62719-260





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.	Numbe

Date of Issuance:

62719-260

MAY 2 7 2008

NOTICE OF PESTICIDE:

_ Registration

x Reregistration

(under FIFRA, as amended)

Term of Issuance:

Name of Pesticide Product:

Crossbow

Name and Address of Registrant (include ZIP Code):

Dow AgroSciences

9330 Zionsville Rd.

Indianapolis, IN

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 conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

- A. 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.
- B. Make the following label changes:
 - 1. Under "Precautionary Statements";

Use the following statements:

"Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals."

- Under "Personal Protective Equipment";
 - Delete reference to post harvest dips or sprays to citrus use in both the glove and the apron statements because this use does not appear on the label.

Signature of Approving Official:

Date:

MAY 2 7 2008

Product Manager (23) Registration Division (7505P)

EPA Form 857 0-6

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- Change the glove requirement to ""Some materials that are chemical-resistant to this
 product are made of XXX. If you want more options, follow the instructions for category E
 on an EPA chemical resistance category selection chart.
 Chemical-resistant gloves made of any waterproof materials such as barrier
 laminate, nitrile rubber, neoprene rubber, and viton."
- Delete reference to flaggers because this product label states "Do not apply by air."
- 3. Under "Engineering Controls";

Delete "Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)]" because this product cannot be applied by aerial application.

4. Under "User Safety Recommendations";

Change "Remove clothing immediately if pesticide gets inside." to "Remove clothing/PPE immediately if pesticide gets inside."

5. Under "First Aid";

Interchange the sequence between "If in eyes" and "if swallowed" treatments.

6. Under "Environmental Hazards":

Delete "except as noted on appropriate labels."

- 7. Under "Storage and disposal";
 - Add instructions for pesticide disposal.
 - Add a heading of "Pesticide Disposal" with the following "Pesticide Disposal" statements:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to the label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

8. Add the following statements after "Refer to label booklet for Directions for Use"; (page 3)

"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. v. EP, C01-0132C, (W.D. W. A)." For further information, please refer to http://www.epa.gov/espp/wtc/.

- 9. Under "Spray Drift Management";
 - Add "2-4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures" must be added to the spray drift section of the label.
 - Replace the first paragraph with the following:
 "Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment and weather-related factors

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determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions."

- Change "Do not apply at wind speed greater than 15 mph" to "Do not apply at wind speed greater than 10 mph" under Wind Speed.
- 10. Under "Use Precautions and Restrictions";

Delete Reference to chemigation because application through any type of irrigation is prohibited.

11. Under "Directions for Use - Rangeland and Permanent Pastures";

Make the following changes as required in the Triclopyr RED document:

- Reduce application to once per year.
- Change "Do not cut forage for hay within 7 days of application" to "Do not cut forage for hay within 14 days of application."
- Relocate "fence-rows" to the <u>Pasture and Rangeland</u> section of the label.

Submit one copy of the revised final printed label for the record.

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.

A stamped copy of the label is enclosed for your records.

Enclosure

(Base label for rigid containers 5 gal or less):

Crossbow[®]

Specialty Herbicide

Low Volatile Weed and Brush Herbicide

For the control of most kinds of unwanted trees and brush, as well as annual and perennial broadleaf weeds on rangeland, permanent grass pastures, conservation reserve program (CRP) acres, fence rows, non-irrigation ditchbanks, roadsides, other non-crop areas and industrial sites

Active Ingredient(s):	
2,4-dichlorophenoxyacetic acid,	
butoxyethyl ester [‡]	34.4%
triclopyr BEE: 3,5,6-trichloro-2-pyridinylo	oxyacetic
acid, butoxyethyl ester	16.5%
OtherInert Ingredients	<u>49.1%</u>
Total	100.0%

Contains Petroleum Distillates

Acid Equivalents: 2,4-dichlorophenoxyacetic acid - 23.7% - 2 lb/gal

triclopyr - 11.9% - 1 lb/gal

ACCEPTED
with COMMENTS
in 674 Vetter Dated
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

MAY 27 2008

Keep Out of Reach of Children

CAUTION PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detaile. (If you do not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Swallowed • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Skin Reactions In Some Individuals

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, or using tobacco. When mixing, loading or applying this product or repairing or cleaning equipment, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection (face shield or safety glasses).

