

PM 25 60719-181

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SEP 30 1993

Mr. Michael W. Melichar  
DowElanco  
9002 Purdue Rd.  
P.O. Box 681428  
Indianapolis, IN 46268

Dear Mr. Melichar:

Subject: Final Printed Labels  
Grazon PC  
EPA Reg. No. 62719-181  
Your submission dated Sept. 15, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR part 158, subpart K, § 156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

Sincerely yours,

Robert J. Taylor  
Product Manager 25  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

Enclosure

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Product Data Sheet

Grazon PC  
62719-181

Registrant:

DowElanco  
9002 Purdue Rd. Quad IV  
Indianapolis, IN 46268  
Contact Person: Ms. Terry Fuhs  
1/800-892-6740

EPA Approval 06/18/92

Revisions Include:

For distribution and use only within New Mexico, Oklahoma, and Texas

- 1) Updated wetlands statement
- 2) General use precautions and mixing instructions edited for clarity
- 3) clarified application timing for broom snakeweed and application directions for marshelder

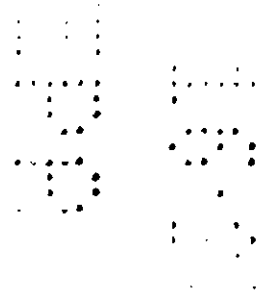
ACCEPTED  
with COMMENTS  
in EPA Letter Dated:

SEP 30 1993

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, this pesticide  
registered under EPA Reg. No.

62719-181

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# RESTRICTED USE PESTICIDE

May injure (phytotoxic) susceptible, non-target plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.



# Grazon\* PC

Range and Pasture Management

For distribution and use only within New Mexico, Oklahoma, and Texas.  
For the control of broadleaf, annual, and perennial weeds, pricklypear, mesquite, and various other species on rangeland and permanent grass pastures.

Refer to the label for complete listing of precautionary statements and directions for use including STORAGE AND DISPOSAL.  
Notice: Refer to the label for the product and Warranty, Directions and Limitation of Remedies for this product.

Keep Out of Reach of Children

**WARNING**

DowElanco, a Division of Dow Chemical Company, N. 4600, U.S.A.

**Specialty Herbicide**

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### Precautionary Statements

#### Hazards to Humans and Domestic Animals

## WARNING AVISO:

Precaucion al usuario: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

Causes Substantial But Temporary Eye Injury • Harmful If Inhaled Or Absorbed Through Skin

Do not get in eyes or on clothing. Wear goggles, face shield or safety glasses when handling. Avoid contact with skin. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Avoid breathing spray mist.

#### First Aid

If in eyes: Flush with plenty of water for at least 15 minutes. Get medical attention.

If swallowed: Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

#### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not contaminate water used for irrigation or domestic purposes by cleaning of equipment or disposal of wastes. Do not allow run-off or spray to contaminate wells, irrigation ditches or any body of water used for irrigation or domestic purposes. Do not make application when circumstances favor movement from treatment site.

Picloram is a chemical which can travel (seep or leach) through soil and under certain conditions has the potential to contaminate groundwater which may be used for irrigation and drinking purposes. Users are advised not to apply picloram where soils have a rapid

to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

An aquifer is defined as "an underground, saturated, permeable, geologic formation capable of producing significant quantities of water to a well or spring. It is the ability of the saturated zone, or portion of that zone, to yield water which makes it an aquifer" (American Chemical Society, 1983).

#### Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Do not use for manufacturing or formulating.

#### STORAGE AND DISPOSAL

Do not contaminate water, food, fertilizer or feed by storage or disposal. Open dumping is prohibited. Pesticide Disposal: Excess pesticide should be used according to label directions or disposed of at an approved waste disposal facility.

Plastic Container Disposal: Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Metal Container Disposal: Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Sprayer Clean-Out: To avoid injury to desirable plants, equipment used to apply Grazon PC herbicide should be thoroughly cleaned before reusing to apply any other chemicals.

1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of rinse water in non-cropland area away from water supplies.

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### STORAGE AND DISPOSAL (Cont.)

2. Rinse a second time, adding 1 qt of household ammonia for every 25 gal of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min.). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Nozzles and screens should be removed and cleaned separately.

### General Information

Grazon PC herbicide is a water soluble liquid product containing picloram.

Use Grazon PC in rangeland and permanent grass pastures to selectively control annual, biennial, and perennial herbaceous weeds such as bitterweed, bursage (bur ragweed, woollyleaf povertyweed), broomweed (annual), horsenettle, locoweed, pricklypear, ragweed (common, lanceleaf, western), snakeweed (broom snakeweed), tasajillo, and thistles. For equal or improved control of such weeds along with many species affected by 2,4-D, use Grazon PC in tank mixtures with 2,4-D low volatile esters or amines or with Remedy\* herbicide.

Applications made according to label directions usually give excellent control of most annual and perennial herbaceous broadleaf weed species. Certain more resistant herbaceous and woody species may require repeat treatment in subsequent years.

### General Use Precautions

Use this product only as specified on this label. Observe any special use and application restrictions and limitations, including method of application and permissible areas of use as promulgated by state or local authorities. Observe labels of other products used in tank mixtures and follow precautions and recommendations thoroughly.

**Chemigation:** Do not apply this product through any type of irrigation system.

Very small amounts can kill or injure many broadleaved plants. To prevent damage to crops and other desirable plants, follow all directions and precautions.

