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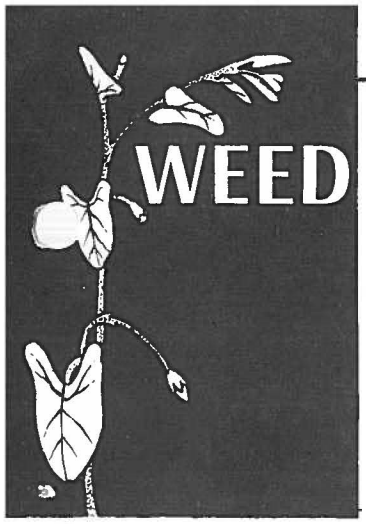

WEED CONTROL NOTES
PROGRESS REPORT

WEED CONTROL STUDIES FOR 1982 IN ALMONDS

Series 82:4

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Introduction

This year's work is highlighted by the registration of norflurazon (Solicam). This long residual preemergence herbicide has been used in some of the stone fruits for several years with growing farmer acceptance, Although it is selective and therefore misses some weed species, (i.e. some of the broadleaf species such as the clovers, flaxleaved fleabane, marestail, puncturevine and others) it does have a retarding effect even on those weeds it misses. More important, norflurazon is moderately effective on several perennial weed species such as nutsedge, bermudagrass, silverleaved nightshade (also called whitehorse nettle) and to a lesser extent johnsongrass. It also gives very good control of annual nightshade species, a growing problem where napropamide (Devrinol) has been used.

One drawback to this excellent new tool for almond growers is the limited safety to young almond trees growing in sandy soils under sprinkler irrigation or in years of excessive rainfall. This potential injury occurs where almonds have been planted in light soils where the organic matter is low (less that 1.0%) or where soils are excessively high in alkalinity (i.e. high boron, sodium and calcium). Under adverse conditions norflurazon should not be used without thorough testing and at no time in violation of the label.

The effect of new herbicides for weed control in young almonds. Lange, A. H., W. D. Edson and G. Massey. (425-10-501-146-1-82). A new almond planting in a sandy loam soil with furrow irrigation was treated with five preemergence herbicides on January 29, 1982. These plots received rain about two weeks after application on February 15, 1982. Other storms followed on March 1 and March 10 and weekly thereafter for several weeks.

A rating made May 11, 1982 showed excellent nutsedge and bermudagrass control by norflurazon (Solicam) and a related herbicide, R 40244. These herbicides also controlled other weeds. Lambsquarters and other weeds were controlled by most treatments in the early ratings.

A later rating showed the best control from norflurazon at the 8 pound per acre rate. There were some symptoms of phytotoxicity at this rate. Two pounds per acre of R 40244 appeared more active than 4 pounds per acre of norflurazon.

Because of the good control these herbicides need further evaluation.

Table 1. The effect of layered herbicides on weed control (425-10-501-146-1-82).

Herbicides	Lb/A	Average Weed Control			
		Nutsedge 1/	Bermudagrass 1/	Lambsquarters 2/	Other Weeds 2/
Oryzalin	4	3.2	6.5	4.0	7.0
Oryzalin	8	0.0	5.2	8.5	10.0
Norflurazon	4	7.2	7.5	5.0	8.5
Norflurazon	8	9.8	9.8	10.0	10.0
R 40244	1	1.2	1.8	8.5	5.0
R 40244	2	7.2	7.8	10.0	10.0
SC 1745	2	4.2	4.0	8.5	10.0
SC 1745	4	3.8	5.0	6.0	10.0
Naproapmide	4	3.0	3.5	8.0	9.5
Napropamide 3/	8	4.2	3.5	10.0	10.0
Norflurazon 3/	2	7.3	7.3	2.0	3.5
Check	-	0.0	0.0	5.0	5.0

1/ Average of 4 replications) (where 0 = no control of
2/ Average of 3 replications) (weeds and 10 = best control
3/ Average of 2 replications) (of weeds evaluated.
Treated 1/29/82. Evaluated 5/11/82.

