

2217-77

5-20-2005

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAY 20 2005

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Mr. Craig Martens  
Manager of Regulatory Services  
PBI/Gordon Corporation  
Post Office Box 014090  
Kansas City, Missouri 64101

Dear Mr. Martens:

Subject: LV 400 2,4-D Weed Killer  
Registration No. 2217-77  
Application and Letter Dated May 5, 2005, Request  
to Amend Registration To Add Maximum Use Rates for  
Forestry and Non-Crop Sites To Label, Based on  
A Memorandum of Understanding Agreed to between  
the Industry Task Force II on 2,4-D Research Data on  
October 14, 2004

The labeling referred to above has been reviewed and found acceptable as an amendment to the registration of "LV 400 2,4-Weed Killer" under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, provided that you:

1. Delete the word "general" as a descriptor to noncropland sites, in the section "Directions, Restrictions and Limitations for Use in Non-Cropland, on page 10.
2. Do not release this product for shipment under any other labeling after October 1, 2005.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of this product under this labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. Please submit one copy of the final printed label before you release the product for shipment.

Sincerely yours,

*Joanne I. Miller*  
Joanne I. Miller  
Product Manager 23

Herbicide Branch  
Registration Division (7505C)

Enclosure

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# LV 400 2,4-D WEED KILLER

A LOW VOLATILE ESTER

**ACTIVE INGREDIENT:**

\*Isooctyl (2-ethylhexyl) ester of 2,4-dichlorophenoxyacetic acid..... 65.5%

INERT INGREDIENTS:..... 34.5%

TOTAL 100.0%

Contains petroleum distillates, xylene or xylene range aromatic solvent.

**THIS PRODUCT CONTAINS:**

\*3.8 lbs. 2,4-dichlorophenoxyacetic acid equivalent per gallon or 43.5%  
Isomer Specific By AOAC Methods.

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**

**KEEP OUT OF REACH OF CHILDREN**

MAY 20 2005  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

**CAUTION**

2217-77

See next panel for additional Precautionary Statements and First Aid.

**NET CONTENTS \_\_\_ GALLONS**

861/ APxxxxxx  
EPA REG. NO. 2217-077  
EPA EST. NO. 2217-KS-1  
MANUFACTURED BY:



Telephone: 1-800-821-7925



**READ THE ENTIRE LABEL FIRST. OBSERVE ALL PRECAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.**

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**CAUTION:** Harmful if swallowed. Avoid contact with skin, eyes or clothing. Harmful if inhaled. Avoid breathing spray mist.

**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 selection chart.

Applicators and other handlers must wear long-sleeved shirt and long pants, chemical resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber, or Viton, shoes plus socks, and protective eyewear.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

**Engineering Control Statements:**

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

*Containers of 5 gallons or more:* Do not open-pour product from this container. A mechanical system (such as a 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 [40CFR 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 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.
- ◆ 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.

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### First Aid

<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 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>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-877-800-5556 for emergency medical treatment advice.</p> <p><b>Note to Physician:</b> Contains petroleum distillates—vomiting may cause aspiration pneumonia.</p>	

### ENVIRONMENTAL HAZARDS:

Do not apply when weather conditions favor drift from target area. Use with care when applying in areas adjacent to any body of water. Do not contaminate water intended for irrigation or domestic purposes. This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

**PHYSICAL OR CHEMICAL HAZARDS:** Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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.

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### 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 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.

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, wear: coveralls, chemical resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber, or Viton, shoes plus socks, and protective eyewear.

### 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.

**Re-entry statement for residential and other turf sites excluding sod farms:** Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until spray has dried or dust has settled.

### STORAGE & DISPOSAL

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

**PESTICIDE STORAGE:** Store in original container in a locked storage area inaccessible to children or pets. This product may be stored in an unheated building.

