

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs Registration Division (7505P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460

NOTICE OF PESTICIDE:

Registration
X Reregistration
(under FIFRA, as amended)

EPA Reg. Nu	mber
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228-358

Date of Issuance:

JUN 15 2009

Term of Issuance:

Name of Pesticide Product:

Esteron 99 Concentrate Herbicide

Name and Address of Registrant (include ZIP Code):

Nufarm Inc.

150 Harvester Drive, Suite 200

Burr Ridge, IL 60527

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided that you:

1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.

Signature of Approving Official:

Date:

JUN 15 2009

Joanne Miller Product Manager 23 Herbicide Branch Registration Division (7505P) 21

- 2. The text "Have person sip a glass of water if able to swallow" appearing in the "IF SWALLOWED" statements in the First Aid section must be revised to read "Do not give any liquid to the person."
- 3. The text "Causes moderate eye irritation" must be added to the Hazards to Humans and Domestic Animals statements.
- 4. The PPE section must be revised to read:

"Some materials that are chemical-resistant to this product are made of barrier laminate, nitrile rubber, neoprene rubber, or viton. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

All mixers, loaders, applicators, flaggers and other handlers must wear:

Long-sleeved shirt and long pants,

Shoes and socks,

Chemical-resistant gloves,

Chemical-resistant apron when mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements."

5. The following text must be added to the engineering control section of the label:

"Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for agricultural pesticides [40CFR 170.240 (d)(6)."

The mechanical transfer engineering control text is no longer needed and may be deleted from the label.

- 6. The first 2 sentences of the Environmental Hazard section must be revised to read:
- "This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark."
- 7. "Protective eyewear" is not triggered for early entry and should be deleted from the early-entry PPE text in the Agricultural Use Requirements box.
- 8. The text "Use Requirements for Rangeland, Pasture and Non-cropland Areas: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is applied to rangeland, pasture or non-cropland areas. Use Requirements for Turf: Restricted Entry Interval: When used on grass seed crops, follow PPE and reentry instructions in the 'Agricultural Use Requirements' section of this label. For use on other turf areas, do not enter or allow people (or pets) to enter the treated area until dusts have settled" must be deleted from the Non-Agricultural Use Requirements box. The entry restriction text must read "Do not enter or allow people (or pets) to enter the treated area until sprays have dried."

9. The following revisions are needed to the directions for use:

#### Sorghum:

Add "Limited to one application per crop cycle."

#### Forestry:

The area treated must be specified in the directions for use as a directed spray to conifer plantations and the rates must comply with the RED rate restrictions for broadcast application (4.0 lbs ae per acre per broadcast application.)

#### Pasture and Rangeland:

Add the following to the precautions and restriction section of the label and any conflicting text must be deleted:

"For susceptible annual and biennial broadleaf weeds: Do not apply more than 1.0 lbs ae per acre per application.

For moderately susceptible biennial and perennial broadleaf weeds, difficult to control weeds and woody plants: Do not apply more than 2.0 lbs ae per acre per application.

Spot treatment: Do not apply more than 2.0 lbs ae per acre."

#### Sod farm and grass grown for seed:

Add:

"Limited to 2 applications per year.

Maximum of 2.0 lbs ae per acre per application.

Minimum of 21 days between applications."

#### **Ornamental Turf**:

The maximum individual application rate of up to 4 pints (1.9 lbs ae) per acre currently on the label exceeds the allowable individual maximum application rate of 1.5 lbs ae per acre per application. The label must be revised.

- 10. On page 3, change "use recommendations" to "use directions". On page 5, change "rates recommended" to "rates specified". Throughout the label change "recommended rates" to "specified rates".
- 11. Delete "General Use" on page 3. This is an implied safety claim.
- 12. Delete the "Agricultural Uses Requirements" boxes on page 7, 11, 15, and 16. These boxes duplicate the required Agricultural Use Requirements box on page 3 and have text not in compliance with the 2,4-D RED.
- 13. To the label add "Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in <u>Washington Toxics Coalition</u>, et. al. v. EP, C01-0132C, (W.D. WA). For further information, please refer to http://www.epa.gov/espp."

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A stamped copy of your labeling is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this letter or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.

# Esteron<sup>®</sup> 99<sup>®</sup> Concentrate Herbicide

FOR SELECTIVE CONTROL OF MANY BROADLEAF WEEDS IN CERTAIN CROPS, INCLUDING, CEREAL GRAINS (WHEAT, BARLEY, MILLET, OATS AND RYE), CORN (FIELD CORN, POPCORN AND SWEET CORN), FALLOW LAND AND CROP STUBBLE, SORGHUM (GRAIN AND FORAGE SORGHUM), AND SOYBEANS (PREPLANT BURNDOWN APPLICATION ONLY), FORESTS, RANGELAND AND ESTABLISHED GRASS PASTURES, INCLUDING CONSERVATION RESERVE PROGRAM (CRP) ACRES, NON-CROPLAND, GRASSES GROWN FOR SEED OR SOD, AND ORNAMENTAL TURF.

#### **ACTIVE INGREDIENT:**

2-Ethylhexyl Ester of 2,4-Dichlorophenoxyacetic Acid	·
OTHER INGREDIENTS:	
	TOTAL: 100.0%

Contains Petroleum Distillates.

\*Equivalent to 2,4-Dichlorophenoxyacetic Acid 44.1%, 3.8lbs. per gallon. Isomer specific AOAC method No. 978.05 (15th Ed.).

