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# Weed Control Recommendations For Oregon

1959-60



Federal Cooperative Extension Service • Oregon State College • Corvallis

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Extension Circular 643

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## Precaution Notes on the Use of Herbicides

The control of unwanted plants in home lawns, vegetable fields, orchards, field crops, and ponds often is difficult. Chemicals must be selected and applied with care, or the losses from spray damage will be greater than the loss from weed competition. For good safe weed control, please keep the following suggestions in mind:

1. Follow the application instructions on the container. Growers lose when food products are condemned because of chemical residues.
2. Applicators are responsible for damage from drift or volatilization of chemicals to nearby plants or crops.
3. Spray carefully. Too much spray will damage crops. Follow instructions on rate of spraying.
4. Sprayers with mechanical agitation are best for applying many chemicals. Chemicals such as Telvar monuron, Karmex diuron, IPC, Chloro IPC, and Simazin, will settle out of spray solutions when not kept actively mixed.
5. Amine formulations of 2,4-D and 2,4,5-T do not volatilize as readily as the ester formulations of the same chemicals. Amine formulations should be used when spraying near susceptible crops or plants.
6. Most perennial weeds and brush require spraying for more than one year for complete control.
7. Spray rates per acre are reduced when sprays are applied in bands. If only half the land area is sprayed, then use half the chemical recommended per acre.
8. Spray equipment must be cleaned thoroughly after being used to apply hormone chemicals, 2,4-D and 2,4,5-T. It is best to have separate sprayers for application of hormone chemicals.
9. County Extension Agents and commercial field service men can provide more information on the use of weed control chemicals.
10. Sodium chlorate is inflammable. Therefore, it must be used carefully. Follow the instructions on the containers.

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Prepared by the  
Federal Cooperative Extension Service  
in cooperation with the  
Departments of Farm Crops, Horticulture,  
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Most of the materials in the following tables are commonly known. A few, however, are better known by their trade names. Although a few of the more common trade names are listed here, the list is not complete and one brand is not recommended over another.

<u>Chemical</u>	<u>Some Trade Names</u>
Dinitro Amine . . . . .	Sinox P. E., Dow Premerge
Dinitro General . . . . .	Sinox General, Dow General, Chipman General
Dinitro Selective . . . . .	Sinox W, Dow Selective
Diuron . . . . .	Karmex Diuron
Monuron . . . . .	Telvar Monuron
Amitrol . . . . .	Amino Triazole and Weedazol
Sesone . . . . .	Craig Sesone
NPA . . . . .	Alanap (Use Alanap 3 for Cucurbits)
MCP . . . . .	Methoxone, Weedar
Dalapon . . . . .	Dowpon, Radapon
TBA . . . . .	Benzac 1281, Tryben
PBA . . . . .	Benzac 354, Zobar
Aromatic Solvents . . . . .	Socal, paint thinner, others sold under various company labels as Aromatic Solvent
Sodium Arsenite . . . . .	Sold under various company names as sodium arsenite
CDAA . . . . .	Randox
CDEC . . . . .	Vegedex
EPTC . . . . .	Eptam
Simazin . . . . .	Simazine
Atrazin . . . . .	Atrazine
4(2,4-DB) . . . . .	Butoxone, Butyrac
2,4,5-TP . . . . .	Kuron, Silvex

## Weed Control Recommendations in Field Crops

Crop	Chemical	Rate per acre and carrier	Remarks
<b>CEREALS</b>			
Wheat, oats, barley, rye	2,4-D	1/2 to 1 lb. in water	Controls broad-leaved weeds. Spray winter grains in 3 to 5 tiller stage and spring grains when 6 to 8 inches tall.
	2,4-D	1 to 1 1/2 lbs. in water	Controls perennial weeds such as Canada thistle and wild morning glories. Spray weeds as late as possible, but before the boot stage of the grain.
Cereals with seedling clover	MCP or 2,4-DB (butyric acid)	1/4 to 1/2 lb. in water	Spray when clover seedling has 2 to 3 true leaves, and after clover is protected by cereal leaves.
Winter cereal (western Oregon)	Karmex diuron	2 lbs. of 80% material in 20 to 30 gals. of water	Apply spray within 10 days after seeding winter cereals. Wheat and oats are more tolerant to sprays than barley. Controls seedling grasses and broad-leaved weeds at time of germination. Do not use on spring seeded grain.
Corn (field)	Dinitro amine	3 lbs. (1 gal.) in water	Apply when corn first appears above the surface of the soil. Surface moisture needed for effective weed control.
	2,4-D	1/2 to 1 1/2 lbs. in water	Use amine form. Spray at spike stage of growth. When spraying taller corn, use drop nozzles to keep spray off the roll of the leaves.
	CDAA (Radox)	6 lbs. in water	Apply after planting. Surface moisture needed for effective weed control. Controls watergrass and millets.
	CDEC (Vegelex)	6 lbs. in water	Apply after planting. Surface moisture needed for effective weed control. Controls watergrass and millets. Especially good on sandy soil where sprinkler irrigation is used.
Corn (field)	EPTC (Eptam)	2 to 4 lbs. in 10 to 20 gals. of water	Disc into seedbed before planting corn. Use 2 to 3 lbs. for watergrass, 3 to 4 lbs. for yellow nutgrass, and 5 lbs. for quackgrass.
Corn (field)	Atrazine	4 lbs. of 50% material in 10 or more gals. of water	Spray before emergence of weeds. Needs at least 1/2 inch of water to activate the chemical. Atrazine is similar to simazine, but more soluble.

WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
<b>HAY</b>			
Alfalfa (established)	Karmex diuron	2 lbs. to 3 lbs. of 80% material in 20-30 gals. of water	Spray in fall and early winter. Controls annual weeds. Three pounds needed on cheatgrass.
Alfalfa and clover seedings	Dinitro amine	2 qts. in 30 to 40 gals. of water	Controls annual broadleaf weeds. Spray when alfalfa or clover has 2 to 3 leaves.
	2,4-DB (butyric acid)	1 lb. in 10 to 20 gals. of water	Controls annual broad-leaved weeds. Spray when alfalfa or clover seedlings have 2 to 3 true leaves and before the weedy annuals have 2 to 3 true leaves. Not cleared for use if clippings are used for forage.
<b>PASTURES</b>			
	- - - -	- - - - -	See accompanying table for the control of specific weeds.
<b>SEED CROPS</b>			
Grass (all grasses)	2,4-D	1/2 to 3/4 lb. in 10 gals. of water	For the control of broad-leaved weeds. Spray before the boot stage of the seed crop. New seeding should have at least 60 days' growth before spraying.
Grass (all grasses)	Dinitro amine	1 1/2 lbs. (1/2 gal.) in 20 or more gals. of water	Dinitro amine can be used on new grass seedings after grass has 3 or more true leaves.
Perennial ryegrass	CIPC	2 lbs. in water	Spray in October for annual weeds. Spray only established fields.
Perennial ryegrass	IPC	3 lbs. in water	Use IPC and CIPC only on fields which have been harvested for seed at least once. Spray after fall rains have started. Good agitation is needed.
Highland bent	Karmex diuron	2 or 3 lbs. in water	Spray in October and November for annual grasses. Spray established fields only. Use 3 lbs. when fields have been burned.
	CIPC	3 lbs. in water	Spray in October for annual grasses. Spray established fields only. Spray before October 31.
	IPC	4 lbs. in water	

WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
SEED CROPS (continued)			
Merion bluegrass	Karmex diuron	2 to 3 lbs. in water	Spray in October and November for annual grasses. Can be used on well-established spring seedings. Use 3-lb. rate when fields have been burned.
	CIPC	3 lbs. in water	Use CIPC only on fields which have been harvested at least once. Spray before October 31.
Alta fescue	Karmex diuron	2 to 3 lbs. in water	Spray in October and November for annual grasses. Can be used on well-established spring seedings.
	CIPC	3 lbs. in water	Use CIPC only on fields which have been harvested at least once. Spray before October 31.
Orchardgrass	Karmex diuron	2 to 3 lbs. in water	Spray in October and November for annual grass control. Can be used on well-established spring seedings. Use higher rate when field has been burned.
	CIPC	3 lbs. in water	Use CIPC only on fields which have been harvested at least once. Spray before October 31.
Creeping fescue	Karmex diuron	2 lbs. in water	Spray in October and November for annual grasses. Spray only fields which have been harvested at least once.
	IPC	3 lbs. in water	Do not spray fields with IPC or CIPC that have not been harvested at least once.
	CIPC	2 lbs. in water	Spray before October 20.
Chewings fescue	Karmex diuron	2 lbs. in water	Spray in October and November. Do not spray fields which have not been harvested at least once.
	IPC	3 lbs. in water	Do not spray chewings fescue with IPC or CIPC after October 20.
	CIPC	2 lbs. in water	Do not spray fields which have not been harvested at least once.

WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
SEED CROPS (continued)			
Birdsfoot trefoil	Dalapon	5 lbs. in water	For the control of weedy annual grasses in new or established stands. Spray after grass has made complete emergence.
	2,4-DB or 2,4,5-TP	1/2 lb. in 20 gals. water	Broad-leaved annual. Spray after the trefoil has at least 2 true leaves, but when the weeds are small. Use only on very weedy planting.
Birdsfoot trefoil	EPTC (Eptam)	4 lbs. in 10 to 20 gals. of water	Broadleaf and grass control. Spray seedbed prior to final discing and harrowing. Disc in within 24 hours 2 to 3 inches deep.
Birdsfoot trefoil	Karmex diuron	2 to 3 lbs. in 20 to 30 gals. water	Controls grasses and broad-leaved weeds. Fields should be at least 1 year old when sprayed. Spray in fall when birdsfoot trefoil is dormant.
Ladino or other white clover	IPC	4 lbs. in 10 to 20 gals. water	For western Oregon use IPC or CIPC in the fall when weedy grasses have started to germinate.
	CIPC	3 lbs. in 10 to 20 gals. water	When spring spraying is needed, use CIPC in February or early March. Spray clover seedlings when they have 2 or more true leaves.
	2,4-DB or MCP	1 lb. (2,4-DB) in 10 gals. water 1/2 lb. MCP in 10 gals. water	Seedlings stand can be sprayed when they have 2 or more true leaves. Established stands can be sprayed in spring or fall when weeds are small.
	Dinitro amine	1 1/2 lbs. (2 quarts) in 30 gals. water	Use dinitro amine when weeds are very small. Clover should have at least 3 true leaves.
Red clover	IPC	4 lbs. in 10 to 20 gals. water	Same as IPC or CIPC on ladino clover.
	CIPC	3 lbs. in 10 to 20 gals. water	

WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
SEED CROPS (continued)			
Red clover (continued)	MCP	1/4 to 1/2 lb. in 10 to 20 gals. water	Apply MCP or 2,4-DB on new stands after the clover has at least 2 true leaves. Spray old stands before 4 inches tall.
	2,4-DB	1/2 to 1 lb. in 10 to 20 gals. water	
	Dinitro amine	1 1/2 lbs. (2 qts.) in 30 gals. water	Use dinitro amine on new stands when the clover has at least 3 true leaves and before the weeds have 3 true leaves.
Alfalfa	Karmex diuron	2 to 3 lbs. in 20 to 30 gals. water	Spray alfalfa fields in October or November. Do not spray fields that are less than 1 year old. Three pounds needed for cheatgrass control.
	2,4-DB	1 lb. in 10 to 20 gals. water	Spray alfalfa after the seedlings have over 3 true leaves, but before the weeds have 3 true leaves. Forage should not be used for feed.
	Dinitro amine	1 1/2 lbs. (2 qts.) in 30 gals. water	Spray after the alfalfa has 3 true leaves, but before the weeds have 3 true leaves.
	CIPC	4 lbs. in 10 to 20 gals. water	Spray when the alfalfa is going into dormancy. (October or November.)
Crimson clover and Subterranean clover	IPC	3 to 4 lbs. in 10 to 20 gals. water	Grass and grain control. Spray in the fall after the clover has at least 3 true leaves. Three lbs. for grass control, 4 lbs. for grain control.
	CIPC	3 lbs. in 10 to 20 gals. water	Chloro IPC should be used in February or March if grass or grain has not been controlled with fall IPC sprays. Only very grassy fields should be sprayed.
	MCP	1/4 lb. in 10 gals. water	Spray during January or February for mustard and radish control. Spray in February or early March for hairy vetch control
Austrian field peas	MCP	1/4 lb. in water	For the control of hairy vetch and mustard. Spray in February or March.



WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
MINT	Karmex diuron	2 to 3 lbs. in 20 to 30 gals. water	Apply as a pre-emergence application. Use 3 lbs. for heavier soil and 2 lbs. for light, sandy soil. Do not use more than 2 lbs. on new plantings. New plantings on sandy soil should not be sprayed.
FLAX	MCP	1/2 lb. in 10 to 20 gals. water	Spray before broad-leaved weeds have 2 to 3 inches growth and before the flax is over 6 to 8 inches tall.
	Dinitro (Dow selective or Sinox W)	2 to 3 qts. in 60 to 100 gals. water	Spray when flax is 2 to 4 inches tall. Spray when flax surface is dry and when temperature is below 80°F.
SUGAR BEETS	Endothal	3 gals. (6 lbs.) in 10 to 20 gals. water	Apply after seeding the beets, but before beets emerge. Spray must be tilled into soil surface unless rain or irrigation follows application. (Follow recommendations of sugar beet company fieldman.)
	TCA	10 lbs. in 10 to 20 gals. water	Spray after planting beets but before the beets emerge. (Follow recommendations of sugar beet company fieldman.)
	EPTC (Eptam)	2 lbs. in 10 to 20 gals. water	Apply Eptam before final discing of sugar beet field. Eptam in 1959 should be limited to trial use. (Follow recommendations of sugar beet fieldman.)
LAWNS	2,4-D	1/2 to 1 lb. in 40 to 100 gals. water or follow label on container	Spray 4 days before clipping lawn. Delay mowing for 2 days after spraying. Respraying needed for control of many weeds and white clover. 2,4-D-2,4,5-T mixtures, and 2,4,5-T controls certain hard-to-kill weeds better than 2,4-D.
	2,4,5-TP	Follow label on container	Controls chickweed better than 2,4-D or mixtures of 2,4-D and 2,4,5-T.

