

Oregon Weed Control Recommendations for Grass Seed Crops

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Weed seeds and unwanted crop seeds are serious contaminants in most seed lots. The seed grower's first responsibility is to plant clean seed on clean land. Seed fields, even though seeded with clean seed on relatively clean land, have some weeds. Weed plants must be removed in the field or the weed seeds removed in the seed cleaning plant. Field removal of weeds with herbicides and roguing is easier and more complete and less expensive than removal by cleaning equipment.

There are numerous herbicides that do a good job controlling most weed pests. Herbicides such as diuron (Karmex), simazine, atrazine, and prometryne, when properly used, control most annual weeds. IPC and CIPC control annual grasses. Dicamba (Banvel D) controls seedling grasses under some conditions, as well as annual and perennial broadleaved weeds. Choice of herbicide, time of spraying, rate of spraying, soil moisture, and method of application spell success or failure.

Diuron, simazine, atrazine, and prometryne must be applied when the weeds to be killed are in the seedling stage of growth. These chemicals do not, at selective rates, kill established plants, even annuals. Timing is very important for IPC and CIPC. IPC and CIPC must be applied when the weather is cool and the soil moist. These chemicals, when applied later than the dates indicated on the attached spray charts, can prevent heading of the seed crop the following year. Dicamba is excellent for the control of sheep sorrel and dock after new leaves have developed.

Straw and chaff from harvested crops reduce the effectiveness of all herbicides. Straw should be removed by burning or by mechanical means. Carbon from burned straw reduces the effectiveness of diuron, simazine, atrazine, and prometryne. If all straw and chaff are not consumed by the fire, some cultural practice, such as harrowing to spread and break up the organic mat, will improve weed control. Burned fields should be sprayed with 20 to 25 percent more herbicide than non-burned fields.

It is advisable, when possible, to alternate the use of herbicides each year. Such changes help prevent build-up of certain tolerant plants. Alternate uses also reduce possibilities of build-up of toxic residues.

2,4-D, dicamba (Banvel D), and combinations of 2,4-D and dicamba, will effectively control most broadleaved plants. New grass seedlings should not be sprayed until the seeded grass is 6 to 8 weeks old. Established grass seed fields should not be sprayed when the seed-heads are in the boot or heading stage of development.

Several of the herbicides mentioned are soil sterilant at higher rates of application. Thus, it is essential that spray equipment be properly calibrated and operated to apply the proper amount of herbicide. Exceeding the recommended rate can result in severe crop-plant injury

and seed-yield reduction. Avoid overlapping, which doubles the rate of application on the overlap areas. To get more uniform spray coverage, mixing the spray solution at one-half concentration and double spraying gives good results; much less damage results from overlap, and there is less chance of untreated skips.

All herbicides need uniform applications. Soil applied herbicides are more demanding for good uniform coverage than most foliage applied herbicide. Carefully calibrated ground sprayers are preferred over aircraft when spraying diuron, simazine, atrazine, prometryne, IPC, and CIPC sprays.

Diuron, simazine, atrazine, and prometryne are wettable powders. Good agitation is needed for even spraying. Spray nozzles used for wettable powders must be checked regularly for wear. Experimental studies show that nozzles applying wettable powders will wear with 30 hours use, enough to increase spray rates 20 percent.

Chemicals used at selective rates will not control established perennial plants such as quackgrass, velvetgrass, or tall fescue. Such plants require special spot spraying or mechanical removal.

Herbicides as Aids in Grass Stand Establishment in Western Oregon

IPC and 2,4-D, or paraquat, when properly used, are aids in the establishment of new grass seed fields. These chemicals make it possible to control seedling grass and broadleaved plants which compete with grass seedlings for plant food and moisture. With proper spraying, the first seed crop can meet top quality seed requirements.

The field to be seeded should be summer fallowed or summer worked immediately after harvest of annual crops. Tillage should be continued into the fall as late as weather permits. Tillage controls perennial plants and encourages germination of soil-borne weed and crop seeds.

The first spray, IPC and 2,4-D, or paraquat, is applied late in November or early December. The second spray, paraquat, is applied at seeding time or shortly after seeding, usually about February 15 to March 15. The field should not be tilled after spraying and before seeding. IPC should be applied 6 to 8 weeks before the grass is seeded. Rear-mounted spray booms are recommended when spraying with paraquat. Wetting agents as recommended on the paraquat label should be used.

The new grass field should be sprayed with 2,4-D or 2,4-D and dicamba during the summer. This spray controls broadleaved weed seedlings. Diuron at 2 pounds per acre is recommended for application in November on well established bluegrass, orchardgrass, tall fescue, Astoria bentgrass, or Highland bentgrass. Fall sprays control fall emerging weeds and crop seedlings.

