

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PM 23

57242-4

6-18-97

1713

Kim Davis
 Glades Formulating Corporation
 c/o RegWest Company
 P.O. Box 2220
 Greeley, CO 80632-2220

JUN 18 1997

Dear Ms. Davis:

Subject: Revised Labeling - Addition of Aquatic Uses
 Gladeamine 3.8 2,4-D Herbicide
 EPA Registration No. 57242-4
 Your Submission Dated February 27, 1997

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provisions:

- 1) Since this product is now registered for aquatic uses, revise the beginning of the third sentence in the Environmental Hazards section to read "For terrestrial uses, do not apply directly to water...".
- 2) Make the following changes to the section regarding spraying instructions for use on weeds and brush in irrigation canal ditchbanks:
 - a) Revise the second sentence of the second paragraph to read "When spraying shoreline weeds, allow no more than 2 foot overspray on to water with an average of less than 1 foot overspray to prevent introduction of greater than negligible amounts of chemical into the water."
 - b) Revise the fishing restriction to read "Water within treated banks should not be fished."

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above changes, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
 Product Manager (23)
 Herbicide Branch
 Registration Division (7505C)

Enclosure

DK: 305-7546: HB/PM23

CONCURRENCES

		CONCURRENCES						
SYMBOL ▶	7505C							
SURNAME ▶	D. KENNY							
DATE ▶	6/17/97							

GLADEAMINE

ACCEPTED
with COMMENTS
in EPA Letter Dated

2 of 13

3.8

JUN 18 1997

2,4-D HERBICIDE

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

For Selective Control of Many Broadleaf Weeds in Aquatic Areas,
Non-Crop Areas, Grass Pastures, Rangelands and in Certain Crops

57242-4

Also for Control of Trees by Injection

Contains Dimethylamine Salt of 2,4-D*

ACTIVE INGREDIENT:

2,4-Dichlorophenoxyacetic acid, dimethylamine salt* 46.3%

INERT INGREDIENTS 53.7%

Total 100.0%

2,4-dichlorophenoxyacetic acid* - 38.4% - 3.8 lbs./gal.

*Isomer Specific by AOAC Method No. 978.05 (15th Ed.)

*Salts are the least volatile forms of 2,4-D and do not release enough vapors from treated areas to reduce yield of adjacent susceptible crops.

REC'D EPA/OPP/DPDI
97 MAY 19 P2:30

PRECAUTIONARY STATEMENTS Hazards to Humans & Domestic Animals KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

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.)

Corrosive; causes irreversible eye damage. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers, including persons repairing or cleaning equipment, must wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eye wear such as face shield or safety glasses (brow and temple protection recommended). Eye protection is not required for ground or aerial applicators in completely enclosed cabs or cockpits
- Chemical-resistant headgear for overhead exposure

NOTE: For containers of over 1 gallon, but less than 5 gallons: Persons engaged in pouring this product must wear coveralls or a chemical-resistant apron.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 Controls Statements:

For Containers of 5 gallons or more: A mechanical transfer system (such as probe and pump) 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 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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Statement of Practical Treatment

If in Eyes: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention. **If Swallowed:** Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. **If on Skin:** Wash with plenty of soap and water. Get medical attention. **If Inhaled:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention. **Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

Environmental Hazards

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Mixing and Loading: 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 and 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.

DIRECTIONS FOR USE

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

AGRICULTURAL USE REQUIREMENTS

Refer to label booklet for *Agricultural Use Requirements* in the *Directions for Use* section for information regarding the Worker Protection Standard, including Personal Protective Equipment (PPE) and Agricultural Use Requirements.

NOTICE: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.

AGRICULTURAL CHEMICAL: Do not ship or store with food, feeds, drugs or clothing.