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 E 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
- Chemical-resistant gloves, when applying postharvest dips or sprays to citrus, applying with any
 handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise
 exposed to the concentrate.

[†]Isomer Specific by AOAC Method No. 978.05 (15th Ed.)



- Protective eyewear
- Chemical resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spils or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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 <u>closed systems or</u> enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. 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 also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Environmental Hazards

This product pesticide is toxic to fish and may be toxic to 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 or runoff may adversely affect fish and nontarget plants. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Triclopyr 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.

Mixing and Loading: Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed

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systems for mixing or transferring this posticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Storage And Disposal

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

Pesticide Storage: Store above 10°F or agitate before use.

Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 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.

Refer to label booklet for additional precautionary information and 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. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

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

Specialty Herbicide	Net Contents
[®] Trademark of Dow AgroSciences LLC <u>Produced for Dow AgroSciences LLC • Indianapolis, I</u>	N 46268 U.S.A.
EPA Reg. No. 62719-260	EPA Est.
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726

(Base label for refillable rigid containers larger than 5 gal):

Crossbow® Specialty Herbicide

Low Volatile Weed and Brush Herbicide

For the control of most kinds of unwanted trees and brush, as well as annual and perennial broadleaf weeds on rangeland, permanent grass pastures, conservation reserve program (CRP) acres, fence rows, non-irrigation ditchbanks, roadsides, other non-crop areas and industrial sites

Contains Petroleum Distillates

Acid Equivalents: 2,4-dichlorophenoxyacetic acid - 23.7% - 2 lb/gal

triclopyr - 11.9% - 1 lb/gal

Keep Out of Reach of Children

CAUTION PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you de not understand the label, find someone to explain it to you in detail.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Swallowed • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Skin Reactions In Some Individuals

Avoid contact with eyes or clothing. <u>Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, or using tobacco.</u> When mixing, loading or applying this product or repairing or cleaning equipment, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection (face shield or safety glasses).

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 E 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
- Chemical-resistant gloves, when applying postharvest dips or sprays to citrus, applying with any
 handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise
 exposed to the concentrate.

[†]Isomer-Specific by AOAC Method No. 978.05 (15th Ed.)



- Protective eyewear
- Chemical resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spils or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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 <u>closed systems or</u> enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. 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 also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Environmental Hazards

This product pesticide is toxic to fish and may be toxic to 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 or runoff may adversely affect fish and nontarget plants. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Triclopyr 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.

Mixing and Loading: Most cases of groundwater contamination involving phonoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D posticides at such sites to prevent contamination of groundwater supplies. Use of closed

systems for mixing or transferring this posticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Storage And Disposal

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

Pesticide Storage: Store above 10°F or agitate before use.

Container Reuse: 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

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

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1926

(Base label for nonrefillable rigid containers larger than 5 gal):

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Low Volatile Weed and Brush Herbicide

For the control of most kinds of unwanted trees and brush, as well as annual and perennial broadleaf weeds on rangeland, permanent grass pastures, conservation reserve program (CRP) acres, fence rows, non-irrigation ditchbanks, roadsides, other non-crop areas and industrial sites

Contains Petroleum Distillates

Acid Equivalents: 2,4-dichlorophenoxyacetic acid - 23.7% - 2 lb/gal

triclopyr - 11.9% - 1 lb/gal

Keep Out of Reach of Children

CAUTION PRECAUCION

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Precautionary Statements

Hazards to Humans and Domestic Animals

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Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, or using tobacco. When mixing, loading or applying this product or repairing or cleaning equipment, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection (face shield or safety glasses).

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 E 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
- Chemical-resistant gloves, when applying postharvest dips or sprays to citrus, applying with any
 handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise
 exposed to the concentrate.