WEED CONTROL RECOMMENDATIONS IN FIELD CROPS (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
LAWNS (continued)	Endothal	3 tbsp. per 1,000 sq.ft. in 2 gals. water	Endothal controls speedwell (Veronica). Spray when speedwell and grass are growing rapidly. A second application in 10 days may be needed for eradication.
	Dalapon	1/2 lb. in 1 gal. water	Spot spray clumps of unwanted grass. Reseed or resod sprayed area in 30 days.
	Commercial crabgrass sprays	Follow label on container	For crabgrass control use one of several trade products available from spray supply store. Follow label on use.
	Soil fumigant	Follow label	Mylone, Vapam, and Methyl bromide are good soil-fumigant chemicals. Use for controlling weed seedlings and weed roots in areas to be planted to lawns. Not a selective treatment.
	Cyanamid	Follow label	Kills germinating weed seeds, then breaks down to provide fertilizer. Apply several weeks before seeding.
	Karmex diuron	4 2 lbs. per acre (1 1/2 oz. per 1,000 sq. ft.)	Controls velvetgrass in western Oregon lawns. Spray only bent and bluegrass lawns. Do not over spray or overlap. Spray in November and December. Use commercial spray applicator with boom sprayer and mechanical agitation.

**Weed Control Recommendations--Small Fruits and Vegetables**

Crop	Chemical	Rate per acre and carrier	Remarks
BLACKBERRIES (all trailing berries) Blueberries, gooseberries, currants, and raspberries  Annual weeds in established plantings	Karmex diuron	2 lbs. of 80% material (1.6 lbs. active) in 30 or more gals. of water	Spray in October or November and, repeat in April or May.

WEED CONTROL RECOMMENDATIONS--SMALL FRUITS AND VEGETABLES (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
<p>BLACKBERRIES (all trailing berries) Blueberries, gooseberries, currants, and raspberries (continued)</p>			
<p>Annual weeds in established plantings</p>	Karmex diuron	<p>4 lbs. of 80% material (3.2 lbs. active) in 30 or more gals. of water</p>	<p>Spray winter or spring (January to April). In using Karmex diuron, spray only soil at base of plant; avoid spraying foliage. Soilsurface moisture is necessary for weed control. Do not use on plants being tip layered.</p>
<p>Broad-leaved perennial weeds in established plantings</p>	2,4-D amine	<p>1 pt. of 4 lbs. per gal. material (1/2 lb. active) in 30 or more gals. of water</p>	<p>Mix with fall application of diuron.</p>
<p>Weeds growing during winter dormancy</p>	Dinitro general plus CIPC	<p>3 pts. of 5 lbs. per gal. material (2 lbs. active) of Dinitro general, plus 6 qts. of 4 lbs. per gal. material (6 lbs. active) CIPC in 30 or more gals. of water or 10 gals. diesel oil</p>	<p>Spray in November to March and only on soil at base of plants, not on foliage.</p>
<p>Perennial weeds</p>	Amitrol	<p>4 lbs. of 50% material (2 lbs. active) in 50 gals. of water</p>	<p>Use as a spot spray to wet foliage of fully grown weeds. Do not spray on crop plants.</p>
<p>CRANBERRIES</p>			
<p>Weeds growing throughout the year</p>	Stoddard solvent or white diesel oil	<p>Use material as purchased. Use enough to thoroughly wet weeds.</p>	<p>Spray in the spring before cranberry buds break or throughout the season as a spot treatment. Best results are obtained on cool, cloudy days.</p>
	Amitrol	<p>Use 4 lbs. of 50% material (2 lbs. active) in 30 or more gals. water</p>	<p>Suggested for trial use when weeds are fully grown and repeat as new weeds develop. Do not use just before or during bloom. This material does not have FDA clearance for use on cranberries at this time.</p>
<p>Weeds emerging in the spring (Horse-tail rush and yellow weed)</p>	Stoddard solvent or white diesel oil	<p>Use material as purchased. Use enough to thoroughly wet weeds</p>	<p>Use in March or April when weeds are small or throughout the season for spot treatment. Best results obtained on cool cloudy days.</p>