Use Grazon PC only once a year. Maximum application rate for Grazon PC is 2 pints per acre per year.

**Note:** Many forbs are susceptible to Grazon PC. Do not spray pastures containing desirable forbs, especially legumes, unless injury to such plants can be tolerated. However, the growth of established grasses is improved after spraying, especially when rainfall is adequate and grazing is deferred.

Do not make application when circumstances favor movement from treatment site.

Do not contaminate water intended for irrigation or domestic purposes. To avoid injury to crops or other desirable plants, do not treat or allow spray drift or runoff to fall onto banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes. Do not apply to snow or frozen ground.

Do not use on sub-irrigated land.

Grazon PC should not be applied in residential areas or near ornamental trees and shrubs. Untreated trees can occasionally be affected by root uptake of the herbicide through movement into the top soil or by excretion of the product from the roots of nearby treated trees. Do not apply Grazon PC within the root zone of desirable trees, unless such injury can be tolerated.

Do not apply or otherwise permit Grazon PC or sprays containing Grazon PC to contact crops or other desirable broadleaf plants, including but not limited to alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes, and other vegetable crops, flowers, fruit plants, ornamentals and shade trees. Do not apply this product in the rooting zone of nearby desirable plants, as injury may occur through root uptake.

Do not use grass or hay from treated areas for composting or mulching of susceptible broadleaf crops.

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Do not spray pastures if injury to existing forage legume component cannot be tolerated. Grazon PC may injure or kill legume plants. Forage legumes may be less sensitive to the herbicide after the seed has been set and has hardened off. New legume seedlings may not be successful if made within one year of application.

Do not move treated soil to other areas or use it to grow plants if they are not registered for use with picloram until an adequate sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

Do not transfer livestock from treated grazing areas onto broadleaf crop areas without first allowing 7 days of grazing on untreated grass pasture. Otherwise, urine may contain enough picloram to cause injury to sensitive broadleaf plants.

Do not use manure from animals grazing treated areas on land used for growing broadleaf crops, ornamentals, orchards or other susceptible, desirable plants. Manure may contain enough picloram to cause injury to susceptible plants.

Do not mix with dry fertilizer.

**Avoid Injurious Spray Drift**

Applications should be made to avoid spray drift since very small quantities of the spray, which may not be visible, may injure susceptible crops during both growing and dormant periods. To minimize spray drift:

1. Use nozzle pressures no greater than are required to obtain a proper spray pattern for adequate coverage of target plants.
2. Apply as a coarse spray.
3. Use nozzles designed for herbicide application that do not produce a fine droplet spray.
4. Spray when wind velocity is low. Follow local state regulations. Avoid conditions which are conducive to air inversions.

When making applications near susceptible crops, spray drift may be further lessened by using a drift control system such as the Microfoi, Thru-Valve boom (or equivalent). If a drift control additive is used, follow all use recommendations and precautions on the product label.

**Ground Equipment:** With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by keeping the operating spray pressures at the manufacturers recommended minimum pressures for the specific nozzle types used (low pressure nozzles are available from spray equipment manufacturers). Do not apply this product with a mistblower. In hand-gun applications, spray drift may be minimized by selecting the minimum pressure that will provide adequate coverage (without forming a mist); by spraying no higher than brush tops.

**Aerial Application:** With aircraft, drift can be lessened by using straight stream nozzles directed straight back; by using a spray boom no longer than 3/4 of the rotor or wing span of the aircraft; by using low pressure sprays; by using a drift control system or drift control additive. Do not use a thickening agent with the Microfoi or the Thru-Valve boom, or other drift control systems that cannot accommodate thick sprays.

**Determine air movement and directions before making foliar applications:** Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movements, lapse conditions, or temperature inversions (stable air). If the smoke layers or otherwise indicates a potential for hazardous spray drift, do not spray.

Do not rotate food or feed crops on treated land if they are not registered for use with picloram until an adequately sensitive bioassay or chemical test shows that no detectable picloram is present in the soil.

**Mixing Instructions**

**Ground and Aerial Applications - Mixing With Water Alone**

Start with about half the required amount of water in the spray tank. With agitation operating, add the required amount of Grazon PC and Reclaim<sup>®</sup> or 2,4-D Amine herbicides. Then add the required amount of Remedy, or a 2,4-D ester product. If a surfactant is needed, it should be added as the remainder of the required water is added to complete the spray mix. When using a

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drift control additive such as Nalco-Trol or equivalent, follow the manufacturer's directions carefully. Complete dispersion of the additive, such as obtained by passage through a pump with moderate to high shearing action, is essential for proper performance of the product.

**Ground and Aerial Applications -  
Mixing Oil-Water Emulsions**

For aerial application, add oil to the total spray mix at the ratio of 1 part oil to 5 parts water (1:5 ratio). Do not use more than 1 gallon of oil per acre for aerial or ground application. Use agricultural spray emulsifiers such as Sponto 712 or Triton X-100 according to mixing instructions given below and tables of materials (Tables 1-4).