^{*}Isomer Specific by AOAC Method No. 978.05 (15th Ed.)

- Protective evewear
- Chemical resistant apron when applying postharvest dips or sprays to citrus, mixing or loading,
 cleaning up spils or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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 <u>closed systems or</u> enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. 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 also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Environmental Hazards

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Triclopyr 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.

Mixing and Loading: Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed

systems for mixing or transferring this posticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

Storage And Disposal

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

Pesticide Storage: Store above 10°F or agitate before use.

Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 tan 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 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.

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

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Active Ingredient(s):	
2,4-dichlorophenoxyacetic acid,	
butoxyethyl ester [‡]	34.4%
triclopyr BEE: 3,5,6-trichloro-2-pyrid	
acid, butoxyethyl ester	16.5%
Inert Other Ingredients	49.1%
Total	100.0%

Contains Petroleum Distillates

Acid Equivalents: 2,4-dichlorophenoxyacetic acid - 23.7% - 2 lb/gal

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EPA	Est.	

[®]Trademark of Dow AgroSciences LLC

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Specialty Herbicide

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^{*}Isomer Specific by AOAC Method No. 978.05 (15th Ed.)

(Page 1 through end):

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes Moderate Eye Irritation • Harmful If Swallowed • Prolonged Or Frequently Repeated Skin Contact May Cause Allergic Skin Reactions In Some Individuals

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, or using tobacco. When mixing, leading or applying this product or repairing or cleaning equipment, wear long-sleeved shirt, long pants, socks, shoes, chemical-resistant gloves and eye protection (face shield or safety glasses).

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 E 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
- Chemical-resistant gloves, when applying postharvest dips or sprays to citrus, applying with any
 handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise
 exposed to the concentrate.
- Protective eyewear
- Chemical resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spils or equipment, or otherwise exposed to the concentrate

See engineering controls for additional requirements

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 <u>closed systems or</u> enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protections Standard (WPS) for agricultural pesticides [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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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

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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: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. 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 also contact 1-800-992-5994 for emergency medical treatment information.

Note to Physician: This product may pose an aspiration pneumonia hazard. Contains petroleum distillates.

Environmental Hazards

This product pesticide is toxic to fish and may be toxic to 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 or runoff may adversely affect fish and nontarget plants. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Triclopyr 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.

Mixing and Leading: Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/leading and disposal sites. Caution should be exercised when handling 2,4-D posticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this posticide will reduce the probability of spills. Placement of the mixing/leading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Physical or Chemical Hazards

Combustible. Do not use or store near heat or open flame.

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.

Storage and Disposal

Do not contaminate water, food or feed by storage or disposal. **Pesticide Storage:** Store above 10°F or agitate before use.

For containers 5 gallons or less:

Container Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 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.

For containers larger than 5 gallons:

Container Reuse: 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 Reuse: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available.

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 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.

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.

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.

Consult federal, state, or local disposal authorities for approved alternative procedures.

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. Consult federal, state, or local disposal authorities for approved alternative procedures.

General Information

Crossbow[®] specialty herbicide is recommended for control of most species of unwanted woody plants, as well as annual and perennial broadleaf weeds, growing on rangeland, permanent grass pastures, CRP, fence rows, non-irrigation ditchbanks, roadsides, other non-crop areas, and industrial sites.

General Use Precautions and Restrictions

For use on plants in non-crop and non-timber areas only. Not for use on crops, timber, or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

Apply this product only as specified on this label.

Be sure that use of this product conforms to all applicable regulations.

Application Restrictions: 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.

Entry Restrictions: Do not allow <u>people (or pets)</u> worker entry into <u>to enter the treated</u> areas until sprays have dried, unless applicator and other handler PPE is worn.

In Arizona: The state of Arizona has not approved Crossbow for use on plants grown for commercial production; specifically forests grown for commercial timber production, or on designated grazing areas.

This product may not be applied to forage that is to be cut and sold for commercial purposes.