WEED CONTROL RECOMMENDATIONS--SMALL FRUITS AND VEGETABLES (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
<p>CRANBERRIES (continued)</p> <p>Moss control</p>	<p>Bordeaux mixture 10-6-100</p>	<p>10 lbs. copper sulfate, 6 lbs. of lime and 100 gals. of water per acre</p>	<p>Use about April 1, when moss shows some growth.</p>
<p>GRAPES</p> <p>Annual weeds in established vineyards</p> <p>Perennial weed control</p>	<p>Karmex diuron</p> <p>Karmex diuron</p> <p>Amitrol</p>	<p>4 lbs. of 80% material (3.2 lbs. active) in 30 or more gals. water</p> <p>1/2 strength of above</p> <p>4 lbs. of 50% material (2 lbs. active) in 50 gals. of water</p>	<p>Use soon after spring cultivation. Soil surface moisture necessary for weed control.</p> <p>Use in the spring and in the fall following last cultivation.</p> <p>Use on fully grown weeds as a spot spray. Wet the weed foliage but not the grapes.</p>
<p>STRAWBERRIES</p> <p>Weeds emerging in new plantings</p>	<p>Sesone</p> <p>Sesone plus CDEC (Vegedex) or CDAA(Randox)</p> <p>EPTC (Eptam)-small trial</p>	<p>4 lbs. of 90% material (3.6 lbs. active) in 30 or more gals. water</p> <p>2 lbs. of 90% material (1.8 lbs. active) of Sesone plus 2 qts. of 4 lbs. per gal. material (2 lbs. active) of Vegedex or Randox in 30 or more gals. water</p> <p><u>Annual grass</u> - 1-1/3 qts. of 6 lbs. per gal. material (2 lbs. active)</p> <p><u>Nutgrass</u> - 2 qts. of 6 lbs. per gal. material (3 lbs. active)</p> <p><u>Quackgrass</u> - 4 qts. of 6 lbs. per gal. material (6 lbs. active) in 30 gals. of water</p>	<p>Use 1 week after planting or as soon as plants start to grow. Repeat as necessary. Apply immediately following cultivation. Soil surface moisture is necessary for control. Rain or sprinkle irrigation improves weed control.</p> <p>Use as small trial where annual grass is a problem. Use 1 week after planting.</p> <p>Spray on soil before planting and work in thoroughly by discing twice.</p>

WEED CONTROL RECOMMENDATIONS--SMALL FRUITS AND VEGETABLES (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
<b>STRAWBERRIES</b> (continued)			
Weeds germinating during summer in established plantings	Sesone	4 lbs. 90% material (3.6 lbs. active) in 30 or more gals. of water	Apply immediately after cultivation and hoeing. Repeat as necessary. Do not apply during picking or one week before picking begins. Soil surface moisture is necessary.
Weeds germinating during the winter	Dinitro general plus IPC	3 pts. of 5 lbs. per gal. material (2 lbs. active) of DN general plus 12 qts. of 2 lbs. per gal. material. (6 lbs. active) IPC in 30 or more gals. of water or if not done in freezing weather 7 to 10 gals. of diesel oil can be used instead of water	Use during the winter when strawberry plants are dormant. It takes about 5 nights of freezing weather to bring dormancy.
	<u>Simazine - small trial</u>	3 lbs. of 50% material (1 1/2 lbs. active) in 30 or more gals. of water	Use immediately following last cultivation and hoeing in the fall. On steep land use only a band application over the row. This allows grass and weeds to grow between the rows and they will prevent erosion.
<b>VEGETABLES</b>			
Asparagus	Telvar monuron	1 1/2 lbs.	Apply after discing bed, before shoots appear in spring. Light sprinkler irrigation beneficial.
		2-3 lbs.	Apply after harvest.
Beans and sweet corn	Dinitro amine	3-6 lbs. in 30 gals. water	Apply after planting but before emergence of the crop. Surface moisture needed. Control good for 20 to 30 days.
	Dinitro amine and CDEC (vegex)	2-3 lbs. Dinitro amine and 2-4 lbs. CDEC in 30 gals. water	<u>Suggested for trial on light soils where irrigation is used.</u>
Beets	Stoddard solvent	40-80 gals.	Prepare seedbed. Allow time for weeds to germinate. Plant seed and spray.
	Salt	2 lbs. salt per gal. of water used	Spray after beets have 2 or 3 true leaves. Hot, humid day. 150 to 200 gals. water. Weeds not beyond 4-leaf stage.

