



**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**Office of Pesticide Programs**  
**Registration Division (7505P)**  
**Ariel Rios Building**  
**1200 Pennsylvania Ave., NW**  
**Washington, D.C. 20460**

EPA Reg. Number:  
62719-571

Date of Issuance:  
AUG 17 2009

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration  
 (under FIFRA, as amended)

Term of Issuance:

Name of Pesticide Product:  
Grazon PD<sup>2</sup>

Name and Address of Registrant (include ZIP Code):  
 Dow AgroSciences LLC  
 9330 Zionsville Rd.  
 Indianapolis, IN 46268

**Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.**

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA section 4(g)(2)(C) provided you:

1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
2. Make all the following changes to the product label:
  - a. Revise the Hazards to Humans and Domestic Animals section to read "Causes moderate eye irritation. Harmful if swallowed. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals."
  - b. Revise the first PPE sentence to read "Some materials that are chemical-resistant to this product are those made of any waterproof material."
  - c. Revise the PPE for gloves to read "Chemical-resistant gloves (except for pilots)". The PPE "protective eyewear" is optional due to the eye toxicity category and may be removed.
  - d. Revise the second bullet in the User Safety Recommendations box to read "Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing."

Continued on Page 2

Signature of Approving Official:  
  
 Joanne Miller  
 Product Manager 23  
 Herbicide Branch  
 Registration Division (7505P)

Date:  
AUG 17 2009

- e. Revise the first paragraph in the Environmental Hazards section to read as follows:  
“This pesticide ~~may be~~ is toxic to fish and aquatic invertebrates. **This pesticide is toxic to some plants at very low concentrations. Non-target plants may be adversely affected if pesticide is allowed to drift from areas of application.** Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. ~~except as noted on appropriate labels.~~ Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.”
- f. Revise the first sentence in the Groundwater statement to read “This chemical ~~has properties and characteristics associated with chemicals detected in groundwater.~~ **is known to leach through soil into groundwater under certain conditions as a result of label use.**”
- g. As per the picloram RED, the Surface water statement must be included in the Environmental Hazards section as follows:  
"This chemical can contaminate surface water through spray drift. Under some conditions, this chemical may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water."
- h. Revise the restricted entry interval (REI) from “12 hours” to “48 hours”, as per the 2,4-D RED.
- i. Remove the text “Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.” from the Agricultural Use Requirements box, as it is no longer required for dicamba.
- j. On page 9, move the restriction “Do not apply this product through any type of irrigation system.” to the Use Precautions and Restrictions section on page 12.
- k. On page 11, revise the heading from “Maximum Use Rates” to “Application Rate Restrictions”. Revise the section text to read “Total use of Grazon PD<sup>2</sup> herbicide must not exceed 1 gallon (2 lb ae 2,4-D, 0.5 lb ae picloram, 0.5 lb ae dicamba) per acre per application. A minimum interval of 30 days is required between applications. Do not make more than 2 applications per annual growing season.”
- l. On page 10, revise the heading from “General Information” to “Product Information”.
- m. On page 10, revise the last sentence to read “Grazon PD<sup>2</sup> herbicide **is for use** in rangeland and permanent grass pastures to selectively control many annual, biennial...”

- n. On page 11, remove the word “General” from the heading “General Use Precautions and Restrictions”.
- o. It is suggested that the advisory precautions be distinguished from the mandatory restrictions by placing them under separate subsections.
- p. On page 11, revise the sentence to read “Grazon PD<sup>2</sup> herbicide ~~should~~ **must** not be applied in residential areas or near ornamental trees and shrubs.”
- q. On page 12, remove the word “chemigation” from the Spray Drift Management sentence “A variety of factors including weather conditions...”, since chemigation is prohibited.
- r. On page 12, revise the sentence in the Spray Drift Management section to read “Avoiding spray drift at the application site is the responsibility of the applicator **and the grower.**”
- s. On page 13, revise the word from “swatch” to “swath” in the sentence “If applying a Medium spray, leave one swateh unsprayed at the downwind edge of the treated field.”
- t. On page 13, remove “2,4-D” from the sentence “Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-~~D~~ herbicides.”
- u. On page 19, revise the third sentence to read “Do not use more than 1 gallon (**2 lb ae 2,4-D, 0.5 lb ae picloram, 0.5 lb ae dicamba**) of Grazon PD<sup>2</sup> herbicide per acre **per application.**”
- v. On pages 19 & 20 under High-Volume Foliar Applications, the product rates of “2 gallons” exceed allowable maximums and must be lowered to “1 gallon”. Also, application rates must specify the treated area (ex. “1 Gallon/100 Gallons of Spray/Acre”).
- w. On page 20, revise the second bullet to read “Limited to 2 applications per **annual growing season.**”
- x. On page 20, remove the third and fourth bullets, and add a bullet with the restriction “Maximum single application rate of 1.0 gallon of product (2 lb ae 2,4-D, 0.5 lb ae picloram, 0.5 lb ae dicamba) per acre.”
- y. Add the following statement to the labeling:

“Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et al. vs. EPA, C01-0132C, (W.D. WA). For further information, please refer to EPA Web Site: <http://www.epa.gov/espp>.”