# KEEP OUT OF REACH OF CHILDREN CAUTION - PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300 For Medical Emergencies Only, Call (877) 325-1840

# ACCEPTED with COMMENTS In EPA Letter Dated:

EPA REG. NO. 228-358 EPA EST. NO. 228-IL-1 JUN 15 2009 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

298-358

MANUFACTURED FOR NUFARM INC. 150 HARVESTER DRIVE BURR RIDGE, IL 60527



**NET CONTENTS** 

071368-00029.20071105.EPA24D.Pending 62719-9-71368

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION - PRECAUCION

Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Avoid breathing vapors or mists. Avoid contact with skin, eyes, or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber or viton. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

#### All mixers, loaders, applicators, flaggers, and other handlers must wear:

- · long-sleeved shirt and long pants,
- · shoes and socks, plus
- chemical resistant gloves, when applying postharvest dips or sprays to citrus, applying with any handheld nozzle or equipment, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- chemical resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.
- · protective eyewear.

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

See engineering controls for additional requirements.

#### **Engineering Control Statements:**

For containers of over 1 gallon, but less than 5 gallons: Mixers and loaders who do not use a mechanical system (such as probe and pump or spigot) to transfer the contents of this container must wear coveralls or chemical-resistant apron in addition to other required PPE.

For containers of 5 gallons or more: Do not open pour product from this container. A mechanical system (such as probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)], the handler PPE requirements may be reduced or modified as specified in the WPS. When handlers use enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protections 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.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

	FIRST AID
IF IN EYES	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
	HOT LINE NUMBER  ntainer or label with you when calling a poison control center or doctor, or going for treatment, the 1-877-325-1840 for emergency medical treatment information.
	NOTE TO PHYSICIAN

#### **ENVIRONMENTAL HAZARDS**

This pesticide may be toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark except as noted on appropriate labels. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters 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. Application around a cistern or well may result in contamination of drinking water or groundwater.

#### **DIRECTIONS FOR USE**

It Is A Violation Of Federal Law To Use This Product In A Manner Inconsistent With Its Labeling. Read all directions for use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, chemical-resistant gloves made of any waterproof material, shoes plus socks and protective evewear.

#### **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 farm, forests, nurseries, or greenhouses.

#### Use Requirements for Rangeland, Pasture and Non-cropland Areas

No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is applied to rangeland, pasture or non-cropl1 and areas.

#### **Use Requirements for Turf**

Restricted Entry Interval: When used on grass seed crops, follow PPE and reentry instructions in the "Agricultural Use Requirements" section of this label. For use on other turf areas, do not enter or allow people (or pets) to enter the treated area until dusts have settled.

#### **GENERAL INFORMATION**

This product is intended for selective control of many broadleaf weeds in certain crops, including, cereal grains (wheat, barley, millet, oats and rye), corn (field corn, popcorn and sweet corn), fallowland and crop stubble, sorghum (grain and forage sorghum), and soybeans (preplant burndown application only), forests, rangeleand and established grass pastures including Conservation Reserve Program (CRP) areas, non-cropland, grasses grown for seed or sod, and ornamental turf.

Apply this product as water or oil spray during warm weather when weeds or woody plants are actively growing. Application under drought conditions often will give poor results. Use low spray pressure to minimize drift. Generally, the lower dosages recommended on this label will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species and under conditions where control is more difficult, use higher recommended rates. Deep-rooted perennial weeds such as Canada thistle and Field Bindweed and many woody plants usually require repeated applications for maximum control. Consult your State Agricultural Experiment Stations or local Extension Service Weed Specialists for recommendations from this label that best fit local conditions.

#### **GENERAL USE PRECAUTIONS AND RESTRICTIONS**

**Chemigation:** Do not apply this product through any type of irrigation system. Excessive amounts of 2.4-D in the soil may temporarily inhibit seed germination and plant growth,

#### **Avoiding Injury to Non-target Plants**

Spray drift produced during application is the responsibility of the applicator and care should be taken to minimize off-target movement of spray during application. A drift control agent suitable for agricultural use may be used with this product to aid in reducing spray drift. If used, follow all use recommendations and precautions on the product label.

Do not apply where drift may be a problem due to proximity to susceptible crops or other desirable broadleaf plants. Do not apply this product directly to, or otherwise permit contact with cotton, flowers, fruit trees, grapes, ornamentals, vegetables, or other desirable plants that are susceptible to 2,4-D herbicides. Do not permit spray mist containing 2,4-D to contact susceptible plants since even very small quantities of the spray, which may not be visible, can cause severe injury during either active growth and dormant periods. Do not use in greenhouses.

Ground Equipment: With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by applying 10 gallons or more of spray per acre; by using no more than 20 pounds spraying pressure and large droplet producing nozzle tips; by spraying when wind velocity is low; and by stopping all spraying when wind exceeds 10 miles per hour. Do not apply with hollow conetype insecticide or other nozzles that produce a fine-droplet spray.

**Avoid Movement of Treated Soil:** Avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants. Wind-blown dust containing 2,4-D may produce visible symptoms when deposited on susceptible plants, however, serious plant injury is unlikely. To minimize potential movement of 2,4-D on wind-blown dust, avoid treatment of powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigate soon after application.

Do not store or handle other agricultural chemicals with the same containers used for this product. Do not apply other agricultural chemicals or pesticides with equipment used to apply this product unless equipment has been thoroughly cleaned to remove all traces of 2.4-D.