WEED CONTROL RECOMMENDATIONS--SMALL FRUITS AND VEGETABLES (Continued)

Crop	Chemical	Rate per acre and carrier	Remarks
VEGETABLES (continued)			
Broccoli Brussels sprouts Cabbage Cauliflower	CDEC (vegedex)	4 lbs. in 30 gals. water	Apply immediately after seeding. Follow with light irrigation.
Carrots Celery Dill Parsley Parsnips	Stoddard solvent	60-80 gals.	Spray when carrots have 2 true leaves but before carrots are 1/4 inch in diameter. Spray when carrots are dry and with air temperature not over 85°F.
Leaf crops: (Spinach and crucifers)	CDEC (vegedex)	2-3 lbs.	Immediately after seeding. Follow with light irrigation.
	CIPC	1-2 lbs.	Use low rate if air temperature is 60°F. or below.
Onions	CDAА (randox)	6 lbs.	To control weeds on organic soils. Apply with surface soil moisture and as a pre- emergent spray. Repeat only once when weeds are in cotyledon stage.
	CIPC	6 lbs.	To control weeds on mineral soils. Apply with surface soil moisture and as a pre-emergent spray.
Peas	IPC	5 lbs.	Control for wild oats. Disc 3 to 4 inches into the seedbed a week before planting peas.
	Dinitro amine	3/4 to 1 1/2 lbs. in 30 gals. water	Apply when the peas are 4 to 8 inches tall using light rate of chemical for air temperatures of 80°F. Do not use if air temperature is 85°F. or above.
	MCPA	1/8 to 1/6 lb. in 10 gals. water	Apply when peas are 6 to 8 inches tall before bloom.
Squash (summer) Cucumbers Cantaloupes Watermelons	NPA (alanap)	4 lbs. in 30 gals. water	Apply as a pre-emergence spray. Surface soil moisture needed for good weed control. Light irrigation beneficial.
Squash (winter) Pumpkins	Dinitro amine	2 1/2 lbs. in 30 gals. water	Apply to moist soil just before crop plants emerge.

## Chemicals for Control of Common Weeds

Weed	Chemical	Rate per acre and carrier	Remarks	
BRUSH Foliage spray	2,4,5-T or 2,4,5-T plus 2,4-D	1 qt. per 25 gals. of water	Spray to wet brush after full- leaf stage of growth. 2,4,5-T plus 2,4-D recommended for easily-controlled brush, such as willows. 2,4,5-T for harder- to-kill brush, such as wild rose.	
	Basal spraying	2,4,5-T	.1 gal. in 25 gals. of Diesel or stove oil.	Spray lower 18 to 24 inches of trunk. Less danger to crops from volatility injury than spraying foliage.
	Stump spraying	2,4,5-T	1 gal. in 25 gals. of Diesel or stove oil	Spray stump immediately after cutting. Cover all cut surface and sides of stump.
CATTAILS	Dalapon	5 lbs. per 25 gals. of water	Spray when cattail heads appear. Wet plants thoroughly, using at least 160 gals. of spray per acre. Better control by adding a wetting agent to the spray.	
	Amitrol	2 1/2 lbs. per 25 gals. of water	Spray after flowers are matured in the early fall. Thorough coverage, at least 160 gals. of spray per acre. Use wetting agent.	
	2,4-D ester	1 lb. per 25 gals. of water	Apply same as "Dalapon." Re- spraying for at least 2 years needed for eradication with 2,4-D.	
CANADA THISTLE	2,4-D	1 lb. in 10 to 20 gals. of water	Selective spray for thistle control in grass and grass fields. Spray at early bud stage of thistle.	
	Amitrol	1 lb. in 12 gals. of water 8 lbs. per acre	Non-selective spot spraying. Spray when oldest thistles are 15 to 20 inches tall. Do not plow or disc thistle patches before spraying.	
DOCK	2,4-D	1 lb. in 50 gals. of water	Spot spray to wet in rosette stage of growth. Respraying necessary for effective control.	
	2,4-DB	2 lbs. in 10 to 20 gals. of water	Spray dock in the early bud stage of growth. Repeat sprays for effective control. This spray can be used selectively in legume fields. Not cleared for use in forage or pasture fields.	

