

## Weed Management in Almonds for 2007

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Weed management in both young and established almonds (*Prunus dulcis*) is important to ensure proper growth and seasonal development. Many growers have reduced or eliminated weed management to conserve their financial resources. However, this is a mistake, as weeds will compete for water, nutrients, sunlight and space, interfere with effective harvest and physically reduce yield. New materials and new formulations of established materials have been evaluated in 2007 research trials.

### **Materials and Methods**

All tests were applied with CO<sub>2</sub> backpack sprayers delivering a spray volume of 20 GPA at 40 psi thru 8002 flat fan nozzles.

**4 Year Almond Trial 2007:** A four year old almond orchard planted to a 14 x 22 ft spacing was divided into 2 reps of Nonpariel and 2 reps of Fritz for a total of 4 replications of 14 treatments in RCBD. Evaluations in Jan and Feb showed no effects due to the lack of weeds believed to be from the severe cold weather during much of that time. Evaluations were conducted on April 13 (127 Days after the initial treatment - DAT), May 29 (173 DAT), September 11 (278 DAT), 2007. Harvest samples were collected on August 10 & Sept 19, 2007

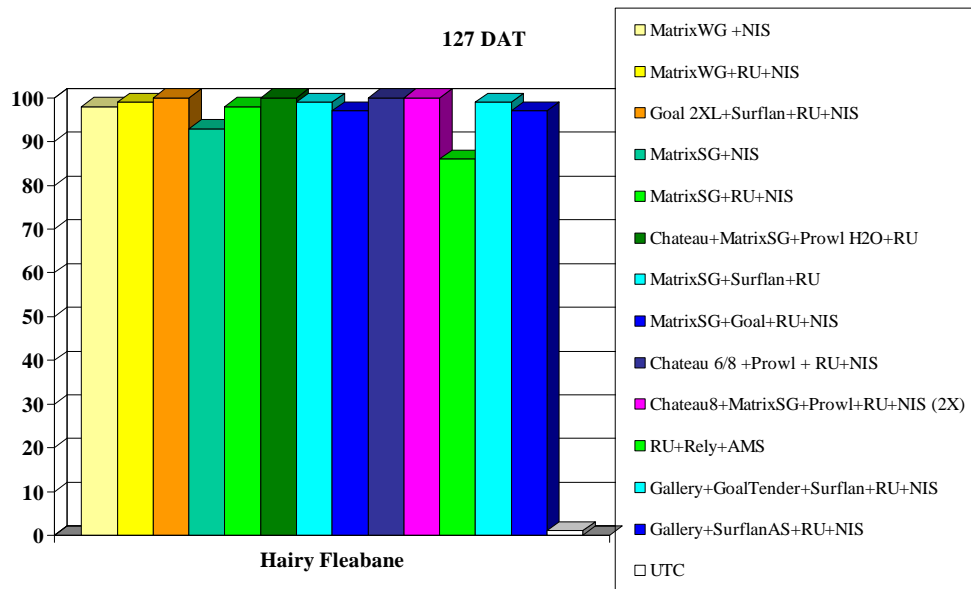
**1 Year Almond Trial 2007:** An almond orchard planted March 1, 2006 on a 17 by 20 ft spacing was divided into two tree plots of 22 treatments with four replications in a randomized complete block design. Treatments were applied on Jan 3, 2007. Certain treatment were not applied at this time. The second application which included treatments not previously applied and sequentially timed treatments was April 16, 2007. Trunk diameters were taken on January 16, March 19, and June 5, 2007. Due to extremely cold weather, there were no weeds present to evaluate at 30 and 60 days after the initial treatment. Weed and crop injury evaluations were conducted on April 13 (127 DAT) and August 10 (219 DAT), 2007.

