



# SPECIMEN LABEL

# TRICLOPYR 4E

## Specialty Herbicide

*For the control of woody plants and broadleaf weeds on rights-of-way, industrial sites, non-crop areas, non-irrigation ditch banks, forests, and wildlife openings, including grazed areas on these sites.*

Manufactured by:  
**ALBAUGH, INC.**  
Ankeny, Iowa 50021

**FOR CHEMICAL SPILL, LEAK,  
FIRE, OR EXPOSURE, CALL  
CHEMTREC (800) 424-9300**

AD040606

<b>ACTIVE INGREDIENT:</b>	
Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, butoxyethyl ester . . . . .	61.6%
<b>INERT INGREDIENTS:</b> . . . . .	38.4%
<b>TOTAL</b> . . . . .	100.0%

Contains petroleum distillates  
Acid equivalent: triclopyr - 44.3% - 4 lb/gal

EPA Reg. No. 42750-126

EPA Est. No. 42750-MO-001

### **KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION**

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

#### **FIRST AID**

<b>IF ON SKIN:</b>	<ul style="list-style-type: none"> <li>• Flush skin with plenty of water.</li> <li>• Get medical attention if irritation persists.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Do not induce vomiting.</li> <li>• Call a physician.</li> </ul>

In case of emergency endangering health or the environment involving this product, call CHEMTREC toll-free at 1-800-424-9300.

**See inside booklet for additional PRECAUTIONARY STATEMENTS.**

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin, or clothing. Avoid breathing mists or vapors. Avoid contamination of food.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

**WPS Uses:** Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) – in general, agricultural-plant uses are covered – must wear:

- Long-sleeved shirt and long pants
- Chemical -resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber, or Viton
- Shoes plus socks

**Non-WPS Uses:** Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) – in general, only agricultural-plant uses are covered by the WPS – must wear:

- Long-sleeved shirt and long pants
- 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:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. 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 disposing of equipment washwaters.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame. Do not cut or weld container.

### 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 use for manufacturing or formulating.

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

### 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 such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton
- Shoes plus socks

**AGRICULTURAL USE REQUIREMENTS FOR FORESTRY USES:** For use of this product on forestry sites, follow PPE and Reentry restrictions in the "Agricultural Use Requirements" section of this label.

**USE REQUIREMENTS FOR NON-CROPLAND AREAS:** No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is applied to non-cropland.

## NON-AGRICULTURAL USE REQUIREMENTS

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

**Entry Restrictions for Non-WPS Uses:** For applications to non-cropland areas, do not allow entry into areas until sprays have dried, unless applicator and other handler PPE is worn.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** Store above 28°F or agitate before use.

**PESTICIDE DISPOSAL:** Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable federal, state, or local procedures.

**PLASTIC CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**METAL CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**CONTAINER DISPOSAL FOR REFUSABLE CONTAINERS:** Replace the dry disconnect cap, if applicable, and seal all openings which have been opened during use. Return the empty container to a collection site designated by Albaugh. If the container has been damaged and cannot be returned according to the recommended procedures, contact the Albaugh Customer Service Center at 1-800-247-8013 to obtain proper handling instructions.

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

## GENERAL INFORMATION

TRICLOPYR 4E will control unwanted woody plants and annual and perennial broadleaf weeds in forests, and on non-crop areas including industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides and railroads, fence rows, non-irrigation ditch banks, and around farm buildings. These sites may include grazed areas as well as establishment and maintenance of wildlife openings.

## GENERAL USE PRECAUTIONS

- The state of Arizona has not approved TRICLOPYR 4E for use on plants grown for commercial production; specifically forests grown for commercial timber production, or on designated grazing areas.
- When applying this product in tank mix combination, follow all applicable use directions and precautions on each manufacturer's label.
- Do not apply on ditches used to transport irrigation water. Do not apply where runoff or irrigation water may flow onto agricultural land as injury to crops may result.
- Do not apply this product using mist blowers unless a drift control additive, high viscosity inverting system, or equivalent is used to control spray drift.
- Sprays applied directly to Christmas trees may result in conifer injury. When treating unwanted vegetation in Christmas tree plantations, care should be taken to direct sprays away from conifers.
- Do not apply TRICLOPYR 4E directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants and do not permit spray mists containing it to drift onto them.
- It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands, flood plains, deltas, marshes, swamps, bogs, and transitional areas between upland and lowland sites. Do not apply to open water such as lakes, reservoirs, rivers, streams, creeks, saltwater bays, or estuaries.

