

**SPECIMEN
LABEL**

Agri Star®
By Albaugh Inc.

TRICLOPYR 4E

Specialty Herbicide

For the control of woody plants and broad leaf weeds on rangeland and permanent grass pastures, and conservation reserve program (CRP) acres (including fence rows and non-irrigation ditch banks within these areas), 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.

1525 NE 36th Street
Ankeny, Iowa 50021

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

ACTIVE INGREDIENT:

Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, butoxyethyl ester 61.6%

INERT INGREDIENTS 38.4%

TOTAL 100.0%

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

EPA Reg. No. 42750-126

EPA Est. No. 42750-M0-001

**KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCIÓN**

**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

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Do not give liquid to the person.

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. Contact CHEMTREC toll free at 1-800-424-9300 for transportation or emergency medical treatment information.

See inside booklet for additional PRECAUTIONARY STATEMENTS.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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 are given, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

PHYSICAL OR CHEMICAL HAZARDS

Combustible: 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:

1. Coveralls
2. Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber or Viton
3. Protective Eyewear
4. Shoes plus socks

AGRICULTURAL USE REQUIREMENTS FOR FORESTRY USES: For use of this product on forestry sites, follow PPE and Re-entry 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.

CONTAINER DISPOSAL:

Non-refillable containers (1, 2.5, 30 & 55 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by State and local ordinances.

(non-refillable <5 gallons): 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.

(non-refillable >5 gallons): 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 (all sizes): Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable container (>250 gallon & bulk): 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 the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by State and local ordinances.

Consult Federal, State, or local disposal authorities for approved alternative procedures.

PRODUCT 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, rangelands, permanent grass pastures, and conservation reserve program (CRP) acres (including fence rows and non-irrigation ditch banks within these areas). These sites may include grazed areas as well as establishment and maintenance of wildlife openings.

TRICLOPYR 4E is an oil-soluble, emulsifiable liquid product containing the herbicide triclopyr. TRICLOPYR 4E may be applied to woody or herbaceous broadleaf plants as a foliar spray or as a basal bark or to cut stump application to woody plants. As a foliar spray TRICLOPYR 4E will control only herbaceous plants that have emerged from the soil or woody plants that are in full leaf at the time of application.

Small amounts of TRICLOPYR 4E can kill or injure many broadleaf plants. To prevent damage to crops and other desirable plants, follow all directions and precautions.

USE PRECAUTIONS AND RESTRICTIONS

- 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 must 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.
- Many forbs (herbaceous broadleaves) are susceptible to TRICLOPYR 4E. Do not spray pastures containing desirable forbs, especially legumes such as clover, unless injury or loss of such plants can be tolerated. However, the stand and growth of established grasses usually is improved after spraying, especially when rainfall is adequate and grazing is deferred.
- Established grasses are tolerant to this product, but newly seeded grasses may be injured until well established as indicated by tillering, development of a secondary root system and vigorous growth. Do not reseed treated areas for a minimum of three weeks after treatment.
- Do not apply directly to irrigation ditches or water used for irrigation or domestic purposes.
- Do not apply directly to water.

Maximum Application Rates:

- Do not apply more than 2 lbs. acid equivalent per acre per year to sites that may be grazed (equivalent to 2 quarts of formulated product) to sites that may be grazed or harvested for hay.
- Do not apply more than 6 lbs. acid equivalent per acre per year (equivalent to 6 quarts of formulated product) to forestry sites.
- Do not apply more than 8 lbs. acid equivalent per acre per year (equivalent to 8 quarts of formulated product) to all other use sites listed on this label.

CHEMIGATION

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

GRAZING AND HAYING RESTRICTIONS

- Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product.
- Do not harvest hay for 14 days after application.

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.

AVOID INJURIOUS SPRAY DRIFT

Applications must 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, apply TRICLOPYR 4E 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.

SPRAY DRIFT MANAGEMENT

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural rice patties.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downwards more than 45 degrees.

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

The applicator must be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory](#).

INFORMATION ON DROPLET SIZE

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

CONTROLLING DROPLET SIZE

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

BOOM LENGTH

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

APPLICATION HEIGHT

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

SWATH ADJUSTMENT

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

WIND

Drift potential is lowest between wind speeds of 2–10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential.

