

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 3 1997

Alice Walker, Ph.D.  
Regulatory Consulting  
47 Country Club Drive  
Senatobia, MS 38668

Dear Dr. Walker:

SUBJECT: Label Amendment Deleting Unsupported Terrestrial and  
Ditchbank Uses  
Albaugh Lo-Vol 4D Herbicide  
EPA Registration No. 42750-5  
Your Submission Dated June 20, 1996

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

1. It is noted that the latest approved labeling (December 3, 1996) instructed changes on the labeling (a copy is enclosed for your reference). Please incorporate these changes into the labeling.
2. The first page of the label should be revised to read as the first page of the latest approved labeling of December 3, 1996.

A stamped copy of the labeling 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)  
Fungicide-Herbicide Branch  
Registration Division (7505C)

Enclosure

CONCURRENCES

SYMBOL ▶	7505C							
SURNAME ▶	DMorgan							
DATE ▶	Dec 3, 1997							

2079

ALBAUGH

Lo-Vol 4D Herbicide

2,4-D low volatile ester

ACTIVE INGREDIENT:

Isooctyl ester of 2,4-dichlorophenoxyacetic acid.....66.8%

INERT INGREDIENTS:.....33.2%

TOTAL.....100.0%

Equivalent to 44.3% of the 2,4 isomer of 2,4-D or not less than 3.8 pounds of the 2,4 isomer of 2,4-D per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or poison control center. Drink one or two glasses of water and induce vomiting by touching the back of the throat with finger. DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

See side panel for additional PRECAUTIONARY STATEMENTS.

EPA Reg. No. 42750-5

EPA Est. No. 42750-MO-1

Manufactured by  
ALBAUGH, INC.  
Ankeny, Iowa 50021

Net Contents  
\_\_\_\_ Gallons

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

DEC 3 1997

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

42750-5

**PRECAUTIONARY STATEMENTS  
CAUTION  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Avoid contact with skin, eyes or clothing. Harmful if swallowed. Avoid inhaling vapor or spray mist.

**PERSONAL PROTECTIVE EQUIPMENT**

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, protective eyewear, and chemical-resistant apron when cleaning equipment, mixing, or loading.

If this container contains over 1 gallon and 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.

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**

If this container contains 5 gallons or more in capacity, a mechanical system (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.

### ENVIRONMENTAL HAZARDS

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 apply when weather conditions favor drift from target area. Spray equipment used in applying this product should be thoroughly cleaned before using for any other purpose. Use repeated flushing with soap and warm water or suitable chemical cleaner. It is best to use a separate sprayer for application of insecticides and fungicides. Do not contaminate water by cleaning of equipment or disposal of wastes. This product will kill or seriously injure many desirable forms of vegetation. Do not apply directly to flowers, fruits, vegetables, grapes, ornamentals, cotton or other desirable plants. Do not use when there is hazard from drifting mists. (Coarse sprays are less likely to drift.) Vapors from this product may injure susceptible plants in the immediate vicinity. Avoid contamination of water used for domestic purposes and irrigation purposes. Excessive amounts of this product in the soil may temporarily inhibit seed germination and plant growth. Do not apply this product through any type of irrigation system.

**GROUNDWATER CONTAMINATION:** 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, pour, spill 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. 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 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.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, chemical-resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber, or viton, shoes plus socks, 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.

Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

**STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly.

**STORAGE:** Do not store below 0°F. If frozen, warm to 40°F. and redissolve before using by rolling or shaking the container. This product can be stored in an unheated building. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. 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:** 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.

Read entire label before using this product.

**GENERAL INFORMATION**

Lo-Vol 4D is a selective herbicide recommended for the control of many broadleaved weeds in crops, along fence rows, around farm buildings and similar areas.

Lo-Vol 4D may be combined with liquid nitrogen fertilizers suitable for foliar application for weed control and fertilizing corn, small grains, sorghum and pasture grasses in one operation when 10 gallons or more of liquid nitrogen fertilizer is applied per acre. Use Lo-Vol 4D in accordance with recommendations for these crops given on this label. See preparation of the spray for mixing Lo-Vol 4D with liquid nitrogen fertilizers.