NET CONTENTS: _____ GALLONS

EPA Reg. No. 57242-4 EPA Est. 57242-FL-1

GLADES FORMULATING CORPORATION
P.O. Box 1690; Belle Glade, FL 33430-6286

GLADEAMINE

3.8

2,4-D HERBICIDE

For Selective Control of Many Broadleaf Weeds in Aquatic Areas,
Non-Crop Areas, Grass Pastures, Rangelands and in Certain Crops

Also for Control of Trees by Injection

Contains Dimethylamine Salt of 2,4-D*

ACTIVE INGREDIENT:

2,4-Dichlorophenoxyacetic acid, dimethylamine salt*	46.3%
INERT INGREDIENTS	<u>53.7%</u>
Total	100.0%

2,4-dichlorophenoxyacetic acid* - 38.4% - 3.8 lbs./gal.

*Isomer Specific by AOAC Method No. 978.05 (15th Ed.)

*Salts are the least volatile forms of 2,4-D and do not release enough vapors from treated areas to reduce yield of adjacent susceptible crops.

Keep Out of Reach of Children

DANGER PELIGRO

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.)

Refer to inside of label booklet for additional precautionary information including Personal Protective Equipment (PPE) and Directions for Use including Agricultural Use Requirements and Storage and Disposal.

NOTICE: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.

AGRICULTURAL CHEMICAL: Do not ship or store with food, feeds, drugs or clothing.

NET CONTENTS: _____ GALLONS

EPA Reg. No. 57242-4

EPA Est. 57242-FL-1

GLADES FORMULATING CORPORATION
P.O. Box 1690; Belle Glade, FL 33430-6286

4713

5713

PRECAUTIONARY STATEMENTS
Hazards to Humans & Domestic Animals
DANGER PELIGRO

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.)

Corrosive, causes eye irreversible damage. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers, including persons repairing or cleaning equipment, must wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eye wear such as face shield or safety glasses (brow and temple protection recommended). Eye protection is not required for ground or aerial applicators in completely enclosed cabs or cockpits
- Chemical-resistant headgear for overhead exposure

NOTE: For containers of over 1 gallon but less than 5 gallons: Persons engaged in pouring this product must wear coveralls or a chemical-resistant apron.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

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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.
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Mixing and Loading: 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.

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.

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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 (PPE), notification to workers, 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 48 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 over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eye wear
- Chemical-resistant headgear for overhead exposure

STORAGE AND DISPOSAL

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

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. Plastic Containers 5 Gallons or Less: Triple rinse (or equivalent). Then dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL: Consult Federal, state or local disposal authorities for approval of alternate procedures.

GENERAL INFORMATION

Gladeamine is a selective herbicide for control of many broadleaf weeds in non-crop areas, grass pastures, rangelands and in certain crops; also for control of trees by injection.

Generally, the lower dosages given 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. Apply this product during warm weather when weeds are young and growing actively. Use enough spray volume for uniform coverage by ground or air application. If only bands or rows are treated, leaving middles unsprayed, the dosage per crop acre is reduced proportionately. Do not apply where drift may be a problem due to proximity of susceptible crops or other desirable plants. Read and follow all Use Precautions given on this label.

General Use Precautions

Be sure that use of this product conforms to all application regulations.

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

Crop Injury: Do not apply this product directly to, or otherwise permit it to come into contact with cotton, flowers, fruit trees, grapes, ornamentals, vegetables, or other desirable plants which are sensitive to 2,4-D herbicides and do not use in a greenhouse. Do not permit spray mist containing it to drift onto them, since even very small quantities of the spray, which may not be visible, can cause severe injury during both growing and dormant periods. Use coarse sprays to minimize drift.

Avoid Spray Drift: Applications should be made only when there is no hazard from spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible crops during both growing and dormant periods. Use coarse sprays to minimize drift since, under adverse weather conditions, fine spray droplets may drift a mile or more. A spray thickening agent, such as Nalco-Trol or Sta Put, may be used with this product to aid in reducing spray drift. If used, follow all use recommendations and precautions on the product label.