The effect of preemergence combinations on annual weed control. Vargas, R. (425-20-501-146-3-82). Young almonds in their second leaf were sprayed in a strip down the tree row on November 23, 1981. On April 8, 1982 excellent weed control was observed from all treatments.

Weed control in nonbearing almonds (DeBenedetto Farms - 425-20-501-146-3-82).

Herbicides	Lb ai/A	Average[1/] Weed Control	Weeds Present
Simazine+ Norflurazon	½+4	9.8	Mustard
Oxyfluorfen+ Norflurazon	1+4	10.0	
Oxyfluorfen+ Norflurazon	1½+4	10.0	
Oxyfluorfen+ Norflurazon	2+4	10.0	
Norflurazon	4	9.8	Burclover

1/ Average of 4 replications where 0 = no control and 10 = 100% control.

A comparison between low pressure, low volume sprays and conventional application of preemergence herbicides for annual weed control in orchards. Lange, A. H. and K. F. Lange. (425-73-501-115-1-81). The berms of paired rows of ten year old orchard trees were treated with oxyfluorfen (Goal) plus simazine (Princep) plus napropamide (Devrinol) plus oryzalin (Surflan) on January 18, 1982. The same rate of 1+½+1+½ Lb/A was applied to both rows one with a micro-max on a breakaway boom delivering 4 gallons of spray per acre (broadcast basis) in a 5 foot swath down the tree row. The other row was treated with an OC 08 at 30 psi 2-3 mph or 34 gal/A rate of spray.

The early rating showed similar results with a slight possible advantage to the lower volume spray.

The later rating appeared to reverse the earlier effect slightly.

A comparison between low pressure, low volume sprays and conventional application of preemergence herbicides for annual weed control in orchards (425-73-501-115-1-81).

Method of Application	Average Annual Weed Control[1/] 4/11	10/26
Conventional Randle	8.1	7.4
Micro-Max	8.6	6.8
Check	0.0	0.0

1/ Average of 17 replications where 0 = no control and 10 = best control. Evaluation dates indicated at top of table.

Annual weed control with combinations of herbicides in a mature orchard. Vargas, R. (425-20-501-146-2-81). All plots received 0.5 Lb/A paraquat to knock down standing weeds at the time of applying the preemergence herbicides. The dates of application were November 26, 1980 and November 20, 1981.

The weeds rated on the dates of rating were chickweed, mustard, ripgut, filaree, groundsel, fiddleneck and Flaxleaved fleabane.

All treatments gave satisfactory control except napropamide (Devrinol) which seemed to degrade earlier than the other herbicides in this trial.

Had the plots been rated later in the season, there would have been more differences between single chemicals and combinations.

Annual weed control in almonds (425-20-501-146-2-81).

Herbicides	Lb/A	Average[1/] Weed Control 4/8	Weed Control 6/10	Phyto 6/10
Simazine	1	9.2	10.0	0.0
Simazine	2	10.0	10.0	0.0
Simazine+Napropamide	1+4	9.8	9.8	0.0
Simazine+Oryzalin	1+4	10.0	9.8	0.0
Simazine+Oxyfluorfen	1+2	10.0	10.0	0.0
Napropamide	4	6.8	6.5	0.0
Oryzalin	2	8.2	10.0	0.0
Oryzalin	4	7.2	7.0	0.0
Oxyfluorfen	1	9.5	10.0	0.0
Oxyfluorfen	2	8.5	9.5	0.0
Oxyfluorfen+Napropamide	2+4	9.8	9.8	0.0
Oxyfluorfen+Oryzalin	2+4	9.8	9.8	0.0
Oxyfluorfen+Triton Ag98	2+.5%	10.0	9.2	0.0
Check	-	0.0	0.0	0.0

1/ Average of 4 replications where 0 = no control, no phyto symptoms and 10 = complete kill. Applications dates 11/26/80 and 11/20/81. Evaluation dates noted at top of table.

