# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 27, 2016

Tami Jones-Jefferson Regulatory Manager Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268

Subject: Notification per PRN 98-10 – Remove Extra Spaces; Add CA Restriction to Mesquite Product Name: Transline EPA Registration Number: 62719-259 Application Date: 03/28/2016 Decision Number: 515624

Dear Ms. Jones-Jefferson:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

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.

If you have any questions, please contact Terri Stowe at (703) 305-6117 or by email at stowe.terri@epa.gov.

Sincerely,

Vaytryn V. Wontagues

Kathryn V. Montague Product Manager 23 Herbicides Branch Registration Division (7505P) Office of Pesticide Programs

# Transline<sup>®</sup> EPA Reg. No. 62719-259

# **Registration Notes:**

**Final Printed Labeling:** Label text based on EPA-accepted copy dated April 23, 2015, non-notification label prepared June 25, 2015 and Notification with file name Transline-259 28Mar16NW-Ed.doc.

- 1. Put the weed acacia in magenta.
- 2. Add footnote to mesquite "Not registered for use in CA."
- 3. Removed extra spaces between words throughout the booklet.

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

(Base label):

# **Transline**<sup>®</sup>

SPECIALTY HERBICIDE

62719-259 The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

NOTIFICATION

- For control of broadleaf annual and perennial weeds and woody brush • species on: rangeland and permanent grass pastures, grasses grown for hay, Conservation Reserve Program (CRP) sites;
- forest sites, conifer and tree plantations;
- non-crop areas for example airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, manufacturing and storage sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil and gas pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storm water retention areas, substations, unimproved rough turf grasses, vacant lots and other non-crop residential areas, and around farm buildings;
- natural areas (open space) for example, campgrounds, parks, prairie • management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- including grazed areas on these sites.

Active Ingredient:

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

Acid Equivalent:

3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lb/gal)

# Keep Out of Reach of Children CAUTION

**Precautionary Statements** 

# Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin

Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

# Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

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:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product.
- Wash the outside of gloves before removing.
- As soon as possible, wash thoroughly and change into clean clothing.
- 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, or 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 for rigid containers 5 gal or less)

#### 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.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container.

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

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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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### (Storage and Disposal for refillable rigid containers larger than 5 gal)

# 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.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**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, alternatively, 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

# (Storage and Disposal for nonrefillable rigid containers larger than 5 gal)

# **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.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container.

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 mix tank or collect rinsate for later use or disposal. Insert 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### 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 unacceptable, return at once unopened.

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

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

EPA Reg. No. 62719-259

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

<sup>®</sup>Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow
 Produced for
 Dow AgroSciences LLC
 9330 Zionsville Road
 Indianapolis, IN 46268

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(cover, shipping container):

# **Transline**<sup>®</sup>

# SPECIALTY HERBICIDE

For control of broadleaf annual and perennial weeds and woody brush species on:

- rangeland and permanent grass pastures, grasses grown for hay, Conservation Reserve Program (CRP) sites,
- forest sites, conifer and tree plantations;
- non-crop areas for example airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, manufacturing and storage sites, military lands, mining and drilling areas, non-irrigation ditch banks, oil and gas pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storm water retention areas, substations, unimproved rough turf grasses, vacant lots and other non-crop residential areas, and around farm buildings;
- natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- including grazed areas on these sites.

#### Active Ingredient:

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

#### Acid Equivalent:

3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lb/gal)

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

# **Agricultural Use Requirements**

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

# Refer to inside of label booklet for additional precautionary information including Directions for Use.

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

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(Page 1 through end):

#### **Precautionary Statements**

# Hazards to Humans and Domestic Animals

# CAUTION

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# **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

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

# **User Safety Recommendations**

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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# **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.

#### **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

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

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

**Entry Restrictions for Non-WPS Uses:** For applications to fallow cropland, rangeland, pasture, and non-crop areas, do not enter treated areas until sprays have dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves made of any waterproof material, long-sleeved shirt, long pants, shoes and socks.

#### 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.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container.

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. 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

#### 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, alternatively, 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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# **Product Information**

Use Transline<sup>®</sup> specialty herbicide for postemergence control of broadleaf weeds and woody brush species in sites listed on this label such as range, forests, non-crop, and natural areas. Use on these sites may include application to grazed areas. Transline is labeled for control of broadleaf weeds in cottonwood/poplar and eucalyptus tree plantations; in all states except Florida.

