



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

July 23, 2020

Travis Bui, PhD  
US Crop Protection Regulatory Leader  
Dow AgroSciences, LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Subject: Label Amendment – Minor Changes Throughout  
Product Name: Lontrel Turf and Ornamental  
EPA Registration Number: 62719-305  
Application Date: October 24, 2018  
Decision Number: 548013

Dear Dr. Bui:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

Page 2 of 2  
EPA Reg. No. 62719-305  
Decision No. 548013

with FIFRA section 6. If you have any questions, please contact Kable Bo Davis by phone at 703-306-0415, or via email at [davis.kable@epa.gov](mailto:davis.kable@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "M. Ondish", followed by the word "for" written in a cursive style.

Mindy Ondish  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

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

CLOPYRALID	GROUP	4	HERBICIDE
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# Lontrel® Turf and Ornamental

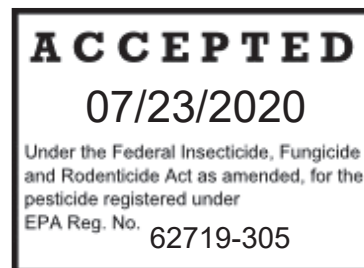
## HERBICIDE

For selective postemergence control of broadleaf weeds in

- non-residential turfgrass, including turfgrass grown for seed or sod farms,
- noncrop areas including roadsides, parks, recreation areas and unimproved rough turf areas;
- landscapes, ornamental plantings, field grown nurseries such as with conifers, non-leguminous woody species, and ornamental grasses;
- Christmas tree plantations.

Active Ingredient:

clopypalid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt .....	40.9%
Other Ingredients .....	59.1%
Total .....	100.0%



Acid Equivalent: clopypalid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% – 3 lb/gal

[Editor’s Note: The following Container Use Directions should be included on the label if product is packaged in a Tip ‘n Measure bottle.]

### Container Use Directions



1. Remove the measuring chamber cap and induction seal. Replace cap and securely tighten. Tip container until liquid fills measuring chamber.
2. Return container to level position. No adjustment is needed.
3. Remove measuring chamber cap and dispense into proper application equipment.

**For multiple dose measuring:** Remove fill chamber cap and dispense according to markings on side of bottle.

Keep Out of Reach of Children

## CAUTION PRECAUTION

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

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### Precautionary Statements

#### Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin

**Avoid contact with eyes, skin, or clothing.**

### **Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

### **User Safety Recommendations**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### **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 on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

### **Environmental Hazards**

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### **Physical or Chemical Hazards**

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

### **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.

### **Storage and Disposal**

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

**Container Handling:** 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 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 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 not acceptable, 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](http://www.dowagro.com).

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

EPA Reg. No. 62719-305

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

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**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268 USA**

NET CONTENTS \_\_\_\_\_

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

CLOPYRALID	GROUP	4	HERBICIDE
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# Lontrel<sup>®</sup> Turf and Ornamental

## HERBICIDE

For selective postemergence control of broadleaf weeds in

- non-residential turfgrass, including turfgrass grown for seed or sod farms,
- noncrop areas including roadsides, parks, recreation areas and unimproved rough turf areas;
- landscapes, ornamental plantings, field grown nurseries such as with conifers, non-leguminous woody species, and ornamental grasses;
- Christmas tree plantations.

Active Ingredient:

clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt .....40.9%

Other Ingredients .....59.1%

Total .....100.0%

Acid Equivalent: clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% – 3 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 do not understand the label, find someone to explain it to you in detail.)

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin**

**Avoid contact with eyes, skin, or clothing.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

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### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### 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 on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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.

### Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not contaminate water used for irrigation or domestic purposes.

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### Physical or Chemical Hazards

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

### 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.

### Storage and Disposal

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

**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.

**Refer to 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 not acceptable, return at once unopened.**

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

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**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268 USA**

NET CONTENTS \_\_\_\_\_



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

CLOPYRALID	GROUP	4	HERBICIDE
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# Lontrel<sup>®</sup> Turf and Ornamental

## HERBICIDE

For selective postemergence control of broadleaf weeds in

- non-residential turfgrass, including turfgrass grown for seed or sod farms,
- noncrop areas including roadsides, parks, recreation areas and unimproved rough turf areas;
- landscapes, ornamental plantings, field grown nurseries such as with conifers, non-leguminous woody species, and ornamental grasses;
- Christmas tree plantations.

Active Ingredient:

clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt.....40.9%

Other Ingredients .....59.1%

Total .....100.0%

Acid Equivalent: clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% – 3 lb/gal

**Keep Out of Reach of Children**

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin**

**Avoid contact with eyes, skin, or clothing.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

---

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### 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.