#### SPRAY DRIFT MANAGEMENT (AERIAL APPLICATION)

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

#### **Droplet Size**

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

#### Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

#### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

#### Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

#### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

#### Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

#### Additional requirements for Aerial Applications

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

#### Additional requirements for Ground Boom Application

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

2,4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures.

#### MIXING INSTRUCTIONS

 Fill the spray tank about half full with water, then add the required amount of this product with agitation, and finally the rest of the water.

Note: This product in water forms an emulsion that tends to separate unless the mixture is kept agitated.

- 2. If oil is added, first mix the product and the oil and then add this mixture to the water. However, with adequate agitation, the oil can be added after the product is mixed with water.
- 3. If straight oil is used, a solution is formed and separation does not occur. Do not allow any water to get into the oil-herbicide mixture to avoid formation of an invert emulsion.

**Note:** Adding oil, wetting agent, or other surfactant to the spray mixture may increase effectiveness on weeds, but also may reduce selectivity in crops resulting in crop damage.

#### **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. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of this product and other pesticides. 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, sludge, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combinations should not be used.

#### Mixing with Liquid Nitrogen Fertilizer

This product may be combined with liquid nitrogen fertilizer suitable for foliar application to accomplish broadleaf weed control and fertilization or corn, small grains or pastures in a single operation. Use this product in accordance with recommendations for these crops provided in this label. Use liquid fertilizer at rates recommended by the supplier or Extension Service Specialist. Test for mixing compatibility by mixing spray ingredients in correct proportions in a clear glass jar before mixing in spray tank. A compatibility aid such as Unite or Compex may be needed in some situations. Compatibility is best with liquid fertilizer solutions containing only nitrogen. Mixing with N-P-K solutions may not be satisfactory, even with the addition of a compatibility aid. Pre-mixing this product with 1 to 4 parts water may help in situations when mixing difficulty occurs.

Fill the tank about half full with the liquid fertilizer, then add the required amount of this product with agitation. Maintain agitating and complete filling the tank with liquid fertilizer. Apply immediately and continue agitation in spray tank during application. **Do not store the spray mixture**. Application during very cold weather (near freezing) is not advisable.

#### Sprayer Clean-Out

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before re-use or applying other chemicals.

- 1. Rinse and flush application equipment thoroughly after use at least three times with water. Dispose of all rinse water by application to treatment area or apply to non-cropland area away from water supplies.
- 2. During the second rinse, add 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15-20 min). Let the solution stand for several hours, preferably overnight.
- 3. Flush the solution out of the spray tank through the boom.
- 4. Rinse the system twice with clean water, recirculating and draining each time.
- 5. Remove nozzles and screens and clean separately.
- 6. If equipment is to be used to apply another pesticide or agricultural chemical to a 2,4-D susceptible crop, additional steps may be required to remove all traces of 2,4-D, including cleaning of disassembled parts and replacement of hoses or other fittings that may contain absorbed 2,4-D.

#### **APPLICATION INFORMATION**

Spray volume: Apply with calibrated air or ground equipment using sufficient spray volume to provide adequate coverage of target weeds or as otherwise directed in specific use directions. For broadcast application, apply the recommended rate of this product in a spray volume of 2 or more gallons per acre by air and 10 or more gallons per acre for ground equipment. Use low-pressure sprays to minimize drift. Where states have regulations, that specify minimum spray volumes, they should be observed. In general, spray volume should be increased as crop canopy, height and weed density increase in order to obtain adequate spray coverage. Do not apply less than 2 gallons total spray volume per acre.

Application Rates: Generally, lower rates in recommended rate ranges will be satisfactory for more sensitive weeds species, when weeds are small, and when environmental conditions are favorable for rapid growth. Use higher rates in the recommended rate range for less sensitive species and under less favorable growing conditions. For crop uses, do not mix with oil or other adjuvants unless specifically recommended on the label. Deep-rooted perennial weeds such as Canada thistle and field bindweed and many woody plants usually require repeated applications for effective control.

#### **Spot Treatments**

To prevent misapplication, spot treatments should be applied with a calibrated boom or with hand sprayers using a fixed spray volume per 1,000 sq. ft. as indicated below.

Hand-Held Sprayers: Hand-held sprayers may be used for spot applications of this product in labeled crops. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on a treatment area of 1,000 sq. ft. Mix the amount of this product (fl. oz. or ml) corresponding to the desired broadcast rate in one (1) or more gallons of spray. To calculate the amount of this product required for larger areas, multiply the table value (fl. oz. or ml) by the number of thousands of sq. ft. of area to be treated. An area of 1,000 sq. ft. is approximately 10.5 x 10.5 yards (strides) in size. To calculate the amount of this product required for a broadcast rate the higher than those listed, use a multiple of the table value, for example, if a spot treatment requires the equivalent of an 8 pint per acre, use 2x the amount per gallon of spray required for the 4pints per acre rate.

#### **Rate Conversion Table for Spot Treatment:**

		L	abel Broadca	st Rate (pt/ac	re)		
1/2	2/3	3/4	1	. 2	3	4	8
		Equivalent	Amount of E	steron 99 per	1,000 sq. ft.		
1/5 fl oz† (5.5 ml)	1/4 fl oz (7.3 ml)	1/3 fl oz (8.3 ml)	3/8 fl oz (11 ml)	3/4 fl oz (22 ml)	1 ff oz (33 ml)	1-1/2 fl oz (44 ml)	3 fl oz (88 ml)

†Conversion factors: 1 pt - 16 fl oz.; 1 fl oz = 29.6 (30) ml

Band Application: This product may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated acre.