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

### USE PRECAUTIONS:

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

Don't overdose. Avoid spray drift to cotton, soybeans, tomatoes, tobacco, grapes, fruit trees, flowers, garden crops, ornamental plants, shrubs, trees and other hormone herbicide sensitive desirable plants. Do not apply near these plants because small quantities of wind drifted herbicide may cause severe injury.

Do not apply when wind speed is sufficient to cause drift. Do not apply when an air temperature inversion exists. An air inversion may be detected by creating a smoke column and observing a layering effect.

Do not apply when temperatures exceed 90°F. Do not apply if rain is expected within the hour.

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**GENERAL INFORMATION:**

Apply LV 400 2,4-D Weed Killer as a water or oil spray during warm weather when weeds or brush are actively growing. Application under drought conditions often will give poor results. Use low spray pressure to minimize drift. On cropland and along roadsides, do not exceed 20 psi pressure.

Use adequate spray volume to provide uniform coverage of weeds and brush, usually 5 to 20 gallons per acre by ground equipment and 3 to 5 gallons by aircraft. Higher gallonage may be used if desired to improve spray coverage.

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, the higher dosages will be needed.

For crop uses, do not mix with oil or other adjuvants unless specifically recommended on this label. Deep rooted perennial weeds such as Canada thistle, field bindweed, and many woody plants usually require repeated applications for maximum control.

Do not apply LV 400 2,4-D Weed Killer where spray drift may contact nearby susceptible crops or other desirable plants, or may contaminate water used for irrigation or domestic purposes. Read and follow all precautions on this label. Local conditions may affect the use of herbicides. Consult your State Agricultural Experiment Station or Extension Service weed specialists for advice in selecting treatments from this label to best fit local conditions. Be sure that use of this product conforms to all applicable regulations. Apply this product only as specified on this label.

- WEEDS -		
Bindweed	Mallow, Venice	Sowthistle, annual
Buckbrush	Manzanita	Spanishneedles
Buckhorn	Marshelder	Sumac
Buckwheat	Milkweed	Sunflower
Canada thistle	Milkvetch	Sweetclover
Cocklebur	Morningglory, annual	Tansy mustard
Coffeeweed	Mustards	Tansy ragwort
Cornflower	Nettles	Thistle, bull
Coyotebrush	Oak, shinney	Thistle, musk
Croton	Pennycress	Thistle, Russian
Dandelion	Pepperweed, field	Tumbleweed
Docks	Pigweed	Velvetleaf
Dogfennel	Plantain	Vervain
Elderberry	Poison ivy	Vetch
Fanweed	Poorjoe	Wild carrot
Galinsoga	Ragweed	Wild garlic
Goatsbeard	Rape, wild	Wild hemp
Halogeton	Sage, coastal	Wild onion
Horsenettle	Sagebrush, sand	Wild radish
Jewelweed	Salsify	Wild sweet potato
Jimsonweed	Sheep sorrel	Willow
Knotweed	Shepherdspurse	Wormwood
Kochia	Sicklepod	Yellow rocket
Lambsquarters	Smartweed	Yellow starthistle
Locoweed	Sneezeweed, bitter	

**Ground Equipment - Spray drift can be lessened by:** Keep the spray boom as low as possible and apply 20 gallons or more of spray per acre. Use no more than 20 psi spraying pressure with flat fan or flooding flat fan nozzle tips. Spray when wind velocity is low. Do not spray with oil when wind exceeds 6 to 7 miles per hour. Do not apply with hollow cone tip or other nozzles that produce a fine droplet spray.

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**Aircraft Application - Spray drift can be lessened by:** Apply not less than 5 gallons of spray per acre. Use no more than 20 psi spray pressure at the nozzles. Use nozzles which produce a coarse spray pattern. Spray only when wind velocity is less than 5 miles per hour.

#### **SPRAY PREPARATION:**

**With Water:** Fill the spray tank about one-half full with water. Add the required amount of LV 400 2,4-D Weed Killer with agitation. Then, add the rest of the water.