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### Physical or Chemical Hazards

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

### 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.

### Storage and Disposal

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

**Container Handling:** 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 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 Directions for Use.**

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(label booklet cover):

CLOPYRALID	GROUP	4	HERBICIDE
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# Lontrel<sup>®</sup> Turf and Ornamental

## HERBICIDE

For selective postemergence control of broadleaf weeds in

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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 additional precautionary information including Directions for Use.**

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NET CONTENTS \_\_\_\_\_

(Booklet page 1 through end)

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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

# CAUTION

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin**

**Avoid contact with eyes, skin, or clothing.**

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

### User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### First Aid

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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.

### Environmental Hazards

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Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### Physical or Chemical Hazards

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

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### Directions for Use

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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 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. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

### **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 12 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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

### **Non-Agricultural Use Requirements**

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

When Lontrel Turf and Ornamental is applied to lawns, landscape areas, or golf courses, keep unprotected persons out of treated areas until sprays have dried.

### **Storage and Disposal**

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

#### **Nonrefillable containers 5 gallons or less:**

**Container Handling:** 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 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 5 gallons or larger:**

**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 5 gallons or larger:**

**Container Handling:** 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 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.

## Product Information

Lontrel® Turf and Ornamental herbicide is recommended for selective, postemergence control of broadleaf weeds in non-residential turfgrass, including turfgrass grown for seed or sod farms, noncrop areas such as roadsides and unimproved rough turf areas, landscapes, ornamental plantings, field grown nurseries such as with conifers, non-leguminous woody species, and ornamental grasses.

## Restrictions

- In **California, Florida, and New York** the maximum use rate is 2/3 pint per acre per growing season. In these states, do not exceed a cumulative amount of 2/3 pint of clopyralid [0.25 lb acid equivalent (a.e.)] per acre per crop year, unless specifically allowed.
- Sale and use of this product in Suffolk and Nassau counties in the state of New York is prohibited.
- In **California** and **Washington**, turfgrass and lawn uses are restricted to golf courses only.
- In **Oregon**, use of this product is limited to golf courses, field grown nurseries, noncrop areas, and grass grown for seed or sod farms.
- Do not use on residential turfgrass. Turfgrass and lawn uses are restricted to non-residential sites.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not collect runoff water from treated areas for use as irrigation water.
- Do not apply by aircraft.
- Do not use in greenhouses.
- Do not use in container nurseries.
- Do not use in forest nursery beds or conifer seed beds.
- Do not make broadcast applications to ornamental plantings in commercial and residential landscape settings, except as noted in the landscape section below. However, spot and directed applications are permissible.
- To avoid plant injury, do not apply to exposed roots of shallow rooted trees and shrubs such as legumes (pod bearing plants such as acacia, locust, mimosa, redbud, or mesquite) or littleleaf linden (*Tilia cordata* and other *Tilia* species).
- Do not allow sprays of this product to contact exposed suckers and/or roots of susceptible trees or shrubs or injury may occur.



- Do not reseed turfgrass for 3 weeks after application.
- Lontrel Turf and Ornamental is not labelled for use on golf course putting greens or tees.
- Do not send grass clippings to a compost facility.
- Do not collect grass clippings for mulch or compost.
- Applicator must give notice to landowners/property managers to not use grass clippings for composting.
- **Chemigation:** Do not apply this product through any type of irrigation system.

### **Crop Rotation Restrictions**

Residues of this product in treated plant tissues that have not completely decayed may affect succeeding susceptible crops. Do not rotate to susceptible broadleaf plantings for 10.5 months after application of this product or 18 months if soil contains less than 2% organic matter. A field bioassay is recommended prior to planting certain plant species that may be highly sensitive to clopyralid, such as members of the legume family. These recommendations are based on average annual precipitation, regardless of irrigation practices. Use of this product in accordance with these rotational recommendations, if followed, is not expected to result in crop injury. However, because this product is dissipated in the soil by microbial activity and the rate of microbial activity is dependent on soil moisture, temperature, and organic matter, accurate prediction of potential rotational crop injury is impossible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by removal of plant residues, supplemental fall irrigation and deep tillage prior to planting a sensitive crop.

**Field Bioassay Instructions:** Using typical tillage practices, and established practices for a particular crop, make limited plantings of the potentially sensitive plant variety across the area previously treated with this product. Plants should also be located so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the intended crop does not show visible symptoms of injury within 90 to 120 days, the sensitive crop in question can be established in the treated area in the growing season following the bioassay. If visible injury occurs, the intended sensitive crop should not be planted and the bioassay repeated the following growing season.