Band width in inches

X Broadcast rate per acre = Band rate per treated acre

Row width in inches

Band width in inches

X Broad cast volume per acre = Band volume per treated acre

Row width in inches

#### **WEEDS CONTROLLED**

#### **Annual or Biennial Weeds**

Beggarticks (1) raqweed, common Bittercress, smallflowered 12 lambsquarter, common ragweed, giant bitterweed lettuce, prickly (1) (2) rape, wild broomweed, common 113 lettuce, wild rocket, yellow lupines salsify ,common 113 burdock, common buttercup, smallflowered (1) (2) mallow, little " salsify, western (9) carpetweed mallow, Venice (1) shepherdspurse cinquefoil, common (2) marshelder sicklepod cinquefoil, rough (2) smartweed (annual species) (1) (2) morningglory, annual cocklebur, common morninggloyr, ivy sneezeweed, bitter morningglory, woolly sowthistle, annual coffeeweed mousetail (2) copperleaf, Virginia (3) sowthistle, spiny croton, Texas mustard (except blue mustard) spanishneedles croton, woolly parsnip, wild sunflower fixweed pennycress (fanweed) sweetclover galinsoga pepperweeds (Lepidium spp.) (1) (2) tansymustard pigweeds (Amaranthus spp.) " geranium, Carolina (8) thistle, bull hemp, wild poorjoe thistle, musking horseweed or marestail (2) primrose, common thistle, Russian (tumbleweed) " iewelweed purslane, common 12) velvetleaf jimsonweed pusley, Florida vetches knotweed (1) radish, wild

#### **Perennial Weeds**

Alfalfa (1) (2) clover, red ma Jerusalem-artichoke artichoke, Jerusalem <sup>m</sup> coffeeweed loco, bigbend aster, many-flower " cress, hoary (1) nettles Austrian fieldcress (1) dandelion (12 (including stinging) (1) onion, wild (1) bindweed docks " (hedge, field and Éuropean) ma dogbanes 6 pennywort goldenrod blue lettuce plantains blueweed, Texas eveningprimrose, cutleaf ragwort, tansy " broomweed garlic, wild m sowthistle, perennial bulinettle (1) (2) hawkweed, orange " thistle, Canada (1) 22 healai carrot, wild in vervains<sup>(i)</sup> catnip ironweed, western (2) ,wormwood ivy, ground 49 chicory

- (1) These weed species are only partially controlled and may required repeat applications and/or use of higher recommended rates of this product even under ideal conditions of application.
- (2) This product may not be used to control this weed species in the state of California.

#### **CROP USES**

Agricultural Use Requirements for Crops: For the following crop uses, follow PPE and Reentry instructions in the "Agricultural Use Requirements" section of this label.

#### CEREAL GRAINS (WHEAT, BARLEY, MILLET, OATS, RYE) (Not Underseeded With A Legume)

Crop/Application Timing	Esteron 99 (pt/acre)	Specific Use Directions
Wheat, Barley, Millet, Rye Annual and biennial broadleaf weeds Perennial broadleaf weeds	1/2 to 2 <sup>†</sup> 1 to 2 <sup>†</sup>	Apply after crop is fully tillered, but before boot stage of growth (usually 4 to 8 inches tall) and weeds are small. Do not apply before tillering or from early boot through the milk stage of growth.
Oats (Spring Seeded) (Fall Seeded Southern)	1/2 3/4 to 1-1/4 <sup>1</sup>	Apply after crop is fully tillered, but before boot stage of growth (usually 4 to 8 inches tall) and weeds are small. Do not apply before tillering or from early boot through the milk stage of growth. Do not apply during or immediately following cold weather.
Preharvest Application (all cereals)	1	Apply using air or ground equipment to control weeds that could interfere with harvest, or to suppress perennial weeds. Apply when grain is in dough stage. Do not apply from early boot through the milk stage of growth.

<sup>†</sup> Use the lower rate in the rate range if small annual or biennial weeds are the major problem. Use the higher rate if perennial weeds or annual or biennial weeds are present which are considered to be hard-to-kill as determined by local experience. Higher rates increase the risk of crop injury and should be used only where weed control justifies such risk. Do not apply this product at the crop seedling stage of growth. Consult state agricultural experiment station or extension service weed specialists for recommendations or suggestions to fit local conditions.

Restrictions:
Grazing and Haying Restrictions: Do not permit dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 14 days after treatment. Do not harvest for hay or harvest grain within 14 days after application.

#### USE PRECAUTIONS FOR CEREAL GRAINS (Wheat, Barley, Millet, Oats, and Rye)

The preharvest interval (PHI) is 14 days.

#### Postemergence:

Limited to one postemergence application per crop cycle. Maximum of 2.75 pints per acre per application.

Limited to one preharvest application per crop cycle. Maximum of 1 pint of product per acre per application.

Limited to 3.25 pints of product per acre per crop cycle.