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

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

SENSITIVE AREAS

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

PLANTS CONTROLLED BY TRICLOPYR 4E

Woody Plants Controlled:

alder	choke cherry	hornbeam	sassafras
arrowwood	cottonwood	kudzu++	scotch broom
ash	Crataegus (hawthorn)	locust	sumac
aspen	dogwood	madrone	sweetbay magnolia
bear clover (bearmat)	Douglas fir	maples	sweetgum
beech	elderberry	milkweed vine+	sycamore
birch	elm	mulberry	tanoak
blackberry	gallberry	oaks	thimbleberry
blackbrush	gorse	pepper vine+	tree-of-heaven (<i>Ailanthus</i>)
blackgum	granjeno	persimmon	tulip poplar
boxelder+	guajillo	pine	twisted acacia
Brazilian pepper	guava+	poison ivy	Virginia creeper+
buckthorn	hawthorne	poison oak	wax myrtle
cascara	huisache (suppression)	poplar	wild rose
ceanothus	lantana+	salmonberry	willow
cherry	hazel	salt-bush (<i>Braccharis</i> spp.)	willow primrose
chinquapin	hickory	salt-cedar+	winged elm

+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	curly dock	matchweed	sulfur cinquefoil
bull thistle	dandelion	mustard	sweet clover
burdock	dogfennel	oxalis	tropical soda apple
Canada thistle	field bindweed	plantain	vetch
chicory	goldenrod	purple loosestrife	wild carrot (Queen Anne's lace)
cinquefoil	ground ivy	ragweed	wild lettuce
clover	lambsquarters	sericea lespedeza	wild violet
creeping beggarweed	lepedeza	smartweed	yarrow

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition. Et. Al. v. EPA, CO1-0132C, (W.D. WA). For further information, please refer to <http://www.epa.gov/espp/litstatus/wtc/index.htm>.

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:

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

APPLICATION DIRECTIONS FOR RIGHTS-OF-WAY, INDUSTRIAL SITES, NON-CROP AREAS, NON-IRRIGATION DITCH BANKS, FORESTS, AND WILDLIFE OPENINGS, INCLUDING GRAZED AREAS ON THESE SITES

Mixing Directions

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.

Do not apply more than 2 lbs. acid equivalent per acre per year (equivalent to 2 quarts of formulated product) to sites that may be grazed or harvested for hay.

Do not apply more than 6 lbs. acid equivalent per acre per year (equivalent to 8 quarts of formulated product) to all other use sites listed on this label.

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, apply the higher rates 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. Make coverage 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 must 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 "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 "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, re-agitation 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. Direct the stream 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 6 quarts per acre may suffer injury. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture must 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 6 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 can 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. Direct this spray 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 must 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.

Broadcast apply these mixtures 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. Make applications 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. Make applications in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

APPLICATION DIRECTIONS FOR RANGELAND AND PERMANENT GRASS PASTURES, AND CONSERVATION RESERVE PROGRAM (CRP) ACRES INCLUDING FENCE ROWS AND NON-IRRIGATION DITCH BANKS WITHIN THESE AREAS

Mixing Directions

Spray volume must be sufficient to obtain complete and uniform foliar coverage. For aerial application apply at least 2 gallons of total spray volume per acre. For ground application, apply 10 or more gallons of total spray volume per acre. Use higher spray volumes for ground or aerial application to ensure adequate coverage with increased depth and density of foliage, particularly for treatment of woody plants or as indicated in the "Treatment Recommendations" section of this label.

TRICLOPYR 4E may be foliar applied by diluting with water or by preparing an oil-water emulsion. For woody plant control, an oil-water emulsion will perform more dependably under a broader range of conditions than a straight water dilution and is especially recommended for aerial applications.

Oil-Water Emulsions

NOTE: Do not use oil-water emulsions on areas to be grazed.

Oil-water emulsions may be prepared using diesel fuel, fuel oil, or kerosene plus an emulsifier such as Sponto 712 or Triton X-100. Use a jar test to check spray mix compatibility before preparing oil-water emulsion sprays in the mixing tank.