Drift from aerial or ground application may be reduced by:

1. Applying as near to the target as possible in order to obtain coverage.
2. By increasing the volume of spray mix per acre.
3. By decreasing the pounds of pressure at the nozzle tips.
4. By using nozzles which produce a coarse spray pattern.
5. By not applying when wind is blowing toward susceptible crops or valuable plants.
6. (Aerial) By using straight stream nozzles directed straight back and using a spray boom no longer than 3/4 the wing or rotor span of aircraft.

Determine Air Movement and Directions Before Foliar Application: Use a smoke generator or other means at or near the application site for the detection of air movement, air stability or temperature inversions. Such a condition exists when there is little or no wind and air temperature is lower near the ground than at higher levels. Use appropriate drift control measures or avoid application when smoke is moving toward nearby desirable susceptible plants or sensitive areas.

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To avoid injury to desirable plants, do not store, handle, or apply other agricultural chemicals with the same containers or equipment used for this product except as specified on this label. Excessive amounts of 2,4-D in the soil may temporarily inhibit seed germination or plant growth.

Consult your state Agricultural Experiment station or Extension Service weed specialists in many states for recommendations from this label that 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 CONTROLLED

bitterweed
broomweed
burdock
carpetweed
carrot, wild
chicory
cocklebur
coffeeweed
croton
dandelion
dock
flixweed
galinsoga
hemp, wild
jewelweed
jimsonweed
kochia

lambquarters
loco, bigbend
lupines
mallow, Venice
marshelder
morningglory, annual
mustards
penumycress
pennwort
pepperweed
pigweed
plantains
poorjoe
pusley, Florida
radish, wild
ragweed, common
rape, wild
rocket, yellow

shepherdspurse
sicklepod
smartweed
sneezeweed, bitter
sowthistle, annual
spanishneedles
sunflower
sweetclover
tansymustard
thistle, bull
thistle, musk
thistle, Russian
tumbleweed
velvetleaf
vetch
waterplantain
winchweed
wormwood

To Prepare the Spray: Mix this product only with water, unless otherwise directed on this label. Add about half the water to the mixing tank, then add this product with agitation, and finally the rest of the water with continuing agitation. **Note:** Adding oil, wetting agent or other surfactant to the spray may increase effectiveness on weeds, but also may reduce selectivity to crops resulting in crop damage.

APPROVED USES

AQUATIC SITES

Weeds and Brush Irrigation Canal Ditchbanks

(Seventeen Western States: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming.)

For control of annual and perennial broadleaf weeds, apply 1 to 2 quarts of this product per acre in approximately 20 to 100 gallons per acre in 7 feet of water. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder-to-control weeds, a repeat spray after 3 to 4 weeks using the same rates may be needed for best results. Apply no more than two treatments per season.

For woody brush and patches of perennial broadleaf weeds, mix 1 gallon of this product in 150 gallons of water. Wet foliage thoroughly using about 1 gallon of solution per square rod. Note: 1 square rod = 30.25 square yards.

Spraying Instructions:

Apply with low pressure (10 to 40 psi) power spray equipment mounted on a truck, tractor or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is fairly calm, 10 mph or less. Do not use on small canals (less than 10 cfs) where water will be used for drinking purposes.

Boom spraying onto water surface must be held to a minimum and no cross-stream spraying to opposite banks should be permitted. When spraying shoreline weeds, allow no more than 2 foot overspray onto water to prevent introduction of greater than negligible amounts of chemical into the water.

Do not allow dairy animals to graze on treated areas for at least 7 days after spraying. Water within treated banks should not be fished for at least 7 days after treatment.

Aquatic Weed Control

For use in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, rivers and streams that are quiescent or slow moving.

Notice to Applicators:

State and Local Coordination: Before application, coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

Fish Toxicity - Oxygen Ratio: Fish breathe oxygen in the water and a water-oxygen ratio must be maintained. Decaying weeds use up oxygen. To avoid fish kill from decaying plant material do not treat more than one half the lake or pond at one time. For large bodies of weed infested waters leave buffer strips of at least 100 feet wide and delay treatment of these strips for 4 to 5 weeks or until the dead vegetation has decomposed.

