, was chisel plowed. In the spring a seed bed was prepared using a field cultivar with rolling baskets. 'RB07' hard red spring wheat was seeded on May 17 at 1.8 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.

**Treatment Date** | **June 17**
--- | ---
**Weed Density (#/ft²)** |  
- Common Lambsquarters | 5  
- Common Mallow | 21  
- Nightflowering Catchfly | 2  
- Redroot Pigweed | 15  
- Wild buckwheat | 10  
- Wild Mustard | 10  
**Wheat Stage** | tillering  
**Air temperature (°F)** | 65  
**Soil temperature (°F)** | 60  
**Relative humidity (%)** | 76  
**Wind** | 5 mph  
**Rainfall before Application** |  
Week 1 (inch) | 2.69  
**Rainfall after Application** |  
Week 1 (inch) | 1.91  
Week 2 (inch) | 0.59  

There were no significant differences between treatments in weed control for any of the broadleaf species. Overall control averaged 70% on June 27 and ranged from 80% to 90% at the July 10 and July 30 rating dates. Wheat injury ratings of 5% to 10% were recorded at the first rating but no significant injury was observed at the later dates. Yields did not significantly differ.
### Weed Control

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Rate</th>
<th>Common Lambsquarters (Product/A) (%)</th>
<th>Common Mallow (Product/A) (%)</th>
<th>Wild Mustard (Product/A) (%)</th>
<th>Nightflowering Catchfly (Product/A) (%)</th>
<th>Redroot Pigweed (Product/A) (%)</th>
<th>Wild Buckwheat (Product/A) (%)</th>
<th>Weed Injury 7/30 (%)</th>
<th>Wheat Yield (Bu/A)</th>
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<tbody>
<tr>
<td>WFS 2,4-D Amine 4</td>
<td>1 pt</td>
<td>70</td>
<td>90</td>
<td>90</td>
<td>70</td>
<td>90</td>
<td>88</td>
<td>70</td>
<td>90</td>
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<tr>
<td>AGH 14001</td>
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<td>70</td>
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<tr>
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<td>90</td>
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<tr>
<td>AGH 09008</td>
<td>1 pt</td>
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<td>90</td>
<td>90</td>
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<td>90</td>
<td>73</td>
<td>90</td>
</tr>
<tr>
<td>AGH 09008 + AG 8050</td>
<td>1 pt + 6.4 oz</td>
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<td>90</td>
<td>90</td>
<td>70</td>
<td>90</td>
<td>87</td>
<td>70</td>
<td>87</td>
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<tr>
<td>AGH 09008 + AG 13040</td>
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<td>85</td>
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<td>85</td>
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<tr>
<td>AGH 09008 + AG 14012</td>
<td>1 pt + 6.4 oz</td>
<td>70</td>
<td>90</td>
<td>90</td>
<td>70</td>
<td>90</td>
<td>85</td>
<td>70</td>
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<tr>
<td>AGH 09008 + AG 14013</td>
<td>1 pt + 6.4 oz</td>
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<td>87</td>
<td>70</td>
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<td>87</td>
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<tr>
<td>AGH 09008 + AG 13064</td>
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</tbody>
</table>

LSD (0.05) ns ns ns ns ns ns ns ns ns ns ns ns ns ns ns ns ns ns 3 ns ns ns

WFS 2,4-D Amine 4L.
AGH 14001 = experimental from Winfield Solutions.
AGH 14002 = experimental from Winfield Solutions.
AGH 09008 = experimental from Winfield Solutions.
AG 8050 = experimental adjuvant from Winfield Solutions.
AG 13040 = experimental adjuvant from Winfield Solutions.
AG 14012 = experimental adjuvant from Winfield Solutions.
AG 14013 = experimental adjuvant from Winfield Solutions.
AG 13064 = experimental adjuvant from Winfield Solutions.