The following is a partial list of weeds controlled by Lo-Vol 4D:

Beggartick	Jimsonweed	Smartweed
Bindweed	Knotweed	Sowthistle
Bitterweed	Lambsquarters	Sumac
Blueweed, Texas	Mallow	Sunflower
Broomweed	Marshelder	Tansy mustard
Buckbrush	Milkvetch	Tansy ragwort (rosette)
Burdock	Morningglory	Tumbleweed
Canada thistle	Musk thistle	Velvetleaf
Carpetweed	Mustards	Vervain
Chicory	Nettle, stinging	Vetch
Cocklebur	Pennywort	Wild carrot
Coffeeweed	Pigweed	Wild garlic
Coyotebrush	Plantain	Wild hemp
Dandelion	Poorjoe	Wild onion
Dock	Puncturevine	Wild radish
Dogfennel	Pusley, Florida	Willow
Elderberry	Ragweed	Witchweed
Galinsoga	Russian thistle	Yellow rocket
Goldenrod	Shepherdspurse	
Henbit	Sicklepod	

### USE PRECAUTIONS

Avoid contact with 2,4-D susceptible crops and other desirable broadleaf plants. Lo-Vol 4D is injurious to most broadleaf plants. Therefore, do not apply directly to or otherwise permit even minute amounts to contact cotton, grapes, tobacco, fruit trees, vegetables, flowers, ornamentals or other desirable plants susceptible to 2,4-D. Do not use in or near a greenhouse.

Do not apply in the vicinity of cotton, grapes, tobacco, tomatoes or other desirable 2,4-D susceptible crops or ornamental plants. Do not spray when wind is blowing towards susceptible crops of ornamental plants.

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.

**Ground Equipment:** With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by applying 20 gal. or more of spray per acre; by using no more than 20 pounds spraying pressure with large droplet producing nozzle tips; by spraying when

wind velocity is low; and by stopping all spraying when wind exceeds 6 to 7 mph. Do not apply with hollow cone-type insecticide or other nozzles that produce a fine-droplet spray.

**Aerial Application:** With aircraft, drift can be lessened by applying a coarse spray; by using no more than 20 pounds spraying pressure at the nozzles; by using straight stream nozzles directed straight back; by using a spray boom no longer than 3/4 the wing span of the aircraft; and by spraying only when wind velocity is less than 6 mph.

Do not apply by aircraft when an air temperature inversion exists. Such a condition is characterized by little or no wind and with air temperature lower near the ground than at higher levels. The use of a continuous smoke column at or near site of application is suggested to indicate direction and velocity of air movement and to indicate a temperature inversion by layering of the smoke.

Violent windstorms may move soil particles. If 2,4-D is on soil particles and they are blown onto susceptible plants, visible symptoms may appear. Serious injury is unlikely. The hazard of movement of 2,4-D on dust is reduced if treated fields are irrigated or if rain occurs shortly after application.

At high temperatures vapors from this product may injure susceptible plants growing nearby. Do not use in a greenhouse. Excessive amounts of this herbicide in the soil may temporarily inhibit seed germination or plant growth.

**TO PREPARE A SPRAY WITH WATER:** Add one half the required amount of water to the spray tank; then add this product with agitation, and finally the balance of the water with continued agitation.

Note: This material forms an emulsion in water, not a solution. This tends to separate on standing. Provide agitation to prevent such separation and insure uniform spray mixtures.

**TO PREPARE A SPRAY WITH LIQUID NITROGEN SOLUTIONS:** Fill spray tank half full with liquid nitrogen. Start agitator. Add Lo-Vol 4D in the quantity for the numbers of acres a full tank will cover. Continue agitation of spray solution and complete filling of tank with fertilizer. Continue agitation until tank is empty. Mix only one tank at a time and apply immediately. Do not spray during or immediately following cold weather. Use spray equipment designed to handle corrosive liquid nitrogen solutions. After spraying, remove any remaining solution and rinse spray rig thoroughly with water.

**Time of Application:** Best results are obtained when Lo-Vol 4D is used on young weeds that are actively growing. Application of lower recommended rates to susceptible annual weeds usually will be satisfactory, but for perennial weeds and other conditions, such as in very dry areas where control is difficult, use higher recommended rates and increase the volume of water per acre. When used as a selective spray on crops the stage of growth of the crop must be considered. Some woody plants and weeds are hard to control and repeat applications may be necessary.

**Small Grains (Wheat, Barley, Rye):** Apply Lo-Vol 4D on small grains when fully tillered or stooled (4 to 8 inches tall), but before the "boot" stage. Crop injury may result if applied earlier than "tiller" or from early "boot" through the "milk" stage. Do not use on grain undersown with legumes such as alfalfa or clovers. Do not graze or feed forage from treated fields within 2 weeks after treatment. See chart for recommended rates.

For late season use to control large succulent weeds, apply 1 to 2 pints per acre on small grain from dough stage to harvest -- use only when weeds threaten to interfere with harvest operations. Do not use treated straw for livestock feed.

**Corn: Preemergence** -- Best results are obtained with Lo-Vol 4D when applied 3 to 5 days after planting but before corn emerges. Do not apply to light sandy soils.