Wind Velocity - Ground or Surface Application: Do not apply when wind speeds are at or above 10 mph. **Air Application:** Do not apply when wind speeds are at or above 5 mph. The restrictions do not apply to subsurface applications used in weed control programs.

Irrigation: Delay the use of treated waters for irrigation for three weeks after treatment unless an approved assay shows that the water does not contain more than 0.1 ppm 2,4-D acid. Do not treat irrigation ditches in areas where water will be used to overhead sprinkle irrigate susceptible crops, especially grapes, tomatoes and cotton.

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Potable Water: Delay the use of treated water for domestic purpose for a period of three weeks or until such time as an approved assay shows that the water contains no more than 70 ppb 2,4-D acid.

Water Hyacinth (*Eichornia crassipe*)

This product will control water hyacinth with surface and air applications.

Amounts to Use: 2 to 4 quarts (4 lb. acid equivalent per gallon) per acre. Spray the weed mass only. Use 4 quarts when plants are matured or when the weed mass is dense.

When to Apply: Spray when water hyacinth plants are actively growing. Repeat as necessary to kill regrowth and hyacinth plants missed in the previous operation.

Surface Application: Use power sprayers operated with a boom or spray gun mounted on a boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Use 50 to 400 gallons/A of spray mixture. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. Follow the drift control agent label for mixing directions.

Air Application: Use drift control spray equipment or thickening agents mixed into the spray solution. Apply 1.0 gallon per acre of this product through standard boom system with a minimum of 5 gallons of spray mix per acre.

2,4-D Acid	½ lb.	1 lb.	2 lbs.	3 lbs.	4 lbs.
Equivalent Gladeamine	1 pt.	2 pts.	2 qts.	3 qts.	4 qts.

Water Milfoil (*Myriophyllum spicatum*)

For Eurasian Water Milfoil in programs conducted by the Tennessee Valley Authority in dams and reservoirs of the TVA System. This product will control milfoil with surface, subsurface and air application. How to use: To control water milfoil when using or applying less than 5 gallons of concentrate per acre, dilute the concentrate with water to apply a minimum of 5 gallons of spray mix per acre. Do not treat within ½ mile of potable water intakes. Shoreline areas should be treated by sub-surface injection applied by boat to avoid aerial drift. Do not apply when weather conditions favor drift from target area. Do not contaminate water by cleaning of equipment washwaters.

Open Water Areas: To reduce contamination and prevent undo exposure to fish and other aquatic organisms, do not treat water areas that are not infested with aquatic weeds.

Amounts to Use: Apply 2.5 to 10 gallons of this product per acre. The higher rate is used in areas of greater water exchange. These areas may require a repeat application.

When to Apply: For best results, apply in spring or early summer when milfoil starts growing. This timing can be checked by sampling the lake bottom in areas heavily infested with weeds the year before.

Subsurface Application: Apply 2.5 to 10 gallons of this product per acre as a concentrate directly into the water through boat mounted distribution systems.

Surface Application: Apply 2.5 to 10 gallons of this product per acre in a minimum spray volume of 5 gallons mix per acre.

Air Application: Use drift control spray equipment or thickening agents mixed into the solution. Apply 2.5 to 10 gallons per acre of this product through standard boom systems with a minimum of 5 gallons of spray mix per acre.

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.

AMOUNT OF THIS PRODUCT TO USE IN CROPS

By Air or Ground Application

NOTE: Do not apply when weather conditions favor drift from treated areas. Read complete directions and use precautions before using.