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

Foliar sprays should be applied during warm weather when brush and weeds are actively growing. Application under drought conditions may provide less than desirable results. Use low spray pressures to minimize spray drift. Apply Crossbow in a manner to avoid contacting nearby susceptible crops or other desirable plants and to avoid contaminating water intended for irrigation or domestic use. Read and follow all use precautions given on this label.

Do not use on bentgrass. Do not use on newly seeded grasses until grass has established a good root system and is tillering.

Do not reseed pastures within a minimum of three weeks after treatment.

Do not spray pastures containing desirable broadleaf forbs, especially legumes such as clover, unless injury or loss of such plants can be tolerated. However, the stand and growth of established grasses usually is improved, particularly when rainfall is adequate and grazing is deferred.

Do not apply Crossbow directly to, or otherwise permit it to come into direct contact with cotton, grapes, tobacco, vegetable crops, citrus, flowers, fruit or ornamental trees, or other desirable broadleaf plants and do not permit spray mists containing it to drift onto them.

Under conditions which are conducive to evaporation (high temperatures and humidity), vapors from this product may injure susceptible crops growing nearby. Excessive amounts of this herbicide in the soil may temporarily inhibit seed germination and plant growth.

Crossbow is formulated as a low volatile ester. However, the combination of spray contact with impervious surfaces, such as roads and rocks, and increasing ambient air temperatures, may result in an increase in the volatility potential for this herbicide, increasing a risk for off-target injury to sensitive crops such as grapes and tomatoes.

Grazing and Haying Restrictions

Except for lactating dairy animals, there are no grazing restrictions following application of this product.

Grazing Lactating Dairy Animals: Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product.

Do not harvest hay for 14 days after application.

Grazed areas of non-cropland and forestry sites may be spot treated if they comprise no more than 10% of the total grazable area.

Slaughter Restrictions: During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

Avoid Injurious Spray Drift

Applications should be made only when hazards from spray drift are at a minimum. Very small quantities of spray, which may not be visible may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured. Spray drift can be reduced by adding a spray thickening agent such as Nalco-Trol, Liberate, Chem-Trol or equivalent to the spray mixture. If a spray thickening agent is used, follow all use recommendations and precautions on the product label.

With ground broadcast equipment, drift can be reduced by keeping the spray boom as low as possible; by applying no less than 20 gallons of spray per acre; by keeping the operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when the wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to air inversions. In hand-gun applications, select the minimum spray pressure that will provide adequate plant coverage (without forming a mist). The use of a mistblower is not recommended.

With aerial applications, use a drift control system such as Microfoil or Thru-Valve booms, or use Nalco-Trol or Arborchem 38-F drift control additive or equivalent. Keep spray pressures low enough to provide coarse spray droplets. Do not use a thickening agent with the Microfoil or the Thru-Valve booms, or other systems that cannot accommodate thick sprays.

Spray Drift Management

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.

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 ontarget 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 swatch 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.

2,4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures.

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.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

- 1. The distance of the outer most operating nozzles on the boom must not exceed 3/4 the length of the helicopter rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory**. [This information is advisory in nature and does not supersede mandatory label requirements.]

Aerial Drift Reduction Advisory

Information On Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).



Controlling Droplet Size:

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle
 types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow
 rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nezzle Orientation Orienting nezzles so that the spray is released parallel to the airstream
 produced larger droplets than other orientations and is the recommended practice. Significant
 deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle
 types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream
 nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction, and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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.

Temperature Inversions: Applications should not occur during a local, low level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Mixing Directions

Crossbow in water forms an emulsion (not a solution), and separation may occur unless the spray mixture is agitated continuously.

Water Spray: Fill the spray tank about half full with clean water. Then add the Crossbow and complete filling the tank with agitation running. Mix thoroughly and continue moderate agitation while spraying.