CHEMICALS FOR CONTROL OF COMMON WEEDS (Continued)

Weed	Chemical	Rate per acre and carrier	Remarks
FRENCH PINK	2,4-D ester	1 lb. in 10 to 20 gals. of water	Selective control in grain or grass fields. Spray before the bud stage of growth of the French Pink and before the boot stage of grass or grain.
HORSETAIL RUSH	MCP	1 lb. in 10 to 20 gals. water per acre	Selective spray for horsetail rush in grain fields. Spray when rush is 4 to 6 inches tall.
	Amitrol	1 lb. in 12 gals. of water	Nonselective spot spraying. Spray when horsetail rush is 6 to 12 inches tall. (8 lbs. per acre.)
	Ammate	3 lbs. per sq. rod	Soil sterilant application. Apply in early April. Use for eradication of small patches.
PUNCTURE VINE	2,4-D	2 lbs. in 10 to 20 gals. water per acre	Spray when plants are small, and respray for new seedling growth.
POISON OAK	2,4,5-T ester	1 lb. in 25 gals. of water	Spray in full-leaf stage, and respray.
	Amitrol	1 lb. in 12 gals. of water	Spot treatment. Spray after full-leaf, preferably during June.
QUACKGRASS	Karmex diuron or Telvar monuron	30 lbs. per acre in water 1/4 lb. per gal. for spot spraying	Soil sterilant treatment. Moisture washes chemical to root area of the plant. Treated area remains sterile for 2 to 5 years, depending on amount of moisture and solubility of chemical.
	Dalapon	10 lbs. in 10 to 20 gals. of water 1 lb. in 10 gals. water for spot treatment	Spray when the quackgrass is making rapid spring growth. Retreat area with 5 lbs. of dalapon per acre every two weeks, as long as growth is visible on the quackgrass.
	Amitrol	10 lbs. in 10 to 20 gals. of water. 1 lb. in 10 gals. of water for spot treatment	Foliage application. Early fall treatment in western Oregon or irrigated areas of eastern Oregon. This treatment helps control quackgrass. It is not effective for eradication.



CHEMICALS FOR CONTROL OF COMMON WEEDS (Continued)

Weed	Chemical	Rate per acre and carrier	Remarks
QUACKGRASS (continued)	EPIC (Eptam)	6 lbs. in water per acre	Disc 4 to 6 inches into the soil, when finishing the seed-bed. The treated area can be planted to beans, corn, potatoes, or alfalfa. This treatment controls, but does not eradicate quackgrass.
	Simazine	20 lbs. in 10 to 20 gals. of water	Selective use in corn. Treat area in fall or early spring after quackgrass starts growth. Land should not be planted to crops other than corn for 3 years.
RUSSIAN KNAPWEED	2,4-D	20 lbs. in 20 to 100 gals. of water	Spray when knapweed is in bud stage. Respray new growth.
	TBA	20 lbs. (10 gals.) per acre in 20 or more gals. of water	For trial use. Spray when plants first appear in the early spring. Treatment sterilizes the soil for one to three years.
	Soil sterilant	See County Extension Agent	See County Extension Agent.
RAGWEED	2,4-D	1 lb. in 50 gals. of water per acre	Spray when weeds are small before any blossoms are visible.
ST. JOHNSWORT	2,4-D	2 lbs. in 50 gals. of water per acre	Use ester form. Spray early. Use 5% oil in mixture to wet plant. Respraying needed. Beetles preferred for controlling large infestations.
STAR THISTLE	2,4-D	1 lb. in 50 gals. of water per acre	Spray when thistles are in early bud stage of growth.
TANSY RAGWORT	2,4-D	3 lbs. in 50 gals. of water per acre	Use ester form. Spray before any blossoms open.
TUSSOCK	2,4-D	1 1/2 lbs. in 50 gals. of water	Use ester form. Spray in March or April. Add 3 gals. of diesel oil to 50 gals. of water to help wet the plants.
WHITE TOP	2,4-D	1 lb. in 20 to 50 gals. of water per acre	2,4-D sprays for selective use. Spray at bud stage of the plant.
	Amitrol	6 to 8 lbs. in 50 gals. of water per acre	Amitrol sprays for nonselective use. Spray at bud stage of the plant.

CHEMICALS FOR CONTROL OF COMMON WEEDS (Continued)