The effect of three preemergence herbicides on ten varieties of almonds. Lange, A. H. and W. D. Edson. (425-73-501-146-1-82). The effect of high rates of preemergence herbicides on the growth of young trees in their second leaf having been replanted after the first year in the ground were evaluated. The herbicides applied January 7, 1982. Within a few days of application 1.3 inches rainfall occurred. Rainfall in the amount of 8.9 inches occurred after application.

The herbicides did not cause excessive injury. Only simazine (Princep) appeared to affect Peerless, Butte and Nonpareil on Lovell. It is interesting that the vigor of Mission even on Lovell was not affected by simazine, but appeared to be affected by oxyfluorfen (Goal). This possible effect of oxyfluorfen needs to be checked out as it may be an artifact, especially since there was only three replications of the oxyfluorfen treatment and no previous such injury has occurred.

The effect of high rates of three preemergence herbicides on second year replanted almond varieties (425-73-501-146-1-82).

	Average Vigor			
Tree Variety	Simazine 4 lb/A 1/	Oryzalin 8 lb/A 1/	Oxyfluorfen 8 lb/A 2/	No Treatment 1/
Peerless on Lovell	5.2	7.5	6.0	7.2
NePlus Untra on Lovell	6.0	7.5	7.7	5.2
Mission on Lovell	8.5	8.8	3.3	7.2
Butte on Lovell	5.0	8.0	7.0	8.5
Nonpareil on Lovell	5.2	8.0	8.3	7.5
Ruby on Nemaguard	7.0	6.2	6.3	6.8
Carmel on Nemaguard	6.5	7.0	7.7	8.0
Price on Nemaguard	6.0	6.5	7.7	5.2
Thompson on Nemaguard	5.8	8.0	6.0	6.8
Nonpareil on Nemaguard	7.0	7.0	7.7	7.0
Average	5.1	7.5	6.8	6.9

1/ Average 4 replications where 0 = dead trees and 10 = the largest, most vigorously growing trees.
2/ Average of only 3 replications.

Table 1. The effect of repeated preemergence herbicide applications on tree trunk diameters after the second year (425-73-501-146-2-81).