**Batch Mixing Instructions**

With continuous, vigorous agitation:

1. Add half the amount of water to be used to the spray tank.
2. Add the required amount of water soluble herbicide such as Grazon PC, Reclaim or 2,4-D Amine products required.
3. With continued, vigorous agitation slowly add a premix of oil, emulsifier and oil soluble herbicides such as Remedy or a 2,4-D ester product as required. Note: Do not allow water or mixtures containing water to get into the premix or Remedy herbicide since a thick "invert" (water in oil) emulsion may be formed that will be difficult to break. Such an emulsion may also be formed if the premix or Remedy is put into the mixing tank before the addition of water.
4. Add the remaining water. Also, during the final filling of the tank, add Nalco-Trol or equivalent drift control agent, plus an agricultural surfactant (if a water dilution rather than an oil-water emulsion spray is used).

**Aerial Application - Mixing Oil-Water Emulsions (Meter Mixing)**

Water-oil sprays containing tank mixes of Grazon PC plus Remedy, or other herbicides may also be prepared using the spray tank "loading" pump to mix the ingredients while filling the tank. This procedure involves simultaneous metering of the required amounts of water and Grazon PC with an oil-emulsifier and 2,4-D or Remedy into the intake line of the pump during operation. Since emulsification is accomplished in the

pump, it is important that a pump with moderate to high shearing action be used. For proper results always introduce the water and Grazon PC and Reclaim herbicide into the intake line before introducing the oil-emulsifier premix, or a thick, invert emulsion may result. Maintain vigorous agitation in the spray tank during application.

**Use of Grazon PC And 2,4-D Herbicide With Liquid Fertilizer For Broadleaf Weed Control in Rangeland And Permanent Grass Pasture**

Grazon PC mixed with 2,4-D ester or amine (at recommended label rates) may be tank mixed with liquid fertilizers and used in foliar application for weed control and fertilization of rangelands and permanent grass pastures. Use liquid fertilizers at rates recommended by supplier or local Extension Service Specialist.

Begin with a compatibility test by pouring the spray component in the desired order and proportions into a clear glass jar before mixing in the spray tank. Use of a compatibility aid such as Unite or Compex is recommended to help obtain and maintain a uniform spray solution during mixing application. Compatibility is best with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K fertilizer solutions or suspensions is more difficult and should not be attempted without first conducting a successful jar test. Agitation in the spray tank must be vigorous to compare with jar test agitation.

**Suggested Mixing and Application Procedure:** With continuous vigorous agitation:

1. Add half the amount of liquid fertilizer to the spray tank.
2. Add compatibility aid such as Unite or Compex at 1 quart per 100 gal of total spray mix.
3. First add the amount of Grazon PC needed for the total spray mixture. Then add the amount of 2,4-D needed for the total spray mixture. Mixing with N-P-K fertilizer solutions may be improved following the above procedure by premixing the herbicides with water before adding them to the spray tank. For Grazon PC, premix 1 part herbicide with 25 to 30 parts water. For 2,4-D, premix 1 part herbicide with 4 parts water.

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4. Add the remaining liquid fertilizer to produce the needed total spray volume.
5. Apply as soon as the spray is totally mixed, maintaining continuous, vigorous agitation from start of mixing through application without interruptions.

Application during very cold (near freezing) weather is not advisable.

Do not store the spray mixture.

Note: Do not use spray equipment for other applications to land planted, or to be planted, to susceptible crops or desirable sensitive plants, unless it has been determined that all phytotoxic herbicide residue has been removed by thorough cleaning of equipment.

**Table 1:  
Amounts Of Grazon PC To Make 100 Gallons Of Spray Solution (Oil-Water Emulsion)**

Label Recommendations		Amount To Make 100 Gallons of Spray Solution				
Total Spray Volume Gal/Acre	Rate Pint/Acre Grazon PC	Gallons Grazon PC	Gallons Oil <sup>†††</sup>	Gallons Water	Ounces Emulsifier <sup>†</sup>	Ounces N.T. <sup>††</sup>
2	1	6.2	15.6	78.2	45.3	4.5
2	2	12.5	14.6	72.9	40.5	4.1
4	1	3.1	16.2	80.7	46.8	4.8
4	2	6.2	15.6	78.2	43.8	4.5
10	1	1.3	10.0	88.8	30.0	5.3
10	2	2.6	10.0	87.4	30.0	5.2
20	1	0.7	5.0	94.4	15.0	5.7
20	2	1.3	5.0	93.8	15.0	5.6

<sup>†</sup>Emulsifiers such as Sponto 712 or Triton X-100 should be added at the rate of 3 ounces per gallon of oil in the total spray mix when using a water-soluble formulation such as Grazon PC or Reclaim.

<sup>††</sup>Amounts of Naico-Trol (N.T.) are calculated on the basis of 6 oz of N.T. per 100 gal of water. Equivalent additives should be added at equivalent rate of active ingredient.

<sup>†††</sup>Do not use more than 1 gal of oil per acre.