- z. Add the following statement to the labeling as required for all picloram products:

“Every 2 years starting January 1, 2008, the registrant will offer training to applicators which will cover application techniques and product stewardship particular to their use(s) of this product (Grazon PD<sup>2</sup>, Registration Number 62719-571). Applicators of this product must be able to provide certification of such training on demand to the State, Tribal, or Federal enforcement agent.”

A stamped copy of your label is enclosed for your records. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after twelve (12) months from the date of this notice or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Enclosure

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(Base label):

**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<sup>®</sup> PD<sup>2</sup>

## Herbicide

**For the control of broadleaf annual and perennial weeds, and certain woody species on CRP, rangeland and permanent grass pastures.**

<b>Group</b>	<b>4</b>	<b>HERBICIDE</b>
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**Active Ingredients:**

- picloram: 4-amino-3,5,6-trichloro-2-pyridine-carboxylic acid, triisopropanolamine salt ...9.13%
- 2,4-dichlorophenoxyacetic acid, triisopropanolamine salt .....38.01%
- dicamba: 3,6-dichloro-2-methoxy-benzoic acid .....5.09%
- Other Ingredients .....47.77%
- Total ..... 100.0%

**Acid Equivalents:**

- picloram (4-amino-3,5,6-trichloro-2-pyridine-carboxylic acid) - 5.09% - 0.5 lb/gal
- 2,4-dichlorophenoxyacetic acid - 20.37% - 2 lb/gal
- dicamba (3,6-dichloro-2-methoxy-benzoic acid) - 5.09% - 0.5 lb/gal

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**

*AUG 17 2009*

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

62719-571

**Keep Out of Reach of Children**

## CAUTION

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Causes Substantial but Temporary Eye Injury • Harmful if Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.**

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

**All mixers, loaders, applicators, flaggers and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

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- Chemical-resistant gloves, when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- Chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- See Engineering Controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

### Engineering Controls

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the WPS (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)].

### User Safety Recommendations:

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### First Aid

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

This pesticide may be toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark except as noted on appropriate labels. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Nonrefillable containers 5 gallons or less:****Storage and Disposal**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** If exposed to subfreezing temperatures (below 32° F), the product should be warmed to at least 40° F and agitated thoroughly before using.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable containers larger than 5 gallons:****Storage and Disposal**

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** If exposed to subfreezing temperatures (below 32° F), the product should be warmed to at least 40° F and agitated thoroughly before using.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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[cover]

**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<sup>®</sup> PD<sup>2</sup>**  
**Herbicide**

**For the control of broadleaf annual and perennial weeds, and certain woody species on CRP, rangeland and permanent grass pastures.**

<b>Group</b>	<b>4</b>	<b>HERBICIDE</b>
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**Active Ingredients:**

- picloram: 4-amino-3,5,6-trichloro-2-pyridine-carboxylic acid, triisopropanolamine salt ...9.13%
- 2,4-dichlorophenoxyacetic acid, triisopropanolamine salt .....38.01%
- dicamba: 3,6-dichloro-2-methoxybenzoic acid .....5.09%
- Other Ingredients .....47.77%
- Total ..... 100.0%

**Acid Equivalents:**

- picloram (4-amino-3,5,6-trichloro-2-pyridine-carboxylic acid) - 5.09% - 0.5 lb/gal
- 2,4-dichlorophenoxyacetic acid - 20.37% - 2 lb/gal
- dicamba (3,6-dichloro-2-methoxy-benzoic acid) - 5.09% - 0.5 lb/gal

**Keep Out of Reach of Children**  
**CAUTION**

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

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

EPA Reg. No. 62719-571

EPA Est. \_\_\_\_\_



(inside booklet)

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals**

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**CAUTION****Causes Substantial but Temporary Eye Injury • Harmful If Swallowed**

**Do not get in eyes or on clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.**

**Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

**All mixers, loaders, applicators, flaggers and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear
- Chemical-resistant gloves, when applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- Chemical resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- See Engineering Controls for additional requirements.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

**Engineering Controls**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the WPS (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)].