### **Four year old trial site**

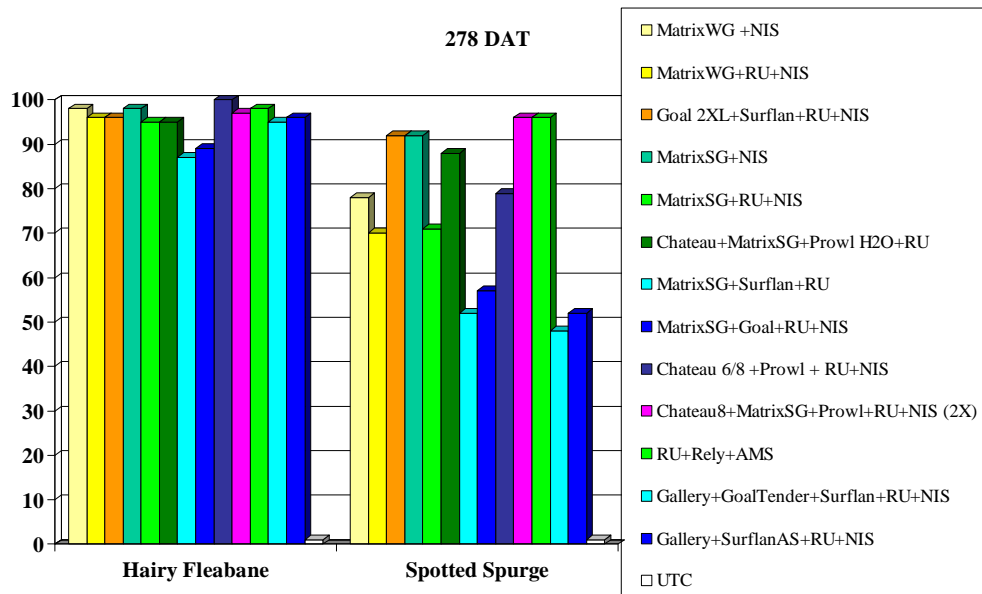
**At 127 DAT** only Matrix @ 4 oz tank mixed with Glyphosate (RU) at 1 qt and Induce (NIS) at 6.4 oz indicated significantly lower control than the best treatments. However this treatment still exhibited excellent control at 92% for hairy fleabane, foxtail barley, rattail fescue, mayweed, pineapple weed, whitestem filaree, panicle willowweed, shepherd's purse, and white clover. There were no significant differences for brass buttons by any treatment. **At 173 DAT**, all treatments still provided excellent control of hairy fleabane, foxtail barley, and rattail fescue with only Matrix SC at 4 oz tank mixed with NIS or RU tank mixed with Rely and AMS exhibiting significantly less control than the other treatments. Mayweed, pineappleweed and whitestem filaree were completely controlled by all treatments. **At 278 DAT**, excellent control was exhibited for the following weeds by all treatments: barnyardgrass, junglerice - 100%, and cheeseweed - 95 to 100%. Fleabane exhibited 87 to 100% control, white clover exhibited 86 to 100 % control, and sowthistle exhibited 91 to 100% control with no significant differences between treatments. Acceptable control of spotted spurge was only exhibited by the following: Goal 2XL 2 pt mixed with Surflan 1 gal, RU 1 qt and NIS 6.4 fl oz; Matrix SG 4 oz mixed with

NIS 6.4 oz, Chateau 8 oz mixed with Matrix SG 4 oz, Prowl H2O 4 qt and RU 1 qt; Chateau 8 oz mixed with Matrix SG 4 oz, Prowl H2O 3 qt, RU 1 qt and NIS 6.4 oz (2X); or RU 2 qt mixed with Rely 4 qt and AMS 10 lb. There was no indication of crop injury at any evaluation throughout the year.