Size of Sprayer	Amount of Crossbow Required for Spray Mixture		
(Gallons)	1%	1.5%	4%
1	1 1/3 fl oz	2 fl oz	5 1/3 fl oz
3	4 fl oz	6 fl oz	1 pt
5	6 2/3 fl oz	10 fl oz	1 2/3 pt
50	2 qt	3 qt	2 gai
100	1gal	1.5 gal	4 gal

Application Instructions

Restrictions:

Rangeland and Permanent Pastures

- Preharvest Interval: Do not cut forage for hay within 7 days of application. 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.
- Maximum application rate: Apply no more than 1 gallon (1 lb ae triclopyr + 2 lb ae 2,4-D) per acre per growing season on range and pasture sites, including rights of way, fence rows or any area where grazing or harvesting is allowed.
- Use 2 or more gallons of spray solution per acre
- Do not make more than 2 applications per year
- Do not apply within 30 days of previous application
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable

Non-Cropland

On non-cropland, apply no more than 8 gallons (8 lb ac triclopyr + 16 lb ac 2,4-D) per acre per year.

Postemergence (annual and perennial weeds):

- Do not make more than two applications per year
- Maximum of 1 gallon (1 lb ae triclopyr + 2.0 lbs ae/acre 2,4-D per application
- Minimum of 30 days between application
- Use 2 or more gallons of spray solution per acre

Postemergence (woody plants)

- Limited to 1 application per year
- Maximum of 2 gallons (2 lbs ae triclopyr + 4.0 lbs ae/acre 2,4-D per year)
- Use 2 or more gallons of spray solution per acre

Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

General Weed Control (See Table)

Broadcast Treatment (Ground Equipment and Helicopter): Use up to 1 1/2 gallons of Crossbow per acre in enough water to deliver 10 to 30 gallons of total spray per acre. Apply when weeds are actively growing. Best time for treatment of biennial and winter annual weeds is when the plants are in the rosette

stage. Treat when plants are actively growing. Re-treatment of hard-to-control weeds such as field bindweed, chicory, dogfennel, goldenrod, horsenettle, kudzu, milkweed, perennial sowthistle, leafy spurge, and Canada thistle may be necessary. See recommendations regarding the use of drift control additives as listed in the General Use Precautions section under Avoid Injurious Spray Drift.

Spot Treatment: To control broadleaf weeds in small areas with a hand sprayer, use 4 to 6 fl. oz. of Crossbow in 3 gallons of water and spray to thoroughly wet all foliage.

General Weed Control

High-Volume Foliar Treatment or Spot Treatment				
1% Mixture	1% Mixture	1 to 1.5% Mixture	1.5% Mixture	
	Foliar Broado	ast Applications		
1 qt/acre	2 qt/acre	2 - 4 qt/acre	4 qt/acre	
blueweed (B) buttercup, annual (A) horseweed, (marestail) (A) lambsquarters, common (A) mustard, wild (A) ragweed, common (A) spurge, thyme-leaf (A)	bedstraw, annual (A) bluebur (A) burdock (B) clover, white sweet (B) clover, bur (A) cocklebur (A) croton, wooly (A) dogbane, hemp (P) (TG) ironweed, tall (P) lettuce, wild (A,WA) mustard, tansy (WA) radish, wild (A) ragwort, tansy (B) shepherd's purse (WA)	amaranth, spiny (A) buttercup, tall (P) chickweed, mouseear (P) clover, white (P) dandelion (P) dock, curly (P) galinsoga, hairy (A) goatsbeard (A,B) henbit (B,WA) ironweed, western (P) ivy, ground (P) kochia (A) lespedeza (A) oxalis (P) pennycress, field (WA) pepperweed, field (A,B) pigweed, redroot (A) plantain, broadleaf (P) plantain, narrow-leaf (P) purslane, annual (A) sneezeweed, bitter (A) sowthistle, annual (A) sunflower (A) thistle, Russian (A) vetch (P) violet, wild (P) wormwood, biennial (B) yellow rocket (P,B)	bindweed, field (P) (TG) carrot, wild (B) chicory (P) suppression cinquefoil (A,B,P) dogfennel (P) suppression fleabane, annual (A,B) goldenrod (P) (TG) horsenettle (P) kudzu (P) (TG) marshelder (A) milkweed (P) suppression pepperweed, perennial (P) pokeweed (P) sesbania, hemp (A) sowthistle, perennial (P) TG) spurge, leafy (P) (TG) thistle, bull (B) thistle, Canada (P) (TG) thistle, musk (nodding) (B) yarrow (P)	

(A) Annual

(B) Biennial

(WA) Winter Annual

(P) Perennial

(TG) Top growth control only. Repeat treatment may be necessary.