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**Table 2:**  
**Amounts Of Grazon PC Plus Remedy To Make 100 Gallons Of Spray Solution (Oil-Water Emulsion)**

Label Recommendations			Amount To Make 100 Gallons of Spray Solution					
Total Spray Volume Gal/Acre	Rate Pint/Acre Grazon PC	Rate Pint/Acre Grazon ET	Gallons Grazon PC	Gallons Remedy	Gallons Oil†††	Gallons Water	Ounces Emulsifier†	Ounces N.T.††
2	1	0.5	6.2	3.1	15.1	75.6	15.1	4.5
2	2	0.5	12.5	3.1	14.0	70.4	14.0	4.2
2	1	1	6.2	6.2	14.6	73.0	14.6	4.4
2	2	1	12.5	6.2	13.6	67.7	13.6	4.1
2	1	2	6.2	12.5	13.6	67.7	13.6	4.1
2	2	2	12.5	12.5	12.5	62.5	12.5	3.8
4	1	0.5	3.1	1.6	15.9	79.4	15.9	4.8
4	2	0.5	6.2	1.6	15.4	76.8	15.4	4.6
4	1	1	3.1	3.1	15.6	78.1	15.6	4.7
4	2	1	6.2	3.1	15.1	75.6	15.1	4.5
4	1	2	3.1	6.2	15.1	75.6	15.1	4.5
4	2	2	6.2	6.2	14.6	73.0	14.6	4.4
10	1	0.5	1.2	0.6	10.0	88.2	30.0	5.3
10	2	0.5	2.6	0.6	10.0	86.8	30.0	5.2
10	1	1	1.2	1.2	10.0	87.6	30.0	5.3
10	2	1	2.6	1.2	10.0	86.2	30.0	5.2
10	1	2	1.2	2.6	10.0	86.2	30.0	5.2
10	2	2	2.6	2.6	10.0	84.8	30.0	5.1
20	1	0.5	0.6	0.3	5.0	94.1	15.0	5.7
20	2	0.5	1.2	0.3	5.0	93.5	15.0	5.6
20	1	1	0.6	0.6	5.0	93.8	15.0	5.6
20	2	1	1.2	0.6	5.0	93.2	15.0	5.6
20	1	2	0.6	1.2	5.0	93.2	15.0	5.6
20	2	2	1.2	1.2	5.0	92.6	15.0	5.6

† Emulsifiers such as Sponto 712 or Triton X-100 should be added at the rate of 2 oz/gal of oil when Remedy is a part of the spray mixture. (Remedy is an emulsifiable concentrate with some emulsifier in the formulation.)  
 †† Amounts of Nalco-Trol (N.T.) are calculated on the basis of 6 oz of N.T. per 100 gal of water. Equivalent additives should be added at equivalent rate of active ingredient.  
 ††† Do not use more than 1 gal of oil per acre.

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**Table 3:**  
**Amount Of Grazon PC Plus 2,4-D To Make 100 Gallons Of Spray Solution (Oil-Water Emulsion)**

Label Recommendations			Amount To Make 100 Gallons of Spray Solution						
Total Spray Volume Gal/Acre	Rate Ping/Acre Grazon PC	Formula 40 or Esteron 99 Conc.	Gallons Grazon PC	Gallons Formula 40 or Esteron 99 Conc.	Gallons Oil <sup>†††</sup>	Gallons Water	Ounces Emulsifier 1 <sup>†</sup>	Ounces Emulsifier 3 <sup>†</sup>	Ounces N.T. <sup>††</sup>
2	0.25	0.5	1.6	3.1	15.9	79.4	15.9	47.7	4.8
2	0.5	1	3.1	6.2	15.1	75.5	15.1	45.3	4.5
2	1	2	6.2	12.5	13.5	67.7	13.5	40.5	4.1
2	2	4	12.5	25.0	10.4	52.1	10.4	31.2	3.1
4	0.25	0.5	0.8	1.6	16.2	81.4	16.2	48.6	4.9
4	0.5	1	1.6	3.1	15.9	79.4	15.9	47.7	4.8
4	1	2	3.1	6.2	15.1	75.5	15.1	46.8	4.5
4	2	4	6.2	12.5	13.5	67.7	13.5	40.5	4.1
10	0.25	0.5	0.3	0.6	10.0	89.1	10.0	30.0	5.4
10	0.5	1	0.6	1.2	10.0	88.2	10.0	30.0	5.3
10	1	2	1.2	2.4	10.0	86.4	10.0	30.0	5.2
10	2	4	2.4	4.8	10.0	82.8	10.0	30.0	5.0
20	0.25	0.5	0.15	0.3	5.0	94.6	5.0	15.0	5.7
20	0.5	1	0.3	0.6	5.0	94.1	5.0	15.0	5.7
20	1	2	0.6	1.2	5.0	94.2	5.0	15.0	5.7
20	2	4	1.2	2.4	5.0	91.4	5.0	15.0	5.5

<sup>†</sup>Emulsifiers such as Sponto 712 or Triton X-100 should be added at the rate of 3 ounces per gallon of oil when used with a water-soluble product such as 2,4-D Amine or at 2 oz/gal of oil when used with an oil-soluble product, such as 2,4-D Ester, in the total spray mix.  
<sup>††</sup>Amounts of Nalco-Trol (N.T.) are calculated on the basis of 6 oz of N.T. per 100 gal of water. Equivalent additives should be added at equivalent rates of active ingredient.  
<sup>†††</sup>Do not use more than 1 gal of oil per acre.