# **Precautions and Restrictions**

Use directions in Dow AgroSciences supplemental labeling may supersede directions or limitations in this labeling.

- Do not contaminate water intended for irrigation or domestic purposes. To avoid injury to crops or other desirable plants, do not treat or allow spray drift to fall onto banks or bottoms of irrigation ditches or other channels that carry water that may be used for irrigation purposes.
- Do not use in greenhouses.
- In California, the maximum application rate is 2/3 pint per acre per annual growing season.
- In Florida, Transline can only be used for the control of kudzu in forests, utility rights-of-way, roadsides, fence lines, and other non-crop 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.
- Chemigation: Do not apply this product through any type of irrigation system.

- Removal of Woody Plants Following Treatment: To maximize woody plant control, it is recommended that treated plants not be removed by mechanical means or by fire for one year after application
- Some desirable broadleaf plants (forbs) are susceptible to Transline. Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated. However, the stand and growth of established perennial grasses is usually improved after treatment, especially if rainfall is adequate for active plant growth and grazing is deferred.
- Roses and Leguminous trees such as locusts, redbud, mimosa, and caragana adjacent to or in a treated area can occasionally be affected by root uptake of Transline
- Established grasses are tolerant to Transline, but newly seeded grasses may be injured until well established as indicated by tillering, development of a secondary root system, and vigorous growth.
- Rotation to Broadleaf Crops: Do not plant broadleaf crops in treated areas until an adequately sensitive bioassay with a sensitive crop, such as soybean or other legume, shows that the level of clopyralid present in the soil will not adversely affect that broadleaf crop.
- Grazing/Haying: There are no restrictions on grazing or hay harvest following application of Transline at labeled rates except for exported grass hay from California, Nevada, Washington and Oregon (see instructions in the Range and Permanent Grass Pasture section)
- Do not transfer livestock from treated grazing areas, or from feeding of treated hay, to sensitive broadleaf crop areas without first allowing 3 days of grazing on an untreated pasture (or feeding of untreated hay). If livestock are transferred within less than 3 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.
- Restrictions in Grass Clippings, Hay, or Manure Use:
  - Do not use grass, hay, or straw from areas treated within the previous 18 months in compost, mulch or mushroom spawn.
  - Do not use plant residues, including grass clippings, hay, or straw from treated areas, for composting or mulching, where susceptible plants may be grown the following season.
  - Do not spread manure from animals that have consumed clopyralid-treated forage or hay within the previous 3 days on land used for growing susceptible broadleaf crops, ornamentals, orchards, or other susceptible desirable plants..
  - To promote herbicidal decomposition, plant residues should be evenly incorporated or burned.
     Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.
- Field Bioassay Instructions: In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample variability in field conditions such as soil texture, soil organic matter, soil pH, rainfall pattern, drainage, and any other variable that could affect the seed bed of the new crop. The field bioassay can be initiated between harvest of the treated crop and planting of the intended rotational crop. Observe the test crop for symptoms of herbicidal activity, such as poor stand (effect on seed germination), chlorosis (yellowing), epinasty, and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the intended rotational crop; plant a crop tolerant to clopyralid such as barley, canola (rapeseed), grasses, field corn, oats, sugar beets, or wheat.

#### **Avoid 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 Transline directly to, or allow spray drift to come in contact with, vegetables, flowers, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other desirable broadleaf crops or ornamental plants. Establish small areas of new legume seedlings prior to seeding more extensive areas in order to determine if phytotoxic residues are present in the soil of previously treated areas at levels that could inhibit legume establishment. See Field Bioassay Instructions above.

Unless otherwise specified on this label or supplemental labeling for Transline, do not apply this product to any broadleaf crop or ornamental planting or to areas where sensitive plants will be planted during the same growing season. (See Rotation to Broadleaf Crops.)

#### **Avoid Spray Drift**

Avoid spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible broadleaf plants 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 directions and precautions on the product label.

**Ground Application:** With ground equipment, minimize spray drift by keeping the spray boom as low as possible, by applying 10 gallons or more of spray per acre, by keeping the operating spray pressures at the manufacturer's minimum specified 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.