**Treatment of Plant Species not Listed on the Label (Nursery and Turfgrass Use Only):** Users who wish to use Lontrel Turf and Ornamental on ornamental plant and turfgrass species not listed on this label may determine the suitability for use by treating a small area of turfgrass or small number of ornamental plants at a labeled rate. Prior to treatment of larger areas, treated plants should be observed for any symptoms of herbicidal injury, such as foliar damage, reduced vigor or stand reduction, during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious. The user assumes responsibility for any plant damage or other liability resulting from use of Lontrel Turf and Ornamental on ornamental plant species not listed in this label.

### **Weed Resistance Management**

This product contains the active ingredient clopyralid, a Group 4 synthetic auxin herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance take one or more of the following steps.

- Rotate the use of this product or other Group 4 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage, renovation, (or other mechanical control methods), cultural ( e.g., higher seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties), and other management practices.
- Scout after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as turfgrass renovation, hoeing, or tillage. Prevent movement of resistant weed seeds to other fields by cleaning the mowing, harvesting, and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact a customer service representative at 800-992-5994.

## Avoiding Injury to Non-Target Plants

This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Therefore, do not apply this product directly to, or allow spray drift to come in contact with, flowers, grapes, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other susceptible broadleaf crops or ornamental plants or soil where these crops will be planted the same season. See Crop Rotation Restrictions.

### Spray Drift Management

Avoid spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible crops during active growth or dormant periods. Use medium to coarse sprays to minimize drift. To aid in further reducing drift, a drift control or deposition agent suitable for agricultural use may be used with this product. If used, follow all use recommendations and precautions on the product label.

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or vegetative canopy.
- For all applications, applicators are required to use a medium to coarse spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- In hand-gun applications, select the minimum pressure required to obtain adequate plant coverage without forming a mist.
- Do not apply with a mist blower.

## Spray Drift Advisories

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

- **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

**Controlling Droplet Size - Ground Boom**

- **Volume** – Increasing the spray volume to 20 gallons or more per acre will produce larger droplets that will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size. Low pressure nozzles are available from spray equipment manufacturers.
- **Spray Nozzle** – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

- **BOOM HEIGHT - Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

- **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

- **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

- **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of 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. Avoid applications during temperature inversions.

- **WIND**

Drift potential generally increases with wind speed. Avoid applications during gusty wind conditions. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Sprayer Clean-Out**

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before reusing to apply any other chemicals.

1. Rinse and flush application equipment thoroughly at least 3 times with water after use. Dispose of rinse water by applying to treatment area or to 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 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Remove nozzles and screens and clean separately.

### **Mixing Instructions**

1. Add 3/4 of the required spray volume to the spray tank and start agitation.
2. Add the required amount of Lontrel Turf and Ornamental.

3. Add any surfactants, adjuvants or drift control agents according to manufacturer's label.
4. Agitate during final filling of the spray tank and maintain sufficient agitation during application to ensure uniformity of the spray mixture.

**Note:** Allow time for thorough mixing of each spray ingredient before adding the next. If allowed to stand after mixing, agitate spray mixture before use.

### Tank Mixing (Turfgrass and Noncrop Areas)

Lontrel Turf and Ornamental may be applied in tank mix combination with labeled rates of other products provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product. Do not tank mix Lontrel Turf and Ornamental with other herbicides labeled for use in ornamental landscapes except the specialty herbicides and/or grass herbicides listed in the chart below and only on iceplant, Myoporum, red apple and other ground covers that are tolerant to Lontrel Turf and Ornamental. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Product Name	EPA Registration No.	Active Ingredient
Dimension <sup>®</sup> 2EW	62719-542	Dithiopyr
Dimension <sup>®</sup> Ultra 40WP	62719-445	Dithiopyr
Gallery <sup>®</sup> 75 Dry Flowable	62719-145	Isoxaben
Gallery <sup>®</sup> SC	62719-658	Isoxaben

### Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed labeled application rates. If products containing the same active ingredient are tank mixed, do not exceed the maximum allowable active ingredient use rates.
- For products packaged in water soluble packaging, do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned. (See instructions for Sprayer Clean-Out.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of Lontrel Turf and Ornamental and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in the required order and their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. The mixture should remain stable or, if separation occurs, should readily mix if agitated. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

## Application Directions

### Application Timing

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at, or following application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be affected. Wet foliage at the time of application may decrease control. Applications of Lontrel Turf and Ornamental are rainfast within 2 hours after application.

### Use of Adjuvants

Addition of surfactants, crop oils, or other adjuvants is not usually necessary when using this product. Adding a surfactant to the spray mixture may increase effectiveness on weeds but may reduce selectivity

to the crop or desirable plant, particularly under conditions of plant stress. If an adjuvant is added to the spray solution, follow all manufacturer use guidelines.