## CORN (Field Corn, Popcorn And Sweet Corn)

Application Timing/ Stage of Growth	Esteron 99 (pt/acre)	Specific Use Directions
Preplant (Burndown) Preemergence (Field corn, popcorn, and sweet corn)	1 to 2	General: For best results, growth conditions should be favorable for active
(Fleid cont, popcont, and sweet cont)		weed growth. Use high rate in rate range for less susceptible weeds, cover crops such as alfalfa, weeds in advanced stages of development, or under less favorable growth conditions.
		Preplant: Apply 7 to 14 days before planting corn to control emerged broadleaf weed seedlings or existing cover crops.
		Preemergence: Apply any time after planting, but before corn emerges to control broadleaf weed seedlings or existing cover crops. Do not use on light sandy soils.
Postemergence		Apply when weeds are small and corn is
(Field corn, popcorn, and sweet corn)		less than 8 inches tall (to top of canopy) If corn is more than 8 inches tall, use drop
Annual broadleaf weeds Crop up to 8 inches tall	1/2 to 1	nozzles to keep spray off foliage.  Treat perennial weeds when they are in bud to bloom stage.
Crop 8 inches tall to tasseling (directed spray only)	1	Do not tank mix with atrazine, oil or othe adjuvants.
Perennial broadleaf weeds		Do not apply from tasseling to hard dough stage.  Note: Corn treated with 2,4-D may become temporarily brittle. Wind o cultivation may cause stem breakage during the period of time that corn is brittle.  Sweet Corn: To minimize potential for crop injury, use only lowest rate in rate.
		range.
Preharvest (Field corn and popcorn only)	up to 3	Apply after corn is in hard dough (codenting) stage. Do not apply to sweet corn.

#### **Precautions**:

- Corn hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known t be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed Specialist for this information.
- · After postemergence application, delay cultivation for 8 to 10 days to allow corn to overcome any temporary brittleness.

#### USE PRECAUTIONS FOR CORN (Field and Popcorn)

Do not use treated crop as fodder for 7 days following application.

The preharvest interval (PHI) is 7 days.

Maximum of 6.25 pints of product per acre per crop cycle.

#### Preplant or Preemergence

Limited to one preplant or preemergence application per crop cycle. Maximum of 2.25 pints of product per acre per application.

#### Postemergence

Limited to one postemergence application per crop cycle. Maximum of 1 pint of product per acre per application.

#### Preharvest

Limited to one preharvest application per crop cycle.

Maximum of 3.25 pints of product per acre per application.

#### **USE PRECAUTIONS FOR SWEET CORN**

Do not use treated crop as fodder for 7 days following application. The preharvest interval (PHI) is 45 days.

Minimum of 21 days between applications.

Maximum of 3.25 pints of product per acre per crop cycle.

#### **Preplant or Preemergence**

Limited to one preplant or preemergence application per crop cycle. Maximum of 2.25 pints of product per acre per application.

#### Postemergence

Limited to one posternergence application per crop cycle. Maximum of 1 pint of product per acre per application.

#### **FALLOWLAND AND CROP STUBBLE**

Fallowland is idle land, postharvest to crops or between crops.

Type of Weeds	Esteron 99 (pt/acre)	Specific Use Directions
Annual broadleaf weeds	1 to 2	Use lower rate in rate range when weeds are small (2 to 3 inches tall) and conditions are favorable for active growth and a higher rate when weeds are larger and/or growing conditions are less favorable.
Biennial broadleaf weeds	2 to 4	Apply when musk thistles or other biennial species are in the seedling to rosette stage and before development of flower stalks. Use lower rates in the spring during the rosette stage and the highest rate in the fall or when flower stalks have develoed.
Perennial broadleaf weeds	2 to 4	Apply when perennial weeds are in bud or bloom stage and actively growing.  Do not disturb treated areas for at least 2 weeks after application or until top growth is dead.
Wild garlic and onion in crop stubble	4	Apply to new regrowth of wild garlic or onion that occurs in the fall after harvest of other crops.

#### Precautions and Restrictions:

- Grazing and Haying Restrictions: In grazed areas, do not apply mor than 4 pt/acre of this product per application. Do not harvest forage or hay from treated areas for 7 days after application. If treated area is grazed within 30 days of application, withdraw meat animals at least 3 days before slaughter.
- · For best control results do not cultivate for at least 2 weeks after application or until top growth is dead.

#### **Planting in Treated Areas**

Labeled Crops: Within 29 days after an application of this product, plant only those crops listed on this or other registered 2,4-D labels. Follow more specific limitations, if any, provided in directions for specific crops. Labeled crops may be at risk of crop injury or loss if planted soon after application, especially during the first 14 days. Degradation factors described below should be considered in weighing this risk.

Other Crops: Degradation factors described below should be considered in weighing this risk. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperatures above freezing have elapsed since application.

Degradation Factors: When planting into treated areas, the risk of crop injury is less if lower rates of product were applied and conditions following application have included warm, moist soil conditions that favor rapid breakdown of 2,4-D. Risk is greater if higher rates of product were applied and soil temperatures have been cold and/or soils have been excessively wet or dry in the days following application. Consult your local agricultural extension service or information about susceptible crops and typical conditions in your area.

USE PRECAUTIONS FOR FALLOW LAND (crop stubble on idle land, or postharvest to crops, or between crops) Plant only labeled crops within 29 days following application.

Limited to 2 applications per year.

Maximum of 4.25 pints of product per acre per application.

Minimum of 30 days between applications.