**Aerial Application:** With aircraft, minimize drift by using straight stream nozzles directed straight back; by using a spray boom no longer than 3/4 of the rotor or wing length of the aircraft; by using drift control systems or drift control additives; and, by keeping spray pressures low enough to provide coarse spray droplets. Do not use a thickening agent with the Microfoil or Thru-Valve booms, or other systems that cannot accommodate thick sprays. Spray only when wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to air inversions. Do not apply with broadcast applications in less than 4 gallons per acre.

Do not apply by aircraft when an air temperature inversion exists. Such a condition is characterized by little or no wind and lower air temperature near the ground than at higher levels. The use of a smoke device on the aircraft or continuous smoke column at or near the site of application will indicate air direction and velocity, and whether a temperature inversion is present, as indicated by horizontal layering of the smoke.

#### **Sprayer Clean-Out**

To avoid injury to desirable plants, thoroughly clean equipment used to apply Transline before reusing to apply any other chemicals.

- 1. Rinse and flush application equipment thoroughly at least three 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 quart 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 Directions**

Transline – Alone: To prepare a water dilution of Transline:

1. Add 3/4 of the required spray volume to the spray tank and start agitation.

- 2. Add the required amount of Transline.
- 3. Add any surfactants, adjuvants or drift control agents according to manufacturer's label. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant.
- 4. Add any spray thickening agent, if needed to control drift, according to the manufacturer's label.
- 5. 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.

#### Transline - Tank Mix:

This product 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. Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.

#### **Tank Mixing Precautions:**

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.
- 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 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 Transline 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. If the mixture balls-up, forms flakes, sludges, jels, 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. 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 Transline are rainfast within 2 hours after application.

#### **Application Rates**

Generally, application rates at the lower end of the rate range will be satisfactory for young, succulent growth of susceptible weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions, such as drought or extreme temperatures, dense weed stands and/or larger weeds), the higher rates within the rate range will be needed.

#### **Use of Adjuvants**

Addition of surfactants, crop oils, or other adjuvants may increase effectiveness of Transline. If an adjuvant is added to the spray solution, follow all manufacturer use guidelines. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

#### Spray Coverage

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Do not make broadcast applications in less than 4 gallons of total spray volume per acre. For best results and to minimize spray drift, apply in a spray volume of 10 gallons or more per acre. As vegetative canopy and weed density increase, increase spray volume to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoid Injury to Non-Target Plants.

#### **Cut Surface Applications**

Apply Transline to control unwanted trees and vines in the legume family such as mimosa, locust, redbud, or wisteria. Transline can be used either undiluted or diluted in a 1 to 1 ratio with water, as directed below. **Note:** No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.

**Tree Injector Method:** Apply\_by injecting 1/2 milliliter of undiluted Transline or 1 milliliter of the diluted solution through the bark at intervals of 3 to 4 inches between centers of the injector wound. Completely surround the tree with injections at any convenient height.

**Hack and Squirt Method:** Make cuts with a hatchet or similar equipment at intervals of 3 to 4 inches between centers at a convenient height around the tree trunk. Spray 1/2 milliliter of undiluted Transline or 1 milliliter of the diluted solution into each cut.

**Frill or Girdle Method:** Make a single girdle through the bark completely around the tree at a convenient height. Wet the cut surface with undiluted or diluted solution.

#### **Cut Stump Application**

Spray or paint the cut surfaces of freshly cut stumps and stubs with a 50/50 mix of Transline and water. The cambium area next to the bark is the most vital area to wet. Apply Transline as soon as the tree or vine has been cut.

# **Broadleaf Weeds Controlled**

artishaka larupalam	locoweed, white
artichoke, Jerusalem	locoweed, lambert marshelder
buckwheat, wild buffalobur <sup>1</sup>	maisheidei
	nightshada, agatara blaak
burdock, common	nightshade, eastern black
chamomile, false (scentless)	nightshade, cutleaf
chamomile, mayweed (dogfennel)	nightshade, hairy
clover, black medic	oxeye daisy
clover, hop	pineappleweed
clover, red	ragweed, common
clover, white	ragweed, giant
cocklebur, common	salsify, meadow (goatsbeard)
coffeeweed	sicklepod
cornflower (bachelor button)	smartweed, green <sup>1</sup>
dandelion	sorrel, red
dock, curly	sowthistle, annual
groundsel, common	sowthistle, perennial <sup>1</sup>
hawksbeard, narrowleaf	starthistle, yellow
hawkweed, orange	sunflower (common and wild)
hawkweed, yellow	teasel, common
horseweed	thistle, artichoke
jimsonweed	thistle, bull
knapweed, diffuse	thistle, Canada (rosette to bud)
knapweed, Russian <sup>1</sup>	thistle, musk (rosette to bud)