Ground Application: Add oil to the spray mix at a rate of 5 to 10% of the total mix, up to a maximum of 1 gallon of oil per acre, using agricultural spray emulsifiers according to mixing instructions below.

Aerial Application: Use oil and water in the spray mixture in a 1:5 ratio (1 part oil to 5 parts water), up to a maximum of 1 gallon of oil per acre according to mixing instructions below.

Water Dilutions

For water dilutions, an agricultural surfactant at the manufacturer's recommended rate may be added to the spray mixture to provide improved wetting of weed foliage. To help minimize spray drift, a drift control and deposition aid cleared for application to growing crops is recommended in all spray mixtures.

Tank Mixing

TRICLOPYR 4E may be applied in tank mix combination with labeled rates of other herbicides 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.

Tank Mixing Precautions:

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels,
- Do not exceed recommended application rates. If products containing the same active ingredient are tank mixed, do not exceed the maximum allowable active ingredient use rates,
- For direct injection or other spray equipment where the product formulations will be mixed in undiluted form, take special care to ensure tank mix compatibility,
- 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 TRICLOPYR 4E and other herbicides or spray carriers. Use a clear glass quart jar with lid and mix the tank mix ingredients in 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 must not be used.

Mixing Order:

1. Add half the needed water to the mixing tank and start agitation.
2. Add water-soluble herbicide (if used).
3. Prepare a premix of oil, emulsifier (if oil-water emulsion), and TRICLOPYR 4E plus other oil-soluble herbicide (if used), e.g. 2,4-D ester. Continue agitation and add premix to the spray tank. **Note:** Do not allow water or mixtures containing water to get into the premix or TRICLOPYR 4E since a thick “invert” (water in oil) emulsion may be formed that will be difficult to break. Such an emulsion may also be formed if the premix or TRICLOPYR 4E is put in the mixing tank before the addition of water.
4. Add the remaining water. Also during final filling of the tank a drift control and deposition aid cleared for application to growing crops (if used), plus an agricultural surfactant (if a water dilution rather than an oil-water emulsion spray is used).

Continuous agitation of the spray mixture during both mixing and application is necessary to ensure spray uniformity.

Mixing with Liquid Fertilizer for Broadleaf Weed Control

TRICLOPYR 4E may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish weed control and fertilization of grass pastures in one operation. Use TRICLOPYR 4E in accordance with recommendations for weed control in grass pastures as given on this label. Use liquid fertilizer at rates recommended by supplier or Extension Service Specialist.

Note: TRICLOPYR 4E is not recommended for use with liquid fertilizer on woody plants (brush). Foliage burn caused by liquid fertilizer may reduce herbicide effectiveness on woody plants.

Compatibility with Liquid Fertilizer: Prior to mixing in spray tank, conduct a “jar test” for spray mixture compatibility by mixing each component in the required order and proportion in a clear glass jar. See procedure for Tank Mixing Compatibility Testing, above. A compatibility aid such as Unite or Compex may be needed in some situations. Compatibility is best with straight liquid nitrogen fertilizer solutions. Mixing with N-P-K solutions or suspensions may not be satisfactory even with the addition of compatibility aid. Premixing TRICLOPYR 4E with 1 to 4 parts water may help in difficult situations.

Fill in the spray tank about half-full with the liquid fertilizer, then add the herbicide with agitation and complete filling the tank with fertilizer. Apply immediately and continue agitation in the spray tank during application.

Precautions: Do not store liquid fertilizer spray mixtures. Application with liquid fertilizer during very cold weather (near freezing) is not advisable. The likelihood of mixing or compatibility problems with liquid fertilizer increases under cold conditions.

Note: Do not use broadcast spray equipment used for application of TRICLOPYR 4E for other applications to susceptible crops or desirable plants, or land planted to such plants, unless it has been determined that all phytotoxic herbicide residue has been removed by thorough cleaning of the equipment.

Oil Mixture Sprays for Basal Treatment: When preparing oil-based spray mixtures, use either diesel fuel, No. 1 or No. 2 fuel oil, kerosene or commercially available basal oil. Substitute other oils or diluents only as recommended by the oil or diluent’s manufacturer. When mixing with a basal oil or other oils or diluents, read and follow the use directions and precautions on the manufacturer’s product label. 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.