#### SORGHUM (GRAIN SORGHUM (MILO) AND FORAGE SORGHUM)

Application Timing/Stage of Growth	Esteron 99 (pt/acre)	Specific Use Directions
Postemergence† Crop 6 - 8 inches tall Crop 8 - 15 inches tall (directed spray only)	1/2 to 1† 3/4 to 1	Apply when sorghum is 6 to 15 inches tall. If sorghum more than 8 inches tall (top of canopy), use drop nozzles to keep spray off foliage.  Do not use with oil or other adjuvants.  Do not treat during boot, flowering or dough stage.

<sup>†</sup>Temporary crop injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply this product under these conditions, use no more that 2/3 pint per acre.

#### **Precautions and Restrictions:**

- Sorghum hybrids vary in tolerance to 2,4-D. Some are easily injured. Apply only to varieties known to be tolerant to 2,4-D. Consult the seed company or your agricultural experiment station or extension service weed specialist for this information.
- Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days after application.
- Do not apply more than 1.0 pint per acre of this product per use season.

#### SOYBEANS (PREPLANT BURNDOWN APPLICATION ONLY)

(Not for Use in California)

Application Timing	Esteron 99 (pt/acre)	Specific Use Directions	
Preplant (Burndown)	3/4 to 1	Apply not less than 7 days before planting soybeans.  Precautions and Restrictions below.	See Use
·	1 to 2	Apply not less than 15 days before planting soybeans. Precautions and Restrictions below.	See Use

General Use Directions: Use this product to control emerged broadleaf weeds or existing cover crops. For best results, apply when weeds are small and actively growing. Use the higher rate in the respective rate range for larger weeds and when perennials are present. Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may be added to spray mixtures to increase the herbicidal effectiveness on certain weeds. Read and follow all directions and precautions on this label and on the label of each product added to the spray mixture.

#### Use Precautions, Restrictions and Limitations:

- Important Notice: Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and
  the extent of such injury will depend on weather (temperature and rainfall) from herbicide application until soybean emergence and
  agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is
  more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.
- $\cdot$  Do not disturb treated soil through tillage between application and planting of soybeans.
- · Do not use on sandy soils with less than 1.0% organic matter.
- In treated fields, plant soybean seed as deep as practical, but not less than 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
- · Do not make more than one application per season regardless of the application rate used.
- Do not allow livestock grazing or harvest hay, forage, or fodder from treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.
- Do not apply this product as a preplant application in soybeans unless you are prepared to accept the results of soybean injury, including possible stand loss and/or yield reduction.
- During the growing season following application, do not replant treated fields with crops other than those labeled for use with this
  product.
- · Do not apply more than 2 pint per acre of this product per use season.

15/2

#### FORESTRY, RANGELAND, ESTABLISHED PASTURE, AND NON-CROPLAND USES

Agricultural Use Requirements for Forests (Except Tree Injection Use): For use in forests, follow PPE and Reentry instructions in the "Agricultural Use Requirements" section of this label.

Agricultural Use Requirements for Rangeland, Pasture, Forest (Tree Injection Only) and Non-cropland Areas: When this product is applied to rangeland and established pastures not harvested for hay or seed; non-cropland areas, and when applied by tree injection method only in forest sites, follow reentry requirements given in the "Non-Agricultural Use Requirements" section of this label.

#### **FORESTS**

Forest site preparation, forest roadsides, brush control, established conifer release (including Christmas trees and reforestation areas)

Treatment Site Method of Application	Esteron 99	Specific Use Directions
Annual Weeds Biennial and perennial broadleaf weeds and susceptible woody plants	2 to 4 pt/acre 4 to 8 pt/acre	Apply when weeds are small and growing actively before the bud stage. Apply when biennial and perennial species are in the seedling to rosette stage and before flower stalks appear. For difficult to control perennial broadleaf weeds and woody species, use up to 4 qt of this product plus 1 to 4 qt of Garlon® 3A herbicide per acre.  For conifer release, make application in early spring before budbreak of conifers when weeds are small and actively growing.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rate recommended for this treatment site and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application Instructions".
Conifer Release: Species such as white pine, ponderosa pine, jack pine, red pine, black spruce, white spruce, red spruce, and balsam fir	1-1/2 to 3 qt/acre	To control competing hardwood species such as alder, aspen birch, hazel, and willow, apply from mid to late summer when growth of conifer trees has hardened off and woody plants are stil actively growing. Apply with ground or air equipment, using sufficient spray volume to ensure complete plant. Because this treatment may cause occasional conifer injury, do not apply i such injury cannot be tolerated.
Directed Spray: Conifer plantations including pine	4 qt/100 gal	Apply when brush or weeds are actively growing by directing the spray so as to avoid contact with conifer foliage and injurious amounts of spray. Apply in oil, oil-water, or water carrier in a spray volume of 10 to 100 gallons per acre.
Basal Spray (May also be used in Rangeland, Pastures, and Noncropland)	8 qt/100 gal or	Thoroughly wet the base and root collar of all stems until the spray begins to accumulate around the root collar at the ground line. Wetting stems also with the mixture may aid in control.
Surface of Cut Stumps (May also be used in Rangeland, Pastures, and Noncropland)	2.6 fl oz/gal	Apply as soon as possible after cutting trees. Thoroughly wet the cambium layer of the cut surface being careful to wet the entire circumference.
Frill and Girdle (May also be used in Rangeland, Pastures, and Noncropland)		Cut frills (overlapping V-shaped notches cut downward through the bark in a continuous ring around the base of the tree) using an axe or other suitable tool. Saturate the freshly cut frills with the 2,4-D mixture.