knapweed, spotted	thistle, Italian
ladysthumb <sup>1</sup>	vetch
lettuce, prickly	

<sup>1</sup>These weeds may only be suppressed. Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during, and after treatment. For perennial weeds, such as Russian knapweed and perennial sowthistle, Transline will control the initial top growth and inhibit regrowth during the season of application (season long control). At higher use rates shown on this label, Transline may cause a reduction in shoot regrowth in the season following application; however, plant response may be inconsistent due to inherent variability in shoot regrowth from perennial root systems.

# **Broadleaf Weeds Controlled (California Only)**

knapweed, diffuse	thistle, artichoke
knapweed, Russian <sup>1</sup>	thistle, Canada (rosette to bud)
knapweed, spotted	thistle, Italian
starthistle, yellow	thistle, musk (rosette to bud)
· · · ·	

<sup>1</sup>These weeds may only be suppressed. Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during, and after treatment.

# **Woody Plants and Vines Controlled**

acacias	mimosa (silktree)
eastern redbud	
kudzu	Mesquite <sup>1</sup>
	wisteria

locust (spp) <u>Not registered for use in CA.</u> **Uses** 

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

Use Transline 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 Transline 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 Transline per acre for control of annual weeds. Apply 1/2 to 2/3 pint of Transline 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:** Hand-held sprayers may be used for spot applications of Transline 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 upon an area of 1000 sq ft. Mix the amount of Transline (fl oz or mL) corresponding to the desired broadcast rate in 1 gallon or more of spray. To calculate the amount of Transline 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 (calculation,  $3500 \div 1000 = 3.5$ ). An area of 1000 sq ft is approximately  $10.5 \times 10.5$  yards (strides) in size.

Amount of Transline to Treat an Area of 1000 sq ft (pint/acre) (Mix in 1 Gallon or More of Spray)			
FI oz per 1000 sq ft	3/32 fl oz	3/16 fl oz	1/4 fl oz
	(2.8 mL)	(5.5 mL)	(7.3 mL)
Equivalent pt/acre	1/4	1/2	2/3

#### **Tank Mixing**

Transline may be applied in tank mix combination with other herbicides as per label directions for Christmas tree plantations. Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.

#### **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 Transline 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 Transline. Do not use unless
  previous experience shows injury is tolerable.
- Do not apply with an air blast sprayer.

# Cottonwood/Poplar and Eucalyptus Tree Plantations (All States Except Florida)

Use Transline for postemergence control of labeled broadleaf weeds in new and established plantings of cottonwood/poplar and eucalyptus tree plantations. Apply as a broadcast foliar spray over trees or as a banded or directed spray Apply in 10 gallons or more per acre total spray volume using ground equipment only. Multiple applications may be made as long as the total rate per annual growing season does not exceed 1 1/3 pint per acre. Apply to new plantings only after they are well established as indicated by several inches of new healthy growth.

**Application Rates:** Apply at a rate of 1/3 to 1 1/3 pints/acre in eucalyptus tree plantations and 1/3 to 2/3 pints/ acre in cottonwood/poplar plantations. Sequential applications may be made as long as the total rate per annual growing season does not exceed 1 1/3 pints per acre.

In California: The maximum use rate is 2/3 pint per acre per annual growing season.

**In Hawaii:** For control of additional weeds in eucalyptus tree plantations (listed below), apply as a broadcast spray over the top, as a directed or branded spray, or as a spot treatment.