NOTE: Do not use oil-water emulsions on areas to be grazed.

High-Volume Foliar Treatment of Individual Plants Using Ground Equipment

For control of susceptible woody plants, use TRICLOPYR 4E alone or in tank-mix combination at the recommended rate to make 100 gallons of spray mixture. To control a broader spectrum of woody plants and broadleaf weeds, TRICLOPYR 4E may be tank-mixed with recommended rates of other herbicides (see application rates table below). When tank-mixing, follow all applicable use directions, precautions, and limitations on the respective product labels. (See Tank-Mixing Precautions under “Mixing Directions”.)

Application Rates per 100 Gallons of Spray			
TRICLOPYR 4E		Tank-Mix Product	Rate ³
1–4 qts.	—	—	—
1–2 qts.	plus	Grazon P+D herbicide	4 qt
1–2 pts.	plus	2,4-D low volatile ester herbicide	1–2 qts.
1–2 qts.	plus	Tordon* 22K herbicide	1–2 qts.
2 qt	plus	Reclaim* ^{1,2} herbicide	2 qts.

1. Reclaim* herbicide is registered for use only in Texas, Oklahoma and New Mexico.
2. See directions for “Mesquite control using high volume foliar (also called leaf spray) application” below.
3. Do not apply more than 2 lb of acid equivalent per acre per year on areas that may be grazed (equivalent to 2 quarts of formulated product).

Depending on the size and density of the woody plants involved, apply sufficient spray volume to thoroughly wet all leaves, stems, and root collars. To minimize spray drift, select the minimum spray pressure that will provide adequate plant coverage without forming a mist and direct sprays no higher than tops of target woody plants. A drift control additive cleared for application to growing crops is recommended to reduce spray drift. Before using any recommended tank mixture read the directions and all use precautions on both labels.

For best results, make foliar spray applications when woody plants and weeds are actively growing. **Note:** See “Foliar Broadcast Treatment” section for information on environmental factors influencing control results as well as recommendations concerning application timing.

Mesquite control using high volume foliar (also called leaf spray) application:

For control of mesquite infestations of low to moderate density, TRICLOPYR 4E and Reclaim may be applied in tank-mixture 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 TRICLOPYR 4E in combination with 2 quarts of Reclaim per 100 gallons of total spray solution (1/2% v/v of each product), Apply in water or as an oil-water emulsion as described in “Mixing Directions”. If using an oil-water emulsion, add the oil at a rate of 5% of the total spray volume. 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. Do not apply when mesquite foliage is wet. The total amount of TRICLOPYR 4E applied must not exceed 1-1/3 pints per acre. For best results, follow information given below concerning effect of environmental conditions and application timing on control. 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.

FOLIAR BROADCAST TREATMENT USING AERIAL OR GROUND EQUIPMENT

Environmental conditions and application timing influence brush and weed control results.

For best results, make foliar applications when woody plants and weeds are actively growing. For woody species, make applications after the rapid growth period of early spring when leaf tissue is fully expanded and terminal growth has slowed. Brush regrowth should be at least 4 ft. in height prior to treatment to insure adequate foliage for herbicide absorption. Adequate soil moisture before and after treatment as well as the presence of healthy foliage at the time of application are important factors contributing to optimal herbicidal activity.

Mesquite: 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. Make application 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. Mesquite regrowth should be at least 4 ft. in height prior to treatment to insure adequate foliage for herbicide absorption.

Mesquite Only

Apply TRICLOPYR 4E at 1/2 to 1 pint per acre in combination with 2/3 to 1-1/3 pint per acre of Reclaim. See label for Reclaim for additional treatment recommendations and information on mesquite control. Apply aerially as an oil:water emulsion in 4 or more gallons total volume per acre or in 10 or more gallons total volume per acre using ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application.