CROP	DOSAGE PER ACRE	
	Normal Rates (Usually Safe To Crop)	Higher Rates for Special Situations ² (More likely to Injure Crop)
SMALL GRAINS		
Spring postemergence		
wheat, barley, rye	2/3 to 1-1/3 pts.	2 to 3 pts.
oats	½ to 1 pt.	1½ to 2 pts.
Preharvest (dough stage)		
wheat, barley, oats	1 to 2 pts.	2 to 3 pts.
CORN¹		
Preemergence	2 to 4 pts.	
Emergence ¹	1 pt.	1½ pts.
Postemergence ¹		
up to 8 inches tall	½ to 1 pt.	
8 inches to tasseling	1 pt.	1½ to 2½ pts.
(use only directed spray)		

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CROP	DOSAGE PER ACRE	
	Normal Rates (Usually Safe To Crop)	Higher Rates for Special Situations ² (More likely to Injure Crop)
SORGHUM (Milo)¹		
Postemergence		
6 to 8 inches tall	2/3 to 1 pt.	
8 to 15 inches tall (use only directed spray)	1 pt.	1 1/2 to 2 pts.
RICE	1 to 2 1/2 pts.	2 to 3 pts.
SUGARCANE	2 to 4 pts.	

¹Corn and sorghum varieties vary in tolerance to 2,4-D; some are easily injured. Before spraying, get information on 2,4-D tolerance of specific varieties and spray only those known to be resistant to 2,4-D injury. If plants are more than 8 inches tall, use directed spray and keep spray off corn and sorghum foliage.

²These higher rates may be needed to handle difficult weed problems in certain areas, such as under dry conditions, especially in western areas. However, do not use unless possible crop injury will be acceptable. Consult State Agricultural Experiment Station or Extension Service weed specialists for recommendations or suggestions to fit local conditions.

WEED CONTROL IN SMALL GRAINS NOT UNDERSEEDED WITH A LEGUME (Barley, Oats, Rye, Wheat): See Table for recommended use rates. Spray after grain begins tillering and before the boot stage (usually 4 to 8 inches tall) and weeds are small. Do not apply before the tiller stage nor from early boot through the milk stage. To control large weeds that will interfere with harvest or to suppress perennial weeds, preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well. NOTE: Do not graze lactating dairy animals on treated areas within 7 days after application. Do not harvest grain fields cut for hay from treated areas for 30 days. Withdraw meat animals from treated forage at least 3 days before slaughter. Do not feed treated straw to livestock.

WEED CONTROL IN CORN: See Table for recommended use rates.

Preemergence: Apply to soil anytime after planting but before corn emerges. Do not use on very light, sandy soil.

Emergence: Apply just as corn plants are breaking ground.

Postemergence: Apply to emerged corn. When corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage.

Do not apply from tasseling to dough stage. Injury to corn is most likely to occur if this product is applied when corn is growing rapidly under high temperature and high soil moisture conditions. In such situations, use the low rate of 1/2 pint per acre. After application, delay cultivation for 8 to 10 days to allow the corn to overcome any temporary brittleness. NOTE: Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only 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.

WEED CONTROL IN SORGHUM (MILO): See Table for recommended use rates. Treat only after the sorghum is 6 inches high and preferably before it is 15 inches high. Do not treat during the boot, tasseling or early dough stages. Reduce spray drift by keeping the boom and spray nozzles as low as possible. If crop is taller than 8 inches, use drop nozzles to keep the spray off the leaves. 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 than 2/3 pint per acre. NOTE: Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only 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.

WEED CONTROL IN RICE: See Table for recommended use rates. Apply in the late tillering stage of rice development, at the time of first joint development (first to second green ring), usually 6 to 9 weeks after emergence. Do not apply after panicle initiation, after rice internodes exceed 1/2 inch, at early seedling, early panicle, boot flowering or early heading growth stages. NOTE: Some rice varieties under certain conditions can be injured by 2,4-D. Therefore, before spraying, consult local Extension Service or University specialists for appropriate rates and timing of 2,4-D sprays.

WEED CONTROL IN SUGARCANE: See Table for recommended use rates. Apply as a preemergence or postemergence spray in accordance with state recommendations.