#### Additional Weeds Controlled in Eucalyptus Tree Plantations in Hawaii:

	Application	
Weed Species	Rate	Application Timing

	(pint/acre)	
ageratum (Ageratum conyzoides) fireweed (Erechtites hieracifolia) thickhead (Crassocephalum crepidioides)	1/3 – 2/3	Smaller plants may be controlled using the lower rate. Plants may be slow to show control at lower rates.
beggarweed ( <i>Desmodium intortum</i> ) horseweed ( <i>Conyza bonariensis</i> )	2/3 – 1 1/3	Smaller plants may be controlled using the lower rate. Use 1 to 1 1/3 pints per acre for <i>Desmodium intortum</i> in flower stage.

**Spot Application:** If applying as a spot treatment, apply to weeds on a spray to wet basis (not to runoff) with uniform and complete spray coverage. Avoid contact with foliage of cottonwood/poplar trees as much as possible. See use instructions for Hand-Held Sprayers.

**Hand-Held Sprayers:** Mix the amount of Transline corresponding to the desired broadcast rate in 1 gallon or more of water and apply to an area of 1000 sq ft. For larger areas, multiply the values in the table below 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  $3.5 (3500 \div 1000 = 3.5)$ . Prepare a spray solution by adding 1/4 fl oz of Transline per gallon of water. When applied at 1 gallon of spray per 1000 sq ft, this spray concentration is equivalent to a broadcast rate of 2/3 pint per acre. Using the example of 3500 sq ft, the applicator would use  $3.5 \times 1/4$  fl oz of Transline in 3.5 gallons of water.

Amount of Transline to Treat an Area of 1000 sq ft (pint/acre) (Mix in 1 Gallon or More of Spray)				
Fl oz per 1000 sq ft	1/8 fl oz (3.6 mL)	¼ fl oz (7.3 mL)	3/8 fl oz (11 mL)	½ fl oz (15 mL)
Equivalent pt/acre	1/3	2/3	1	1 1/3

**Tank Mix:** This product 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. Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.

#### **Specific Use Precautions and Restrictions:**

- In California, do not exceed 2/3 pint per acre per annual growing season.
- Do not tank mix Transline with other herbicides labeled for this use unless spray avoids all contact with tree foliage.
- Certain broadleaf weeds, such as mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and bindweed, will not be controlled or suppressed.

# Forest Sites, Including Tree Plantings

(All States Except Florida)

NOTE: Forestry uses in California are permitted as long as the maximum use rate per annual growing season for California (2/3 pint per acre) is not exceeded.

Apply\_Transline for control of certain problem weeds growing in forest sites, including tree plantings. Apply\_Transline either at site preparation or after trees are planted (tree release). Applications of Transline over the top of tolerant tree species may be made anytime during the season; however, some needle/leaf curling may occur if applied during active tree growth. This effect is transient and trees should recover by the end of the same growing season or early in the following growing season.

alder black walnut bur oak cherry cherry bark oak choke cherry cottonwood crabapple Douglas-fir eastern red cedar European larch	grand fir green ash hackberry hickory hybrid aspen hybrid poplar incense cedar loblolly pine lodgepole pine longleaf pine noble fir	Norway spruce pacific silver fir Ponderosa pine red oak red pine Russian olive sawtooth oak Scotch pine slash pine shortleaf pine	sugar maple sumac sycamore Virginia pine western red cedar western hemlock white ash white pine white spruce white oak
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#### Examples of tolerant tree species:

#### **Broadcast Application**

Apply the required amount of Transline in 5 gallons of water or more per acre to achieve thorough and uniform spray coverage of target weeds using ground equipment or helicopter.

Transline will not control mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and field bindweed.

Weed Species	Application Rate (pint/acre)	Application Timing
general weed control	1/4 - 1 1/3	Apply when weeds are small and actively growing. The lower rate of 1/4 pt per acre provides acceptable control of weeds only under highly favorable plant growing conditions and when weeds are no more than 3 to 6 inches tall.
knapweed, diffuse knapweed, spotted thistle, Canada	1/3 – 1 1/3	For best results, apply after the majority of basal leaves have emerged, up to early bud stage. Treatments applied prior to the emergence of the majority of basal leaves or at later growth stages may result in only partial control.
hawkweeds starthistle, yellow thistle, bull thistle, musk	2/3 – 1 1/3	For best results, apply from rosette to bolting stage of growth. For hawkweeds only, fall applications will not control this weed.
kudzu		Applications are most effective between late June and early October as long as the kudzu are actively growing and not under drought stress. The ideal time to apply is during vigorous growth and just prior to or during flowering.

