

Specimen Label



Dow AgroSciences

Lontrel®

Turf and Ornamental

HERBICIDE

®™Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

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

Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-305

Keep Out of Reach of Children

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

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.

Directions for Use

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

Read all Directions for Use carefully before applying.

Do not apply this product 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,

Storage and Disposal (Cont.)

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.
- 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 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 recommended 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.

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 above.

Avoid Spray Drift

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 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.

Spray drift can be lessened by keeping the spray boom as low as possible, by applying 20 gallons or more of spray per acre, by keeping the operating spray pressures at the manufacturer's minimum recommended pressures for the specified 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 application under completely calm conditions which may be conducive to air inversion. 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.

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 Dimension and Gallery specialty herbicides and/or grass herbicides and only on iceplant, Myoporum, red apple and other ground covers that are tolerant to Lontrel Turf and Ornamental.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended 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 ¹ (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)

¹ 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) ¹
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 chamomile, false (mayweed) cocklebur, common coffeeweed cornflower daisy, oxeye hawksbeard, narrowleaf hawkweed, orange hawkweed, yellow inula sp. jimsonweed lettuce, prickly	locoweed, white locoweed, lambert marshelder salsify, meadow sicklepod sorrel, red sowthistle, annual speedwell starthistle, yellow sunflower teasel, common thistle, bull thistle, musk vetch, common	1/2	1/5 (5.4 mL)

Weeds Controlled (Cont.)		Lontrel Turf and Ornamental	
		(pt/acre)	(fl oz/1000 sq ft) ¹
carrot, wild cudweed dandelion, common groundsel, common horseweed knapweed, spotted knapweed, diffuse	knotweed, prostrate pimpernel, scarlet plantain, narrowleaf spurry, corn ragwort, tansy thistle, Canada ²	2/3	1/4 (7.3 mL)
buckwheat, wild ragweed - (common, giant)	smartweed	1	3/8 (11 mL)
Weeds Suppressed (Repeat Treatment May Be Necessary)			
buffalo bur buttercup, hairy buttonweed, Virginia dollarweed knapweed, Russian	kudzu ladysthumb mesquite plantain, broadleaf sowthistle, perennial	1 1/3	1/2 (15 mL)

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

²Control 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 Information section). See Weeds Controlled and Use Rates in General Information section.

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

Established Cool Season Turfgrass

Common Name	Scientific Name
bentgrass (including bentgrass fairways)	<i>Agrostis</i> species
bluegrass, Kentucky	<i>Poa pratensis</i>
fescue, chewing	<i>Festuca rubra</i> var. <i>commutata</i>
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</i> var. <i>saurae 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 in General Information 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 Ornamental section.
- **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 Dimension and Gallery specialty herbicides and/or grass herbicides, and only on iceplant, Myoporum, red apple and other ground covers that are tolerant to Lontrel Turf and Ornamental.
- **Do not** apply to container grown ornamentals.
- For treatment of nursery ornamentals not found in this section refer to Precautions and Restrictions.

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 in General Information 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:

Trees	Recommended Application Method: O = Over the Top Spray D = Directed Spray	
Common Name	Scientific Name	
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 sp.</i>	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

Shrubs	Recommended Application Method: O = Over the Top Spray D = Directed Spray	
Common Name	Scientific Name	
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
spirea, anthony waterer	<i>Spiraea bumalda</i>	D
yew	<i>Taxus media</i>	O, D

Ornamental Grasses	Recommended Application Method: O = Over the Top Spray D = Directed Spray	
Common Name	Scientific Name	
adagio miscanthus	<i>Miscanthus sinensis var. 'Adagio'</i>	O, D
autumn moor	<i>Stipa tenuissima var. 'Ponytails'</i>	O, D
autumn red flame	<i>Miscanthus sinensis var. 'Purpurascens'</i>	O, D
blaze little bluestem	<i>Schizachyrium scoparium var 'Blaze'</i>	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 var. 'Woods dwarf'</i>	O, D
feathertop	<i>Pennisetum villosum</i>	O, D
fountain grass	<i>Pennisetum alopecuroides</i>	O, D
gardener's garters	<i>Phalaris arundinaceae var. 'Picta'</i>	O, D
hamein fountain grass	<i>Pennisetum alopecuroides var. 'Hameln'</i>	O, D
Japanese blood grass	<i>Imperata cylindrica var. 'red baron'</i>	O, D
karl foerster feather reed	<i>Calamagrostis acutiflora var. 'Foerster'</i>	O, D
Korean feather reed	<i>Calamagrostis brachytricha</i>	O, D
maiden	<i>Miscanthus sinensis var. 'Gracillimus'</i>	O, D
moudry fountain	<i>Pennisetum alopecuroides var. 'Moudry'</i>	O, D

Ornamental Grasses (Cont.)		Recommended Application Method: O = Over the Top Spray D = Directed Spray
Common Name	Scientific Name	
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

Groundcovers		Recommended Application Method: O = Over the Top Spray D = Directed Spray
Common Name	Scientific Name	
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.

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 in General Information 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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Label Code: D02-071-007
Replaced Label: D02-071-006
LOES Number: 010-00057

EPA accepted 10/17/17

Revisions:

1. Revised restrictions in Oregon related to golf courses, field grown nurseries, noncrop areas, and grass grown for seed or sod farms."
2. Added to Restrictions, "Do not use in container nurseries"
3. Revised broadcast applications restrictions.
4. Removed the statement, "Do not apply this product in tank mix to wood ornamental plants."
5. Added the following, "Do not tank mix Lontrel Turf and Ornamental with other herbicides labeled for use in ornamental landscapes except Dimension and Gallery specialty herbicides and/or grass herbicides and only on iceplant, Myoporum, and red apple ground covers that are tolerant to Lontrel Turf and Ornamental."
6. Under Turf Grasses Specific Use Restrictions added "noncrop areas".
7. Updated Ornamental Specific use Precautions
8. Added "Broadcast applications may be made over ground covers such as iceplant, Myoporum and red apple."
9. Added Groundcovers Table.
10. Added "Non-Crop Areas" section.
11. Added "Christmas Tree Plantations" section.
12. Added "Field Grown Lilies" section
13. Added "Dichondra Turfgrass and Dichondra Grown for Seed" section.