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**Table 4:**  
**Amounts of Grazon PC And Reclaim To Make 100 Gallons Of Spray Solution (Oil-Water Emulsion)**

Label Recommendations			Amount To Make 100 Gallons of Spray Solution					
Total Spray Volume Gal/Acre	Rate Pint/Acre Grazon PC	Rate Pint/Acre Reclaim	Gallons Grazon PC	Gallons Reclaim	Gallons Oil†††	Gallons Water	Ounces Emulsifier†	Ounces N.T.††
2	1	2/3	6.2	4.2	14.9	74.7	44.7	4.5
2	1	1 1/3	6.2	8.3	14.3	71.2	42.9	4.3
2	2	2/3	12.5	4.2	13.9	69.4	41.7	4.2
2	2	1 1/3	12.5	8.3	13.2	66.0	39.6	4.0
4	1	2/3	3.1	2.1	15.8	79.0	47.4	4.7
4	1	1 1/3	3.1	4.2	15.5	77.2	46.5	4.6
4	2	2/3	6.2	2.1	15.3	76.4	45.9	4.6
4	2	1 1/3	6.2	4.2	14.9	74.7	44.7	4.5
10	1	2/3	1.2	0.8	10.0	87.8	30.0	5.3
10	1	1 1/3	1.2	1.7	10.0	86.9	30.0	5.2
10	2	2/3	2.6	0.8	10.0	86.4	30.0	5.2
10	2	1 1/3	2.6	1.7	10.0	85.5	30.0	5.0
20	1	2/3	0.6	0.4	5.0	94.0	15.0	5.6
20	1	1 1/3	0.6	0.8	5.0	93.6	15.0	5.6
20	2	2/3	1.2	0.4	5.0	93.4	15.0	5.6
20	2	1 1/3	1.2	0.8	5.0	93.0	15.0	5.6

† Emulsifiers such as Sponto 712 or Triton X-100 should be added at the rate of 3 ounces per gallon of oil in the spray solution.

†† Amounts of Nalco-Trol (N.T.) are calculated on the basis of 6 oz. Nalco-Trol per 100 gal of water. Equivalent additives should be added at equivalent rates of active ingredient.

††† Do not use more than a gallon of oil per acre.

**Table 5:**  
**Mixing Chart For High Volume Foliar Applications**  
**(Label rate range is 1 to 4 qt/100 gallons)**

Total Volume of Spray Mixture	Amount of Grazon PC Required at Specified Rate			
	1 qt/100 gal	2 qt/100 gal	3 qt/100 gal	4 qt/100 gal
400 gal	1 gal	2 gal	3 gal	4 gal
100 gal	1 qt	2 qt	3 qt	4 qt
50 gal	1 pt	2 qt	3 pt	4 pt
10 gal	3.2 fl oz	6.4 fl oz	9.6 fl oz	12.8 fl oz
5 gal	1.6 fl oz	3.2 fl oz	4.8 fl oz	6.4 fl oz
3 gal	1 fl oz	2 fl oz	3 fl oz	4 fl oz

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### Approved Uses

Mix the required amount of Grazon PC in sufficient water for uniform coverage and apply as a coarse, low-pressure spray with ground or aerial application equipment. The use of a drift control additive such as Naico-Trol, or equivalent, is strongly recommended, especially when water alone is used as the carrier.

### Broadcast Foliar Applications (Ground or Aerial)

Apply in 10 to 20 gal of total spray mixture per acre by ground and in a minimum of 2 gal/acre or more for aerial application (unless otherwise specified). See Mixing Directions and Tables 1 to 4 for instructions on oil-water emulsion details. Good coverage is essential. Swath width should not exceed 1 1/4 times the wingspan of the aircraft.

### Woody Plants - Broadcast Use Recommendations

Pest	Amount of Grazon PC (Picloram) Per Acre	Specific Directions
Pncklypear (Unburned rangeland)	1 qt (0.5 lb ae)	Best application time is generally from late August to early November. Applications at other times of the year may be less than optimum. Herbicidal activity on unburned pncklypear is very slow and may continue for two years or longer. Good coverage is essential.
Pncklypear (Burned rangeland)	1 pt (0.25 lb ae)	Install intense controlled burns during December through March. Then apply the product during mid-April through May. Rainfall following burning can also stimulate prolific resprouting of the burned plants. Good coverage is also essential.
Macartney rose, Multiflora rose (Mowed and other disturbed stands, within 3 years of disturbance)	1 qt (0.5 lb ae)	Add an approved agricultural surfactant (or use an oil-water emulsion) and use higher spray volumes (20 to 25 gal/acre by ground or a minimum of 5 gal/acre by air). Avoid spraying earlier than 9 to 12 months following mowing or when plants have a high percentage of new growth. Repeat treatment when necessary. Swath width should be such as to provide adequate overlap between swaths to facilitate good coverage. Product can be applied in the spring or fall if conditions are favorable for good plant growth.

Woody Plants - Broadcast Use Recommendations (Cont.)