# Spot Applications can be used in forest sites. Follow instructions in the "Spot Treatment" section above.

#### **Tank Mixing**

Transline may be applied in tank mix combination with other herbicides registered for this use such as: Accord<sup>®</sup> XRT II, Rodeo, Arsenal, Garlon<sup>®</sup> 4 Ultra, Garlon 3A, Milestone, Opensight, 2,4-D, atrazine, Oust XP or Velpar DF as per label directions for forest site uses. Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.

#### **Specific Use Precautions:**

 Application of Transline 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 (see below). 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 Transline 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 control of such plants.

#### **Specific Use Restrictions:**

- Applications of Transline over actively growing conifers may cause some needle curling. Tree injury in the form of needle curling may be increased by the addition of a surfactant or crop oil with broadcast applications of Transline. Use of a surfactant or crop oil is not recommended unless previous experience shows such injury can be tolerated.
- Do not use in forest nursery beds.

# **Non-Crop Areas**

# All States Except Florida. NOTE: Non-crop uses in California are permitted as long as the maximum use rate for California (2/3 pint per acre per annual growing season) is not exceeded. See section for California below.

For use on non-crop areas, such as industrial manufacturing and storage sites, and rights-of-way, such as along roadsides, electrical power lines, communication lines, pipelines and railroads, including grazed areas on these sites and forest spot application adjacent to these sites. **Note:** Transline is not registered for use in landscaping or on turfgrass or lawns.

**Broadcast Application (Ground or Aerial):** For control of broadleaf weeds, apply 1/4 to 1 1/3 pint of Transline [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 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 Transline per acre after basal leaves are produced or in the fall up to and following a light frost. Transline can be applied in an invert emulsion using oil and an appropriate inverting agent. Follow label directions of the inverting agent. Established grasses are tolerant to Transline, 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 mesquite with Individual Plant treatments on rangeland see the Mesquite Control section below):** For control of broadleaves and certain woody plants (e.g., mesquite), use 1 to 3 quarts of Transline 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 Transline 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. For best results on mesquite, apply in the spring or early summer, 40 to 90 days after the first green growth appears and when soil moisture is adequate for active growth. A soil temperature of 75 to 83°F at a depth of 12 to 18 inches is optimal for good plant kills. Soil temperature of less than 75°F at this depth will reduce the ultimate root kill of mesquite.

#### **California Only**

For use on forests, non-crop areas, such as manufacturing and storage sites, roadsides, electrical power lines, communication lines, pipelines and railroads, including grazed areas on these sites. Use rates as described above up to the maximum use rate for California (2/3 pint per acre per annual growing season)

Kudzu Control

#### (All States Except California)

**Restriction: In Florida**, use Transline only for the control of kudzu in forests, utility rights-of-way, roadsides, fence lines, and other non-crop 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 Transline to control kudzu in rangeland, forests, utility rights-of-way, roadsides, and other non-crop areas 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 Transline 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. See Application Timing section.

**Broadcast Application (Ground or Aerial):** Apply at a rate of 2/3 to 1 1/3 pint of Transline (equivalent to 0.25 lb to 0.5 lb ae) per acre. Make sequential applications as long as the total rate per annual growing 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 and spray volumes of 5 gallons or more per acre for aerial applications will ensure adequate coverage. Transline can be applied in an invert emulsion using oil and an appropriate inverting agent. Follow label directions of the inverting agent.

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

#### **Specific Use Precautions:**

- Application of Transline 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 Transline 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.

# **Range and Permanent Grass Pastures**

# NOTE: Rangeland and pasture uses in California are permitted as long as the maximum use rate for California (2/3 pint per acre <u>per annual growing season</u>) is not exceeded.

Use Transline to control susceptible broadleaf weeds on rangeland, shelterbelts, Conservation Reserve Program acres, or established forage grasses in permanent grass pastures. Best results on most weeds are obtained when weeds are small and actively growing (see specific information below) and application is made in 10 gallons or more per acre of water using ground equipment. Do not apply with broadcast applications in less than 4 gallons per acre.

There are no grazing or having restrictions following Transline applications when used at labeled rates except for export hay from California, Nevada, Oregon and Washington.