### Spray Coverage

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. For best results and to minimize spray drift, apply in a spray volume of 20 gallons or more per acre. As vegetative canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoiding Injury to Non-Target Plants.

### Spot Treatments

To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers using a fixed spray volume per 1000 sq ft as indicated below.

### Hand-Held or Backpack Sprayer Application

Hand-held sprayers may be used for treatment of smaller areas if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1000 sq ft. Mix the amount of Lontrel Turf and Ornamental (fl oz or mL) corresponding to the desired broadcast rate in the spray volume needed to treat 1000 sq ft. To calculate the amount required for larger areas, multiply the table value (fl oz or ml) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (calc.  $3500 \div 1000 = 3.5$ ). An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

Amount of Lontrel Turf and Ornamental per 1000 sq ft to Equal Specified Broadcast Rate					
1/4 pt/acre	1/3 pt/acre	1/2 pt/acre	2/3 pt/acre	1 pt/acre	1 1/3 pt/acre
1/10 fl oz <sup>1</sup> (2.7 mL)	1/8 fl oz (3.6 mL)	1/5 fl oz (5.4 mL)	1/4 fl oz (7.3 mL)	3/8 fl oz (11 mL)	1/2 fl oz (15 mL)

<sup>1</sup>1 fl oz = 29.6 (30) mL

### Weeds Controlled and Use Rates

For best results, apply Lontrel Turf and Ornamental when weeds are small and actively growing. For control of weeds such as Canada thistle and knapweeds, apply after the majority of the basal leaves have emerged, but before bud stage. Applications made too early or later than bud stage may result in less consistent control.

**Note:** Use higher rates when hard to control species are prevalent or when applications are made in late summer or on mature weeds or during periods of drought stress.

In California, Florida and New York the maximum use rate is 2/3 pint/acre per growing season.

Weeds Controlled		Lontrel Turf and Ornamental	
		(pt/acre)	(fl oz/1000 sq ft) <sup>1</sup>
black medic dock (curly, broadleaf) galinsoga goldenrod	mayweed, stinking nightshade (Eastern, black, cutleaf, hairy) pineappleweed	1/4 - 1/3	1/10 - 1/8 (2.7 - 3.6 mL)
burnweed, American burweed, lawn clover (red, hop, white, sweet)	dogfennel	1/3 - 1/2	1/8 - 1/5 (3.6 - 5.4 mL)
artichoke, Jerusalem aster, seaside burdock, common	locoweed, white locoweed, lambert marshelder	1/2	1/5 (5.4 mL)

chamomile, false (mayweed)	salsify, meadow sicklepod		
cocklebur, common	sorrel, red		
coffeeweed	sowthistle, annual		
cornflower	speedwell		
daisy, oxeye	starthistle, yellow		
hawksbeard, narrowleaf	sunflower		
hawkweed, orange	teasel, common		
hawkweed, yellow	thistle, bull		
inula sp.	thistle, musk		
jimsonweed	vetch, common		
lettuce, prickly			
carrot, wild	knotweed, prostrate	2/3	1/4 (7.3 mL)
cudweed	pimpernel, scarlet		
dandelion, common	plantain, narrowleaf		
groundsel, common	spurry, corn		
horseweed	ragwort, tansy		
knapweed, spotted	thistle, Canada <sup>2</sup>		
knapweed, diffuse			
buckwheat, wild	smartweed	1	3/8 (11 mL)
ragweed - (common, giant)			
<b>Weeds Suppressed (Repeat Treatment May Be Necessary)</b>			
buffalo bur	kudzu	1 1/3	1/2 (15 mL)
buttercup, hairy	ladysthumb		
buttonweed, Virginia	mesquite		
dollarweed	plantain, broadleaf		
knapweed, Russian	sowthistle, perennial		

<sup>1</sup> For treatment of small areas, see instructions for spot treatment and use of hand-held or backpack sprayers, above.

<sup>2</sup> Control of Canada thistle: For effective control of Canada thistle, apply Lontrel Turf and Ornamental at the rate of 2/3 pint per acre when the majority of thistle plants have emerged and are from 6 to 8 inches in height or diameter to bud stage. For best results, do not cultivate areas before or after application since cultivation can disrupt translocation of the herbicide to the roots of Canada thistle and reduce control. If cultivation is necessary following application, it should be delayed 14 to 20 days. In landscape settings, for control of Canada thistle apply only as a directed spot application as described above to avoid injuring non-target plants. In nurseries, a spot treatment or broadcast application may be made as directed.

## Uses

### Turfgrass (Including Turfgrass Grown for Seed or Sod)

Apply Lontrel Turf and Ornamental in enough water to deliver 20 gallons or more of total spray mix per acre. Higher application volumes may be used when tank mixed with fertilizers. Spot applications may be applied at equivalent broadcast rates using hand-held application equipment (see instructions in Application Directions section). See Weeds Controlled and Use Rates section.