## CHEMIGATION

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

## AVOID INJURIOUS SPRAY DRIFT

Applications should be made only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

**Aerial Application (Helicopter Only):** For aerial application on rights-of-way or other areas near susceptible crops, use an agriculturally registered spray thickening drift control additive as recommended by the manufacturer or apply through the Microfoil boom, Thru-Valve boom, or equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift reducing systems may be utilized if they are made as drift-free as are mixtures containing an agriculturally registered thickening agent or applications made with the Microfoil boom or Thru Valve boom. If a spray thickening agent is used, follow all use recommendations and precautions on the product label. Do not use a thickening agent with the Microfoil boom, Thru Valve boom, or other systems that cannot accommodate thick sprays.

Reference within this label to a particular piece of equipment produced by or available from other parties is provided without consideration for use by the reader at its discretion and subject to the reader's independent circumstances, evaluation, and expertise. Such reference by Albaugh is not intended as an endorsement of such equipment, shall not constitute a warranty (express or implied) of such equipment, and is not intended to imply that other equipment is not available and equally suitable. Any discussion of methods of use of such equipment does not imply that the reader should use the equipment other than is advised in directions available from the equipment's manufacturer. The reader is responsible for exercising its own judgment and expertise, or consulting with sources other than Albaugh in selecting and determining how to use its equipment.

With aircraft, drift can be lessened by applying a coarse spray; by using a spray boom no longer than 3/4 the rotor length; by spraying only when wind velocities are low; or by using an approved drift control system. Keep operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used. Low pressure nozzles are available from spray equipment manufacturers. Select nozzles and pressures which provide adequate plant coverage, but minimize the production of fine spray particles.

**Ground Equipment:** To aid in reducing spray drift potential when making ground applications near susceptible crops or other desirable broadleaf plants, TRICLOPYR 4E should be applied through large droplet producing equipment, such as the Radiarc sprayer or in thickened spray mixtures using an agriculturally registered drift control additive, or high viscosity invert systems. When using a spray thickening or inverting additive, follow all use directions and precautions on the product label. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; and by spraying when wind velocity is low. Do not apply with nozzles that produce a fine droplet spray. Keep operating spray pressures at the lower end of the manufacturer's recommended pressures for the specific nozzle type used. Low pressure nozzles are available from spray equipment manufacturers. Select nozzles and pressures which provide adequate plant coverage, but minimize the production of fine spray particles.

**High Volume Leaf-Stem Treatment:** To minimize spray drift, keep sprays no higher than brush tops and keep spray pressures low enough to provide coarse spray droplets. A spray thickening agent may be used to reduce spray drift.

## GRAZING AND HAYING RESTRICTIONS

### Grazing or harvesting green forage:

- 1) Lactating dairy animals:
  - Two quarts per acre or less: Do not graze or harvest green forage from treated area for 14 days after treatment.
  - Greater than 2 to 6 quarts per acre: Do not graze or harvest green forage until the next growing season.
- 2) Other Livestock:
  - Two quarts per acre or less: No grazing restrictions.
  - Greater than 2 to 6 quarts per acre: Do not graze or harvest green forage from treated area for 14 days after treatment. **Note:** If less than 25% of a grazed area is treated, there is no grazing restriction.

### Haying (harvesting of dried forage):

- 1) Lactating dairy animals:
  - Do not harvest hay until the next growing season.
- 2) Other Livestock:
  - Two quarts per acre or less: Do not harvest hay for 7 days after treatment.
  - Greater than 2 to 4 quarts per acre: Do not harvest hay for 14 days after treatment.
  - Greater than 4 quarts per acre: Do not harvest hay until the next growing season.

### Slaughter Restrictions:

Withdraw livestock from grazing treated grass or consumption of treated hay at least 3 days before slaughter. This restriction applies to grazing during the season following treatment or hay harvested during the season following treatment.