**Note:** LV 400 in water forms an emulsion which tends to separate unless the mixture is kept agitated.

**With Water & Oil:** Mix LV 400 2,4-D Weed Killer and the oil first. Add this mixture to the water. However, with adequate agitation, the oil can be added after the LV 400 2,4-D Weed Killer is mixed in the water.

**With Oil:** If straight oil is used, a solution is formed and separation does not occur. Do not allow any water to get into the herbicide-oil solution to avoid formulation of an invert emulsion.

#### **SMALL GRAINS (NOT UNDERSEEDED WITH A LEGUME):**

**Note:** Do not permit dairy or meat animals being finished for slaughter to forage or graze treated grain fields within 2 weeks after treatment.

**Spring Wheat & Barley:** Apply 0.5 to 1.0 pint of product per acre. Spray when crop is in full tiller stage (usually 4 to 8 inches tall) but before the boot stage, and when weeds are small. Do not apply before the tiller stage nor from early boot to the dough stage. Higher rates (0.75 to 1.5 pints of product per acre) may be required to control certain weeds but crop injury may occur.

**Winter Wheat & Rye:** Apply 0.5 to 0.75 pint of product per acre in the spring at the full tiller stage but before the early boot stage. Do not apply before the tiller stage nor from early boot to the dough stage.

**Spring Seeded Oats:** Apply 0.5 pint of product per acre at the full tiller stage but before the early boot stage. Oats are less tolerant to 2,4-D than wheat or barley and more likely to suffer some injury.

**Fall Seeded Oats (Southern) Grown for Grain:** Apply 0.75 to 1.5 pints of product per acre after full tillering but before the early boot stage. Some difficult weeds may require the higher rate for maximum control but crop injury may result. Do not apply during or immediately following cold weather.

**Preharvest Treatment:** Apply 1.0 to 2.0 pints of product per acre when grains are in the hard dough stage to control large weeds that may interfere with harvest. Best results are obtained when soil moisture is sufficient to cause succulent weed growth. Do not feed treated straw to livestock.

#### **CORN:**

Hybrids vary in response to 2,4-D and some are easily injured. Spray only varieties known to be tolerant to 2,4-D. Contact seed company or your State Agricultural Experiment Station or Extension Service weed specialists for this information. Use one of the following programs for weed control in corn:

**Preemergence:** Apply 1.0 to 2.0 quarts of product per acre to soil anytime after planting but before corn emerges. Do not cultivate until necessary.

**Emergence:** Apply 1.0 pint of product per acre just as corn plants are breaking ground.

**Postemergence:** After emergence of corn, use 0.5 pint of product per acre. Application of 0.75 to 1.0 pint of product per acre may be needed for maximum control of some weeds but such rates are more likely to injure the corn. Do not apply from the tasseling to dough stage. Do not use with oil, atrazine or other adjuvants. Crop injury is more likely to occur if corn is growing rapidly under high temperature and high soil moisture conditions. To reduce breakage of stalks from temporary brittleness caused by 2,4-D, delay cultivation for 8 to 10 days after treatment.

**Early Post-Emergence Application:** When corn is 2 to 4 inches high, apply as soon as possible after most weeds have emerged. Use 0.5 pint of product per acre. Drop nozzles are not necessary at this time.

**Lay-By Application:** When corn is 2 to 3 feet high, use 0.5 pint of product per acre. At this stage of corn growth, since stalks may become brittle from exposure to 2,4-D there is always a chance that high winds may damage the crop 1 to 3 days after spraying. Use drop nozzles. Cultivation should be completed before applying this spray.

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**High-Clearance Application:** Apply 1.0 pint of product per acre. Adjust spray nozzles to hit tall weeds.

**Preharvest Treatment:** After the hard dough or dent stage, apply 1.0 to 2.0 pints of product per acre by air or ground equipment to suppress perennial weeds and control tall weeds such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, smartweed, velvetleaf, and vines that interfere with harvesting. Do not forage or feed corn fodder for 7 days following application.