Lontrel Turf and Ornamental is recommended for use on the following turfgrass species:

#### Established Cool Season Turfgrass

**Common Name**

bentgrass (including bentgrass fairways)  
bluegrass, Kentucky  
fescue, chewing

**Scientific Name**

*Agrostis* species  
*Poa pratensis*  
*Festuca rubra* var. *commutata*

fescue, creeping red	<i>Festuca rubra</i>
fescue, sheeps	<i>Festuca ovina</i>
fescue, tall	<i>Festuca arundinaceae</i>
ryegrass, perennial	<i>Lolium perenne</i>

### Established Warm Season Turfgrass

Common Name	Scientific Name
bahiagrass	<i>Paspalum notatum var. sauriae parodi</i>
bermudagrass (including bermudagrass fairways)	<i>Cynodon</i> spp.
buffalograss	<i>Buchloe dactyloides</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
fescue, tall (growing in warm season areas)	<i>Festuca arundinaceae</i>
kikuyugrass	<i>Pennisetum clandestinum</i>
seashore paspalum	<i>Paspalum vaginatum</i>
zoysiagrass	<i>Zoysia japonica</i>
zoysiagrass	<i>Zoysia tenuifolia</i>
St. Augustinegrass	<i>Stenotaphrum secundatum</i>

**Note:** Lontrel Turf and Ornamental may discolor and/or stunt turfgrass that is not well established or is stressed or weakened due to unfavorable climatic conditions, temperature extremes, drought, nematodes, or other factors that damage or weaken turfgrass. To avoid unacceptable turfgrass injury, apply Lontrel Turf and Ornamental only to healthy, well-established turf that has a well-anchored root system.

#### Specific Use Restrictions:

- **Do not** use on residential turfgrass. Turfgrass and lawn uses are restricted to non-residential sites.
- **Do not** send grass clippings to a compost facility.
- **Do not** collect grass clippings for mulch or compost.
- Applicator must give notice to landowners/property managers to not use grass clippings for composting.
- In the states of **California, Oregon** and **Washington**, turfgrass and lawn uses are restricted to golf courses and noncrop areas only.

### Ornamentals (Landscapes and Nurseries)

Lontrel Turf and Ornamental may be used for selective postemergence control of labeled broadleaf weeds in new and established plantings of selected ornamentals. See Weeds Controlled and Use Rates section.

#### Specific Use Precautions:

- Due to the wide variety of plants found in commercial and residential landscape settings and to avoid injury to non-target species, use only spot and directed sprays on labeled ornamental species in landscape settings except as noted here in the Ornamentals section.
- True firs (grand, noble, and pacific silver firs) show more needle curling than other conifers when higher rates are used. Use lower rates in rate range for broadcast applications or use directed sprays where possible if needle curling is undesirable.
- For treatment of nursery ornamentals not found in this section refer to Precautions and Restrictions.

#### Specific Use Restrictions:

- **Do not** apply Lontrel Turf and Ornamental to the foliage or bark or under the canopy of legumes (pod bearing plants such as acacia, locust, mimosa, redbud, or mesquite) or littleleaf linden (*Tilia cordata* and other *Tilia* species). Lontrel Turf and Ornamental is also highly active on plants in the sunflower family such as perennial daisies and sunflowers, and the nightshade family such as potato vine and Jerusalem cherry. Do not allow spray or spray drift to come in contact with desirable plants belonging

to these families or severe plant injury or death may occur.

- **Do not** tank mix Lontrel Turf and Ornamental with other herbicides labeled for use in landscape ornamentals except the specialty herbicides and/or grass herbicides listed in the chart below, and only on iceplant, Myoporum, red apple, and other ground covers that are tolerant to Lontrel Turf and Ornamental:

Product Name	EPA Registration No.	Active Ingredient
Dimension <sup>®</sup> 2EW	62719-542	Dithiopyr
Dimension <sup>®</sup> Ultra 40WP	62719-445	Dithiopyr
Gallery <sup>®</sup> 75 Dry Flowable	62719-145	Isoxaben
Gallery <sup>®</sup> SC	62719-658	Isoxaben

- **Do not** apply to container grown ornamentals.

#### **Nursery – Broadcast and Directed Application – Not for Use in Container Grown Ornamentals**

Apply as an over-the-top broadcast foliar spray or as a directed spray. Apply in 20 gallons or more per acre total spray volume using ground equipment only. Multiple applications may be made as long as the total rate per growing season does not exceed 1 1/3 pint per acre. In California, Florida, and New York, the maximum use rate is 2/3 pint per acre per growing season. Apply to new plantings only after they are well established. See Weeds Controlled and Use Rates section.