WEED CONTROL ON FALLOW LAND: Use 1 to 2 quarts of this product per acre on annual broadleaf weeds and up to 3 quarts per acre on established perennial species, such as Canada thistle and field bindweed. Apply to weeds actively growing. Do not plant any crop for 3 months after treatment or until chemical has disappeared from soil.

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RANGELAND, PASTURE, NON-CROP AND FOREST USES

Use Requirements for Rangeland, Pasture, Forest 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, and forest sites when applied by the tree injection method only.

WEED CONTROL IN ESTABLISHED GRASS PASTURES AND RANGELANDS: Use at 2 to 4 pints per acre. Apply preferably when weeds are small and growing actively before the bud stage. 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. *Grazing Restrictions: Do not graze lactating dairy animals on treated areas within 7 days after application. Do not harvest grass cut for hay from treated areas for 30 days. Withdraw meat animals from treated forage at least 3 days before slaughter.*

CONTROL OF SOUTHERN WILD ROSE: On pastures and rangeland, apply a maximum of 2 quarts of this product per acre per application. On roadsides and fencerows, use 1 gallon of this product plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water and spray thoroughly as soon as foliage is well developed. Two or more treatments may be required. *Grazing Restrictions: Do not graze lactating dairy animals on treated areas within 7 days after application. Do not harvest grass cut for hay from treated areas for 30 days. Withdraw meat animals from treated forage at least 3 days before slaughter.*

SPOT TREATMENT IN NON-CROP AREAS: To control broadleaf weeds in small areas with a hand sprayer, use ¼ pint of this product in 3 gallons of water and spray to thoroughly wet all foliage.

TREE INJECTION TREATMENT: To control unwanted hardwood trees such as elm, hickory, oak and sweetgum in forest and other non-crop areas, apply this product by injecting 1 ml of the undiluted product through the bark around the trunk at intervals of 1 to 3 inches between edges of the injector wounds. For harder to control species such as ash, maple and dogwood use 2 ml of undiluted product per injection site. Continuous cuts around the trunk often provide improved control. Also, cuts near the ground level may be more effective than at higher levels. Treatments can be made at any season; however, effectiveness may be less during winter months. Maples should not be treated during the spring sap flow. **Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.**

FOR RIGHTS-OF-WAY: For perennial broadleaf weeds and susceptible woody species, use up to 2 gallons of this product per acre. For difficult to control perennial broadleaf weeds and woody species, use up to 2 gallons of this product and 1 to 4 quarts GARLON[®] 3A herbicide per acre.

For ground application: High volume: Apply a total of 100 to 400 gallons per acre. Low volume: Apply a total of 10 to 100 gallons per acre.

For helicopter: Apply a total of 10 to 30 gallons per acre spray volume.

TURF USES

Use Requirements for Turf

Including Sod Farms and Grass Seed Crops

Restricted Entry Interval: When used on sod farms or 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 allow people (other than applicators) or pets on treatment area during application. Do not enter into treated areas until sprays have dried.

Restrictions on Retreatment: Do not apply more than 2 broadcast applications per year per treatment site.

BROADLEAF WEED CONTROL IN NON-CROPLAND GRASS AREAS (Excluding Sod Farms or Grass Grown for Seed) SUCH AS LAWNS, GOLF COURSES, CEMETERIES, PARKS, AIRFIELDS, ROADSIDES, VACANT LOTS and DRAINAGE DITCH BANKS: Use 1 to 2 quarts of this product per acre in the amount of water needed for uniform application. Treat when weeds are young and growing well. Do not use on dichondra or other herbaceous ground covers. Do not use on creeping grasses such as bent except for spot treating nor on freshly seeded turf until grass is well established. Reseeding of lawns 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. Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeated applications, not to exceed two applications per year per site.

WEED CONTROL IN SOD FARMS: Use 1 to 3 quarts of this product per acre in the amount of water needed for uniform application. Treat when weeds are young and growing well. Usually 2 quarts per acre will provide adequate weed control. Do not use on dichondra or other herbaceous ground covers. Do not use on creeping grasses such as bent except for spot treating or on freshly seeded turf until grass is well established. Reseeding 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. Deep-rooted perennial weeds such as bindweed and Canada thistle may require repeated applications.