Herbicides	Lb/A	Average Almond Trunk Diameters[1/]										
		Ruby	Mission	Neplus	Butte	Merced	Price	Thompson	Carmel	Peerless	Nonpareil	Average
Simazine	2	40.0	42.5	35.0	37.5	37.5	45.0	30.0	40.0	27.5	37.5	37.3
Simazine	4	36.7	40.0	52.5	52.5	42.5	37.5	40.0	50.0	32.5	45.0	42.9
Simazine	8	36.7	30.0	42.5	40.0	40.0	35.0	32.5	42.5	22.5	42.5	36.4
Napropamide	4	30.0	47.5	42.5	40.0	40.0	37.5	35.0	37.5	25.0	35.0	37.0
Napropamide	8	30.0	45.0	45.0	42.5	32.5	37.5	30.0	45.0	30.0	37.5	37.5
Napropamide	16	25.0	43.3	35.0	37.5	35.0	32.5	27.5	40.0	22.5	37.5	33.6
Oryzalin	4	37.5	45.0	47.5	45.0	40.0	37.5	35.0	50.0	27.5	35.0	40.0
Oryzalin	8	37.5	45.0	45.0	55.0	40.0	37.5	40.0	55.0	32.5	37.5	42.5
Oryzalin	16	37.5	50.0	42.5	53.3	52.5	42.5	40.0	55.0	25.0	50.0	44.8
Dichlobenil	4	40.0	50.0	47.5	47.5	42.5	50.0	32.5	52.5	32.5	45.0	44.0
Dichlobenil	8	40.0	52.5	47.5	55.0	42.5	45.0	40.0	52.5	25.0	50.0	45.0
Dichlobenil	16	33.3	50.0	47.5	47.5	42.5	40.0	35.0	45.0	25.0	42.5	40.8
Glyphosate	4	27.5	42.5	40.0	50.0	40.0	42.5	30.0	45.0	33.3	42.5	39.3
Glyphosate	8	22.5	27.5	45.0	35.0	32.5	32.5	30.0	30.0	26.7	25.0	30.7
Glyphosate	16	15.0	30.0	25.0	25.0	30.0	25.0	17.5	30.0	10.0	16.7	22.4
EPTC	4	27.5	37.5	30.0	30.0	26.7	30.0	25.0	35.0	20.0	35.0	29.7
EPTC	8	26.7	42.5	37.5	37.5	33.3	27.5	27.5	40.0	22.5	35.0	33.0
EPTC	16	22.5	35.0	32.5	35.0	25.0	27.5	25.0	37.5	30.0	32.5	29.3
Oxyfluorfen	4	32.5	47.5	47.5	50.0	37.5	47.5	37.5	45.0	27.5	47.5	42.0
Oxyfluorfen	8	42.5	57.5	52.5	57.5	40.0	52.5	42.5	57.5	32.5	50.0	48.5
Oxyfluorfen	16	42.5	47.5	45.0	57.7	46.7	47.5	42.5	45.0	32.5	47.5	45.3
Dinoseb	4	25.0	35.0	25.0	32.5	35.0	27.5	25.0	27.5	20.0	35.0	28.8
Dinoseb	8	30.0	40.0	27.5	35.0	30.0	27.5	25.0	35.0	30.0	30.0	31.0
Dinoseb	16	42.5	47.5	40.0	52.5	36.7	32.5	25.0	35.0	30.0	40.0	38.2
Dalapon	4	27.5	36.7	30.0	37.7	32.5	33.3	32.5	35.0	26.7	32.5	32.3
Dalapon	16	30.0	40.0	32.5	36.7	30.0	30.0	33.3	37.5	25.0	32.5	32.8
MSMA	4	30.0	47.5	47.5	42.5	36.7	35.0	35.0	52.5	30.0	45.0	40.2
MSMA	16	27.5	40.0	37.5	40.0	25.0	35.0	27.5	35.0	22.5	30.0	32.0
Weed free check	-	35.0	47.5	50.0	45.0	37.5	40.0	27.5	45.0	22.5	37.5	38.8
Weedy check	-	16.7	32.5	25.0	23.1	22.5	22.5	20.0	25.0	17.5	22.5	22.8
Ave. of all trtmts.		32.0	42.7	40.2	43.1	36.6	36.8	32.1	42.4	26.3	38.3	

1/ Average of 4 replications. Measurements taken above the graft and in mm.

The effect of over the top and directed basal sprays of five herbicides on newly planted Nonpariel and Carmel almond trees. Lange, A. H. and W. D. Edson. (425-73-501-146-4-82). Young almond trees leaved out with 2-3 inch leaves were sprayed April 30, 1982 in small replicated plots. The low rate of each chemical was applied over the top of the young tree and the high rate was directed at the base of the trunk.

The trees were growing in a Hanford fine sandy loam with flood-furrow irrigation.

A May evaluation showed good weed control with glyphosate (Roundup) and Am Ho 00661 as the weeds were broadleaved annual species such as pigweed, lambsquarters, etc.

The tree phytotoxicity ratings indicated severe injury from glyphosate sprayed over the top and some slight injury from the basal spray. A later measurement showed the basal injury to be much more toxic. The only other herbicide to carry significant injury was foliar applied Am Ho 00661. The trees grew out of some of the injury by fall but still showed some growth reduction. There was no problem from the basal spray.

None of the other herbicides showed significant effects sprayed over the top or directed at the base of the trees.

Table 1. The effect of over-the-top and directed postemergence herbicides on two varieties of almond trees (425-73-501-146-4-82).