Mesquite and Pricklypear Cactus

Where pricklypear cactus is a target species in association with mesquite, apply a tank mix of 1/2 to 1 pint of TRICLOPYR 4E with 1 to 2 pints of Tordon 22K per acre. (The 2 pint per acre rate of Tordon 22K will provide a higher and more uniform plant kill of pricklypear.) Tordon 22K may also be applied in combination with Reclaim to control pricklypear while providing improved control of mesquite. See labels for Tordon 22K and Reclaim for additional information and treatment recommendations. Apply aerially as an oil:water emulsion in 4 or more gallons total volume per acre or in 10 or more gallons total volume per acre using ground equipment. If mesquite canopy is dense, use higher spray volumes. Use a maximum of 1 gallon of oil per aerator aerial or ground application.

South Texas Mixed Brush (Mesquite, Pricklypear Cactus, Blackbrush, Twisted Acacia and Granjeno)

Use 1 to 2 pints of TRICLOPYR 4E in a tank mix with 2 pints of Tordon 22K per acre where pricklypear is a problem or with 2/3 to 1-1/3 pints of Reclaim per acre where mesquite is the prevalent species. TRICLOPYR 4E will contribute to control of non-legume species such as granjeno and oaks. However, where woody legume species are predominate, Tordon 22K at 2 pints per acre may be applied in combination with Reclaim at 2/3 to 1-1/3 pints per acre for improved control. See labels for Tordon 22K and Reclaim for additional information and recommendations. Apply aerially in oil:water emulsion in 4 or more gallons total volume per acre or in 15 or more gallons total volume per acre using ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application. The use of an oil:water emulsion is critical and good spray coverage is essential for acceptable brush control.

Sand Shinnery Oak Suppression

In Texas, New Mexico and Oklahoma, apply TRICLOPYR 4E alone at a rate of 1/2 to 2 pints per acre for suppression of shinnery oak growing on sandy soils. Grass response following suppression may be impressive where rainfall is adequate. Grazing deferment following application together with proper grazing management is recommended to allow for the reestablishment of grass stands.

Post Oak and Blackjack Oak – Regrowth Stands

Apply in the late spring (May) to early summer (June-July) when oak leaves are fully developed (expanded). Use 2.0 quarts of TRICLOPYR 4E alone or in tank mix combination with 0.5 to 1.0 pints of 2,4-D low-volatile ester herbicide per acre. Apply in an oil:water emulsion or water surfactant dilution (see mixing instructions) in sufficient total volume per acre to assure thorough coverage; usually 5 gallons per acre or more by fixed-wing aircraft or helicopter or 15 to 25 gallons per acre by ground equipment. Use a maximum of 1 gallon of oil per acre for aerial or ground application. Lower rates may be used for suppression only. Control will require at least 3 consecutive treatments.

Note: Regrowth plants have a large root mass relative to top growth when compared to undisturbed plants. In order for top growth to intercept and translocate enough herbicide to control the roots, delay broadcast treatment until top growth is at least four feet tall.

High volume foliar treatment: For regrowth less than four feet tall, apply 2 quarts of TRICLOPYR 4E per 100 gallons of water and 2 quarts of Ag surfactant alone or in tank mix combination with 1 gallon of Grazon P+D or 1 quart of Tordon 22K. Apply as a high volume leaf-stem treatment to individual plants using ground equipment.

Post Oak and Blackjack Oak – Mature Stands

For control of mature stands (greater than 5 feet tall), apply TRICLOPYR 4E at 2 quarts per acre in late spring (May) to early summer (June–July) when oak leaves are fully developed (expanded). Understory species such as winged elm, buckbrush, tree huckleberry and ash occurring in some areas will not be controlled (only suppressed or defoliated) by TRICLOPYR 4E alone. Where these understory species occur, control may be improved by tank mixing 2 quarts of TRICLOPYR 4E with 1 quart of Tordon 22K or 4 quarts of Grazon P+D per acre. For best results, apply as an oil:water emulsion in a total volume of 5 gallons per acre or more by fixed-wing aircraft or helicopter.