WEED CONTROL RECOMMENDATIONS FOR OREGON GRASS SEED CROPS

Crops	Chemical	Rate per acre & carrier	Remarks
STATEWIDE Grass (all grasses)	2,4-D	1/2 to 3/4 lb. in 10 to 20 gals. of water	For the control of broadleaved weeds, spray before the boot stage of the seed crop. New seedlings should have 60 days growth before spraying.
	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 three or more true leaves.
	Dicamba (Banvel D) and dicamba plus 2,4-D	1/4 lb. of dicamba in 10-20 gals. of water or 1/2 to 3/4 lb. of 2,4-D and 1/4 lb. of dicamba.	For sheep sorrel control, spray from November to April. Sheep sorrel should have new leaf growth when sprayed. Do not pasture sprayed fields. Combinations control some weeds not controlled by 2,4-D or dicamba singly.



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WEED CONTROL RECOMMENDATIONS FOR OREGON GRASS SEED CROPS

Crops	Chemical	Rate per acre and carrier	Remarks
WESTERN OREGON			
Perennial ryegrass	CIPC	2 lbs. in 10-20 gals. of water by ground.	IPC or CIPC should not be used on fields less than 16-17 months old. Fall seeded fields should not be sprayed the following fall. Spray before October 31. Spray after fall rains have started. Good agitation is needed.
	IPC	3 lbs. in 10-20 gals. of water by ground.	
	Atrazine	1-1½ lbs. in 10-20 gals. of water by ground.	
Highland and Astoria bentgrass	IPC	4 lbs. in 10-20 gals. of water by ground.	Spray IPC and CIPC in October for annual grasses. Spray established fields only before Oct. 31.
	CIPC	3 lbs. in 10-20 gals. of water by ground.	
	Simazine	2½ lbs. per acre in 10-20 gals. of water by ground.	
	Diuron (Karmex)	2 to 3 lbs. in 10-20 gals. of water by ground.	
Kentucky bluegrass varieties	IPC or CIPC	3 lbs. in 10-20 gals. of water by ground.	Spray before Nov. 1. Do not spray fields before the first seed harvest. More effective on riggut brome and wild oats than diuron.
	Diuron	2 to 4 lbs. in 10-20 gals. of water by ground.	
	Simazine	3 to 3½ lbs. in 10-20 gals. of water by ground.	
Tall fescue (Alta)	IPC or CIPC	3 lbs. in 10-20 gals. of water by ground.	Do not use before the first harvested crop. Spray before Oct. 31.
	Diuron	2 to 4 lbs. in 10-20 gals. of water by ground.	
	Simazine	3 to 3½ lbs. of product in 10-20 gals. of water by ground.	
Orchardgrass	IPC or CIPC	3 lbs. in 10-20 gals. of water by ground.	Do not spray new fields before first harvest year. Spray after first rain before Oct. 31.
	Diuron	2 to 4 lbs. per acre in 10-20 gals. of water by ground.	
	Simazine	3 to 3½ lbs. product in 10-20 gals. of water by ground.	
Chewings fescue or creeping red fescue	IPC	3 lbs. in 10-20 gals. of water by ground.	Do not spray fine fescue fields before the first seed harvest with IPC or CIPC. Spray after the first rain and before October 20.
	CIPC	2 lbs. in 10-20 gals. of water by ground.	
	Diuron	2 lbs. of product in 10-20 gals. of water by ground.	
	Simazine	2½ lbs. of product in 10-20 gals. of water by ground.	
EASTERN OREGON			
Chewings fescue, creeping red fescue, Kentucky bluegrass var.	Dicamba	3 lbs. (3 qts.) in 10-20 gals. of water by ground.	Controls downy brome (cheatgrass) and rattail fescue. Spray within 10 days of first fall irrigation when soil is still damp. Spray after first seed harvest. Fields should be burned. Unburned straw should be scattered with a harrow or other tillage implement before spraying. Do not pasture sprayed fields.
Bluegrass varieties	Prometryne	3½ to 4 lbs. of product in 10-20 gals. of water per acre.	Controls seedling grasses such as downy brome. Fields should be burned prior to spraying. Use only on fields after at least one crop harvest. Do not pasture sprayed fields or feed sprayed straw.
CHEMICAL SEEDBED FOR WESTERN OREGON			
	IPC plus 2,4-D	4 lbs. of IPC plus 1 lb. of 2,4-D with 10-20 gals. of water, at least 5 gals. by air.	Controls only seedling plants. Apply in late November or early December. Respray in February or March with ½ lb. per acre of paraquat. Be sure seed is well covered before spraying. Spray before seeded crop emerges.
	Paraquat	½ lb. in 10-30 gals. of water, at least 5 gals. by air.	Use rear-mounted spray boom. Controls only seedling plants. Respray at seeding time or before seeded crop emerges. Be sure seed is covered if sprays are applied after seeding. Use wetting agents according to label on paraquat.
SUMMER AND FALL CARE FOLLOWING CHEMICAL SEEDBED SPRAYING			
	2,4-D or 2,4-D plus dicamba	½ to ¾ lb. of 2,4-D in 10-20 gals. of water, or ½ lb. of 2,4-D plus ¼ lb. of dicamba in 10-20 gals. of water, at least 5 gals. by air.	Seeded crops should have at least 5 leaves (about 8 weeks old) before spraying.
	Diuron	2 lbs. of product in 10-20 gals. of water by ground.	Spray in October and November on well established stands of bluegrass, tall fescue, orchardgrass, Astoria bentgrass, or Highland bentgrass.