Weed	Chemical	Rate per acre and carrier	Remarks
WILD BERRY VINES	2,4,5-T	2 lbs. per 50 gals. of water	Spray in late spring. Cover all leaf surface. Plan to respray regrowth.
WILD IRIS	Dalapon	1 lb. in 10 gals. of water	Spray to wet during the early bloom stage of the iris. Some iris species controlled with 2,4-D.
WILD GARLIC	2,4-D	1 to 2 lbs. per acre in water	Use ester form. Use 1-lb. rate for selective spraying in grain or grass. Use 2-lb. rate for nonselective spraying. Spray when garlic is 6 to 8 inches tall. Respraying necessary. A 10% diesel oil or stove oil added to the spray helps wet the garlic. Do not use oils for selective spraying.
	TBA	5 lbs. in 20 gals. of water	Trial use. Soil sterilant for 1 year. Treatment injures cereals and grasses. Perennial grasses recover from the treatment.
WILD MORNING GLORY (Bindweed)	TBA or PBA	10 gals. per acre in 20 gals. water. (20 lbs. TBA) (40 lbs. PBA)	In eastern Oregon treat any time morning glory patches can be found. In stubble fields treat immediately after harvest. In western Oregon treat before September 1. Short sterilant period usually 1 year in western Oregon, 2 or more in eastern Oregon.
	Sodium chlorate	4 to 6 lbs. per sq. rod	Fall treatment in eastern Oregon and April treatment in western Oregon. Effects soil for 2 to 10 years, depending on rate of treatment and moisture.
	2,4-D	1 lb. for selective spraying in 10 gals. of water	Spray grain or grass before the boot stage of growth. Morning glory can be more effectively sprayed in spring grain than in winter grain.

CHEMICALS FOR CONTROL OF COMMON WEEDS (Continued)

Weed	Chemical	Rate per acre and carrier	Remarks
WILD MORNING GLORY (Bindweed) (continued)	2,4-D amine	3 lbs. in 10 gals. water, nonselective spraying	For best control in summer-fallow fields till the field until about July 1. Spray about July 20 at the early blossom stage of the morning glory. The spray program should be followed for several years. Spray in hard dough or after harvest when the field is in wheat.
SHEEP SORREL	MCP	1 1/2 lbs. in 10 to 20 gals. of water	Prevents the set of seed of sorrel in grass seed fields. Spray at first sign of sheep sorrel flower stalks. Spraying must be done before the first head of the grass shows. This spray prevents seed development, it does not kill the sorrel.
	Endothal	8 lbs. (4 gals.) in 20 gals. of water. Spot treatment, 1 gal. in 25 gals. of water	Spray during cool, moist weather in late fall or early spring. Endothal is slightly poisonous and should be used with care to avoid prolonged exposure to clothing and skin.
YELLOW NUTGRASS	Telvar monuron or Karmex diuron	40 lbs. in 30 to 40 gals. of water. 1/4 lb. per gal. of water for spot treatment	Treat in the spring as soon as the nutgrass is visible. Soil will be sterilized for several years. Watch for germination of bulblets after the soil sterilants have disappeared.
	EPTC (Eptam)	3 lbs. in 20 gals. of water	Selective control for fields to be planted to potatoes, beans, corn, carrots, or transplanted to strawberries. Apply the Eptam before the discing, before the crop is planted. Disc the Eptam 4 to 6 inches into the soil immediately after applying. Heavier treatments are needed for eradication. Heavier rates will damage some crops.

## Aquatic Weed Control Recommendations

Weed	Chemical	Rate per acre and carrier	Remarks
DITCH BANKS	Dalapon and 2,4-D	10 lbs. Dalapon plus 2 lbs. 2,4-D Amine in 50 gals. of water	Use at least 100 gals. of spray per acre of ditch sprayed.
	ATA and 2,4-D	10 lbs. ATA plus 2 lbs. 2,4-D Amine in 50 gals. water	Use at least 100 gals. of spray per acre of ditch sprayed.
IRRIGATION CANALS	Aromatic Solvents	5-10 gals. per cubic foot water flow per second	See irrigation district manager or other qualified person for details of treating.
PONDS	Sodium Arsenite	4 to 8 p.p.m.*  2 to 4 p.p.m.* for algae	Controls most soft or leafy submerged aquatics. Kills trout at higher concentrations. Dangerous if swallowed by man or livestock. Apply in spring and summer.
	2,4-D	1/4% to 1% spray	Most weeds growing around pond bank. Use in oil spray for waxy-leaved species. Can be used in combination with 2,4,5-T, TCA, or other herbi- cides. Apply during rapid plant growth.
	Copper Sulfate	0.5 to 1 p.p.m.* for algae	Kills trout at 1 p.p.m. Dangerous to trout at almost any concentration in soft water. Apply any time.
	Delrad	0.2 to 0.5 p.p.m.* for algae	Apparently not toxic to fish at low concentrations. Apply any time.

### Chemicals Which Show Promise But Not Yet Recommended for Regular Field Use

Chemical	Rate per acre and carrier	Remarks
Endothal	.5 p.p.m.*	Controls pond weeds, Potamogeton.
Roccal	.2 to .5 p.p.m.*	Controls filamentous algae.
Phygon XL	0.05 p.p.m.*	Controls planktonic algae. Toxic to fish at about 0.1 p.p.m.

\* One part per million equals 2.73 lbs. of active ingredient per acre foot of water.