**GRAIN SORGHUM (MILO):**

Apply 0.5 pint of product per acre when sorghum is 5 to 15 inches tall. A higher rate of 0.75 to 1.0 pint of product per acre may be needed to control some weeds but the chance for crop injury is likewise increased. Do not use with oil.

Do not treat before the sorghum is 5 inches tall nor during the boot, flowering, or early dough stages. If sorghum is taller than 8 inches, use drop nozzles to keep the spray off the foliage as much as possible.

Temporary crop injury may occur under conditions of high soil moisture and high air temperatures. Cultivars vary in tolerance to 2,4-D and some hybrids are quite sensitive. Spray only varieties known to be tolerant to 2,4-D. Contact seed company or your Agricultural Experiment Station or Extension Service weed specialists for information.

**FOR USE IN REDUCED OR NO-TILLAGE SOYBEANS (PREPLANT ONLY)**

**- GENERAL INFORMATION -**

LV 400 2,4-D Weed Killer is a phenoxy type herbicide that provides postemergence control of many susceptible annual and perennial broadleaf weeds. LV 400 2,4-D Weed Killer may be applied prior to planting soybeans to provide foliar burndown control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. LV 400 2,4-D Weed Killer should only be applied preplant to soybeans in situations such as reduced tillage production systems, where emerged weeds are present. Apply only according to the application instructions given below.

**- MIXING INSTRUCTIONS -**

Mix LV 400 2,4-D Weed Killer only with water, unless otherwise directed on this label. Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may increase the herbicidal effectiveness of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product.

**- APPLICATION PROCEDURES -**

Apply using air or ground equipment in sufficient gallonage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

**APPLICATION TIMING AND USE RATES FOR LOW-VOLATILE ESTERS**

Maximum Amount of LV 400 to Apply	Maximum rate (Pounds 2,4-D a.e./acre)	When to Apply (Days prior to Planting Soybeans)
1 Pint	0.5	Not Less Than 7 Days
1 Quart	1.0	Not Less Than 30 Days



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WEEDS CONTROLLED		
Alfalfa*	Garlic, wild*	Ragweed, common
Bindweed*	Horseweed or marestalk	Ragweed, giant
Bullnettle	Ironweed	Shepherdspurse
Bittercress, smallflowered	Lambsquarters, common	Smartweed, Pennsylvania
Buttercup, smallflowered	Lettuce, prickly	Sowthistle, annual
Carolina geranium	Morningglory, annual	Speedwell
Cinquefoil, common and rough	Mousetail	Thistle, Canada*
Clover, red*	Mustard, wild	Thistle, bull
Cocklebur, common	Onion, wild*	Velvetleaf
Dandelion	Pennycress, field	Vetch, hairy*
Dock, curly*	Plantain	Virginia copperleaf
Eveningprimrose, cutleaf	Purslane, common	

\*These species are only partially controlled.

In general, weeds should be small, actively growing, and free of stress caused by extremes in climatic conditions, diseases, or insect damage at the time of treatment. The response of individual weed species to LV 400 2,4-D Weed Killer is variable. Consult your local county or state Agricultural Extension Service or crop consultant for advice.

**- APPLICATION RESTRICTIONS AND PRECAUTIONS FOR SOYBEANS (PREPLANT) -**

**Important Notice:**

Unacceptable injury to soybeans planted in fields previously treated with LV 400 2,4-D Weed Killer may occur. Whether or not soybean injury occurs and the extent of the 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. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.

Apply a maximum of one application per growing season regardless of the treatment rate.

Do not apply LV 400 2,4-D Weed Killer when weather conditions such as air temperature inversions or wind favor drift from treated areas to susceptible plants.

**Livestock Grazing Restriction:**

Livestock should be restricted from feeding/grazing of treated cover crops. Do not feed hay, forage or fodder. Restrict livestock from grazing treated fields.

In fields previously treated with 2,4-D, plant soybean seed as deep as practical or at least 1.5 to 2.0 inches deep. Adjust the press wheel of the planter, if necessary, to ensure that planted seed is completely covered.