#### **Landscape and Nursery Spot Treatment**

Spot treatments using hand-held equipment are allowed, but avoid contact with tree foliage or limit contact to lower branches. Apply to weeds on a spray-to-wet basis with a uniform and complete spray coverage. See additional instructions for spot applications using hand-held application equipment in Application Directions section.

Broadcast applications may be made over ground covers such as iceplant, Myoporum, and red apple.

Lontrel Turf and Ornamental may be used in established plantings of the following ornamental trees, shrubs, and ornamental grasses:

<b>Trees</b>	<b>Recommended Application Method:</b> O = Over the Top Spray D = Directed Spray	
<b>Common Name</b>	<b>Scientific Name</b>	
dogwood, flowering	<i>Cornus florida</i>	D
fir, balsam	<i>Abies balsamea</i>	O, D
fir, Douglas	<i>Pseudotsuga menziesii</i>	O, D
fir, fraser	<i>Abies fraseri</i>	O, D
fir, grand	<i>Abies grandis</i>	O, D
fir, noble	<i>Abies procera</i>	O, D
maple, red	<i>Acer rubrum</i>	D
oak, red	<i>Quercus rubra</i>	D
oak, willow	<i>Quercus phellos</i>	D
pine, lodgepole	<i>Pinus contorta</i>	O, D
pine, ponderosa	<i>Pinus ponderosa</i>	O, D
pine, Scotch	<i>Pinus strobus</i>	O, D



pine, white	<i>Pinus</i> sp.	O, D
spruce, Norway	<i>Picea abies</i>	O, D
spruce, white	<i>Picea glauca</i>	O, D
spruce, Colorado (blue)	<i>Picea pungens</i>	O, D
sycamore, American	<i>Platanus occidentalis</i>	D

<b>Shrubs</b>	<b>Recommended Application Method: O = Over the Top Spray D = Directed Spray</b>	
<b>Common Name</b>	<b>Scientific Name</b>	
arborvitae, American	<i>Thuja occidentalis</i>	O, D
arborvitae, nigra-dark American	<i>Thuja occidentalis</i>	O, D
azalea, hino-crimson	<i>Rhododendron obtusum</i>	O, D
boxwood, littleleaf	<i>Buxus microphylla</i>	O, D
cinquefoil	<i>Potentilla fruticosa</i>	D
juniper, shore	<i>Juniperus conferta</i>	O, D
juniper, blue rug	<i>Juniperus horizontalis</i>	O, D
juniper, blue star	<i>Juniperus squamata</i>	O, D
pine, mugo-mugho	<i>Pinus mugo</i>	O, D
rhododendron, roseum elegans	<i>Rhododendron catawbiense 'roseum elegans'</i>	O, D
spiraea, anthony waterer	<i>Spiraea bumalda</i>	D
yew	<i>Taxus media</i>	O, D

<b>Ornamental Grasses</b>	<b>Recommended Application Method: O = Over the Top Spray D = Directed Spray</b>	
<b>Common Name</b>	<b>Scientific Name</b>	
adagio miscanthus	<i>Miscanthus sinensis</i> var. 'Adagio'	O, D
autumn moor	<i>Stipa tenuissima</i> var. 'Ponytails'	O, D
autumn red flame	<i>Miscanthus sinensis</i> var. 'Purpurascens'	O, D
blaze little bluestem	<i>Schizachyrium scoparium</i> var 'Blaze'	O, D
blue grama	<i>Bouteloua gracilis</i>	O, D
blue lyme	<i>Leymus arenarius</i>	O, D
blue moor	<i>Sesleria caerulea</i>	O, D
bottle-brush	<i>Hystrix patula</i>	O, D
common quaking	<i>Briza media</i>	O, D
dwarf's garters ribbon	<i>Phalaris arundinaceae</i> var. 'Woods dwarf'	O, D
feathertop	<i>Pennisetum villosum</i>	O, D
fountain grass	<i>Pennisetum alopecuroides</i>	O, D
gardener's garters	<i>Phalaris arundinaceae</i> var. 'Picta'	O, D
hamein fountain grass	<i>Pennisetum alopecuroides</i> var. 'Hameln'	O, D
Japanese blood grass	<i>Imperata cylindrica</i> var. 'red baron'	O, D
Karl Foerster feather reed	<i>Calamagrostis acutiflora</i> var. 'Foerster'	O, D
Korean feather reed	<i>Calamagrostis brachytricha</i>	O, D
maiden	<i>Miscanthus sinensis</i> var. 'Gracillimus'	O, D
moudry fountain	<i>Pennisetum alopecuroides</i> var. 'Moudry'	O, D
northern sea oats	<i>Chasmanthium latifolium</i>	O, D