**Postemergence** -- Apply Lo-Vol 4D from emergence to tasseling. When spraying corn above 10 inches in height, use nozzle extensions ("corn drops"), directing the spray at base of the corn plant to keep the spray off the leaves as much as possible. Do not apply from tassel emergence to dough stage. Crop injury is more likely to occur if corn is growing rapidly under high temperature and high soil moisture conditions. Under such conditions, use the lowest recommended rates. Delay cultivation for 8 to 10 days after application to reduce stalk breakage resulting from temporary brittleness caused by 2,4-D. Hybrids vary in tolerance to 2,4-D. Consult local agricultural experiment station or extension service weed specialists regarding the use of 2,4-D on your specific hybrid. See chart for recommended rates.

**Corn: Preharvest** -- Apply Lo-Vol 4D, 1 pt. to 2 pts. per acre, with air or ground equipment after the hard dough (dent stage) to suppress weeds that interfere with harvest such as bindweed, cocklebur, dogbane, jimsonweed, ragweed, sunflower, velvetleaf and certain other broadleaf weeds, and to decrease production of weed seeds. The high rate should be used on difficult-to-control weeds growing under stress conditions.

**Sorghum:** Apply Lo-Vol 4D when sorghum plants are 6 to 12 inches tall and secondary roots are well established. Use drop nozzles when crop is over 10 inches tall. Do not apply from flowering to dough stage. See chart for recommended rates.

**AMOUNT OF LO-VOL 4D PER ACRE**

Crop (See Detailed Directions Above)	For Average Conditions	For Dry Conditions as in Western States
<b>Wheat, Barley, Rye:</b>		
Annual Weeds	1/2 to 1 pint	1 to 2 pints
Perennial Weeds	1 pints	1 1/4 to 2 pints
<b>Corn:</b>		
Preemergence	1 to 2 quarts	
Postemergence	1/2 pint	1/2 to 3/4 pint
<b>Sorghum:</b>		
Postemergence	1/2 pint	1/2 to 3/4 pint

\*These higher rates in a minimum of 5 gallons of spray may be needed to control difficult weed problems in certain areas such as under dry conditions especially in western areas. Consult State Agricultural Experiment Station or Extension Service Weed Specialists for recommendations or suggestions to fit local conditions.

\*\*If only rows or bands are treated, leaving middles unsprayed, reduce dosage rate per crop acre proportionate to the ground area actually sprayed.



**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 1/2 to 3 quarts 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.

**Pastures:** To control many broadleaved weeds in pasture, meadows and rangelands, use 2 pints per acre of Lo-Vol 4D. Treat pasture when weeds are growing actively. Do not apply to newly seeded pastures until grass is well established, or after heading begins. Do not apply when grass is in "boot" to "milk" stage if grass seed production is desired. For control of wild garlic and wild onion in pastures apply 2 to 3 quarts per acre in very early spring and repeat annually until weeds are eradicated. Do not graze dairy animals on treated area within 7 days after treatment. Allow 30 days before feeding grass cut for hay and wait 3 days before slaughter of meat animals.

**Lawns, Golf Courses and Similar Turf:** Apply 2 pints of Lo-Vol 4D per acre. Do not apply to newly seeded lawns until grasses become well established. Injury may result if applied to bentgrass, St. Augustinegrass, carpetgrass, centipedegrass, Dichondra and clovers.

**NOTES FOR ALL TURF SITES (EXCLUDING SOD FARMS):** The maximum number of broadcast applications per treatment site is 2 per year.

**Woody Plant Control:** To control 2,4-D susceptible woody plants such as alder, buckbrush, elderberry, sumac and willow on non cropland and waste areas, use 2 to 3 quarts Lo-Vol 4D in 100 gallons of water. Wet thoroughly all parts of the plants including foliage and stems to the point of run-off. Higher volumes are necessary where the brush is very dense and over 6 to 8 feet high. Applications are more effective when applied to actively growing plants. Do not treat during periods of severe drought or in early fall when leaves have lost their healthy green color. Hard-to-control species may need retreatment the following season.

**General Weed Control:** Along fence rows, roadsides, industrial sites, around farm buildings and similar areas, use 1 to 2 quarts of Lo-Vol 4D in 100 gallons of water per acre. Thoroughly wet all foliage to run-off.

**Nonaquatic Uses:** This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not contaminate water when disposing of equipment washwaters.

**Condition of Sale, Warranty, Limitation of Liability**

This product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label only when used in accordance with directions under normal use conditions. Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage, or handling of this material not in strict accordance with directions given herewith. In no case shall the seller be liable for consequential, special, or indirect damages such as loss of profits or values resulting from the use or handling of this product.

**IN CASE OF EMERGENCY, CALL CHEMTREC: (800) 424-9300**