Other Susceptible Woody Plants

(See listing of “Woody Plants Controlled by TRICLOPYR 4E”)

Use 2 to 4 pints of TRICLOPYR 4E alone or in combination with 2 to 3 quarts of 3.8 lbs./gal. 2,4-D low volatile ester or amine formulation. When difficult-to-control species such as ash, choke cherry, elm, maple or oaks are prevalent, and during applications made when plants are mature late in the summer or during drought conditions, use the higher rates of TRICLOPYR 4E, alone or with 2,4-D. TRICLOPYR 4E may also be applied in tank-mixture with Grazon P+D or Tordon 22K for increased control of certain species. See labels for Grazon P+D and Tordon 22K for additional information and treatment recommendations. Apply aerially in 4 or more gallons total volume per acre or in 10 or more gallons total volume per acre using ground equipment. For best results on blackberry, apply during or after bloom.

For management of kudzu, apply TRICLOPYR 4E at 1 quart per acre. Repeat application may be necessary to achieve desired level of control.

Susceptible Broadleaf Weeds

(See listing of “Annual, Biennial and Perennial Broadleaf Weeds Controlled by TRICLOPYR 4E”)

Use TRICLOPYR 4E at 2 pints per acre in a water spray. Apply as a broadcast spray in a total volume of 10 or more gallons per acre by ground equipment or aerially in a total volume of 2 or more gallons per acre. Apply at anytime the weeds are actively growing. TRICLOPYR 4E at 1/2 to 3 pints may be tank-mixed with 1 to 2 quarts of 3.8 lbs./gal. 2,4-D amine or low volatile ester.

Recommendations for Specific Broadleaf Weeds:

Weeds Controlled	Rate per Acre
sericea lespedeza	1–2 pts.
For best results, apply after maximum foliage development in the late spring to early summer, but prior to bloom.	
sulfur cinquefoil	1–2 pts.
For best results, apply to plants in the rosette stage	
tropical soda apple	2 pts.
Apply when tropical soda apple plants reach the first flower stage. For best results, apply in a total spray volume of 40 gallons per acre using ground equipment. An agricultural surfactant may be added at the manufacturer’s recommended rate to provide more complete wetting and coverage of the foliage. Spot treatments may be used to control sparse plant stands. For spot treatment use a 1 to 1.5% solution of TRICLOPYR 4E in water (1 to 1-1/2 gallons of TRICLOPYR 4E in 100 gallons total spray mixture) and spray the entire plant to completely wet the foliage.	
In Florida, control of tropical soda apple may be improved by using the following management practices:	
<ul style="list-style-type: none">• Mow plants to a height of 3 inches every 50 to 60 days or whenever they reach flowering. Continue the mowing operation through April.• In late May to June (50 to 60 days after the April mowing) apply TRICLOPYR 4E as a broadcast treatment as recommended above.• Use spot treatment as recommended above to control any remaining plants or thin stands of plants that germinate following a broadcast treatment.	

INDIVIDUAL PLANT TREATMENT (NON-FOLIAR APPLICATIONS)

Low Volume Basal Bark Treatment (Also called Stem Spray Method)

Susceptible woody plants such as mesquite, huisache, red maple, red and white oak, birches and aspen, with stems less than 6 inches in basal diameter, can be controlled by low volume basal applications of TRICLOPYR 4E. Mix 20 to 30 gallons of For best results, apply after maximum foliage development in the late spring to early summer, but prior to bloom in enough oil to make 100 gallons of total spray mixture. Apply with a backpack or knapsack (but not with a mistblower) using low pressure and a solid cone or flat-fan nozzle. Spray the basal parts of the brush and tree trunks to a height of 12 to 15 inches from the ground in a manner which thoroughly wets the lower stem, 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 months, except when snow or water prevent spraying to the ground line.

Streamline Basal Bark Treatment

To control or suppress susceptible woody plants such as mesquite, huisache, red maple, white and red oak, elbowbush, greenbriar, hackberry, pricklyash, yaupon and wild grape, mix 25 to 30 gallons of TRICLOPYR 4E with 10% penetrant such as Cidekick in enough oil to make 100 gallons of spray mixture. Streamline basal bark treatments are most effective on stems less than 4 inches in basal diameter. Apply with a backpack or knapsack sprayer using equipment which provides a directed straight stream spray. Apply the spray in a 2 to 3 inch wide band to one side of stems less than 3 inches in basal diameter. Direct the spray to a point approximately 12 to 24 inches above the ground. Treat both sides of stems which are 3 or more inches in basal diameter. Better control is achieved when spray is applied to thin juvenile bark and above rough thickened mature bark. Vary herbicide concentration with size and susceptibility of the brush being treated. Apply at any time, including winter months, except when snow or water prevents spraying to the desired height above the ground level.