Pest	Amount of Grazon PC (Picloram) Per Acre	Specific Directions
Mesquite	1 to 2 pt (0.25 to 0.5 lb ae) with 1/2 pt to 1 pt (0.25 to 0.5 lb ae) of Remedy or 2/3 to 1 1/3 pt (0.25 to 0.5 lb ae) of Reclaim	<p>Higher application rates should be used east of Interstate 35 (I-35). Environmental conditions may influence results considerably.</p> <p>For best results on mesquite, apply in the spring or early summer during the period approximately 40 to 90 days after the first green growth appears and when the soil moisture is adequate for good growth. A soil temperature of 78°F to 83°F at a depth of 12 to 18 inches has been reported as optimal for good plant control. Spraying should be postponed if the soil temperature is not at least 75°F at the 12 inch depth. Soil temperatures will vary with soil types. Clay soils (bottomland soils) or wet soils are colder and/or slower to warm up than coarser (upland soils) or dry soils. Degree of control can vary accordingly. Frost, hail, or insect damage can reduce plant root kill and may, if severe, prohibit treatment for that year. Do not treat when plants have new (light green) terminal growth in response to heavy rainfall during the growing season. Mesquite regrowth should be at least 4 feet in height for best results with broadcast foliar applications. Do not treat more than once a year. Retreatment may not be effective unless the trees have developed sufficient leaf surface to intercept the spray. Apply as a 1:5 oil:water emulsion in a total spray volume of 2 to 4 gallons per acre by air or 10 to 20 gallons per acre by ground. As brush density increases, use higher recommended spray volumes. Fall treatments are not recommended.</p>
South Texas mixed brush (including mesquite, pricklypear, blackbrush, twisted acacia, graryeno and guajillo)	1 qt (0.5 lb ae) with 1 to 2 pt (0.5 to 1.0 lb ae) of Remedy or 2/3 to 1 1/3 pt of Reclaim	<p>Apply in a minimum of 4 gal of oil-water emulsion per acre by air or 20 to 25 gal/acre by ground. See comments listed in the Mesquite Control section.</p>
Huisache (Suppression)	1 qt (0.5 lb ae)	<p>Fall applications are recommended. Performance can be erratic. Fall applications for Grazon PC alone are not suitable for mesquite control, or for control of certain other species found in the South Texas mixed brush complex.</p>

**Woody Plants - Broadcast Use Recommendations (Cont.)**

Pest	Amount of Grazon PC (Picloram) Per Acre	Specific Directions
Chinese tallowtree	1 qt (0.5 lb ae) with 2 pt (1.9 lb ae) of 2,4-D ester or 1 pt (0.5 lb ae) of Remedy	Add an approved agricultural surfactant (0.5% vol/vol) (or use an oil-water emulsion) and use higher spray volumes (20 to 25 gal/acre by ground, or a minimum of 5 gal/acre or more by air). The product may be applied in the spring or fall, if conditions are favorable for good plant growth.

**Annual and Perennial Weeds - Broadcast Use Recommendations**

Broom snakeweed Fall/Early Winter (Sept. - Nov.)	1 pt (0.25 lb ae)	In years of less-than-normal rainfall prior to flowering, apply only after flowering is completed. In years with normal to above-normal rainfall prior to or during flowering, apply the herbicide during full flower and/or active pollination, stopping with the initiation of new top growth. Applications should be made following sufficient moisture (snow or rainfall) to provide active plant growth (both basal and terminal leaves are green and actively growing).
Late Winter/Early Spring (Feb. - April)	1 qt (0.5 lb ae)	
Annual broomweed, bitterweed, bursage (bur ragweed), common ragweed, tasajillo, musk thistle, bull thistle	1 to 2 pt (0.25 to 0.5 lb ae)	Use the lower rate in very early season (March-April), when weeds are no more than 2 inches tall and conditions are favorable for good plant growth. Use the higher rate when weeds range from 3 inches tall to early flowering.
Bitter sneezeweed, buffalo bur, camphorweed, cocklebur, croton, marshelder (sumpweed, sulfaweed), smartweed, sunflower, wild carrot, prickly lettuce, annual broomweed, bitterweed, bursage (bur ragweed), common ragweed, tasajillo, musk thistle, bull thistle	<p>1/4 to 1/2 pt (0.0625 to 0.125 lb ae) with 0.5 to 1 pt of the desired 2,4-D formulation</p> <p>1/2 to 1 pt (0.125 to 0.25 lb ae) with 1 to 2 pt of the desired 2,4-D formulation</p>	For marshelder (sumpweed, sulfaweed), use a minimum of 0.5 pt of Grazon PC and 0.5 pt of 2,4-D plus surfactant. Apply when weeds are 3" to 6" tall using only the highest recommended total volume (aerial or ground).
Early season (March-April)		Lower tank mixes are effective only in very early season while weeds are no more than 2 inches tall and conditions are favorable for good plant growth.
Mid to late season (May-June)		Apply when weeds range from 3 inches tall to early flowering, with conditions favorable for good plant growth.