WEED CONTROL IN GRASS SEED CROPS: Use 1 to 4 pints per acre in spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to the milk stage. Spray seedling grass only after the five-leaf stage, using ¾ to 1 pint per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4 pints can be used to control hard-to-kill annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth. **NOTE:** Do not use on bentgrass unless spray injury can be tolerated. *Grazing Restrictions: Do not graze lactating dairy animals on treated areas within 7 days after application. Do not harvest grass cut for hay from treated areas for 30 days. Withdraw meat animals from treated forage at least 3 days before slaughter.*

WARRANTY DISCLAIMER

Glades Formulating Corp. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Glades Formulating Corp. makes no other express or implied warranty of merchantability or fitness for a particular purpose or any other express or implied warranty.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Glades Formulating Corp. or the seller. All such risks shall be assumed by Buyer.

LIMITATION OF REMEDIES

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Glades Formulating Corp.'s election, one of the following:

- 1) Refund of purchase price paid by buyer or use for product bought, or
- 2) Replacement of amount of product used.

Glades Formulating Corp. shall not be liable for losses or damages resulting from handling or use of this product unless Glades Formulating Corp. is promptly notified of such loss or damage in writing. In no case shall Glades Formulating Corp. be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Glades Formulating Corp. or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

12.713

SUPPLEMENTAL LABEL

ACCEPTED
with COMMENTS
In EPA Letter Dated

JUN 18 1997

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
57247-4

GLADEAMINE 3.8 2,4-D HERBICIDE

For Selective Control of Many Broadleaf Weeds in Aquatic Areas

Contains Dimethylamine Salt of 2,4-D*

ACTIVE INGREDIENT:

2,4-Dichlorophenoxyacetic acid, dimethylamine salt*	46.3%
INERT INGREDIENTS	<u>53.7%</u>
Total	100.0%

2,4-dichlorophenoxyacetic acid* - 38.4% - 3.8 lbs./gal.

*Isomer Specific by AOAC Method No. 978.05 (15th Ed.)

*Salts are the least volatile forms of 2,4-D and do not release enough vapors from treated areas to reduce yield of adjacent susceptible crops.

**Keep Out-of Reach of Children
DANGER PELIGRO**

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.)

Refer to Label for Complete Directions for Use and Precautionary Statements

**APPROVED USES
AQUATIC SITES**

Weeds and Brush Irrigation Canal Ditchbanks

(Seventeen Western States: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming.)

For control of annual and perennial broadleaf weeds, apply 1 to 2 quarts of this product per acre in approximately 20 to 100 gallons per acre in 7 feet of water. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder-to-control weeds, a repeat spray after 3 to 4 weeks using the same rates may be needed for best results. Apply no more than two treatments per season.

For woody brush and patches of perennial broadleaf weeds, mix 1 gallon of this product in 150 gallons of water. Wet foliage thoroughly using about 1 gallon of solution per square rod. Note: 1 square rod = 30.25 square yards.

Spraying Instructions:

Apply with low pressure (10 to 40 psi) power spray equipment mounted on a truck, tractor or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is fairly calm, 10 mph or less. Do not use on small canals (less than 10 cfs) where water will be used for drinking purposes.

Boom spraying onto water surface must be held to a minimum and no cross-stream spraying to opposite banks should be permitted. When spraying shoreline weeds, allow no more than 2 foot overspray onto water to prevent introduction of greater than negligible amounts of chemical into the water.

Do not allow dairy animals to graze on treated areas for at least 7 days after spraying. Water within treated banks should not be fished for at least 7 days after treatment.

Aquatic Weed Control

For use in ponds, lakes, reservoirs, marshes, bayous, drainage ditches, rivers and streams that are quiescent or slow moving.