Note: Best results with some hardwood species occur when applications are made from approximately 6 weeks prior to leaf expansion in the spring until approximately 2 months after leaf expansion is completed.

Treatment of Cut Stumps in California

To control resprouting, apply undiluted TRICLOPYR 4E to wet the area adjacent to the cambium and bark around the entire circumference of freshly cut stumps.

Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer. Cut stumps so that they are approximately level to facilitate uniform TRICLOPYR 4E coverage. Use an applicator which can be calibrated to deliver the small amounts of material required.

Cut Stump Treatment

To control resprouting of freshly 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 backpack or knapsack sprayer using low pressures and a solid cone or flat fan nozzle. Spray the sides of the stump and the outer portion of the cut surface, including the cambium in a manner which thoroughly wets the stem and root collar area, but not to the point of runoff. Spray mixture concentration should vary with the size and susceptibility of species treated. Apply at any time, including in winter months, except when snow or water prevent spraying to the ground line.

Dormant Stem Treatment

Mix 3 to 6 quarts of TRICLOPYR 4E in enough oil to make 100 gallons of spray. Apply with knapsack or power spraying equipment, using low pressure (20-40 psi). Treat anytime when brush is dormant and most of the foliage has dropped. Do not apply when snow or water prevent spraying to the ground line. Thoroughly wet the upper parts of the stems and use the remainder needed to wet the lower 12 to 15 inches above the ground to the point of runoff. For root suckering species such as sumac, sassafras and locust, also spray the ground under the plant to cover small root suckers which may not be visible above the soil surface. For oil-water mixture application, mix 6 quarts of TRICLOPYR 4E, 25 gallons of oil and 1.5 gallons of an approved agricultural spray emulsifier such as Sponto 712 or Triton X-100 as indicated in the mixing directions. Treat as above.

Thinline Basal Bark Treatment

Control of susceptible woody plants such as red maple, blackberry, dogwood, red and white oak, with stems less than 6 inches in diameter, can be achieved with applications of undiluted TRICLOPYR 4E in a thin stream to all sides of the stems about 6 inches above the base of the plants. Direct the stream horizontally to apply a narrow band of TRICLOPYR 4E around each stem or clump. From 2 to 15 ml of chemical is required for treatment of single stems and from 25 to 100 ml to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

Growing Point and Leaf Base (Crown) Treatment of Yucca

Prepare a 2% v/v solution of TRICLOPYR 4E in diesel or fuel oil (13 oz. of TRICLOPYR 4E in 5 gallons of spray mixture). Thoroughly wet the center of the plant including growing point and leaf bases to the soil surface. Complete coverage of leaves is not necessary.

TREATMENT OF CONSERVATION RESERVE PROGRAM (CRP) ACRES (ESTABLISHED PERMANENT GRASS STANDS)

Use TRICLOPYR 4E on CRP acres only after perennial grasses are well established (see precaution for newly seeded grasses under “General Use Precautions”).

Restrictions: When applying to CRP lands, follow all applicable State and Federal regulations. Follow the most severe grazing restriction imposed by the pesticide label or by the USDA Acreage Conservation Reserve Program. After that time period, follow local (CRP) guidelines regarding cropping and having restrictions. Do not use TRICLOPYR 4E if damage or loss of existing legumes or other desirable broadleaf plants cannot be tolerated.

Broadcast Application (Ground or Air): For control of listed broadleaf weeds, apply TRICLOPYR 4E as a broadcast spray at 1–2 pints/acre or up to 1-1/2 quarts per acre for deep-rooted perennial broadleaf and susceptible woody species. Use a total spray volume of 10 or more gallons per acre for ground broadcast or 2 or more gallons per acre by air. For other woody plant treatment methods, including high volume foliar, basal bark or cut stump treatment, refer to the preceding “Application Methods and Treatment Recommendations” for appropriate use directions.

On CRP acres, apply no more than 1-1/2 quarts/acre of TRICLOPYR 4E per growing season.

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2. Replacement of amount of product used.

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