**User Safety Recommendations:**

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**First Aid**

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

This pesticide may be toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark except as noted on appropriate labels. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

### 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 apply this product through any type of irrigation system.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls worn over short-sleeve shirt and short pants
- chemical resistant footwear plus socks
- chemical-resistant gloves made of any water-proof material
- chemical-resistant headgear for overhead exposure
- protective eyewear

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Entry Restrictions for Non-WPS Uses:** Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

### Storage and Disposal

Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** If exposed to subfreezing temperatures (below 32° F), the product should be warmed to at least 40° F and agitated thoroughly before using.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

#### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### Refillable containers larger than 5 gallons:

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable containers larger than 5 gallons:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### General Information

Grazon PD<sup>2</sup> herbicide in rangeland and permanent grass pastures to selectively control many annual, biennial, and perennial broadleaf weeds and woody species listed on this label.

Herbicidal effects of Grazon PD<sup>2</sup> herbicide occur primarily from uptake by plant foliage and translocation throughout the plant, however, secondary herbicidal activity may occur from soil uptake of picloram. Very small amounts can kill or damage broadleaf plants. To prevent damage to crops and other desirable plants, carefully follow all directions and precautions.

**General Use Precautions and Restrictions**

Observe any special use and application restrictions and limitations, including method of application and permissible areas of use as required by state or local regulations. When used in tank mix combination with other products, follow all applicable use directions, precautions, restrictions, and limitations on the labels of each product used.

**Application Rate Ranges:** Use higher rates in areas with dense weed populations or for longer residual control. For best results, the lower rate should be used only when environmental conditions are favorable for plant growth and when the plants are in the recommended growth stage. Compared to results obtained with the higher rate, a lower rate may be slower to show activity, provide a lower level of control, and may require retreatment.

**Maximum Use Rates:** Total use of Grazon PD<sup>2</sup> herbicide must not exceed 4 quarts per acre per annual growing season. Repeat treatments may be applied as necessary, but total use must not exceed 4 quarts per acre per annual growing season.

**Grazing Restrictions:**

- There are no grazing restrictions for non-lactating dairy animals or other livestock **including horses, sheep, goats, and other animals in the treatment area.**
- Do not allow lactating dairy animals to graze treated areas within 7 days after application.
- Do not harvest grass cut for hay from treated areas for 37 days after application.
- Meat animals must be withdrawn from treated forage at least 30 days before slaughter

**Grazon PD<sup>2</sup> herbicide should not be applied in residential areas or near ornamental trees and shrubs.** Untreated trees can 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 PD<sup>2</sup> herbicide within the area occupied by roots of desirable trees, unless such injury can be tolerated.

**On areas treated with this product, do not rotate to crops intended for food or feed use,** other than range or pasture grasses, rye, forage sorghum, sudangrass, wheat, barley or oats not underseeded with a legume. **Do not move treated soil, or use treated soil for growing other plants** until soil residues of picloram are no longer detectable as indicated by an adequately sensitive bioassay or chemical test.

**Do not spray pastures if the injury to existing forage legumes cannot be tolerated.** Grazon PD<sup>2</sup> herbicide may injure or kill legume plants. Forage legumes may be less sensitive to the herbicide after the seed has set and plant growth is mature. Seeding of legumes may not be successful if made within one year of application depending on rate applied.

**Established grasses are tolerant to this product,** but newly seeded grasses may be injured until well established as indicated by tillering, development of a secondary root system and vigorous growth (see Planting Grasses Section).

Grazon PD<sup>2</sup> herbicide may **suppress certain established grasses** such as smooth brome grass and buffalograss. However, subsequent grass growth should be improved by release from weed competition. Smooth brome grass grown for seed may be sensitive to this product if applied under adverse growing conditions (moisture stress).

**Do not transfer livestock** from treated grazing areas to 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 grass or hay from treated areas or manure from animals being fed treated forage or hay for composting or mulching of desirable, susceptible 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.**

**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 run-off 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.**

**Do not apply or otherwise permit Grazon PD<sup>2</sup> herbicide or sprays containing Grazon PD<sup>2</sup> herbicide 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 make application when circumstances favor movement from treatment site.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

### **Spray Drift Management**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

#### **Droplet Size**

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

#### **Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

#### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

#### **Susceptible Plants**

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, fruit trees, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that may not be visible may injure susceptible broadleaf plants.

#### **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

#### **Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

#### **Aerial Application**

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

#### **Ground Boom Application**

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

**Temperature And Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

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### **Application Directions**

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#### **Broadcast Foliar Application (Ground or Aerial)**

Unless otherwise specified, apply in water alone or in an oil-water emulsion in a total spray volume of 10 to 40 gallons per acre using ground equipment or 1 or more gallons per acre by aerial application. If aerially applied, results will be more consistent for spray volumes of 2 or more gallons per acre. Use of the lower total spray volume with ground equipment is recommended primarily where Grazon PD<sup>2</sup> is applied simultaneously with liquid fertilizer. Good coverage is essential. For aerial application, swath width should not exceed 1 1/4 times the wingspan of the aircraft.



