Supplemental Labeling

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Garlon* 4

EPA Reg. No. 62719-40

Forestry Uses of Garlon 4

This supplemental labeling contains uses of Garlon 4 which are within the scope of the worker protection standard as follows: Control of woody plants and broadleaf weeds in forests, including wildlife openings and grazed areas on this site.

Active Ingredient:
triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid, butoxyethyl ester 61.6%
Inert Ingredients..... 38.4%
Total 100.0%
Acid Equivalent:
triclopyr - 44.3% - 4 lb/gal
Contains petroleum distillates

ATTENTION

- This labeling must be in the possession of the user at the time of application.
- **Note:** This supplemental labeling contains uses of Garlon* 4 herbicide which are within the scope of the Worker Protection Standard. Follow Agricultural Use Requirements in the Directions for Use section of this supplemental labeling Follow all other Precautionary Statements, applicable directions, restrictions, and limitations on the product label for Garlon 4.
- Read "Warranty Disclaimer" and "Limitation of Remedies" in the label booklet attached to the container for Garlon 4.

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.

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 apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements (Continued)

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

Forest Management Applications

For broadcast applications apply the recommended rate of Garlon* 4 herbicide in a total spray volume of 5 to 25 gallons per acre by air or 10 to 100 gallons per acre by ground. Use spray volumes sufficient to provide thorough coverage of treated foliage. Use application systems designed to prevent spray drift to off-target sites. Nozzles or additives that produce larger droplets may require higher spray volumes to provide adequate coverage.

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 Garlon 4 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 Garlon 4 in tank mix combination with 6 to 8 quarts per acre of Tordon* 101 Mixture herbicide or 2 to 2 1/2 quarts per acre of Tordon K herbicide. Where grass control is also desired, Garlon 4, alone or in combination with Tordon K or Tordon 101 Mixture, may be tank mixed with 1 to 4 quarts per acre of Accord or Roundup herbicide, or 8 to 16 fluid ounces per acre of Arsenal Applicator's Concentrate herbicide. Susceptible woody plants, broadleaf weeds and grasses may also be controlled using a tank mix of 2 to 4 quarts per acre of Garlon 4 and 16 to 24 fluid ounces of Arsenal Applicator's Concentrate. When applying tank mixes, follow use directions and precautions on each product label.

In Western, Northeastern, North Central and Lake States (States Not Listed Above As Southern States): To control susceptible woody plants and broadleaf weeds, apply Garlon 4 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 quarts per acre of Garlon 4 in tank mix combination with 4 to 8 quarts of Tordon 101 Mixture, 2 quarts per acre of Tordon K, or 1 to 2 gallons per acre of 3.8 lb/gal 2,4-D low volatile ester. Where grass control is also desired, Garlon 4, alone or in tank mix combination with Tordon 101 Mixture or Tordon K, may be applied with 1 to 3 quarts per acre of Accord or Roundup herbicide, 2 to 4 ounces per acre of Oust, a combination of Accord (or Roundup) plus Oust at the rates listed, or 8 to 16 fluid ounces of Arsenal Applicator's Concentrate. When applying tank mixes, follow the 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 Garlon 4. To broaden the spectrum of species controlled to include fetterbush, staggerbush, titi and grasses, apply 2 to 3 quarts per acre of Garlon 4 in tank mix combination with 8 to 16 fl oz 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 Garlon 4 may be applied in tank mix combination with 2 to 3 quarts per acre 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.**

Note: Conifers planted sooner than one month after treatment with Garlon 4 at less than 1 gallon per acre or sooner than two months after treatment at 1 to 2 gallons per acre may be injured. 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.

Directed Spray Applications for Conifer Release
To release conifers from competing hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, and pin cherry, mix 1 to 5 gallons of Garlon 4 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 have reached full leaf size, but before autumn coloration. The majority of treated hardwoods 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.

Note: Sprays 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.

Broadcast Applications for Mid-Rotation Understory Brush Control in Southern Coastal Flatwoods Pine Stands (Ground Equipment Only)
For control of susceptible species such as gallberry and wax-myrtle and broadleaf weeds, apply 2 to 4 quarts per acre of Garlon 4. To broaden the spectrum of woody plants controlled to include fetterbush, staggerbush and titi, apply 2 to 3 quarts per acre of Garlon 4 in tank mix combination with 8 to 16 fl oz of Arsenal Applicator's Concentrate. Saw-palmetto will be partially controlled by use of Garlon 4 at 4 quarts per acre or by mixtures of Garlon 4 at 2 to 3 quarts per acre in tank mix combination with either 8 to 16 fl oz of Arsenal Applicator's concentrate or 2 ounces of Escort herbicide.

These mixtures should be broadcast applied over target understory brush species, **but to prevent injury to pines, make applications underneath the foliage of pines.** It is recommended that sprays be applied in 30 or more gallons per acre of total volume. 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.