			Average[1/]			
			Nonpareil		Carmel	
Herbicides	Lb/A	Type of Spray	Weed Control	Crop Phyto	Weed Control	Crop Phyto
Glyphosate	1	Over the top	10.0	5.5	10.0	5.5
Glyphosate	4	Basal	10.0	2.8	10.0	2.5
BAS 9052	1	Over the top	2.8	1.5	3.2	1.0
BAS 9052	4	Basal	4.2	0.8	2.5	0.0
Fluazifop	1	Over the top	3.2	0.5	1.5	0.0
Fluazifop	4	Basal	4.2	0.5	2.0	0.0
Am Ho 00661	1	Over the top	10.0	6.5	10.0	7.5
Am Ho 00661	4	Basal	10.0	2.2	10.0	1.0
Metolachlor	2	Over the top	6.0	1.2	4.0	1.2
Metolachlor	4	Basal	5.5	0.8	4.0	1.8
Metolachlor	8	Basal	6.8	0.8	6.0	1.2
Check	-	-	2.5	1.2	0.5	0.5

1/ Average of 4 replications where 0 = no weed control or no phytotoxicity symptoms observed and 10 = best weed control or almond trees dead. Treated 4/30/82. Trees transplanted 3/25/82. Evaluated 5/24/82.

The effect of several new postemergence herbicides on well established bermudagrass. Lange, A. H. and W. D. Edson. (425-73-502-1-82). A well-established stand of bermudagrass growing on a ditch bank was divided into 15 ft plots and treated October 1, 1982 with herbicides. Rated October 28, 1982 for initial effects all chemicals gave some initial effects. NC 28260 showed the least but a surfactant was inadvertently left out which probably affected the initial activity. Both fluazifop (Fusilade) and BAS 9052 (Poast) gave considerable activity but did not approach the activity from glyphosate (Roundup) and SC 0224.

The spring regrowth will better indicate the true relative activity on the control of bermudagrass.

Herbicides	Lb/A	Average[1/] Bermudagrass Control
Fluazifop+Pace	1/2+1%	6.3
Fluazifop+Pace	1+1%	7.0
Fluazifop+Pace	2+1%	7.7
BASF 9052+Pace	1/2+1%	5.7
BASF 9052+Pace	1+1%	6.7
BASF 9052+Pace	2+1%	7.0
NC 28260	1	2.0
NC 28260	2	1.3
NC 28260	4	5.7
Glyphosate	2	8.0
Glyphosate	4	9.7
Glyphosate	8	10.0
SC 0224	2	8.3
SC 0224	4	10.0
SC 0224	8	10.0
Check	-	0.7

1/ Average of 3 replications where 0 = no effect and 10 = complete kill. Treated 10/1/82. Evaluated 10/28/82.

Table 2. The effect of a spring application of postemergence herbicides on the control of perennial bindweed as measured by the extent of regrowth (425-50-502-146-1-82).

Herbicides	Lb/A	Average of Timing of Application[1/]		
		Spring	Spring & Fall	Fall[2/]
Glyphosate	4	0.8	0.8	8.2
Glyphosate	8	0.0		
SC 0224	4	0.0		
SC 0545	4	0.2		
AmHo 00661	1	6.0		
Pix+Glyphosate	2½ pt.+4	0.2		
Check	-	8.2		

1/ Average of 4 replications where 0 = no regrowth of bindweed and 10 = full bindweed growth. Treated 6/9/82. Evaluated 7/20/82.
2/ Not yet sprayed with glyphosate.

Table 3. A comparison of perennial bindweed control (425-50-513-146-1-82).

Herbicides	Lb/A	Average of Timing of Application[1/]		
		Spring	Spring & Fall	Fall[2/]
Glyphosate	4	7.0	8.0	0.2
Glyphosate	8	9.5		
SC 0224	4	9.5		
SC 0545	4	8.5		
AmHo 00661	1	0.5		
Pix+Glyphosate	2½ pt.+4	9.0		
Check	-	0.0		

1/ Average of 4 replications where 0 = no control of bindweed and 10 = no bindweed growth.
2/ Not yet sprayed with glyphosate.

The effect of preemergence herbicides on the control of bermudagrass in the tree row. Lange, A. H., W. D. Edson and G. Massey. (425-10-502-146-1-82). Bermudagrass can best be controlled in the centers by tillage and tilled-in trifluralin (Treflan). The bermudagrass in the tree row can be kept under control with repeated treatment of glyphosate (Roundup). A more effective and less expensive method of control has been demonstrated with certain soil active herbicides. The objective of this experiment was to compare three of these herbicides under commercial conditions.