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To provide more complete wetting and coverage of the foliage, a non-ionic surfactant may be used at recommended rates. The use of a drift control additive is recommended for drift reduction and improved deposition.

**Section I: Control of Broadleaf Weeds and Woody Plants in Rangeland and Permanent Grass Pastures in the Southwest, Southeast, and Mid-Atlantic States**

**1 - 2 Pints/Acre or 3 - 4 Pints/Acre:** Apply at the rate indicated by stage of growth to control the following woody plants or broadleaf weeds:

Weed Species	Specific Use Directions
annual broomweed, bitter sneezeweed, bitterweed, buffalo bur, bull thistle, bursage (bur ragweed), camphor weed, cocklebur, common ragweed, croton, horseweed, lambsquarters, pigweed, prickly lettuce, smartweed, sunflower, tasajillo, wild carrot	<p><b>Early Season: Apply at a rate of 1 - 2 pt/Acre</b> in early to mid spring when weeds are less than 3 inches tall. Rates in the lower end of the rate range are effective only when weeds are less than 2 inches tall and conditions are favorable for plant growth.</p> <p><b>Mid to Late Season: Apply at a rate of 3 - 4 pts/Acre</b> in late spring to early summer when weeds are 3 inches tall to early flowering.</p>

**2 - 4 Pints/Acre:** Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:

Weed or Brush Species	Specific Use Directions
aster, heath	Apply prior to bud stage when actively growing.
aster, spiny (Mexican devilweed)	Apply prior to bud stage when actively growing.
bee plant, Rocky Mountain	Apply prior to bud stage when actively growing.
bindweed, hedge	Apply prior to bud stage when actively growing.
blackberry	Tank-mix 2 pints per acre of <b>Grazon PD<sup>2</sup> herbicide</b> with 1 pint per acre of Remedy <sup>®</sup> herbicide plus surfactant. Apply in late May to early June during or after bloom (not before) when the foliage is dark green. Do not treat blackberries in the same year after mowing, shredding, or burning. Even one year after removal of top growth, blackberry stands will be more difficult to control than undisturbed stands and will require retreatment.
buckwheat, climbing false	Apply prior to seed development when actively growing.
buckwheat, wild	Apply prior to seed development when actively growing.
bullnettle, western	Apply in spring when plants begin to flower.
bundleflower, Illinois	Apply prior to bud stage when actively growing.
burdock, common	Apply prior to bud stage when actively growing.
buttercup	Apply in early spring prior to bud stage.
chickweed, mouseear	Apply prior to bud stage when actively growing.
chicory	Apply from rosette stage to early bud stage when actively growing.
coneflower, upright prairie	Apply when plants are to 6 inches tall, but before flowering.
common goldenweed, Drummond's goldenweed ( <i>Isocoma</i> spp.)	Apply in the spring (April-June) when favorable growing conditions result in substantial canopy development. Thorough and uniform coverage is essential. Use higher spray volumes (20-25 gpa for ground and 4-5 gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions).

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curly dock	<b>Early Season: Apply 2 pints per acre</b> prior to bolting stage of growth. <b>Mid-to-Late Season: Apply at a rate of 3 - 4 pts/Acre</b> from bolting to bud stage.
devil's-claw	Apply prior to flowering when actively growing.
dogfennel (cypressweed)	Apply when plants are from 6 to 24 inches tall, but before flowering. Increase rate within the rate range as season progresses and plants become larger.
erigonum, annual	Apply prior to bud stage when actively growing.
fleabane, rough	Apply prior to bud stage when actively growing.
gray goldaster narrowleaf goldaster	Apply in the spring during the bud stage (pre-bloom) using an oil-water emulsion spray. Thorough coverage is essential.
goldenrod, Missouri	Apply prior to bud stage when actively growing.
goldenweed, common, goldenweed, Drummond's ( <i>Isocoma</i> spp.)	Apply in the spring (April-June) when favorable growing conditions result in substantial canopy development. Thorough and uniform coverage is essential. Use higher spray volumes (20-25 gpa for ground and 4-5 gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions).
hemlock, poison	Apply from rosette stage in spring or fall up to 36" tall.
hemlock, water (common)	Apply from rosette stage in spring or fall up to bud stage.
horsenettle, Carolina	Apply at <b>2 pts/Acre</b> when plants are 4-6 inches tall. A <b>2 pts/Acre</b> retreatment may be necessary for acceptable control. Apply <b>3 - 4 pts/Acre</b> when flowering or for longer residual control of later emerging plants and greater stand reduction the following year.
horehound	Apply during active growth.
jimsonweed	Apply prior to bud stage when actively growing.
marshelder (sumpweed)	Apply in early season when weeds are less than 4 inches tall. Older plants require higher rates. Thorough and uniform coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment)
morningglory, ivyleaf	Apply prior to bud stage when actively growing.
mugwort	Apply prior to bud stage when actively growing.
nightshade, silverleaf	Apply at <b>2 pts/Acre</b> when plants are 4-6 inches tall. Apply <b>3 - 4 pts/Acre</b> when flowering or for longer residual control of later emerging plants and greater stand reduction the following year. Retreatment is necessary for total control.
pennycress, field	Apply when plants are to 6 inches tall, but before flowering.
plantain, buckhorn	Apply prior to bud stage when actively growing.
pricklypoppy, annual	Apply prior to bud stage when actively growing.
puncturevine	Apply prior to flowering when actively growing.
ragweed, common, giant, lanceleaf and western	Use lower rates in rate range when weeds no more than 2 inches tall and conditions are favorable for plant growth. Use higher rates when weeds are from 3 inches tall to early flowering.
sagebrush, sand	Apply when new terminal growth reaches 6 - 12" and before average daytime temperature reaches 95 degrees F. Use low rate only in early season.
snow-on-the-mountain	Apply prior to bud stage when actively growing.
sowthistle, spiny (prickly)	Apply prior to bud stage when actively growing.
stickweed	Apply at <b>2 - 3 pts/Acre</b> prebloom.
thistles, biennial: including bull, musk, plumeless or scotch	Apply at <b>2 pts/Acre</b> at rosette stage. Apply at <b>Rate 3 - 4 pts/Acre</b> in mid to late season from bolting to bud stage.
vervain, blue vervain, hoary	Apply when plants are 6 inches tall to early flowering. Increase rate within the rate range as season progresses and weeds mature.