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 or willow **before leaf-out** or evergreen hardwoods such as madrone, chinquapin, and *Ceanothus* spp., use Garlon 4 at 1 to 2 qt per acre. Diesel or fuel oil carrier may be used especially on deciduous hardwood species. On evergreen hardwoods, water carrier with 1 to 2 gallons of diesel oil per acre or a suitable surfactant or oil substitute at manufacturer's recommended rates are equally effective.

On Conifer Plantations (Excluding Pines) After Hardwoods Begin Growth and Before Conifer Bud Break ("Early Foliar" Hardwood Stage): Use Garlon 4 at 1 to 1.5 qt alone or with 3.8 lb/gal 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 lb acid equivalent per acre from both products. After conifer bud break, these sprays may cause more serious injury to the crop trees. Added 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 Garlon 4 at rates of 1 to 1.5 qt per acre alone or plus 3.8 lb/gal 2,4-D low volatile ester herbicide to provide no more than 3 lb acid equivalent per acre from both products. Treat as soon after conifer bud hardening as possible so that hardwoods are actively growing. Added oil, oil substitute or surfactant may cause unacceptable injury to the conifers.

Note: Sprays may cause discolored needles and temporary growth suppression of some conifers, but they should recover and grow normally.

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 Garlon 4 at rates of 1.5 to 3 quarts per acre alone or plus 3.8 lb/gal 2,4-D amine or low-volatile ester herbicides 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.

Note: Sprays may cause discolored needles and temporary growth suppression of some conifers, but they should recover and grow normally.

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 Garlon 4 at rates of 1.5 to 3 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.

Spot Treatment to Control Clumps of Resprouting Hardwoods Such as Big Leaf Maple Using a Hovering Helicopter in Forests

Stem Treatment Before Leaf-Out: Mix 1 to 2 gallons of Garlon 4 with about 20 gallons diesel oil and enough water to make 100 gallons of solution. Apply as an invert emulsion by means of a hovering helicopter equipped with a nozzle system to direct sufficient spray to cover the stems to the ground line of the sprouted trees, usually 3/4 to 1 1/2 gallon per clump.

Note: Conifers contacted by this spray may be seriously injured; in existing plantations, drift control systems, such as invert emulsions, should be used to minimize injury to adjacent conifers. A dye or other
marking system to designate treated trees may be used.

Basal Bark and Dormant Brush Treatments

To control susceptible woody plants in forests and on forest roadsides, use Garlon 4 in oil or oil-water mixtures prepared and applied as described below. When preparing mixtures, use as oils either a commercially available basal oil, diesel fuel, No. 1 or No. 2 fuel oil, or kerosene. 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 product label prepared by the oil or diluent's manufacturer.

Oil Mixture Sprays
Add Garlon 4 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-Water Mixture Sprays
First, premix the Garlon 4, oil and surfactant in a separate container. Do not allow any water or mixtures containing water to get into the Garlon 4 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
To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of Garlon 4 in enough oil to make 100 gallons of spray mixture. Apply with knapsack sprayer or power spraying equipment using low pressure (20-40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground. Thorough wetting of the indicated area is necessary for good control. Spray until runoff at the ground line is noticeable. Old or rough bark requires more spray than smooth young bark. Apply at any time, including the winter months, except when snow or water prevent spraying to the ground line.

Low Volume Basal Bark Treatment
To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of Garlon 4 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. 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 months, except when snow or water prevent spraying to the ground line.

Streamline Basal Bark Treatment
To control or suppress susceptible woody plants for conifer release, mix 20 to 30 gallons of Garlon 4 in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using equipment which provides a directed straight stream spray. 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 the spray at bark that is approximately 12 to 24 inches 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. Best results are achieved when applications are made to young vigorously growing stems which have not developed the thicker bark characteristic of slower growing, understory 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 when snow or water prevent spraying at the desired height above ground level.

Thinline Basal Bark Treatment
To control susceptible woody plants with stems less than 6 inches in diameter, apply undiluted Garlon 4 in a thin stream to all sides of the lower stems. The stream should be directed horizontally to apply a narrow band of Garlon 4 around each stem or clump. From 2 to 15 ml of chemical will be 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.

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 Garlon 4 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 Garlon 4 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 nozzles, or handgun using 70 to 100 gallons of spray per acre to ensure uniform coverage of stems. Garlon 4 may be mixed with 4 quarts of Weedone 170 to improve the control of black cherry and broaden the spectrum of herbicidal activity. 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 control resprouting of freshly cut stumps of susceptible species, mix 20 to 30 gallons of Garlon 4 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 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 vary with 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.

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Revisions:
1. Directions for Use for forestry uses removed to Dow AgroSciences supplemental labeling.