The results of the first year were encouraging especially with norflurazon (Solicam). Repeated annual applications of these herbicides will reduce the bermudagrass problem.

The effect of preemergence herbicides on the control of bermudagrass in young almonds (425-10-502-146-1-82).

Herbicides	Lb/A	Average[1/] Bermudagrass Control 5/11	7/27	11/4
Norflurazon +Oryzalin	2+2	7.5	4.0	8.6
Norflurazon +Oryzalin	4+2	9.5	9.5	10.0
Prodiamine	4	9.0	4.0	8.4
Oryzalin	4	8.5	5.5	8.0
Check	-	6.5	5.0	0.0

1/ Average of 2 replications where 0 = no effect and 10 = complete control, i.e. no viable bermudagrass.
Treated 1/22/82. All evaluation dates made in 1982; dates indicated at top of table.

Evaluation of preemergence herbicides on purple nutsedge in first leaf almonds (H-5-82). Kempen, H. K. and A. H. Lange. Young almond trees planted in March of 1982 were treated June 19, 1982 in 8.3 x 48' plots in a sandy soil with about 1% organic matter under sprinkler irrigation. All treatments were sprinkled in on June 19. Paraquat was applied at 1 Lb/A with all treatments except dichlobenil (granular Casoron) and X-77 surfactant at 1 qt/A was added to all sprays. Herbicides were applied broadcast using a CO_2 backpack sprayer with five 8002 nozzles calibrated to 20 gpa at 18 psi.

Dichlobenil and metolachlor (Dual) gave the best nutsedge control but were not exceptional. R 40244 caused some leaf symptoms at both 1 and 2 Lb/A on this high calcium soil in one or more replications. Very slight dichlobenil symptoms were also observed in one replication on August 11. There were no changes when these plots were observed October 26.

Herbicides	Lb ai/A	Purple Nutsedge 1/ Control		Almond 2/ Injury	
		7/16/82	8/11/82	7/16/82	8/11/82
Casoron G4	4	7.3	8.0	0.0	1.7
R 40244 2EC	1	2.3	2.3	0.0	1.7
R 40244 2EC	2	4.0	3.7	0.0	0.3
R 40244 2EC + Napropamide 50WP	1+4	6.0	6.0	0.0	0.3
Metolachlor 8EC	3	5.7	5.0	0.0	0.3
Metolachlor 8EC	6	8.0	8.0	0.0	0.3
R 57245 50WP	2	5.0	5.3	0.0	0.3
Napropamide 50WP	4	3.3	3.7	0.0	0.0
Check (Paraquat)	1	0.3	0.7	0.0	0.0
LSD 5%		4.95	N.S.	N.S.	N.S.
LSD 1%		6.8			

1/ Evaluated as 0 = no nutsedge control and 10 = complete nutsede control.

2/ Evaluated as 0 = no almond injury and 10 = complete kill of almond. Evaluation dates noted on top of table.

The long term effect of preemergence herbicides on the growth and yield of 6 varieties of almond. Lange, A. H. and K. F. Lange. (425-73-501-146-1-77). These long term plots were treated annually with a combination of 4 herbicides for 6 years.

The growth data for all varieties was averaged followed closely by the average yield for all varieties. Although there was no significant difference, the trend showed slightly less growth and yield with the combination of oxyfluorfen (Goal)plus napropamide (Devrinol) giving the poorest control of marestail and flaxleaved fleabane. Those treatments giving the best control were those with simazine (Princep).

A comparison of tree growth of 6 almond varieties treated for 6 years with 4 herbicide combinations (425-73-501-146-1-77).

Herbicides	Lb/A	Average Diameters in cm.[1/]						
		1	2	3	4	5	6	Ave.
Simazine+ Napropamide	1+4	13.8	13.7	13.9	12.1	15.6	13.1	13.70
Simazine+ Oryzalin	1+4	14.8	14.5	14.7	13.9	17.7	13.3	14.82
Oxyfluorfen+ Napropamide	2+4	13.8	12.6	12.9	11.2	15.8	12.8	13.18
Oxyfluorfen+ Oryzalin	2+4	13.6	14.4	14.1	12.9	16.1	12.9	13.92

A comparison of the yield of almond from 6 almond varieties from plots treated for 6 years with 4 herbicide combinations. (425-73-501-146-1-77).