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vetch, hairy	Apply prior to bud stage when actively growing.
wingstem	Apply 2 - 3 pts/Acre prebloom.
yankeeweed	Apply when plants are 8 to 10 inches tall.

<b>3 - 4 pts/Acre:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
Weed or Brush Species	Specific Use Directions
mesquite and oak sprouts (suppression of regrowth):	Delay applications of <b>Grazon PD<sup>2</sup> herbicide</b> for weed control until the foliage of regrowth brush in the treatment area is fully expanded and turned from light to dark green.
milkweed	Apply <b>4 pts/Acre</b> to actively growing milkweeds less than 4 inches tall. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
mullein, common	Apply <b>4 pts/Acre</b> during the rosette stage in spring or fall prior to bolting. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
poisonous plants such as: groundsel ( <i>Senecio</i> spp.), garbancillo, (Wooton loco) and Woolly loco	Apply in fall or winter when moisture conditions are favorable. Because locoweeds are difficult to wet, use of a surfactant (0.25-0.5% vol/vol) or oil-water emulsion is recommended (see Mixing Instructions). <b>Herbicide treatment may increase palatability of poisonous plants. Treated areas should not be grazed until the toxic plants are no longer palatable.</b>
thistle, wavyleaf	Apply from rosette to late bolt stage.
tropical soda apple	Apply when plants are beginning to flower.

<b>1 Gallon/Acre:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
Weed or Brush Species	Specific Use Directions
cactus, pricklypear or cholla	Make ground broadcast application in the spring or early summer to control a broad spectrum of broadleaf weeds in addition to pricklypear.
Chinese tallowtree	Apply in spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is required. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions).
Macartney rose multiflora rose	Apply in spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions). Avoid application within 9-12 months after mowing or when plants have a high percentage of new growth. Poor control will result if plants are less than 3 ft tall.
locust (honey and black) wild plum	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended.

<b>1 Gallon/Acre:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
Weed or Brush Species	Specific Use Directions

Macartney rose multiflora rose	Apply in spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions). Avoid application within 9-12 months after mowing or when plants have a high percentage of new growth. Poor control will result if plants are less than 3 ft tall.
locust (honey and black) wild plum	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended.

## Section II: Control of Broadleaf Weeds and Woody Plants in Rangeland and Permanent Grass Pastures in the North and Northwestern U.S. including Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming

For best results in terms of forage response, desirable forage grasses should be present in the area to be treated in sufficient density to provide competition to lessen weed re-establishment following treatment. Additionally, good grazing management practices are recommended, particularly in the year following treatment, to allow forage grass density to increase.

**Application Rates:** Use higher rates in areas with dense weed populations or for longer residual control. For best results, the lower rate should be used only when environmental conditions are favorable for plant growth and when the plants are in the recommended growth stage. Compared to results obtained with the higher rate, a lower rate may be slower to show activity, provide a lower level of control, and may require retreatment.