#### FORESTS (Continued)

Treatment Site Method of Application	Esteron 99	Specific Use Directions
Tree Injection Application (May also be used in Rangeland, Pastures, and Noncropland)	(1 to 2 ml per injection site)	To control and prevent resprouting of unwanted hardwood trees such as elm, hickory, oak, and sweetgum in forests and other non-crop areas, apply by injecting at a rate of 1 ml of undiluted Esteron 99 per inch of trunk diameter as measured at breast height (DBH), approximately 4-1/2 ft above the ground. Injection sites, however, should be as close to the root collar as possible and the injection bit must penetrate the inner bark. Applications may be made throughout the year, but for best results apply between May 15 and October 15. Maples should not be treated during the spring sap flow.  For hard to control species such as ash, maple, and dogwood use 2 ml of undiluted Esteron 99 per injection site or double the number of 1 ml injections.  Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

Forest site preparation, forest roadsides, brush control, established conifer release (including Christmas trees and reforestation areas)

#### **Precautions and Restrictions:**

- Do not allow sprays to contact conifer shoot growth (current year's new growth) or injury may occur.
- · Do not apply to nursery seedbeds.
- For conifer release, do not use on plantations where larch is among the desired species.
- Grazing and Haying Restrictions: If grazing or haying is anticipated, do not apply more than 4 pt/acre of this product per application. Do not harvest forage or hay from treated areas for 7 days after application. If treated area is grazed within 30 days of application, withdraw meat animals at least 3 days before slaughter.
- · For broadcast applications, do not apply more than 8.0 pt/acre of this product per 12 month period.

## RANGELAND, ESTABLISHED GRASS PASTURES (Including Perennial Grasslands not in Agricultural production such as Conservation Reserve Program Acres)

Target Weeds or Woody Plants	Esteron 99 (pt/acre)	Specific Use Directions
Annual broadleaf weeds Biennial and perennial broadleaf weeds	2 2 to 4	For best results, apply when weeds are small and growing actively before the bud stage. Apply when musk thistles or other biennial species are in the seedling to rosette stage and before flower stalks appear. Refer to the "Weeds Controlled" section for a listing of susceptible weed species and weeds that may be only partially controlled and require repeat applications and/or use of higher recommended rates even under ideal conditions of application.
Spot Treatment to control broadleaf weeds	See Instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rates recommended for this treatment site and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application Instructions".
Basal spray, cut surface, frill and girdle, and tree injection application methods		Refer to the "Forestry Uses" section for specific use instructions for these application methods.
Wild gartic and wild onion	4	Make three applications (fall-spring-fall or spring-fall-spring) starting in late fall or early spring.

(Continued)

#### RANGELAND, ESTABLISHED GRASS PASTURES (Continued) (Including Perennial Grasslands not in Agricultural production such as Conservation Reserve Program Acres)

Target Weeds or Woody Plants	Esteron 99 (pt/acre)	Specific Use Directions
Broadleaf weed control in newly sprigged coastal bermudagrass	2 to 4	Applications may be made either preemergence or postemergence. Follow "Specific Use Directions" for Rangeland and Established Grass Pastures, above.
Sand shinnery oak Sand sagebrush	2	Sand shinnery oak: Apply by aircraft between May 15 and June 15. Sand sagebrush: Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use a 1:4 oil-water emulsion as carrier and a spray volume of 3 to 5 gallons per acre. Retreatment may be needed.
Big sagebrush Rabbitbrush		Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use a 1:4 oil-water emulsion as carrier and a spray volume of 3 to 5 gallons per acre. Retreatment may be needed.
Chamise, manzanita, buckbrush, coastal sage, coyotebrush, and chaparral species.	4	Apply by ground or aircraft when foliage is fully expanded and plants are actively growing. Use water or 1:4 oil-water emulsion as carrier and a spray volume of 5 to 10 gallons per acre. Retreatment may be needed.
Southern wild rose Broadcast application Spot treatment	up to 4 1 gal/100gal of spray	Broadcast: Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment.  Spot treatment: Apply when foliage is well developed. Thorough coverage is required. Use 1 gallon of this product plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more treatments may be required.  Do not exceed 4 pt per acre per application.
CRP Acres	For program lands such as CRP, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.	

#### Precautions and Restrictions:

- · Do not use on bentgrass, alfalfa, clover, or other legumes.
- Do not use on newly seeded areas until grass is well established.
- · Do not use from early boot to milk stage where grass seed production is desired.
- Do not apply within 30 days of a previous application.
  Grazing and Haying Restrictions: In grazed areas, do not apply more than 4 pt/acre of this product per application. harvest forage or hay from treated areas for 7 days after application. If treated area is grazed within 30 days of application, withdraw meat animals at least 3 days before slaughter.
- · Do not apply more than 8 pt/acre of this product per use season.