## 4 Year Almond Weed Study 2007



## 4 Year Almond Weed Study 2007



### One year old trial site

At 85 DAT, the greatest control of ryegrass was exhibited by Matrix SG tank mixed with Goal, Roundup WeatherMax (RU) and Induce (NIS) and was not significantly different from any treatment but the following: Chateau at 6 oz mixed with Prowl H2O, RU and NIS followed by Chateau at 8 oz mixed with Prowl H2O, RU and NIS (which still provided acceptable control); Gallery T&V at 0.67 lb mixed with Prowl H2O, RU and NIS or the UTC. There were no significant differences in chickweed control for any treatment with all treatments providing excellent control and significantly greater control than the UTC. There was no indication of crop injury by any treatment at this evaluation. At 219 DAT, paraquat had been uniformly sprayed over the entire trial site. There were no significant differences in sowthistle or spiny clotbur control. The greatest control of junglerice was exhibited by Gallery T&V at 1 lb mixed with Prowl H2O, RU and NIS at 94 percent. Although other treatments provided significantly similar control, control levels below 80 percent are considered adequate rather than good or excellent and anything less than 70 percent is considered unacceptable. There was no indication of crop injury at this evaluation.

### Young Almond Weed Management 2007

85 DAT

Treatment	Rate	Ryegrass	Chickweed
Matrix WG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	99 a	100 a
Matrix WG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	95 ab	98 a
Goal 2XL + Surflan + RU + NIS <sup>a</sup>	2 qt + 1 Gal + 1 qt + 6.4 fl oz	96 ab	100 a
Matrix SG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	98 ab	100 a
Matrix SG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	96 ab	100 a
Chateau + Matrix SG + Prowl H2O + RU <sup>a</sup>	8 oz + 4 oz + 1 gal + 1 qt	92 abc	100 a
Matrix SG + Surflan + RU <sup>a</sup>	4 oz + 1 gal + 1qt	99 a	100 a
Matrix SG + Goal + RU + NIS <sup>a</sup>	4 oz + 1 pt + 1 qt + 6.4 oz	100 a	98 a
Chateau + Prowl H2O + RU/Chateau + Prowl H2O + RU <sup>ab</sup>	6 oz + 3 qt + 1 qt/8 oz + 3 qt + 1 qt + 6.4 fl oz	85 c	100 a
Chateau + Matrix SG + Prowl H2O + RU <sup>ab</sup>	8 oz + 4 oz + 3 qt + 1 qt + 6.4 fl oz	96 ab	100 a
RU + Rely + AMS <sup>b</sup>	2 qt + 1 gal + 10 lb		
GoalTender + Prowl H2O+RU+NIS <sup>a</sup>	2 qt + 1 gal + 25.6 fl oz + 6.4 fl oz	94 abc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	89 bc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1.33 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	94 abc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	0.67 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	53 d	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>b</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz		
GoalTender + Surflan + RU + NIS <sup>b</sup>	3 pt + 3 qt + 25.6 fl oz + 6.4 fl oz		
Rely + GoalTender + Surflan <sup>b</sup>	4 qt + 1 qt + 3 qt		
Rely + GoalTender + Surflan <sup>b</sup>	6 qt + 1 qt + 3 qt		
Rely + Chateau <sup>b</sup>	4 qt + 6 oz		
Rely + Chateau <sup>b</sup>	6 qt + 6 oz		
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## Young Almond Weed Management 2007