<b>2 to 4 Pints/Acre:</b> Apply at the indicated stage of growth to control the following broadleaf plant species. Increase rate within rate range as growing season progresses:	
<b>Weed or Brush Species</b>	<b>Specific Use Directions</b>
absinth wormwood annual broomweed	Apply when actively growing in spring or early summer.
biennial thistles, such as bull, musk, plumeless or scotch	Apply <b>2 pt/Acre</b> at rosette stage. Apply <b>3 to 4 pt/Acre</b> to bolted thistle, but apply before early bud stage.
broom snakeweed	Apply after full leaf development to early bloom stage when plants are actively growing.
curly dock	Apply <b>2 pt/Acre</b> early season prior to bolting. Apply <b>3 to 4 pt/Acre</b> in mid to late season from bolting to early flower.
curlycup gumweed	Apply when new growth and seedlings have fully emerged before bloom stage.
fringed sagebrush	Apply a minimum of <b>3 pt/Acre</b> after seed stalk elongation and early flowering (mid - late June) and throughout the summer under good growing conditions.
goldenrod	Apply prior to bud stage during active growth.
hemp (marijuana) hemlock, poison	Apply from rosette stage in spring or fall up to 36" tall.
hemlock, water (common)	Apply from rosette stage in spring or fall up to bud stage.
ironweed, western	Apply <b>2 to 3 pt/Acre</b> prior to bud stage during active growth. A surfactant is recommended.
locoweeds, such as silky crazyweed (white point loco) and lambert crazyweed	Apply from early bud to early bloom stage. Herbicide application may increase palatability of these poisonous plants. Therefore, treated areas should not be grazed until after the toxic plants have dried up. Higher rate range should be considered to provide greater reduction of

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	poisonous plants.
phlox, hoods	Apply during active growth.
plains pricklypear	Apply when the majority of plants are in the flower stage. The lower rate will provide a partial stand reduction. More complete control may be obtained with the higher rate. Treatment response is very slow and may continue for 2 years or longer.
ragweed, common, giant, lanceleaf and western	Use the lower rate in early season when weeds are no more than 2 inches tall. Use the higher rate when weeds range from 3 inches tall to early flowering, when conditions are favorable for plant growth.
thistles, biennial: including bull, musk, plumeless or scotch	Apply <b>2 pt/Acre</b> at rosette stage. Apply <b>3 to 4 pt/Acre</b> in mid to late season from bolting to bud stage.
vervain, blue and hoary	Apply when plants are 6 inches tall to early flowering. Increase rate within the rate range as season progresses and plants mature.
wormwood, Louisiana and absinth	Apply during active growth prior to woody stem development.
yarrow	Apply <b>2 pt/Acre</b> prior to bud stage. A surfactant is recommended.

<b>4 Pints/Acre:</b> Apply at the indicated stage of growth to control the following broadleaf weed species:	
<b>Weed or Brush Species</b>	<b>Application Timing</b>
dense clubmoss	Apply in early summer with a surfactant at 0.25% v/v.
geyer larkspur	Apply from rosette to flower bud formation.
hairy goldenaster	Apply at bloom stage during active growth.
houndstongue	Apply to rosettes in late fall or early summer
larkspur, plains	Apply prior to bud stage when actively growing.
licorice, wild	Apply at bloom stage, but before bur formation.
loco, woolly	Apply from bolting to early bloom. Herbicide application may temporarily increase palatability of this poisonous plant. Therefore, treated areas should not be grazed until toxic plants have dried up.
milkweed, common	Apply at bud stage when actively growing.
mullein, common	Apply during rosette stage in spring or fall prior to bolting. Add a surfactant at the manufacturer's recommended rate to improve wetting of foliage.
oxeye daisy	Apply <b>3-4 pt/Acre</b> when all plants have emerged to late flowering.
pussytoes	Apply prior to bud stage when actively growing. Use a surfactant at the manufacturer's recommended rate to improve wetting of foliage.

<b>1 Gallon/Acre:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
<b>Weed or Brush Species</b>	<b>Specific Use Directions</b>
Macartney rose multiflora rose Chinese tallow	Apply in spring or fall when conditions are favorable for plant growth. Thorough and uniform spray coverage is essential. Use higher spray volumes (20-25 gpa for ground and 5 or more gpa for aerial equipment). Use of a non-ionic surfactant or oil-water emulsion is recommended (see Mixing Instructions). Avoid application within 9-12 months after mowing or when plants have a high percentage of new growth. Poor control will result if plants are less than 3 ft tall.
locust (honey and black) wild plum	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended.

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### High-Volume Foliar Applications

Spray to thoroughly wet foliage and stems. The use of an approved agricultural surfactant is recommended. Do not use more than 1 gallon of Grazon PD<sup>2</sup> herbicide (0.54 lb of picloram) per acre. To minimize spray drift, use lowest possible pressure and coarse spray to achieve good coverage. Keep sprays no higher than brush tops. Use of an approved drift control agent is recommended to reduce the potential for spray drift.