## PLANTS CONTROLLED BY TRICLOPYR 4E

### Woody Plants Controlled

alder	cascara	gorse	poison ivy	Sweetgum
arrowwood	Ceanothus	hazel	poison oak	sycamore
ash	cherry	hickory	poplar	tanoak
aspen	Chinquapin	hornbeam	salmonberry	thimbleberry
bear clover (bearmat)	choke cherry	kudzu++	salt-bush	tree-of-heaven
beech	cottonwood	locust	( <i>Braccharis spp.</i> )	( <i>Ailanthus</i> )
birch	Crataegus (hawthorn)	Madrone	salt-cedar+	tulip poplar
blackberry	dogwood	maples	sassafras	wax myrtle
blackgum	Douglas fir	mulberry	scotch broom	wild rose
boxelder+	Elderberry	oaks	sumac	willow
Brazilian pepper	elm	persimmon	sweetbay magnolia	winged elm
buckthorn	gallberry	Pine		

+For best control, use either a basal bark or cut stump treatment.

++For complete control, retreatment may be necessary.

### Annual and Perennial Broadleaf Weeds Controlled

black medic	creeping beggarweed	lambsquarters	purple loosestrife	wild carrot
bull thistle	curly dock	lepedeza	ragweed	(Queen Anne's lace)
burdock	dandelion	matchweed	smartweed	wild lettuce
Canada thistle	field bindweed	mustard	sweet clover	wild violet
chicory	goldenrod	Oxalis	vetch	yarrow
clover	ground ivy	plantain		

**Table 1 (Maximum Application Rate)**

The following table is a guide for the proper rate of TRICLOPYR 4E without exceeding the maximum use rate of 8 quarts per acre:

<b>Spray Volume Per Acre</b>	<b>Quarts of TRICLOPYR 4E Per 100 Gallons of Spray (Not to Exceed 8 qt/Acre)</b>
400	2
300	2.7
200	4
100	8
50	16
20	40
10	80

## **APPROVED USES**

### **Foliar Applications**

Apply 1 to 8 quarts per acre of TRICLOPYR 4E to control broadleaf weeds and woody plants. Always use in sufficient water to give thorough coverage of the plants to be controlled.

Mix spray components in the following order:

1. Water
2. Spray thickening agent (if used)
3. Surfactant (if used)
4. Additional herbicide (if used)
5. TRICLOPYR 4E.

Mix and apply under moderate and continuous agitation.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

Optimal control is achieved when woody plants and weeds are actively growing. On difficult to control species such as ash, blackgum, choke cherry, elm, maples, oaks, pines, or winged elm or when applying in late summer when the plants are mature and during drought conditions, use the higher label rates.

When using TRICLOPYR 4E in combination with 2,4-D low volatile ester herbicides, generally the higher rates should be used for satisfactory brush control.

Apply higher rates when target brush is tall (approximately 10-15 feet in height) or when the brush foliage exceeds 60% of the area to be treated. Application of lower rates may cause resprouting the following year.

For easy to control brush species or reduced foliage, lower rates may be effective. Consult State or Local Extension personnel for such information.

## **FOLIAR TREATMENT WITH GROUND EQUIPMENT**

### **High Volume Foliar Treatment**

To control woody plants, apply 1 to 3 quarts of TRICLOPYR 4E per 100 gallons of spray mixture. TRICLOPYR 4E may be tank mixed with labeled rates of 2,4-D low volatile ester herbicide, Tordon 101 herbicide, or Tordon K herbicide and diluted to make 100 gallons of spray. Apply at a volume of 100 to 400 gallons of total spray per acre depending on foliage density of woody plants. Coverage should be made to thoroughly wet all foliage and root collars but not to create runoff.

### **Low Volume Foliar Treatment**

To control susceptible woody plants, apply up to 20 quarts of TRICLOPYR 4E in 10 to 100 gallons of finished spray. The spray concentration of TRICLOPYR 4E and total spray volume per acre should be adjusted depending on the size and foliage density of target woody plants and type of spray equipment used. Regardless of spray volume uniform coverage of target plant foliage (including stems and root collars) is essential for optimal control (see "General Use Precautions" and "Restrictions"). When making low volume applications a surfactant is recommended. Delivery rate of spray nozzles to height and density of woody plants is important. When treating tall, dense brush, a spray gun that can deliver up to 2 gallons per minute at 40 to 60 psi may be required. Application equipment with spray tips that deliver less than 1 gallon of spray per minute (such as backpack sprayers) may only be appropriate for short, low to moderate density brush.