#### **Application Rates**

Apply Transline at a rate of 1/3 to 1 1/3 pint per acre when weeds are young and actively growing. Apply Transline as described below for control of spotted and diffuse knapweed, Canada thistle, musk thistle, yellow starthistle and suppression of Russian knapweed. Use the lower labeled application rate for young, actively growing weeds. Use the higher rate under less favorable growing conditions or on dense weed stands and/or larger weeds. Transline may also be tank mixed with 2,4-D at 1/2 to 1 lb ae per acre where weed species present are susceptible to 2,4-D. Transline may be applied in tank mix combination with

other herbicides provided the tank mix product is labeled for the timing and application method for the use site to be treated and tank mixing is not prohibited by the label of the tank mix product. See Mixing Directions section. Observe the label of other products used in tank mixtures and follow all applicable label directions. If directions on this label and tank mix partners differ, follow the most restrictive label directions.

Weed Species	Application Rate (pint/acre)	Application Timing
thistle, musk	1/3 - 1 <sup>1</sup>	Apply from rosette to early bolt growth stage.
thistle, artichoke thistle, Italian	1/3 – 2/3	Apply at the rosette growth stage.
starthistle, yellow	1/2 - 1	Apply from rosette to mid-bolt growth stage
knapweed, diffuse knapweed, spotted	2/3 - 1	Apply any time plants are actively growing, including fall regrowth. Optimum time is from mid bolt to late bud stage of growth.
thistle, artichoke thistle, Italian		Apply during the bolting growth stage.
thistle, Canada	2/3 - 1 1/3	Apply after the majority of basal leaves have emerged through the beginning of the bud stage. Application may also be made to fall regrowth up to following a light frost.
knapweed, Russian	1 - 1 1/3	Apply from bud to mid-flower growth stage or treat fall regrowth.

<sup>1</sup>Transline may be applied to musk thistle in the rosette stage at 1/3 pint per acre only when applied in tank mixture with 2,4-D at 1/2 to 1 lb ae per acre. Otherwise, apply Transline to musk thistle at 2/3 to 1 pint per acre.

#### **Exported Grass Hay**

#### (California, Nevada, Oregon and Washington ONLY)

Use the following chart if the target grass/hay crop will be exported to clopyralid-sensitive destinations.

Timing of Application	Spring Cutting	Fall Cutting	Spring Cutting Subsequent Year <sup>1</sup>	Fall Cutting Subsequent Year <sup>1</sup>
before spring cutting	do not export	may be exported	may be exported	may be exported
after spring cutting	N/A	do not export	may be exported	may be exported
after fall cutting	N/A	N/A	may be exported	may be exported

N/A – not applicable

<sup>1</sup>If no clopyralid applications are made in subsequent year.

- Make fall applications while grass and weeds are actively growing.
- Make fall applications as close to last cutting as possible in order to reduce clopyralid residues in hay the following year.
- Adequate soil moisture, particularly with fall applications, will help weed control as well as reduce clopyralid residues in hay.
- In areas where three cuttings can be made, avoid exporting the first cutting after a clopyralid application.

# **Mesquite Control**

**Removal of Woody Plants Following Treatment:** To maximize woody plant control, do not disturb treated plants or remove by mechanical means or by fire for at least one year after application

Suggested surfactants for ground or aerial applications of Transline for the control of mesquite include

water plus nonionic surfactant with at least 80% active ingredient, crop oil concentrate or methylated seed oil at the manufacturer's specified rates.

#### Timing and Factors in Control:

- The herbicidal response of mesquite is strongly influenced by foliage condition, stage of growth and environmental conditions. For best results, apply when new growth foliage has turned from light to dark green, when the soil temperature is above 75°F at a depth of 12 to 18 inches, and soil moisture is adequate for plant growth. Application should be made within 60 days after the 75°F minimum soil temperature at the 12- to 18-inch depth has been reached. Product performance may be adversely affected if application is made before mesquite foliage has turned from light to dark green or if foliage has been injured or removed by late frost, insects, hail or plant diseases.
- Do not treat if mesquite exhibits new (light green) terminal growth in response to recent heavy rainfall during the growing season. Rate of soil warm-up at the 12- to 18-inch depth may vary with soil texture and drainage. Coarse-textured (sandy) soils warm up sooner than fine-textured (clay) soils and dry soils warm up more quickly than wet soils.
- The herbicidal symptoms of mesquite treated with Transline are often different from those resulting from application of other herbicides. In some years, complete brownout and leaf drop of treated mesquite may be delayed and not occur before the first frost. Other herbicidal symptoms often observed could include discoloration and rupture and/or "bleeding" of bark on branches and trunks.
- Reapplication during the same growing season is not recommended. Re-treatment will not be
  effective until woody plants have developed sufficient new foliage to intercept the spray and
  provide uptake adequate to control the plant when translocated to the root system. Following
  mechanical removal, regrowth mesquite should be at least 4 feet tall before application of
  Reclaim.
- Control of rangeland brush or weeds may be unsatisfactory under adverse growing conditions such as severe drought stress.