Notice to Applicators:

State and Local Coordination: Before application, coordination and approval of local and state authorities may be required, either by letter of agreement or issuance of special permits for such use.

Fish Toxicity - Oxygen Ratio: Fish breathe oxygen in the water and a water-oxygen ratio must be maintained. Decaying weeds use up oxygen. To avoid fish kill from decaying plant material do not treat more than one half the lake or pond at one time. For large bodies of weed infested waters leave buffer strips of at least 100 feet wide and delay treatment of these strips for 4 to 5 weeks or until the dead vegetation has decomposed.

Wind Velocity - Ground or Surface Application: Do not apply when wind speeds are at or above 10 mph. Air Application: Do not apply when wind speeds are at or above 5 mph. The restrictions do not apply to subsurface applications used in weed control programs.

Irrigation: Delay the use of treated waters for irrigation for three weeks after treatment unless an approved assay shows that the water does not contain more than 0.1 ppm 2,4-D acid. Do not treat irrigation ditches in areas where water will be used to overhead sprinkler irrigate susceptible crops, especially grapes, tomatoes and cotton.

Potable Water: Delay the use of treated water for domestic purpose for a period of three weeks or until such time as an approved assay shows that the water contains no more than 70 ppb 2,4-D acid.

Water Hyacinth (*Eichornia crassipe*)

This product will control water hyacinth with surface and air applications.

Amounts to Use: 2 to 4 quarts (4 lb. acid equivalent per gallon) per acre. Spray the weed mass only. Use 4 quarts when plants are matured or when the weed mass is dense.

When to Apply: Spray when water hyacinth plants are actively growing. Repeat as necessary to kill regrowth and hyacinth plants missed in the previous operation.

Surface Application: Use power sprayers operated with a boom or spray gun mounted on a boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Use 50 to 400 gallons/A of spray mixture. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. Follow the drift control agent label for mixing directions.

Air Application: Use drift control spray equipment or thickening agents mixed into the spray solution. Apply 1.0 gallon per acre of this product through standard boom system with a minimum of 5 gallons of spray mix per acre.

2,4-D Acid	½ lb.	1 lb.	2 lbs.	3 lbs.	4 lbs.
Equivalent Gladeamine	1 pt.	2 pts.	2 qts.	3 qts.	4 qts.

Water Milfoil (*Myriophyllum spicatum*)

For Eurasian Water Milfoil in programs conducted by the Tennessee Valley Authority in dams and reservoirs of the TVA System. This product will control milfoil with surface, subsurface and air application. How to use: To control water milfoil when using or applying less than 5 gallons of concentrate per acre, dilute the concentrate with water to apply a minimum of 5 gallons of spray mix per acre. Do not treat within ½ mile of potable water intakes. Shoreline areas should be treated by sub-surface injection applied by boat to avoid aerial drift. Do not apply when weather conditions favor drift from target area. Do not contaminate water by cleaning of equipment washwaters:

Open Water Areas: To reduce contamination and prevent undue exposure to fish and other aquatic organisms, do not treat water areas that are not infested with aquatic weeds.

Amounts to Use: Apply 2.5 to 10 gallons of this product per acre. The higher rate is used in areas of greater water exchange. These areas may require a repeat application.

When to Apply: For best results, apply in spring or early summer when milfoil starts growing. This timing can be checked by sampling the lake bottom in areas heavily infested with weeds the year before.

Subsurface Application: Apply 2.5 to 10 gallons of this product per acre as a concentrate directly into the water through boat mounted distribution systems.

Surface Application: Apply 2.5 to 10 gallons of this product per acre in a minimum spray volume of 5 gallons mix per acre.

Air Application: Use drift control spray equipment or thickening agents mixed into the solution. Apply 2.5 to 10 gallons per acre of this product through standard boom systems with a minimum of 5 gallons of spray mix per acre.

All applicable restrictions, Precautions and Directions on the EPA registered product label must be followed.

EPA Reg. No. 57242-4 EPA Est. 57242-FL-1

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