**Tank Mixing:** As a low volume foliar spray, up to 12 quarts of TRICLOPYR 4E may be applied in tank mix combination with labeled rates of Tordon K or Tordon 101 Mixture in 10 to 100 gallons of finished spray.

## **BROADCAST APPLICATIONS WITH GROUND EQUIPMENT**

Make application using equipment that will assure thorough and uniform coverage at spray volumes applied.

### **Woody Plant Control**

**Foliage Treatment:** Apply 4 to 8 quarts of TRICLOPYR 4E in enough water to make 5 or more gallons per acre of total spray, or TRICLOPYR™ 4E at 1-1/2 to 3 quarts may be combined with labeled rates of 2,4-D low volatile ester, Tordon 101 Mixture, or Tordon K in sufficient water to make 5 or more gallons per acre of total spray.

### **Broadleaf Weed Control**

Apply 1 to 4 quarts of TRICLOPYR 4E in a total volume of 5 or more gallons per acre as a water spray mixture. Apply at any time weeds are actively growing. TRICLOPYR 4E at 1/4 to 3 quarts may be tank mixed with labeled rates of 2,4-D amine or low volatile ester, Tordon K, or Tordon 101 Mixture to improve the spectrum of activity. For higher viscosity spray mixtures to minimize drift or runoff potential, TRICLOPYR 4E can be mixed with diesel oil or other inverting agent. If an inverting agent is used, read and follow the use directions and precautions on the product label.

### **AERIAL APPLICATION (HELICOPTER ONLY)**

Apply using suitable drift control (See "General Use Precautions").

### **Foliage Treatment (Utility and Pipeline Rights-of-Way)**

Apply 4 to 8 quarts of TRICLOPYR 4E alone, or tank mix 3 to 4 quarts TRICLOPYR 4E with labeled rates of 2,4-D low volatile ester, Tordon 101 Mixture, or Tordon K and apply in a total spray volume of 10 to 30 gallons per acre. Apply the higher rates and volumes when plants are dense or under drought conditions.

## **BASAL BARK AND DORMANT BRUSH TREATMENTS**

For control of susceptible woody plants in rights-of-way, and other non-crop areas, and in forests, use TRICLOPYR 4E in oil or oil-water mixtures. Acceptable oils are either commercially available basal oil, or other oils or diluents cleared for use on growing crops. Do not use other oils or diluents unless recommended by the oil or diluent's manufacturer. Follow the use directions and precautions on the product label prepared by the oil or diluent's manufacturer.

### **Oil Mixture Sprays**

Add TRICLOPYR 4E to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

**Oil Mixtures of TRICLOPYR 4E 4 and Tordon K:** Tordon K and TRICLOPYR 4E may be used in tank mix combination for basal bark treatment of woody plants. Due to inherent incompatibility of these formulations, a stable mixture can only be achieved when mixed together directly in oil after first combining each product with a compatibility agent

### **Oil-Water Mixture Sprays**

First, premix the TRICLOPYR 4E, oil and surfactant in a separate container. Do not allow any water or mixtures containing water to get into the TRICLOPYR 4E or the premix. Fill the spray tank about half full with water, then slowly add the premix with continuous agitation and complete filling the tank with water. Continue moderate agitation.

**Note:** If the premix is put in the tank without any water, the first water added may form a thick "invert" (water in oil) emulsion which will be hard to break.

### **Basal Bark Treatment**

For control of susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of TRICLOPYR 4E in enough oil to make 100 gallons of spray mixture. Apply with a low pressure (20-40 psi) knapsack sprayer or power spraying equipment. Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground. Thorough wetting of this zone is needed for good control. Spray to the point of runoff. Brush or trees with older or rough bark may require more spray than smooth young bark. Apply at any time of year, including the winter, unless snow or water prevent spraying to the ground line.

### **Low Volume Basal Bark Treatment**

For susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of TRICLOPYR 4E in enough oil to make 100 gallons of spray mixture. Apply with a low pressure backpack or knapsack sprayer and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks in a manner which thoroughly wets the lower stems, including the root collar area, but not to the point of runoff. Herbicide concentration should vary with size and susceptibility of species treated. Apply at any time, including the winter unless snow or water prevent spraying to the ground line or when stem surfaces are saturated with water.