Note: Best time for treatment of biennial and winter annuals is when plants are in the rosette stage.

Use in Liquid Nitrogen Fertilizer: Crossbow may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish weeding and feeding of grass pastures in one operation. Use Crossbow in accordance with recommendations for grass pastures as given on this label. Use liquid fertilizer at rates recommended by supplier or Extension Service Specialist. Test for mixing compatibility using desired procedure and spray mix proportions in clear glass jar before mixing in spray tank. A compatibility aid such as Unite or Compex may be needed in some situations. Compatibility is best with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K solutions or suspensions may not be satisfactory even with the addition of compatibility aid. Premixing Crossbow with 1 to 4 parts water may help in difficult situations.

Fill the spray tank about half full with the liquid fertilizer, then add the herbicide with agitation and complete filling the tank with fertilizer. Apply immediately and continue agitation in the spray tank during application. Do not store spray mixture. Application during very cold weather (near freezing) is not advisable.

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

Conservation Reserve Program (CRP) For Established Permanent Grass Stands

Use Crossbow on CRP acres only when the perennial grasses are established. Conditions that stress grasses, such as drought, will increase potential for injury to the grasses.

Restrictions: When applying to CRP lands, follow all applicable state and federal regulations. Follow the most severe grazing restriction imposed by the pesticide label or by the USDA Acreage Conservation Reserve Program. After that time period, follow local (CRP) guidelines regarding cropping and having restrictions. Do not use Crossbow if legumes are a desired cover crop during CRP. Do not use on bentgrass or newly seeded grass.

Broadcast Application (Ground or Aerial): Apply 1 to 2 quarts of Crossbow for small weed control or up to 1.5 gallons of Crossbow for deep-rooted perennial and susceptible woody species control using enough water to deliver 10 or more gallons of total spray volume per acre.

Follow precautions and recommendations outlined under Foliar Low-Volume Broadcast Applications.

For basal and dormant brush treatments, follow application directions listed in Woody Plant Control.

Woody Plant Control

Easy-to-Control Species: 1.5 gal/acre broadcast application or 1 to 1.5% mixtures for high-volume foliar applications.

cottonwood	sassafras
dogwood	(top growth
elderberry	scotch broom
hawthorn	sumac
honeysuckle	sycamore
maples (except	tamarack
bigleaf and vine [†])	wax myrtle
multiflora rose	(top growth)
poison ivy	white oak
poison oak	wild grape willow
	dogwood elderberry hawthorn honeysuckle maples (except bigleaf and vine [†]) multiflora rose poison ivy

^Tbasal or dormant stem application only

Harder-to-Control Species: High-volume applications, 1.5% mixture, conventional basal or dormant stem applications are recommended. A broadcast rate of 2 gal/acre will increase the degree of control of these species..

buckbrush (Symphoricarpos spp.)

(suppression)

common persimmon

(suppression)

elm (except winged elm)

honeylocust (suppression)

pine (suppression)

Russian olive

salmonberry (suppression)

sweetgum

trumpetcreeper (suppression)

Virginia creeper (suppression)

High Volume Foliar Applications Through Handguns: Using a power or hand pressured spray-gun, apply a foliar wetting spray containing 1 to 1 1/2 gallons of this product in sufficient water to make 100 gallons of total spray mix. See mixing chart under Mixing Directions for preparing small amounts of this 1 to 1.5% spray mix.

Spray to give thorough coverage of the foliage, wetting all leaves and green stems to the drip point. Depending on the plant size and foliage density, the total amount of required spray is usually 100 to 200 gallons per sprayed acre.

