

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 inch 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

<u>Date</u>	<u>Inches</u>
June 2013	0.09"
1 st irrigation 5/20	6.0"
2 nd irrigation 6/10	6.0"

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.



Purslane

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.