pampas	<i>Cortaderia selloana</i>	O, D
pink crystals ruby	<i>Rhynchelytrium nerviglume</i> var. 'Pink'	O, D
ponytails feather Mexican	<i>Stipa tenuissima</i> var. 'Ponytails'	O, D
purple fountain	<i>Pennisetum setaceum</i> var. 'Rubrum'	O, D
ravenna	<i>Saccharum ravennae</i>	O, D
rosea pampas	<i>Cortaderia selloana</i> var. 'Rosea'	O, D
sarabande miscanthus	<i>Miscanthus sinensis</i> var. 'Sarabande'	O, D
strawberries & cream ribbon	<i>Phalaris arundinaceae</i> var. 'Feeseey'	O, D
striped tuber oat	<i>Arrhenatherum elatius</i> var. 'Variegatum'	O, D
trailblazer switch	<i>Panicum virgatum</i> var. 'Trailblazer'	O, D
trailway side-oats	<i>Bouteloua curtipendula</i> var. 'Trailway'	O, D
tufted hair	<i>Deschampsia cespitosa</i>	O, D
variegated miscanthus	<i>Miscanthus sinensis</i> var. 'Variegatus'	O, D
white flowering fountain	<i>Pennisetum alopecuroides</i> var. 'Caudatum'	O, D
zebra	<i>Miscanthus sinensis</i> var. 'Zebrinus'	O, D

<b>Groundcovers</b>	<b>Recommended Application Method:</b> O = Over the Top Spray D = Directed Spray	
<b>Common Name</b>	<b>Scientific Name</b>	
red apple	<i>Aptenia cordifolia</i>	O, D
Myoporum	<i>Myoporum parvifolium</i>	O, D
iceplant	<i>Carpobrotus edulis</i>	O, D

**Non-Crop Areas**

All States Except Florida.

**NOTE: For California - do not exceed the 2/3 pint per acre maximum use rate allowed in California.**

For use on non-crop areas, such as along roadsides and in unimproved turf areas. For roadside areas with ornamental plantings see the section on ornamental weed control (**Ornamentals (Landscapes and Nurseries)**).

**Broadcast Application:** For control of broadleaf weeds, apply 1/4 to 1 1/3 pint of Lontrel Turf and Ornamental [equivalent to 0.09 to 0.5 lb acid equivalent (ae)] per acre. Use a non-ionic surfactant in spray mixtures at 1 to 2 quarts per 100 gallons of spray mixture. The lower rate of 1/4 pint per acre of Lontrel Turf and Ornamental provides acceptable control of weeds under highly favorable plant growing conditions only and when plants are no more than 3 to 6 inches tall. Where Canada thistle or knapweed is the primary pest, best results are obtained by applying 2/3 to 1 1/3 pint of Lontrel Turf and Ornamental per acre after basal leaves are produced or in the fall up to and following a light frost. Established grasses are tolerant to Lontrel Turf and Ornamental, but new grass seedlings may be injured to varying degrees until the grass has become well established as indicated by vigorous growth and development of tillers and secondary roots.

**High-Volume Leaf Stem Application (Ground)** (for control of broadleaves and certain woody plants, use 1 to 3 quarts of Lontrel Turf and Ornamental per 100 gallons of total spray. Thorough coverage is necessary for good results; therefore, apply as a complete spray to wet foliar application, including all leaves, stems, and root collars, but do not apply more than a total of 1 1/3 pint of Lontrel Turf and Ornamental per acre. To minimize drift, use low spray pressure and keep sprays no higher than the tree crowns. Trees taller than 8 feet in height may be difficult to treat efficiently and obtain thorough coverage.

Unsatisfactory control may result if application is made when brush and weeds are under severe drought stress or other adverse conditions that inhibit plant growth. Environmental conditions may significantly influence results.

### **Kudzu Control (All States Except California)**

**Restriction: In Florida**, use Lontrel Turf and Ornamental only for the control of kudzu in roadsides, and unimproved rough turf areas in the following counties: Baker, Bay, Bradford, Calhoun, Columbia, Escambia, Franklin, Gadsden, Gulf, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Suwannee, Taylor, Union, Wakulla, Walton, and Washington.

Use Lontrel Turf and Ornamental to control kudzu in roadsides and unimproved turf in established plantings of tolerant tree species as a broadcast foliar spray over trees, as a banded or directed spray (in a spray volume of 10 gallons or more per acre), or as a spot application. Apply Lontrel Turf and Ornamental between late June and early October as long as the kudzu is actively growing and not under drought stress. The ideal application time is during vigorous growth and just prior to or during flowering. Only kudzu that has emerged at the time of application will be affected.