<b>1 Gallon/100 Gallons of Spray:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
<b>Weed or Brush Species</b>	<b>Specific Use Directions</b>
blackberry, elm, granjeno, locust, maple, oaks, sweetgum, sumac	Tank mix recommended rate of Grazon P+D with 1-2 qt/100 gallons of Remedy and apply in late spring to early summer when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Spray to thoroughly wet foliage. For best results on blackberry, treat during or after bloom.
annual broomweed, bitterweed, bitter sneezeweed, bullnettle, bursage (bur ragweed), bull thistle, buffalo bur, camphorweed, cocklebur, common ragweed, croton, gray goldaster, lanceleaf ragweed, marshelder (sumpweed), musk thistle, narrowleaf goldaster, prickly lettuce, smartweed, sunflower, wild carrot, silverleaf nightshade, tasajillo, upright prairie cone flower, western horsenettle, western ragweed, yankeeweed	Apply when target weeds are 2-3 inches tall until early flowering.
flameleaf sumac, honeylocust,	Apply in spring when leaves are fully expanded and mature. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Spray to thoroughly wet foliage.
Tropical soda apple	Apply when plant begin to flower.

<b>1-2 Gallons/100 Gallons of Spray:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
<b>Brush Species</b>	<b>Specific Use Directions</b>
Marcartney rose, multiflora rose	Apply in spring or fall when conditions are favorable for plant growth. High volume application is recommended for control of large undisturbed clumps or small regrowth.

<b>2 Gallons/100 Gallons of Spray:</b> Apply at the indicated stage of growth to control the following woody plants or broadleaf weeds:	
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Weed or Brush Species	Specific Use Directions
Chinese tallow tree	Apply in spring or fall when conditions are favorable for plant growth.
cactus, pricklypear or cholla	Applications may be made throughout the year. Spray to wet all pads to runoff. Use of a surfactant (0.25-0.5% vol/vol) is recommended. Water soluble dye may be added to the spray mixture to mark treated plants.
common goldenweed, Drummond's goldenweed	Apply in the spring (April-June) when favorable growing conditions result in substantial canopy development.
poisonous plants such as: groundsel ( <i>Senecio</i> spp.), garbancillo (Wooton loco), and Woolly loco	Apply in fall or winter when moisture conditions are favorable. Herbicide treatment may increase palatability of poisonous plants. Treated areas should not be grazed until the toxic plants have dried up and lost their palatability.

### Treatment After Planting Grasses, Including Conservation Reserve Program (CRP) Acres

#### Restrictions

- The preharvest interval (PHI) is 7 days (cut forage for hay).
- Postemergence:
- Limited to 2 applications per year
  - Maximum of 2.0 lbs 2,4-D ae/acre per application
  - Maximum single application rate 1.0 lb dicamba ai/acre
  - Minimum of 30 days between applications
  - If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable
  - For program lands, such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

#### Weed Control Prior to Seeding Planting Grasses

Grazon PD<sup>2</sup> herbicide may be applied to control weeds prior to planting **cool season grasses**. Apply Grazon PD<sup>2</sup> herbicide at 4 pints per acre or less depending on the target species. Grazon PD<sup>2</sup> herbicide may be tank-mixed with Glyphomax Plus (glyphosate) to control grasses prior to seeding.

- To optimize weed control, minimal disturbance of the treatment area with the seeding operation is suggested. The site should be left undisturbed for a minimum of **21 days prior to seedbed preparation or seeding**. To optimize weed control and reduce the potential for injury of seeded grasses, increase the interval between application of Grazon PD<sup>2</sup> herbicide and planting grass seed.
- Do not plant smooth brome grass for 60 days after treatment.

#### Perennial Grasses

Applications of Grazon PD<sup>2</sup> herbicide to perennial grasses should be made only after perennial grasses are well established as indicated by vigorous growth and a well-developed secondary root system.

**Sprigged Bermudagrass:** Grazon PD<sup>2</sup> herbicide at 1.5 pints per acre or less can be used on sprigged bermudagrass once the runners (stolons) have reached 6 - 12 inches in length and growing conditions are favorable.

**Overseeding:** Grazon PD<sup>2</sup> herbicide at rates of 1.5 pints per acre or less can be applied to permanent pastures that have been over seeded with small grains (such as barley, forage sorghum, oats, rye, ryegrass, sudangrass or wheat) grown for pasture or hay only. Young seedling small grains or grasses are sensitive to Grazon P+D. Grazon P+D should not be applied until overseeded grasses are well established and at tillering stage of growth or later.