**TRICLOPYR 4E Plus Tordon K in Oil Tank Mix:** TRICLOPYR 4E and Tordon K may be applied as a low volume basal bark treatment to improve control of certain woody species such as ash, elm, maple, poplar, aspen, hackberry, oak, ocean spray, birch, hickory, pine, tanoak, cherry, locust, sassafras, and multiflora rose. (See product bulletin for mixing instructions.)

### **Streamline Basal Bark Treatment (Southern States)**

For control or suppression of susceptible woody plants for conifer release, mix 20 to 30 gallons of TRICLOPYR 4E in enough oil to make 100 gallons of spray mixture. Apply as a directed spray with a backpack or knapsack sprayer. Apply sufficient spray to one side of stems less than 3 inches in basal diameter to form a treated zone that is 6 inches in height. When the optimum amount of spray mixture is applied, the treated zone should widen to encircle the stem within approximately 30 minutes. Treat both sides of stems which are 3 to 4 inches in basal diameter. Direct spray at bark that is approximately 1 to 2 feet above ground. Pines (loblolly, slash, shortleaf, and Virginia) up to 2 inches in diameter breast height (dbh) can be controlled by directing the spray at a point approximately 4 feet above ground. Vary spray mixture concentration with size and susceptibility of the species being treated. Optimum results are obtained when applications are made to young growing stems which have not developed the thicker bark of slower growing trees in older stands. This technique is not recommended for scrub and live oak species, including blackjack, turkey, post, live, bluejack and laurel oaks, or bigleaf maple. Apply from approximately 6 weeks prior to hardwood leaf expansion in the spring until approximately 2 months after leaf expansion is completed. Do not apply if snow or water prevents spraying at the desired height above ground level.

### **Low Volume Stem Bark Band Treatment (North Central and Lake States)**

To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of TRICLOPYR 4E in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Apply the spray in a 6 to 10 inch wide band that completely encircles the stem. Spray in a manner that completely wets the bark, but not to the point of runoff. The treatment band

may be positioned at any height up to the first major branch. For best results apply the band as low as possible. Spray mixture concentration should vary with size and susceptibility of species to be treated. Applications may be made at any time, including winter months.

### **Thinline Basal Bark Treatment**

To control susceptible woody plants with stems less than 6 inches in diameter, apply TRICLOPYR 4E either undiluted or mixed at 50-75% v/v with oil in a thin stream to all sides of the lower stems. The stream should be directed horizontally to apply a narrow band around each stem or clump. Use a minimum of 2 to 15 milliliters of TRICLOPYR 4E or oil mixture with TRICLOPYR 4E to treat single stems and from 25 to 100 milliliters to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

### **Dormant Stem Treatment**

Dormant stem treatments will control susceptible woody plants and vines with stems less than 2 inches in diameter. Plants with stems greater than 2 inches in diameter may not be controlled and resprouting may occur. This treatment method is best suited for sites with dense, small diameter brush. Dormant stem treatments of TRICLOPYR 4E can also be used as a chemical side-trim for controlling lateral branches of larger trees that encroach onto roadside, utility, or other rights-of-way.

Mix 4 to 8 quarts of TRICLOPYR 4E in 2 to 3 gallons of crop oil concentrate or other recommended oil and add this mixture to enough water to make 100 gallons of spray solution. Use continuous adequate agitation. Apply with Radiarc, OC or equivalent nozzles, or handgun using 70 to 100 gallons of spray per acre to achieve thorough coverage of stems. TRICLOPYR 4E may be mixed with 4 quarts of Weedone 170 herbicide to improve the control of black cherry and broaden the spectrum of herbicidal activity. In western states, apply anytime after woody plants are dormant. In other areas apply anytime within 10 weeks of budbreak, generally February through April. Do not apply to wet or saturated bark as poor control may result.

### **Cut Stump Treatment**

To prevent resprouting of cut stumps of susceptible species, mix 20 to 30 gallons of TRICLOPYR 4E in enough oil to make 100 gallons of spray mixture. Apply with a low pressure backpack or knapsack sprayer using a solid cone or flat fan nozzle. Spray the root collar area, sides of the stump, and the outer portion of the cut surface including the cambium until thoroughly wet, but not to the point of runoff. Spray mixture concentration should be modified to allow for differences in size and susceptibility of species treated. Apply at any time, including in winter, unless snow or water prevent spraying to the ground line.