**GRASS SEED CROPS:**

Use 1.0 to 1.5 pints of product per acre in the amount of water required for uniform application by air or ground equipment. Apply to established stands in spring from the tiller to early boot stage. Do not spray in boot stage. New spring seedlings may be treated with the lower rate after the grasses have at least five leaves. Perennial weed regrowth may be treated in the fall.

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**BROADLEAF WEED AND BRUSH CONTROL IN RANGELANDS & GRASS PASTURES:**

Do not graze dairy cattle on treated areas within 7 days after application. 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. Observe a 30 day preharvest interval for grass cut for hay, and observe a preslaughter interval for meat animals of 3 days. The maximum application rate to pasture and rangeland is 2 pounds 2,4-D acid equivalent per acre per application per site.

***Bitterweed, Broomweed, Croton, Docks, Kochia, Marshelder, Musk Thistle and Other Broadleaf Weeds:*** Use 2.0 quarts of LV 400 2,4-D Weed Killer per acre per application in the amount of water needed for uniform application. If the weeds are young and growing actively, 1.0 quart per acre will provide control of some species. Deep rooted perennial weeds may require repeated treatments in the same year or in subsequent years.

***Wild Garlic and Wild Onion:*** Apply 2.0 quarts of product per acre making three applications (fall-spring-fall) or (spring-fall-spring), starting in late fall or early spring.

***Weed Control in Newly Sprigged Coastal Bermudagrass:*** Apply 1.0 to 2.0 quarts of product per acre preemergence and/or postemergence.

***Sand Shinnery Oak and Sand Sagebrush:*** On the oak, use 1.0 quart of product in 5.0 gallons of oil or in 4.0 gallons of water plus 1.0 gallon of oil per acre. Apply by aircraft between May 15 and June 15. On the Sagebrush, use 1.0 quart in 3.0 gallons of oil per acre and apply by aircraft when foliage is fully expanded and the brush is actively growing.

***Chamise, Manzanita, Buckbrush, Coastal Sage, Coyotebrush and Certain Other Chaparral Species:*** Use 2.0 quarts per acre per application in 5 to 10 gallons of water. One gallon of fuel oil may be included in the spray mixture for added effectiveness. Make applications by aircraft or ground equipment to obtain uniform spray coverage. For effective control the brush must be fully leafed out and growing actively when sprayed. Retreatment may be needed.

**FOREST CONIFER RELEASE:**

After northern conifers, jack pine, red pine, black spruce, and white spruce cease growth and "harden off" in late summer, a spray of 1.5 to 3.0 quarts per acre of LV 400 2,4-D Weed Killer in 8 to 25 gallons of water per acre may be applied by air to control certain competing hardwood species such as alder, aspen, birch, hazel and willow. Since this treatment may cause occasional conifer injury, do not use if such injury cannot be tolerated. Consult your regional or extension forester or state herbicide specialist for recommendations to fit local conditions.

The maximum application rate to all forestry sites is 3 pounds 2,4-D acid equivalent per application per site. Seasonal: The maximum seasonal application rate to forestry sites is 4 pounds 2,4-D acid equivalent per acre per application per site.

**WOODY PLANT CONTROL IN NONCROPLAND AREAS:**

LV 400 2,4-D Weed Killer is recommended to control perennial broadleaf weeds and undesirable woody plants established in noncropland. It is effective for buckbrush, poison ivy, multiflora rose, and sumac established in the uncultivated areas presented below:

## UNCULTIVATED AGRICULTURAL AREAS AND UNCULTIVATED NONAGRICULTURAL AREAS:

### A. *Recommended Noncropland Sites.*

- Barrier strips
- Farmyards
- Fencerows or fence lines
- Firebreaks
- Highway rights-of-way (principal, interstate, county, private, and unpaved roads): Roadsides, roadside ditches, road shoulders, road embankments, dividers, and medians.
- Industrial sites: Lumberyards, tank farms, fuel or equipment storage areas.
- Municipal, state, and federal lands: Airports and military installations
- Railroad rights-of-way
- Recreation areas: Fairgrounds, golf courses, parks, and areas adjacent to athletic fields.
- Uncultivated, nonagricultural areas.
- Utility rights-of-way: Telephone, pipeline, electrical powerlines, and communication transmission lines

### B. *Prohibitions for Noncropland Sites.*

- Do not apply to any body of water such as lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays). Do not apply to any shorelines (noncropland sites adjacent to the edges of a body of water) for lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays).
- Do not apply to wetlands (swamps, bogs, potholes, or marshes).
- Do not apply to agricultural irrigation water or on agricultural irrigation ditchbanks and canals.
- Do not apply to agricultural drainage water or on agricultural ditchbanks.

## DIRECTIONS, RESTRICTIONS AND LIMITATIONS FOR USE IN NON-CROPLAND

**Broadcast applications to annual and perennial weeds:** Apply to emerged weeds. For best results, treat when weeds are young and actively growing.

The maximum application rate to general noncropland sites is 0.5 gallon (4 pints) of product per acre per application per site.

When multiple applications of up to 2.0 lbs. acid equivalent per acre are utilized to reach the maximum seasonal use rate, do not make a repeat application within 30 days of the previous application.

Minimum spray volume: Use 2 or more gallons of spray solution per acre.

Number of applications: Limited to 2 applications per year.

**Broadcast applications to woody plants:** Apply to trees and brush when foliage is fully expanded and plants are actively growing.

Up to 1.0 gallon of product per acre (4.0 lbs. acid equivalent per acre) may be applied in a single application to rights-of-way, including electrical power lines, communication lines, pipelines, highways and railroads that intersect wooded areas or stands of trees, brush and woody plants.

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The maximum noncropland application rate for tree, brush and woody plant control is 1.0 gallon of product per acre per application per site.

Target species	Application schedule	Maximum application rate, Gallons of product per acre	Maximum application rate, Pounds of acid equivalent per acre per application	Maximum number of applications per year	Minimum days between applications	Minimum spray volume, gallons per acre
Annual and perennial weeds	Broadcast	0.5 gal/A or 4 pints/A	2.0 #/A	2	30 days	2
Woody plants	Broadcast and high volume foliar	1.0 gal/A or 8 pints/A	4.0 #/A	1	NA	See Tables 1-2.

**High volume foliar applications (100-400 gallons per acre):**

Apply 0.25-1.0 gallon of product per acre with adequate water or apply a 0.25-1.0% vol/vol spray solution as a full cover spray with high volume equipment. Use the lower spray concentrations in the range for susceptible species and use the higher spray concentrations within the range for hard-to-control species, for mature plants during the late summer or under adverse environmental conditions (e.g. drought).

Spray broadleaf weeds, woody plants or mixed brush uniformly and thoroughly by wetting all leaves, stems, bark and root collars. The total volume of spray solution required for adequate coverage of solid stands of mixed brush can range from 100-400 gallons of spray solution per treated acre. The spray preparation chart for applications on a spray-to-wet basis is shown below in Table 1.

**Table 1.** Instructions for preparing 100-400 gallons of spray solution at 0.25-1.0% spray concentration with water for high volume foliar applications.

Spray solution per acre, Gallons	Amount of Product Needed for Spray Concentration of:			
	0.25%	0.33%	0.5%	1.0%
100	0.25 gal.	0.33 gal.	0.5 gal.	1.0 gal.
200	0.5 gal.	0.67 gal.	1.0 gal.	----
300	0.75 gal.	1.0 gal.	----	----
400	1.0 gal.	----	----	----

Equal measures: 1gallon = 4 quarts= 8 pints= 128 fl. oz.

The maximum seasonal application rate for trees, brush and woody plant control is 1.0 gallon of product per acre per application per site.