#### NON-CROPLAND

Such as fencerows, hedgerows, roadsides, rights-of-way, utility power lines, railroads and other non-crop areas

Treatment Site or Method of Application	Esteron 99 (pt/acre)	Specific Use Directions
Annual broadleaf weeds  Biennial and perennial broadleaf weeds and susceptible woody plants	2 to 4	Apply when annual weeds are small and growing actively before the bud stage. Biennial and perennial weeds should be rosette to bud stage, but not flowering at the time of application. For difficult to control perennial broadleaf weeds and woody species, tank mix up to 4 quarts of this product plus 1 to 4 qts of Garlon 3A per acre. Oil or wetting agent may be added to the spray, if needed for increased effectiveness.
		For ground application (High volume): apply a total spray volume of 100 to 400 gallons per acre; (low volume) apply a total spray volume of 10 to 100 gallons per acre.
		For helicopter: Apply a total spray volume of 5 to 30 gallons per acre.
Spot Treatment to control broadleaf weeds	See instructions for "Spot Treatment"	Note: To control broadleaf weeds in small areas with a hand sprayer, use an application rate equivalent to the broadcast rates recommended for this treatment site and spray to thoroughly wet all foliage. See rate conversion table and instructions for "Spot Treatment" and use of hand-held sprayers under "Application Instructions".
Basal spray, cut surface, frill and girdle, and tree injection application methods		Refer to the "Forestry Uses" section for specific use instructions for these application methods.
Southern wild rose Broadcast application	up to 4	Broadcast: Apply in a spray volume of 5 or more gallons per acre by aircraft or 10 or more gallons per acre by ground equipment.
Spot treatment	1 gal/100 gal of spray	Apply when foliage is well developed. Thorough coverage is required. Use 4 qt of this product plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water. Two or more treatments may be required.

#### **Precautions and Restrictions:**

- · Do not use on newly seeded areas until grass is well established.
- Bentgrass, St. Augustine, clover, legumes and dichondra may be severely injured or killed by this treatment.
- Do not apply within 30 days of a previous application.
- Grazing and Haying Restrictions: In grazed areas, do not apply more than 4 pt/acre of this product per application. Do not harvest forage or hay

from treated areas for 7 days after application. If treated area is grazed within 30 days of application, withdraw meat animals at least 3 days before

slaughter.

- Do not apply more than 8.0 pt/acre of this product per use season.

#### **TURF USES**

Agricultural Use Requirements: When used in grass grown for seed or sod farms, follow PPE and reentry instructions in the "Agricultural Use Requirements" section of this label.

#### **GRASSES GROWN FOR SEED OR SOD**

Treatment Site (Application Timing)	Esteron 99 (pt/acre)	Specific Use Directions
Grasses Grown for Seed (Postemergence Use) Seedling grass (five-leaf stage or later) Well-established grasses	3/4 to 1	Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active weet growth.
	1 to 4	Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 1 pt/acre. Cool season grasses are more tolerant to higher rates.
		Do not apply to grass in the early boot through milk stage if seed production is desired.  When grass is well established, higher rates of up to 4 pints/acre may be applied for control of hard-to-kill annual or perennial weeds.
Sod Farms (Postemergence)	2 to 4	Deep-rooted perennials such as bindweed and Canada thistle may require repeat applications.  Avoid mowing sod farms for 1 to 2 days before or after application Delay irrigation until the day following application.

#### **Precautions and Restrictions:**

- · Do not use on creeping grasses such as bentgrass except for spot treatment.
- · Do not use on susceptible southern grasses such as St. Augustinegrass.
- Do not use dichondra or other herbaceous ground covers; legumes may be damaged or killed.
- · Do not reapply to a treated area within 21 days of a previous application.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.
- Grazing and Haying Restrictions: In grazed areas, do not apply more than 4 pt/acre of this product per application. Do not harvest forage or hay from treated areas for 7 days after application. If treated area is grazed within 30 days of application, withdraw meat animals at least 3 days before slaughter.
- · Do not apply more than 8 pt/acre of this product per use season.

### ORNAMENTAL TURF (Excluding Grasses Grown for Seed or Sod Farms) (Includes lawns, golf courses, cemeteries and parks, airfields, roadsides and vacant lots)

Use Requirements for Ornamental Turf Areas: When this product is applied to ornamental turf areas, follow PPE and reentry instructions in the "Non-agricultural Use Requirements" section of this label.

Treatment Site (Application Timing)	Esteron 99 (pt/acre)	Specific Use Directions
Ornamental Turf (Postemergence)		Apply when weeds are small and actively growing. For best results, apply when soil moisture is adequate for active
Seedling grass (five-leaf stage or	3/4 to 1	weed growth.
later)		Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeat applications.
Well-established grasses	2 to 4	Do not apply to newly seeded grasses until well established (five-leaf stage or later) and then use a maximum of 1 pt/acre. Cool
Biennial ad perennial broadleaf weeds	4	season grasses are tolerant of higher rates.

#### **Precautions and Restrictions:**

- . Do not use on creeping grasses such as bentgrass except for spot treatment.
- · Do not use on susceptible southern grasses such as St. Augustinegrass.
- · Do not use dichondra or other herbaceous ground covers; legumes may be damaged or killed.
- Reseeding: Delay reseeding at least 30 days following application. Preferably, with spring application, reseed in the fall and with fall application, reseed in the spring.
- · Do not make more than 2 broadcast applications per treatment site per year (does not include spot treatments).
- · Do not apply more than 4 pt/acre of this product per use season.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Keep container tightly closed when not in use. If exposed to subfreezing temperatures, the product should be warmed to at least 40°F and mixed thoroughly before using.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

General: Consult federal, state, or local disposal authorities for approved alternate procedures. Be sure that use of this product conforms to all application regulations of contaminate water, food or feed by storage or disposal.

#### **WARRANTY DISCLAIMER**

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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If you do not agree with or do not accept any of directions for use, the warranty disclaimers, or limitations on liability, do not use the product, and return it unopened to the Seller, and the purchase price will be refunded.

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