### **Treatment of Cut Stumps in Western States**

To control resprouting of salt-cedar and other Tamarix species, bigleaf maple, tanoak, Oregon myrtle, and other susceptible species, apply undiluted TRICLOPYR 4E to wet the cambium and adjacent wood around the entire circumference of the cut stump. Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer. Use an applicator which can be calibrated to deliver the small amounts of material required.

**Note:** All basal bark and dormant brush treatment methods may be used to treat susceptible woody species on range and permanent pasture land provided that no more than 1.5 quarts of TRICLOPYR 4E are applied per acre. Large plants or species requiring higher rates of TRICLOPYR 4E may not be completely controlled.

## **FOREST MANAGEMENT APPLICATIONS**

Optimal control for broadcast applications of TRICLOPYR 4E is achieved using spray volumes that allow thorough plant coverage. Recommended spray volumes are usually 25 gallons per acre by air or 10 to 100 gallons per acre by ground depending upon equipment. When using spray volumes less than 50 gallons per acre, the addition of an agriculturally labeled non-ionic surfactant as described under "Directions for Use" will help assure more complete coverage of foliage. Application systems or additives designed to minimize drift by producing larger droplets may require higher spray volumes to maintain brush control.

**Plant Back Interval for Conifers:** Conifers planted less than 1 month after treatment with TRICLOPYR 4E at less than 4 quarts per acre or less than 2 months after treatment at 4 to 8 quarts per acre may suffer injury. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture should be consulted and the longest recommended waiting period observed.

### **Broadcast Treatments for Forest Site Preparation (Not For Conifer Release)**

**Southern States Including Alabama, Arkansas, Delaware, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia:**

To control susceptible woody plants and broadleaf weeds, apply TRICLOPYR 4E at a rate of 4 to 8 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 2 to 4 quarts per acre of TRICLOPYR 4E in tank mix combination with labeled rates of Tordon 101 Mixture or Tordon K. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida. Where grass control is also desired, TRICLOPYR 4E, alone or in combination with Tordon K or Tordon 101 Mixture, may be tank mixed with labeled rates of other herbicides registered for grass control in forests. Use of tank mix products must be in accordance with the most restrictive of label limitations and precautions. No label application rates should be exceeded.

Do not tank mix with any product containing a label prohibition against such mixing.

**In Western, Northeastern, North Central, and Lake States (States Not Listed Above As Southern States):**

To control susceptible woody plants and broadleaf weeds, apply TRICLOPYR 4E at a rate of 3 to 6 quarts per acre. To broaden the spectrum of woody plants and broadleaf weeds controlled, apply 1.5 to 3.0 quarts per acre of TRICLOPYR 4E in tank mix combination with labeled rates of Tordon 101 Mixture, Tordon K, or 2,4-D low volatile ester. Tordon 101 Mixture and Tordon K are not registered for use in the states of California and Florida. Where grass control is also desired, TRICLOPYR 4E, alone or in tank mix combination with Tordon 101 Mixture or Tordon K, may be applied with labeled rates of other herbicides registered for grass control in forests. When applying tank mixes, follow applicable use directions and precautions on each product label.

#### **Applications for Site Preparation in Southern Coastal Flatwoods:**

To control susceptible broadleaf weeds and woody species such as gallberry and wax-myrtle, and for partial control of saw-palmetto, apply 2 to 4 quarts per acre of TRICLOPYR 4E. To broaden the spectrum of species controlled to include fetterbush, staggerbush, titi, and grasses, apply 2 to 3 quarts per acre of TRICLOPYR 4E in tank mix combination with labeled rates of Arsenal Applicator's Concentrate herbicide. Where control of gallberry, wax-myrtle, broadleaf weeds, and grasses is desired, 2 to 3 quarts per acre of TRICLOPYR 4E may be applied in tank mix combination with labeled rates of Accord herbicide.

These treatments may be broadcast during site preparation of flat planted or bedded sites or, on bedded sites, applied in bands over the top of beds. For best results, make applications in late summer or fall. Efficacy may not be satisfactory when applications are made in early season prior to August.

**Note:** Do not apply after planting pines.

#### **Applications for Conifer Release**

**Note:** Applications for conifer release may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers should recover and grow normally. Over-the-top spray applications can kill pines.