#### **Broadcast Ground or Aerial Application:**

Use Transline alone or in combination with Remedy<sup>®</sup> Ultra specialty herbicide or Tordon<sup>®</sup> 22K specialty herbicide as specified in the table below. Do not apply with broadcast applications in less than 4 gallons per acre. See the General Information section for additional information.

Brush Species	Application Rates (pint/acre)	Specific Use Directions
Mesquite <sup>1</sup>	1 1/3 Transline	See Timing and Factors in Control section for
		information on treatment of mesquite. Apply as
	or	a water spray in a total spray volume of 4
	2/3 - 1 1/3 Transline	gallons or more per acre by air or 10 gallons or
	plus Milestone at 7 fl oz/A	more per acre by ground application using
		higher spray volumes with increasing brush
	or	density and height.
	2/3 - 1 1/3 Transline	Note: Where control of pricklypear cactus is
	plus	desired, the tank mixture of Transline and
	2 Tordon 22K	Tordon 22K should be used.
south Texas mixed	2/3 - 1 1/3 Transline plus	See Timing and Factors in Control section of the
brush, including	2 of Tordon 22K	label for information on treatment of mesquite.
mesquite,		Apply in a spray volume of 4 gallons or more
pricklypear,		per acre by air or 20 gallons or more per acre
blackbrush,		by ground application using higher spray
twisted acacia,		volumes with increasing brush density and
catclaw acacia,		height.

granjeno and guajillo	<b>Note:</b> Where non-legume species such as granjeno, oaks and hackberry predominate, Remedy Ultra at 1 to 2 pt/acre may be substituted for Transline in the tank mixture with Tordon 22K to improve control (see label
	for Remedy Ultra.)

<sup>1</sup>Not registered for use in CA

#### Mesquite Control in Stands of Live Oak:

For the control of mesquite growing within stands of live oak, apply Transline either alone at 1 1/3 pints per acre or in a tank mix with Milestone at 7 fl oz per acre. Apply only as a water dilution containing surfactant (0.25% v/v) at a total spray volume of 4 gallons or more per acre aerially. Live oak over-sprayed with Transline may show a 10 to 20% canopy reduction the year of treatment but will recover. Application of Transline in tank mix combination with other herbicides may result in increased injury to live oak.

#### Individual Plant Treatment - Leaf Spray Method:

For control of mesquite infestations of low to moderate density, Transline may be applied to individual plants with backpack or hand-held sprayers or a vehicle-mounted sprayer with hand-held spray wand or spray gun. For individual plant treatment, use 2 quarts of Reclaim in combination with 2 quarts of Remedy Ultra per 100 gallons of total spray solution (1/2% v/v of each product), or use Transline alone at 3 quarts per 100 gallons of total spray solution.

Apply as a complete spray-to-wet foliar application, including all leaves. Thorough coverage is necessary for good results, but it is not necessary to spray to the point of runoff. The total amount of Transline applied should not exceed 1 1/3 pints per acre. For best results, follow information given in Timing and Factors in Control section and do not spray when mesquite foliage is wet. This application method works best for brush less than 8 feet tall since efficient treatment and thorough coverage of taller brush is difficult to achieve with this method.

To minimize drift, select a spray nozzle and pressure that will provide good coverage while forming a coarse spray. Additionally, drift may be reduced by using the minimum pressure necessary to obtain plant coverage without forming a mist and by directing sprays no higher than tops of target plants. If desired, a spray dye may be added to the spray mixture to mark the treated plants.

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