85 DAT

Treatment	Rate	Ryegrass	Chickweed
Matrix WG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	99 a	100 a
Matrix WG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	95 ab	98 a
Goal 2XL + Surflan + RU + NIS <sup>a</sup>	2 qt + 1 Gal + 1 qt + 6.4 fl oz	96 ab	100 a
Matrix SG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	98 ab	100 a
Matrix SG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	96 ab	100 a
Chateau + Matrix SG + Prowl H2O + RU <sup>a</sup>	8 oz + 4 oz + 1 gal + 1 qt	92 abc	100 a
Matrix SG + Surflan + RU <sup>a</sup>	4 oz + 1 gal + 1qt	99 a	100 a
Matrix SG + Goal + RU + NIS <sup>a</sup>	4 oz + 1 pt + 1 qt + 6.4 oz	100 a	98 a
Chateau + Prowl H2O + RU/Chateau + Prowl H2O + RU <sup>ab</sup>	6 oz + 3 qt + 1 qt/8 oz + 3 qt + 1 qt + 6.4 fl oz	85 c	100 a
Chateau + Matrix SG + Prowl H2O + RU <sup>ab</sup>	8 oz + 4 oz + 3 qt + 1 qt + 6.4 fl oz	96 ab	100 a
RU + Rely + AMS <sup>b</sup>	2 qt + 1 gal + 10 lb		
GoalTender + Prowl H2O+RU+NIS <sup>a</sup>	2 qt + 1 gal + 25.6 fl oz + 6.4 fl oz	94 abc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	89 bc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1.33 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	94 abc	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	0.67 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	53 d	100 a
Gallery T&V + Prowl H2O+RU+NIS <sup>b</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz		
GoalTender + Surflan + RU + NIS <sup>b</sup>	3 pt + 3 qt + 25.6 fl oz + 6.4 fl oz		
Rely + GoalTender + Surflan <sup>b</sup>	4 qt + 1 qt + 3 qt		
Rely + GoalTender + Surflan <sup>b</sup>	6 qt + 1 qt + 3 qt		
Rely + Chateau <sup>b</sup>	4 qt + 6 oz		
Rely + Chateau <sup>b</sup>	6 qt + 6 oz		
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## Young Almond Weed Management 2007 219 DAT August 10 2007

Treatment	Rate	Junglerice	Sowthistle	Spiny Clotbur
Matrix WG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	25 i	98	100
Matrix WG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	36 ghi	91	98
Goal 2XL + Surflan + RU + NIS <sup>a</sup>	2 qt + 1 Gal + 1 qt + 6.4 fl oz	75 ab	100	100
Matrix SG + NIS <sup>a</sup>	4 oz + 6.4 fl oz	26 hi	89	100
Matrix SG + RU + NIS <sup>a</sup>	4 oz + 1 qt + 6.4 fl oz	51 def	94	88
Chateau + Matrix SG + Prowl H2O + RU <sup>a</sup>	8 oz + 4 oz + 1 gal + 1 qt	79 ab	98	98
Matrix SG + Surflan + RU <sup>a</sup>	4 oz + 1 gal + 1qt	45 fgh	92	95
Matrix SG + Goal + RU + NIS <sup>a</sup>	4 oz + 1 pt + 1 qt + 6.4 oz	68 bede	95	100
Chateau + Prowl H2O + RU/Chateau	6 oz/ 8oz + 3 qt + 1 qt	82 ab	99	92
Chateau + Matrix SG + Prowl H2O + RU <sup>ab</sup>	8 oz + 4 oz + 3 qt + 1 qt + 6.4 fl oz	79 ab	100	100
RU + Rely + AMS <sup>b</sup>	2 qt + 1 gal + 10 lb	50 efg	99	100
GoalTender + Prowl H2O+RU+NIS <sup>a</sup>	2 qt + 1 gal + 25.6 fl oz + 6.4 fl oz	76 ab	100	98
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	64 bcdef	100	94
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	1.33 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	75 ab	100	99
Gallery T&V + Prowl H2O+RU+NIS <sup>a</sup>	0.67 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	74 bc	92	100
Gallery T&V + Prowl H2O+RU+NIS <sup>b</sup>	1 lb + 1 gal + 25.6 fl oz + 6.4 fl oz	94 a	100	98
GoalTender + Surflan + RU + NIS <sup>b</sup>	3 pt + 3 qt + 25.6 fl oz + 6.4 fl oz	70 bcd	99	100
Rely + GoalTender + Surflan <sup>b</sup>	4 qt + 1 qt + 3 qt	55 cdefg	99	100
Rely + GoalTender + Surflan <sup>b</sup>	6 qt + 1 qt + 3 qt	80 ab	99	100
Rely + Chateau <sup>b</sup>	4 qt + 6 oz	55 cdefg	96	98
Rely + Chateau <sup>b</sup>	6 qt + 6 oz	66 bcde	98	96
UTC		80 ab	100	100