150700

**Annual and Perennial Weeds - Broadcast Use Recommendations (Cont.)**

Pest	Amount of Grazon PC (Picloram) Per Acre	Specific Directions
Lanceleaf ragweed	1/2 to 1 pt (0.125 to 0.25 lb ae) with 1 to 2 pt of 2,4-D	Use the lower rate in early season when weeds are no more than 2 inches tall and conditions are favorable for plant growth. Use the higher rate when weeds range from 3 inches tall to early flowering.
Bullnettle, silverleaf nightshade, upright prairie cone flower, western horsenettle, western ragweed, yankeeweed	1/2 to 1 pt (0.125 to 0.25 lb ae) with 1 to 2 pt of 2,4-D	Nettles and silverleaf nightshade should be treated when the plants begin to flower in the spring. Yankeeweed should be sprayed when plants are 8 to 10 inches tall; upright prairie cone flower should be sprayed when plants are 2 to 6 inches tall, before flowering.
Common goldenweed, Drummond's goldenweed (Isocoma spp.)	1 to 2 pt (0.25 to 0.5 lb ae) with 1 to 2 pt of 2,4-D	Add 0.25 to 0.5% (vol/vol) of an approved agricultural surfactant or oil-water emulsion with appropriate emulsifier. Higher spray volumes are recommended (15 to 20 gal/acre by ground and 4 to 5 gal/acre by air). Apply in the spring (April-June), when good growing conditions produce substantial canopy development. Good coverage is essential.
Poisonous plants (Such as: woolly loco, garbancillo (Wooton loco) and groundsel (Senecio spp.))	3/4 to 1 pt (0.1875 to 0.25 lb ae) with 1 to 2 pt of 2,4-D or 1 to 2 pt (0.25 to 0.5 lb ae)	Apply in fall or winter under good moisture conditions. Since locoweeds are difficult to wet, add an approved agricultural surfactant at 0.25 to 0.5% (vol/vol) (or apply as an oil-water emulsion). Herbicide application may increase palatability of these poisonous plants. Therefore treated areas should not be grazed until the toxic plants dry up and lose their palatability.
Gray goldaster, Narrowleaf goldaster	1 to 2 pt (0.25 to 0.5 lb ae) with 1 to 2 pt 2,4-D	Apply in the spring during the bud stage (pre-bloom). Apply in oil-water emulsion. Thorough coverage is essential.

**Note (Ground Application Special Equipment):** To control annual and perennial weed species using special low-volume, minimum drift equipment, such as the hooded Forage Chemical Mower, apply 1 to 2 pt (0.25 to 0.5 lb picloram) of Grazon PC in total volumes ranging from 1 gal to 5 gal per acre in water alone or as an oil-water emulsion at a 1:5 and 1:4 oil-to-water ration for a 1 gal and 5 gal per acre solutions, respectively.

Repeat applications may be made in successive years if more complete control is desired. Consult your Extension Weed Specialist for local recommendations.

**High-Volume Foliar Applications**

Spray to thoroughly wet foliage and stems. Use an approved agricultural surfactant at the rate of 0.25 to 0.5% v/v. Do not use more than 1 qt of Grazon PC (0.5 lb of picloram) per acre. To minimize spray drift, use lowest possible pressure and a coarse spray to achieve good coverage. Keep sprays no higher than brush tops. Naico-Trol drift control agent or equivalent is recommended. (See Table 5).

160720

**Woody Plants - High-Volume Foliage Use Recommendations**

Pest	Amount of Grazon PC 100 Gallons	Specific Directions
Pricklypear (burned/unburned rangeland) Broom snakeweed	2 to 4 qt (1 to 2 lb ae)	See "Broadcast Application" section for timing and specific directions.
Macartney rose, Multiflora rose	1 to 2 qt (0.5 to 1 lb ae) with 2 to 4 qt of 2,4-D	This technique can also be used for the control of large undisturbed clumps or for the control of small regrowth. Product can be applied in the spring or fall, if conditions are favorable for good plant growth.
Chinese tallow tree	2 qt (1 lb ae) or 1 to 2 qt (0.5 to 1 lb ae) with 2 to 4 qt of 2,4-D or with 1 qt Remedy	May be treated in spring or fall if conditions are favorable for good plant growth.
Mesquite	1 to 2 qt (0.5 to 1 lb ae) with 1 1/2 to 3 pt of Remedy or 1 to 2 qt of Reclaim	See "Broadcast Application" section for specific application information.
South Texas mixed brush (including mesquite, pricklypear, blackbrush, twisted acacia, grayseno and guajillo)	2 qt (1 lb ae) with 2 to 3 pt Remedy or 1 to 2 qt of Reclaim	See "Broadcast Application" section on mesquite for specific application information.
Huisache (Suppression)	2 qt (1 lb ae)	Apply in the fall. See details in "Broadcast Application" section.
Junipers (Cedars) (including alligator, redberry, Utah, one-seeded pinonpine, eastern redcedar)	2 qt (1 lb ae)	Apply in May through July. Results for ashe juniper can be variable using this technique. Complete coverage is essential.



**Broadleaf Weed Control - High-Volume Foliar Use Recommendations**

Pest	Amount of Grazon PC 100 Gallons	Specific Directions
Common goldenweed, Drummond's goldenweed, Poisonous plants (Such as: woolly loco garbancillo (Wooton loco) and groundsel (Senecio spp)).	2 qt (1 lb ae) with 1 gal of 2,4-D	See "Broadcast Application" section for best application timing. Herbicide application may increase palatability of these poisonous plants. Treated areas should not be grazed until toxic plants dry up and lose their palatability.
Annual broomweed, bitterweed, bursage (bur ragweed), common ragweed, tasajillo, must thistle, bull thistle, bitter sneezeweed, buffalo bur, camphorweed, cocklebur, croton, marshelder (sumpweed), smartweed, sunflower, wild carrot, prickly lettuce, lanceleaf, ragweed, bullnettle, silverleaf, nightshade, upright prairie cone flower, western horsenettle, western ragweed, yankeeweed, gray goldaster, narrowleaf goldaster	1 qt (0.5 lb ae) with 2 qt of 2,4-D	See "Broadcast Application" section for best application timing.

**Special Ground Applications**

Soil Spot Concentrate (Texas and Oklahoma):  
Use Grazon PC undiluted. Applications should precede

periods of expected rainfall. Apply directly to the soil within the dripline and on the upslope side of the tree. Applications to trees taller than 12 feet is not recommended.