**Precautions:**

- Applications of Grazon PD<sup>2</sup> herbicide to established warm season grasses such as bermudagrass during initial greenup in early spring could delay or suppress emergence of new growth. If temporary suppression of new growth cannot be tolerated, application of Grazon PD<sup>2</sup> herbicide should be made prior to greenup or after vigorous vegetative growth has resumed.
- Do not use Grazon PD<sup>2</sup> herbicide if legumes are a desired cover during CRP.
- Conditions unfavorable to plant growth, such as drought, will increase potential for injury to grasses at all stages of growth.
- **Crop Rotation:** Do not rotate to grain sorghum (milo) if greater than 4 pints per acre of Grazon PD<sup>2</sup> herbicide has been applied. For rates below 4 pints per acre, do not plant grain sorghum for 8 months after application. This product is not intended for use on land planted to sweet sorghum. To avoid potential crop injury, planting of small grains should be delayed a minimum of 60 days of soil temperatures above 40°F following application, except in Idaho, North Dakota, Nebraska, Montana, Oregon, South Dakota, Washington and Wyoming, where the minimum interval should be 90 days.
- After CRP, do not plant broadleaf crops in treated acres until an adequately sensitive bioassay (described below) shows that no detectable picloram is present in the soil.

**Field Bioassay Instructions:** In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application. The test area should sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. The field bioassay can be initiated at any time between harvest of the treated crop and the planting of the rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop such as pasture grasses, small grains (barley, oats, rye or wheat), or, after a rotational interval of 8 months, grain sorghum.

**Mixing Instructions**

**Ground or Aerial Application – For Use 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 PD<sup>2</sup> herbicide. 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 drift control additive, carefully follow the manufacturer's directions. Complete dispersion and uniform mixing is essential to proper performance of drift control additives. This can be aided by thorough circulation through a mixing pump with moderate to high shearing action.

**Use With Oil/Water Emulsions**

**Ground Application:** Add oil to the total spray mix at a rate of 5 to 10% of the total mix, up to a maximum of 1 gallon of oil per acre, using agricultural spray emulsifiers and mixing procedures given below.

**Aerial Application:** Use oil and water in the spray mixture in a 1:5 ratio (1 part oil to 5 parts water), up to a maximum of 1 gallon of oil per acre using mixing procedures given below.

**Mixing Instructions for Oil/Water Emulsions (Batch Mixing)**

With continuous, vigorous agitation:

1. Add to the spray tank half the amount of water to be used.
2. Add the amount of Grazon PD<sup>2</sup> herbicide required for the total volume of spray being mixed.
3. Premix the required amount of oil with an emulsifier such as Sponto 712 or Triton X-100, using the manufacturer's recommended rate of emulsifier per gallon of oil. Add the oil-emulsifier premix to the spray tank.
4. Finally, add the remaining amount of water required to bring the spray batch to the desired total volume.



**5. Maintain agitation in the spray tank during application.****Mixing with Liquid Fertilizer for Broadleaf Weed Control in Rangeland and Permanent Grass Pastures**

Grazon PD<sup>2</sup> herbicide may be tank mixed with liquid fertilizers and used in foliar application for weed control and fertilization of rangelands and permanent grass pastures. Avoid using liquid fertilizers in applications to brush as efficacy may be reduced. Use liquid fertilizers at rates recommended by supplier or local Extension Service Specialist.

**Compatibility with Liquid Fertilizer:** Prior to large scale batch mixing, conduct a "jar test" for spray mixture compatibility by mixing each component in the required order and proportion in a clear glass jar. Close the jar and agitate the mixture until evenly dispersed. Use of a compatibility agent is indicated if components of the mixture do not disperse readily or do not remain dispersed after mixing. Use of a compatibility aid such as Unite or Compex is recommended to help obtain and maintain a uniform spray solution during mixing and 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 gallons of total spray mix.
3. First add the amount of Grazon PD<sup>2</sup> herbicide needed for the total spray mixture. Mixing with N-P-K fertilizer solutions may be improved by premixing Grazon PD<sup>2</sup> herbicide with water (1 part Grazon PD<sup>2</sup> herbicide to 25-30 parts water) before adding to the spray tank.
4. Add the remaining liquid fertilizer to produce the needed total spray volume.
5. Apply as soon as mixing is complete, maintaining continuous, vigorous agitation throughout mixing and application without interruption.

Application during very cold (near freezing) weather is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions.

**Do not store the spray mixture.**

**Note:** Do not use spray equipment for application of other products 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 the equipment. See "Cleaning Instructions for Sprayer Equipment" General Use Precautions section of this label.

**Cleaning Instructions for Spray Equipment**

To avoid injury to desirable plants, equipment used to apply Grazon PD<sup>2</sup> herbicide should be thoroughly cleaned before reusing to apply any other chemicals.

1. Rinse and flush application equipment thoroughly after use. Flush the entire system at least three times with water, and dispose of rinse water in non-cropland area away from water supplies.
2. During the second rinse, add 1 qt of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 min.). Let the solution stand for several hours, preferable overnight.
3. Flush the solution out 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 separately.