**For Backpack sprayers, knapsack sprayers, and hand-pressurized pump sprayers**

**Table 2.** Instructions for preparing 1-3 gallons of spray solution at 0.25 -1.0% spray concentration with water for high volume foliar applications.

Gallons Of Water	Amount Of Product Needed for Spray Concentration of :			
	0.25 %	0.33 %	0.5 %	1.0 %
1	2 teaspoons	3 teaspoons	4 teaspoons	8 teaspoons
2	4 teaspoons	2 tablespoons	3 tablespoons	6 tablespoons
3	2 tablespoons	3 tablespoons	4 tablespoons	8 tablespoons

Equal measures: 1 fl. oz. = 2 Tablespoons (Tbs.) = 6 Teaspoons (tsp.)

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Spray brush up to 5 to 8 feet tall after spring foliage is well developed. ~~Mix 3.0 to 4.0 quarts of LV 400 2,4-D Weed Killer in 100 gallons of water and wetting all parts of the brush including foliage, stems and bark. This may require up to 400 gallons of spray per acre for adequate coverage of solid stand of brush.~~ Make application in such a way as to prevent drift of the spray from the area being treated. Spraying can be effective at anytime up to 3 weeks before frost as long as soil moisture is sufficient for active growth of the brush. Control will be less effective in mid summer during hot dry weather when soil moisture is deficient and plants are not actively growing. Oil or wetting agent may be added to the spray if needed for increased effectiveness.

**BROADLEAF WEED CONTROL IN NONCROPLAND AREAS SUCH AS LAWNS, GOLF COURSES, CEMETERIES, PARKS, AIRFIELDS, ROADSIDES, AND VACANT LOTS:**

Apply 1.0 to 3.0 quarts per acre in the amount of water needed for uniform application. Usually 2.0 quarts of product per acre provides good weed control under average conditions. Treat when weeds are young and growing well. Do not use on golf greens nor on dichondra or other broadleaf herbaceous groundcovers. Do not use on creeping grasses such as bentgrass and St. Augustinegrass except for spot treatments, nor on newly seeded turf until grass is well established.

Reseeding of treated areas should be delayed following treatment. With spring application, reseed in the fall; with fall application, reseed in the spring. Legumes are usually damaged or killed so do not treat areas where the legumes are desired. Deep rooted perennial weeds may require repeated treatment in the same season or in subsequent years.

For use on residential and other turf sites excluding sod farms, the maximum application rate to turf is 2 pounds 2,4-D acid equivalent per acre per application per site. The maximum number of broadcast applications per treatment site is 2 per year.

**SPOT TREATMENT:**

To control broadleaf weeds in small noncropland areas with a hand sprayer, use 0.25 pint of LV 400 2,4-D Weed Killer in 3.0 gallons of water and spray to thoroughly wet all weed foliage. Keep spray mixture agitated to prevent separation.

**LIMITED WARRANTY AND DISCLAIMER**

The manufacturer warrants only that the chemical composition of this product conforms to the ingredient statement given on the label, and that the product is reasonably suited for the labeled use when applied according to the Directions for Use.

THE MANUFACTURER NEITHER MAKES NOR INTENDS ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE EXPRESSLY DISCLAIMED. This limited warranty does not extend to the use of the product inconsistent with label instructions, warnings or cautions, or to use of the product under abnormal conditions such as drought, excessive rainfall, tornadoes, hurricanes, etc. These factors are beyond the control of the manufacturer or the seller. Any damages arising from a breach of the manufacturer's warranty shall be limited to direct damages, and shall not include indirect or consequential damages such as loss of profits or values, except as otherwise provided by law.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

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**APPENDIX:**

**Advertising claims that may appear on the container labeling:**

- Controls most common broadleaf weeds and woody brush species in pasture and rangeland, and in crops such as corn, sorghum, wheat, barley and oats.
- Also, for use in lawns, golf courses, cemeteries, parks, airfields, roadsides, vacant lots.