Pest	Amount of Grazon PC to Use	Specific Directions
Ash juniper	4 to 6 mL per 3 foot of plant height	Apply in the spring (April-May).
Eastern redcedar	3 to 4 mL per 3 foot	Apply in either spring (April-May) or fall (September-October)
Eastern persimmon	2 to 4 mL per inch of stem diameter	Apply in spring (March through May).

**Carpet Roller:** Grazon PC can be applied with carpeted rollers where drift presents a hazard to susceptible crops, surface waters and other sensitive areas. Apply to previously untreated plants less than 6 feet tall, and short enough to pass beneath the tractor without breaking off at the ground. Applications made during periods of extended drought conditions will not provide acceptable control. Do not mow, burn or otherwise disturb the treated plants during the remainder of the growing season. Operate carpeted rollers as close to the ground as possible without breaking the stems, but

above the tallest grasses. Grasses growing adjacent to treated plants may exhibit temporary injury. Maximize herbicide deposition on foliage and stems and minimize drppage losses by rotating the carpeted roller at 30 to 40 rpm with the lower edge moving in the same direction as the direction of travel. Maintain the carpet sufficiently wetted to apply up to 1 gal/acre of herbicide-water mixture to stands of average density (100 to 200 plants/acre), and up to 2 gal/acre in dense stands (300 to 400 plants/acre). Rewet rollers at regular intervals.

**Carpet Roller - Use Recommendations**

Pest	Amount of Grazon PC to Use	Specific Directions
Mesquite regrowth	1 gal (2 lb ae) alone or with 2 qt Reclaim to make 8 gal spray mixture	Include 1 ounce of a recommended agricultural surfactant per gallon of herbicide-water mixture (0.75% vol/vol). Apply from May through August, but preferably in May and June, when moisture availability is sufficient to allow normal plant growth. See "Broadcast Application" section for more details regarding optimum conditions for mesquite control.
Huisache/Blackbrush	1 gal (2 lb ae) alone or with 2 to 3 qt of Reclaim to make 8 gal of spray mixture	Include 1 ounce of a recommended agricultural surfactant per gallon of herbicide-water mixture (0.75% vol/vol). Apply in the fall.

**Warranty Disclaimer**

DowElanco warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

**Inherent Risks of Use**

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of DowElanco or the seller. All such risks shall be assumed by Buyer.

**Limitation of Remedies**

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at DowElanco's election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

DowElanco shall not be liable for losses or damages resulting from handling or use of this product unless DowElanco is promptly notified of such loss or damage in writing. In no case shall DowElanco be liable for consequential or incidental damages or losses.

The terms of the "Warranty Disclaimer" above and this "Limitation of Remedies" cannot be varied by any written or verbal statements or agreements. No employee or sales agent of DowElanco or the seller is authorized to vary or exceed the terms of the "Warranty Disclaimer" or this "Limitation of Remedies" in any manner.

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# RESTRICTED USE PESTICIDE

May injure (phytotoxic) susceptible, non-target plants. For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.



For distribution and use only within New Mexico, Oklahoma, and Texas

For the control of broadleaf annual and perennial weeds, pricklypear, mesquite and various other species on rangeland and permanent grass pastures

Active ingredient(s):

picloram: 4-amino-3,5,6-trichloropicolinic acid, as the potassium salt	24.4%
Inert Ingredients	75.6%
Acid Equivalent	
picloram: 4-amino-3,5,6-trichloropicolinic acid	21.1% - 2 lb/gal

## Precautionary Statements

### Hazards to Humans and Domestic Animals

## Keep Out of Reach of Children

# WARNING

Causes Substantial But Temporary Eye Injury - Harmful If Inhaled Or Absorbed Through Skin

Do not get in eyes or on clothing. Wear goggles, face shield or safety glasses when handling. Avoid contact with skin. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Avoid breathing spray mist.

### First Aid

If in eyes: Flush with plenty of water for at least 15 minutes. Get medical attention.

If swallowed: Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not contaminate water used for irrigation or domestic purposes by cleaning of equipment or disposal of wastes. Do not allow run-off or spray to contaminate

wells, irrigation ditches or any body of water used for irrigation or domestic purposes. Do not make application when circumstances favor movement from treatment site. See additional Environmental Hazards under Precautionary Statements inside label booklet.

## Directions for Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. Do not use for manufacturing or formulating.

## STORAGE AND DISPOSAL

Do not contaminate water, food, fertilizer or feed by storage or disposal. Open dumping is prohibited.

**Pesticide Disposal:** Excess pesticide should be used according to label directions or disposed of at an approved waste disposal facility.

**Plastic Container Disposal:** Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Metal Container Disposal:** Do not reuse container. Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Sprayer Clean-Out:** To avoid injury to desirable plants,

equipment used to apply Grazon PC herbicide should be thoroughly cleaned before reusing to apply any other chemicals.

1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of rinse water in non-cropland area away from water supplies.
2. Rinse a second time, adding 1 qt of household ammonia for every 25 gal of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Nozzles and screens should be removed and cleaned separately.

Refer to attached label booklet for additional precautionary information and Directions for Use.

**Notice:** Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet. In case of emergency endangering health or the environment involving this product, call collect 517-636-4400.

**Agricultural Chemical:** Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-181  
39173

EPA Est. 464-M-1  
900-001806

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## Specialty Herbicide