**Laudis® Postemergence Weed Control in Roundup Ready Field Corn**

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**OBJECTIVE:** Evaluate Laudis and other herbicides for postemergence weed control in silage corn.

**MATERIALS & METHODS:** A single trial was conducted in commercial Roundup Ready field corn on Eschinger Rd near Elk Grove, CA. The trial was initiated with two preemergent treatments on May 13, 2013 (A application) for weed efficacy/crop tolerance. Plots were 10 x 25 ft (4 rows corn/plot) arranged in a randomized complete block design with three replications. Application was made with a CO₂ back pack sprayer, 36 psi in 20 gpa of water. The first application (A) a preemergent application of Roundup + Matrix 0.0156 lb ai/A. and Roundup + Dual Magnum @ 1.43 lb ai/A. The postemergence applications were made on May 31, 2013 (B application) of: (2) Roundup Powermax @ 1.38 lb ai/A; (3) Laudis + MSO + Ammonium Sulfate @ 0.082 lb ai/A; (5) Laudis + Roundup PM @ 0.082 + 1.38 lb ai/A; (6) Laudis + Atrazine + MSO @ 0.082 + 0.45 lb ai/A; (8) Shark + Activator 90 @ 0.0148 lb ai/A + 0.25% v/v; and (9) Halex + Activator 90 + Ammonium Sulfate @ 4.0 pt/A. Field corn stage at application was 2-4 inch height; weed stage: watergrass (Echinochloa oryzoides) 2-3 leaf, 0.25-1.0 inch height; velvetleaf (Abutilon theophrasti) 2-4 leaf, 2 – 4 inch height; purslane (Portulaca oleracea) 2-4 leaf, 3-6 inch height; lambsquarters (Chenopodium desiccatum) 4-6 leaf, 2-3 inche height; wild radish (Raphanus raphanistrum) 2 leaf, 1-2 inch height; mallow (Malva neglecta) 1-2 lf, ¾ - 1.0 inch height; volunteer wheat (Triticum aestivum) 1 tiller, 4-6 inch height. An application (C) was made on June 11, 2013 corn stage was V8 (6-8 leaf, 18-28 inch height): treatment (4) Laudis + Shark + MSO + Ammonium Sulfate @ 0.082 + 0.0148 lbai/A. MSO rate was 1.0% v/v and the ammonium sulfate rate was 1.5 lb/A. Weed stage at application (C): purslane (Portulaca oleracea) 8-10 leaf, 8-12 inch height, 3 stems/plant; velvetleaf (Abutilon theophrasti) 6 leaf, 12 – 14 inch height; watergrass (Echinochloa oryzoides) 4-6 leaf, 6-12 inch height, 1 tiller; lambsquarters (Chenopodium desiccatum) 10-14 leaf, 10-12 inch height; wild radish (Raphanus raphanistrum) 6-8 leaf, 6-10 inch height; pigweed (Amaranthus retroflexus) 8-12 inch height, 6-8 leaf; mallow (Malva neglecta) 8-10 leaf, 6-10 inch height.

**RAINFALL DATA:** Weather Station: CIMIS #140 Twitchell Is

**PRECIPITATION AMOUNT (INCHES) *Application Date:** (A) 5-13-13, (B) 5-31-13, (C) 6-11-13

<table>
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<th>Date</th>
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<tr>
<td>June 2013</td>
<td>0.09”</td>
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<tr>
<td>1st irrigation 5/20</td>
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<tr>
<td>2nd irrigation 6/10</td>
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RESULTS & DISCUSSIONS:

Field Corn Injury

18 DA-A No injury noted with preemergence application of Matrix or Dual Magnum.

11 DA-B Shark @ 0.0148 lb ai/A gave some lower leaf spotting but the new growth was clean. There was some early growth reduction with Shark.

15 DA-C Laudis + Shark + MSO + Ammonium Sulfate applied to V8 corn resulted in 10% phytotoxicity.

Shark controls purslane leaves barnyard grass
Weed Control Evaluations

18  DAA & 11 days after 1st irrigation
Watergrass, velvetleaf, purslane, lambsquarter, wild radish, malva and volunteer wheat were just beginning to emerge. Matrix was showing 83% control of weeds. Dual Magnum was 66% control while providing good control of watergrass at 89%.

29 DA-A  11 DA-B
Weeds rated were: watergrass, velvetleaf, purslane, lambsquarter, wild radish, malva and volunteer wheat. Roundup Power Max alone gave 92.4%. Laudis + MSO + Ammonium Sulfate gave 85% overall control but was weak 65% control of purslane. The best treatments at this rating were Laudis + Roundup Power Max and Laudis + Atrazine giving 96.9 and 94.5 % control respectively. Matrix + Roundup Power Max, Shark + Activator 90 and Dual Magnum gave 61.5, 61.4 and 24.6 % control of all weeds rated at this time. Halex + Activator 90 + Ammonium Sulfate gave 97.9% control of all weeds.

44 DA-A  26 DA-B  15 DA-C
Weeds rated were: watergrass, velvetleaf, purslane, lambsquarter and volunteer wheat. Roundup Power Max alone gave 94.2% control of all weeds. Laudis + MSO + Ammonium Sulfate gave excellent control of watergrass (93%), velvetleaf (100%) and lambsquarter (100%) and poor control of purslane (26.2%) and volunteer wheat (63.3%).
Laudis + Roundup Power Max and Laudis + Atrazine gave excellent control of all weeds at 96.7% and 96.4% respectively. Shark + Activator 90 gave excellent control of velvetleaf (100%), purslane (97%) and lambsquarter (100%) but no control of watergrass or volunteer wheat. Halex + Activator 90 + Ammonium Sulfate gave 95.2% control of the above listed weeds. Application (C) Laudis + Shark + MSO + Ammonium Sulfate gave excellent control of watergrass (87%), velvetleaf (100%) and lambsquarter (100%) but weak on purslane (22%) and volunteer wheat (37%).

Summary

Treatments providing the best early season control of weeds; watergrass, velvetleaf, purslane, lambsquarter and volunteer wheat in RR field corn were Roundup Power Max, Laudis + Roundup Power Max, Laudis + Atrazine, and Halex + Activator 90 + Ammonium Sulfate.

Figure 1. Overall weed control in RR Field Corn with Laudis.