For best results, applications should be made when woody plants are actively growing. This is most likely to occur for a period after full leaf in the spring to early summer when moisture and temperature are favorable. For multiflora rose control, the best time for treatment may be expected during the early to midflowering stage.

The required spray volume will increase substantially if the brush exceeds 5 feet in height. Brush over 8 feet tall is difficult to treat efficiently. Large brush or trees may be controlled better by basal or mechanical methods.

Foliar Broadcast Sprays (Ground Equipment and Helicopter): Apply 1.5 to 4 gallons of this product in enough water to deliver 10 to 30 gallons total spray per acre. Use a boom type or other broadcast spray equipment that provides uniform spray coverage over the top of the foliage and make applications when plants are growing well. The favorable period for treatment is most likely to occur after full leaf in the spring and continue into early summer, depending on soil moisture and other conditions. Follow-up treatment with foliar high-volume or basal type treatments may be needed, especially if treating under less favorable conditions.

Aerial Application (Helicopter only): Use Nalco-Trol or equivalent drift control additive as recommended by the manufacturer of the Microfoil boom, Thru-Valve boom, or equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift reducing systems may be utilized if they control spray drift as well as Nalco-Trol or the above mentioned booms. If a spray thickening agent is used, follow all recommendations and precautions on the product label. Do not use a thickening agent with the Microfoil or Thru-Valve booms or other systems that cannot accommodate thick sprays.

Dormant Stem Applications: To control susceptible woody species such as multiflora rose and blackberry, mix 1 to 4 gallons of this product in diesel oil, No. 1 or No. 2 fuel oil or kerosene to make 100 gallons of spray and apply to thoroughly wet upper and lower stems including the root collar and any ground sprouts. Treat at any time when the brush is dormant and the bark is dry. Best results have been obtained with late winter to early spring applications. Do not treat when snow or water prevent spraying to the ground line. For the most susceptible woody species such as blackberries, substitute other diluents or oils only in accordance to manufacturer's recommendations. Apply mixture to thoroughly wet upper and lower stems as described above. The more tolerant species may require total oil carrier for better control. Brush over 8 feet in height is difficult to treat efficiently. Basal or mechanical methods may be better suited for control of large trees.

Conventional Basal Bark and Stump Applications: For control of susceptible woody plants and to prevent or control regrowth from cut stumps, mix 4 gallons of this product in diesel oil, No. 1 or No. 2 fuel oil or kerosene to make 100 gallons of spray mixture. Spray the basal parts of brush or trees to a height of 15 to 20 inches from the ground. Thoroughly wet all the basal bark area including crown buds and ground sprouts. Spray runoff should visibly wet the ground at the base of the stems or trunks. Basal and cut stump applications can be made at any time of the year except when snow or water prevent spraying to the ground line. Best results have been obtained with winter to early spring applications. Basal treatments are less effective on trees with diameters larger than 6 to 8 inches. For better regrowth control, cut the larger trees and treat the stumps. Treat stumps the same as the trunks and also treat the freshly cut surface. The cambium layer just inside the bark is the most important area of the cut surface to treat.

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Thinline Basal Applications: For the control of small multiflora rose, apply a horizontal thin line of undiluted herbicide across all the stems at a height where the stems are less than 1/2 inch in diameter and have thinner bark to penetrate. For bushes with large numbers of stems (over 3 or 4), coverage may be difficult. Basal bark or dormant stem applications may be more effective. Treat when the bark is dry and rain is not forecasted. Best time for multiflora rose control using this application method is during early spring to early summer, when the plants are just about breaking dormancy to actively growing. Apply approximately 20 ml undiluted product per bush. Wherever a stem over 1/2 inch in diameter is treated, it should be completely ringed with herbicide to obtain best results. Additional herbicide is likely to be needed for adequate coverage of these larger stems in a bush or clump.

Old stems with thickened bark require more herbicide than young stems with thin bark. Where regrowth is treated, better root kill may result if resprouts are treated after they are one year old and the bark has lost its green color, but before sprouts reach one inch in diameter.

Terms and Conditions of Use

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