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The first herbicide applications in this project were made on May 7, 1980, one week after the planting was made at the North Willamette Experiment Station. A second application of certain herbicides was made on June 9 at which time spring germinated weeds had emerged.

Fall herbicide treatments were applied to plots which had been uniformly treated with the 5 kg/ha rate of dipenamid in May. The various treatments were applied in September, October, and November as indicated. Certain plots will receive additional herbicide sprays in March.

All plots were evaluated by visually rating crop and weed growth (0 = no response, 100 = complete kill of crop or weed; SR refers to stand reduction, GR refers to growth reduction). In most cases stand reduction for strawberries reflects stand establishment rather than loss of plants from herbicide treatments. Rating were made on July 14 for the spring applied herbicide and on November 28, twenty four days after the last fall application, for the fall herbicide treatments. The ratings from the five replications were averaged and rounded to the nearest five. These data are included in the accompanying tables.

In the spring treatments the most effective herbicides, oryzalin and oxyfluorfen, also appeared to have the greatest potential for causing crop plant injury. The combination diphenamid (3 kg/ha) plus chloroxuron (2 kg/ha) did not appear to have any advantage over diphenamid (5 kg/ha) unless a surfactant (X-77) was added to the combination. Neither bentazon nor dichlofop, or the combination of these two herbicides, particularly improved the selective control of the weed species evaluated in this trial.

Fall applied terbacil, especially the September application, resulted in the development of chlorosis in the strawberry leaves. Both of the early fall timings of terbacil resulted in excellent control of the two weed species evaluated in November. The standard treatment, simazine (1 kg/ha) plus napropamide (2 kg/ha) gave acceptable weed control and was about equal to oxyfluorfen at this time.

Plots in both the spring and fall trials will be further evaluated for weed control and crop yields will be obtained as a measure of crop response.

# SPRING TREATMENT

			kg/ha	<u>Strawberry</u>		<u>lambquarter</u>		<u>Knotweed</u>		<u>dock</u>		<u>dog fennel</u>	
				SR	GR	SR	GR	SR	GR	SR	GR	SR	GR
1.	Diphenamid	May	5	5	5	70	45	60	25	80	55	95	80
2.	Diphenamid	May	3	15	5	70	35	50	10	90	60	90	60
	Chloroxuron	June	2										
3.	Diphenamid	May	3	5	5	90	70	70	45	90	70	90	70
	Chloroxuron	June	2										
4.	Diphenamid	May	3	5	5	60	30	50	20	80	50	90	60
	Bentazon	June	1										
5.	Diphenamid	May	3	0	0	70	20	45	20	80	20	85	35
	Dichlofop	June	1										
6.	Diphenamid	May	3	5	5	85	50	45	25	70	50	95	95
	Bentazon	June	1										
	Dichlofop	June	1										
7.	Metolachlor	May	2	5	20	50	15	45	20	70	30	90	55
8.	Oryzalin	May	3	5	25	100	100	85	80	100	100	100	100
9.	Oxyfluorfen	May	0.25	20	50	100	100	95	85	100	100	95	95
10.	Untreated			10	15	20	0	15	10	20	0	45	0

# FALL TREATMENTS

			kg/ha	<u>Strawberry</u>		<u>checkweed</u>		<u>Annual Bluegrass</u>	
				SR	GR	SR	GR	SR	GR
1.	Terbacil	Sept.	0.5	0	20	100	100	95	95
2.	Terbacil	Sept.	1	0	30	100	100	100	100
3.	Terbacil	Sept.	1.5	0	35	100	100	100	100
4.	Terbacil	Oct.	0.5	5	10	100	100	100	100
5.	Terbacil	Oct.	1	0	10	100	100	100	100
6.	Terbacil	Oct.	1.5	10	20	100	100	95	90
7.	Terbacil	Nov.	0.5	0	10	65	80	65	70
8.	Terbacil	Nov.	1	0	10	80	85	70	80
9.	Terbacil	Nov.	1.5	10	5	90	90	80	85
10.	Terbacil	Oct.	1	10	0	100	100	100	100
	Oxyfluorfen	Nov.	0.5						
11.	Terbacil	Oct.	1	5	10	100	100	100	100
	Dichlofop	March	1						
	Chloroxuron	March	4						
12.	Oxyfluorfen	Nov.	0.25	0	5	70	80	75	80

FALL TREATMENTS Cont.

				<u>Strawberry</u>		<u>checkweed</u>		<u>Annual Bluegrass</u>	
				<u>SR</u>	<u>GR</u>	<u>SR</u>	<u>GR</u>	<u>SR</u>	<u>GR</u>
			<u>kg/ha</u>						
13.	Oxyfluorfen	Nov.	0.5	0	15	80	90	70	75
14.	Oxyfluorfen	Nov.	1	0	20	80	90	70	80
15.	Simazine	Oct.	1	0	15	85	90	85	80
	Napropamide	Oct.	2						
16.	Simazine	Oct.	1	5	10	70	80	70	75
	Napropamide	Oct.	2						
	Oxyfluorfen	Nov.	0.5						
17.	Simazine	Oct.	1	5	15	95	90	85	80
	Napropamide	Oct.	2						
	Dichlofop	Mar.	1						
18.	Simazine	Oct.	1	10	10	80	75	80	75
	Napropamide	Oct.	2						
	Chloroxuron	Mar.	4						
19.	Simazine	Oct.	1	5	5	90	90	85	75
	Napropamide	Oct.	2						
	Dichlofop	Mar.	1						
	Chloroxuron	Mar.	4						
20.	Untreated			0	5	30	10	50	10