**Broadcast Application:** Apply at a rate of 2/3 to 1 1/3 pint of Lontrel Turf and Ornamental (equivalent to 0.25 lb to 0.5 lb ae) per acre. Make sequential applications as long as the total rate per annual use season does not exceed 1 1/3 pint per acre. Do not apply more than 1 1/3 pint per acre per year. The lower rate of 2/3 pint per acre provides acceptable control of kudzu under highly favorable plant growing conditions only and when plants are no larger than 3 to 6 inches tall. Spray volumes of 20 gallons or more per acre for ground roadside and rights-of-way applications will ensure adequate coverage.

**For Spot Applications see the Spot Application section above.**

### **Specific Use Precautions:**

- Application of Lontrel Turf and Ornamental to broadleaf (hardwood) tree species may cause some leaf burning and malformation. This injury is transient in nature, except for plants in the legume family which may be killed if sprayed or if the application is made under the legume tree canopy. Addition of surfactant or crop oil may increase the severity of this injury.
- True firs (grand, noble, and pacific silver firs) show more needle curling than other conifers when higher rates are used. Use lower rates in the rate range for broadcast applications or use directed sprays where possible if needle curling is undesirable.
- Application of Lontrel Turf and Ornamental to plants in the legume family (such as locust, redbud, mimosa, and lupine) or to box elder, persimmon or sassafras will cause severe damage or destruction of such plants.

### **Christmas Tree Plantations (All States Except Florida)**

Use Lontrel Turf and Ornamental for over the top application to actively growing balsam fir, blue spruce, Douglas-fir, Fraser fir, grand fir, lodgepole pine, noble fir, Ponderosa pine, and white pine. In the Pacific Northwest, apply in the first year of transplanting only if some needle curling can be tolerated on first year transplants. Apply to actively growing weeds.

### **Application Timing**

For control of annual weeds, apply Lontrel Turf and Ornamental from weed emergence up to the 5-leaf stage of growth (for best results on wild buckwheat, application at 3 to 5 leaf stage of growth, but before vining). For control of weeds such as Canada thistle and knapweeds, apply after the majority of the basal leaves have emerged up to bud stage or in the fall to knapweed rosettes. Fall applications on Canada thistle can be made up to after a light frost. Applications at this stage must be made to some green growth on the plants.

### **Broadcast Application**

Apply 1/4 to 1/2 pint of Lontrel Turf and Ornamental per acre for control of annual weeds. Apply 1/2 to 2/3 pint of Lontrel Turf and Ornamental per acre for difficult to control weeds such as Canada thistle and knapweeds. Apply as a broadcast application in a minimum of 5 gallons per acre by ground application.

### Spot Application

Apply spot applications at an equivalent broadcast rate of 1/2 to 2/3 pint per acre. Follow instructions for hand-held sprayers below. Direct spray onto weeds and avoid spraying trees where possible.

**Hand-Held Sprayers:** See Hand-Held or Backpack Sprayer Application directions in the Application Directions section

### Tank Mixing

Lontrel Turf and Ornamental may be applied in tank mix combination with other herbicides as per label directions for Christmas tree plantations. Carefully follow applicable use directions, precautions and limitations on the product labels of each tank mix product used. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Specific Use Precaution:

- True firs (grand, noble, and pacific silver firs) show more needle curling than other conifers when higher rates are used. Use lower rates in rate range for broadcast applications or use directed sprays where possible if needle curling is undesirable.

### Specific Use Restrictions:

- Re-treat as necessary, but do not apply more than 2/3 pint of Lontrel Turf and Ornamental per acre per annual growing season.
- **Blue spruce:** Do not exceed 1/2 pint per acre per annual growing season.
- Tree injury may occur with the addition of a surfactant or crop oil with Lontrel Turf and Ornamental. Do not use unless previous experience shows injury is tolerable.
- Do not apply with an air blast sprayer.

### Field Grown Lilies

Lontrel Turf and Ornamental may be applied as a broadcast foliar spray from early spring to fall. Refer to Weeds Controlled Use Rates section for information on application timing, rates and weeds controlled. Only established weeds will be controlled. For spring planted bulbs, delay application until soil covering the newly planted bulbs has been settled by irrigation or rainfall.

### Dichondra Turfgrass and Dichondra Grown for Seed

Apply as a broadcast foliar spray. Apply in 20 gallons or more per acre total spray volume on dichondra lawns and in 20 gallons or more per acre on dichondra grown for seed using ground equipment only. See Weeds Controlled and Use Rates section. Multiple applications may be made as long as the total rate per growing season **does not exceed 2/3 pint per acre**. Apply to new plantings only after they are well established.

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