Herbicides	Lb/A	Average Yield in kilograms/tree[1/]						
		1	2	3	4	5	6	Ave.
Simazine+ Napropamide	1+4	22.3	16.4	9.5	6.5	8.3	17.8	13.47
Simazine+ Oryzalin	1+4	20.9	14.6	8.0	10.5	10.3	22.2	14.42
Oxyfluorfen+ Napropamide	2+4	21.4	7.8	8.0	5.6	13.2	19.0	12.50
Oxyfluorfen+ Oryzalin	2+4	18.3	17.8	12.6	7.6	8.0	19.2	13.92

1/ Variety key: 1 = Nonpareil; 2 = Neplus; 3 = Thompson; 4 = Peerless; 5 = Merced; 6 = Mission.

The effects of two methods of nontillage on growth and yield of two almond varieties. Lange, A. H. and W. D. Edson. (425-73-501-146-1-80). The detrimental effects of tillage have been demonstrated in other work. The detrimental effects of mowed cover crops have been demonstrated in grapes. The objective of this experiment is to measure the detrimental effects of mowed centers versus chemical centers.

January 1, 1980 young Mission and Nonpareil almond trees left over from the 1979 herbicide screening trial were planted alternately in the row so that both varieties would be available in each cultural plot. The soil is a Hanford sandy loam with 59% sand, 33% silt, 8% slay and 0.75% organic matter. A combination of herbicides were applied February 28, 1980, i.e. oxyfluorfen (Goal) and oryzalin (Surflan) at 2+4 Lb/A. Because of the poor flaxleaved fleabane and marestail control, simazine (Princep) was added January 23, 1981 (i.e. simazine + oxyfluorfen at 1+1 plus oryzalin at 4 Lb/A). In addition to the preemergence program, it was necessary to spray with 1 lb of paraquat on July 9, 1981 and 1 Lb/A of glyphosate (Roundup) on August 31, 1981. In 1982 the plots were again sprayed with a combination of simazine + oxyfluorfen + oryzalin at 1+1+4 on January 6, 1982.

The effects of attempting to control weeds with mowing consistently resulted in smaller trees each year when compared with nontillage chemical weed control. Furthermore the first year yields appear to be greater in the nontillage chemical weed control.

This experiment is continuing.

Nontillage almond trial. Average diameters for 1980. (425-73-501-146-1-80).

Herbicide	Lb/A	Average Diameters[1/]	
		Chemical Strip (Mowed Centers)	Complete Chemical Control
Oxyfluorfen+ Oryzalin+ Triton Ag98	2+4+1/2%	37.7	41.5

1/ Average of 8 replications. Fifteen trees to each replication. Diameters taken in mm. Treated 2/28/80. Evaluated 10/9/80.

CHEMICAL INDEX

- at excessive rates.
- with incompatible materials.
- at the wrong formulations.

Personal Safety: Follow label directions exactly. Avoid splashing, spilling, leaks, spray drift or clothing contamination. DO NOT eat, smoke, drink, or chew while using pesticides. Provide for emergency medical care in advance.

A PROGRESS REPORT

To simplify the information, it is sometimes necessary to use trade names of products or equipment. No endorsement of named products is intended nor is criticism implied of similar products not mentioned.

The conclusions drawn from this work should not be used as recommendations. General recommendations for weed control in crops must be based on a very large number of field experiments conducted in all of the soil types under all of the irrigation practices, and in all of the season where the crop is normally grown, and under all the planting dates when grown in California, and for all the varieties used, as well as quality of the end product of the many products produced from this crop.

By including this written report with the previous work published and the future work yet to be done, we expect eventually to develop recommendations for weed control in several crops. In the interest of having this report available for use for next year's work, this report has had limited review. Any mistakes or questions should be directed to the Senior Author.

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