#### **Directed Sprays**

To release conifers from competing hardwoods and brush such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, pin cherry, *Ceanothus* spp., blackberry, chinquapin, and poison oak, mix 4 to 20 quarts of TRICLOPYR 4E in enough water to make 100 gallons of spray mixture. This spray should be directed onto foliage of competitive hardwoods using knapsack or backpack sprayers with flat fan nozzles or equivalent any time after the hardwoods and brush have reached full leaf size, but before autumn coloration. The majority of treated hardwoods and brush should be less than 6 feet in height to ensure adequate spray coverage. Care should be taken to direct spray solutions away from conifer foliage, particularly foliage of desirable pines. Refer to "Table 1" to determine proper mixing rate, spray volume and maximum application rate.

#### **Broadcast Applications for Mid-Rotation Understory Brush Control in Southern Coastal Flatwoods Pine Stands (Ground Equipment Only)**

To control susceptible species such as gallberry and wax-myrtle and broadleaf weeds, apply 2 to 4 quarts per acre of TRICLOPYR 4E. To include control of fetterbush, staggerbush, and titi, apply 2 to 3 quarts per acre of TRICLOPYR 4E in tank mix combination with labeled rates of Arsenal Applicator's Concentrate. Saw-palmetto will be partially controlled by use of TRICLOPYR 4E at 4 quarts per acre or by mixtures of TRICLOPYR 4E at 2 to 3 quarts per acre in tank mix combination with either Arsenal Applicator's Concentrate or Escort herbicide.

These mixtures should be broadcast applied over target understory brush species. To prevent injury to pines, direct applications below the pine foliage. Sprays should be applied in 30 or more gallons per acre of total volume. For optimum results, make applications in late summer or fall. Reduced control may occur when applications are made in early season prior to August.

#### **Broadcast Applications for Conifer Release in the Pacific Northwest and California**

**On Dormant Conifers Before Bud Swell (Excluding Pines):** To control or suppress deciduous hardwoods such as vine maple, bigleaf maple, alder, scotch broom, or willow before leaf-out or evergreen hardwoods such as madrone, chinquapin, and *Ceanothus* spp., use TRICLOPYR 4E at 1 to 2 quarts per acre. Diluents used may be diesel or fuel oil. Alternately, water plus 1 to 2 gallons per acre of diesel oil or a suitable surfactant or oil substitute at manufacturer's recommended rates may be used.

**On Conifer Plantations (Excluding Pines) After Hardwoods Begin Growth and Before Conifer Bud Break ("Early Foliar" Hardwood Stage):** Use TRICLOPYR 4E at 1.0 to 1.5 quarts alone or plus 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 pounds acid equivalent per acre from both products. After conifer bud break, these sprays may cause more serious injury to the crop trees. Use of a surfactant may cause unacceptable injury to conifers especially after bud break.

**On Conifer Plantations (Excluding Pines) After Conifers Harden Off In Late Summer and While Hardwoods Are Still Growing Actively:** Use TRICLOPYR 4E at rates of 1.0 to 1.5 quarts per acre alone or plus 2,4-D low volatile ester to provide no more than 3 pounds acid equivalent per acre from both products. Treat as soon after conifer bud hardening as possible so that hardwoods and brush are actively growing. Use of oil, oil substitute, or surfactant may cause unacceptable injury to the conifers.

#### **Broadcast Applications for Conifer Release in the Eastern United States**

To release spruce, fir, red pine, and white pine from competing hardwoods such as red maple, sugar maple, striped maple, alder, birch (white, yellow, and grey), aspen, ash, pin cherry, and *Rubus* spp. and perennial and annual broadleaf weeds, use TRICLOPYR 4E at rates of 1.5 to 3.0 quarts per acre alone or plus 2,4-D amine or low volatile ester to provide no more than 4 pounds acid equivalent per acre from both products. Applications should be made in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

#### **Broadcast Applications for Conifer Release in the Lake States Region**

To release spruce, fir, and red pine from competing hardwoods such as aspen, birch, maple, cherry, willow, oak, hazel, and *Rubus* spp. and perennial and annual broadleaf weeds, use TRICLOPYR 4E at rates of 1.5 to 3.0 quarts per acre. Applications should be made in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.



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1. Refund of purchase price paid by buyer or user for product bought, or
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