

20 APR 1993

Ms. Nik Ramswick
Universal Cooperatives, Inc.
7801 Metro Parkway
P.O. Box 460
Minneapolis, Minnesota 55440

Dear Ms. Ramswick:

Subject: 2,4-D Lo-V Ester Weed Killer
EPA Registration No. 1386-60
Application Dated April 2, 1993, Request To Amend
the Registration To Include Descriptive Direction
for the Field Corn, Preplant Use and Product
Name Change

The proposed amendment to add descriptive directions for the field corn, preplant use as reflected on the submitted labeling is an acceptable amendment to the subject pesticide product registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended provided:

o That you submit 5 copies of final printed labeling before releasing the product for shipment.

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA, Section 6(e). Your release for shipment of the product constitutes acceptance of this condition.

A stamped copy of the draft label is enclosed for your records.

Your request to change the basic name of the subject product is unacceptable, because this would entail our changing all records for this product. The alternate brand name you are presently using is acceptable.

Sincerely yours,

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

Enclosure
E.Wilson:Diskette#ABC#4: 04-20-92

2,4-D Lo-V Ester Weed Killer

KEEP OUT OF REACH OF CHILDREN
CAUTION

See Side Panel For Additional Precautionary Statement

ACTIVE INGREDIENT:

2-Ethylhexyl ester of 2,4-dichlorophenoxyacetic acid* 69.1

INERT INGREDIENTS 30.9

Total 100.0

*Kramer Specific Acid Equivalent (13.20% of 2.70 lb/gal.) by AOAC Method No. 6.D01-5.

Net Contents: 2 1/2 Gallons

EPA Reg. No. 1386-60
EPA Est. No. 1386-60



ACCEPTED
with COMMENTS

UNIVERSAL COOPERATIVES, INC., MINNEAPOLIS, MN 55440

20 APR 1993
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
1386-60

BEST AVAILABLE COPY

per acre 7 to 14 days before planting. Do not use on light, sandy soil or where moisture is inadequate for normal weed growth. Use high rate for control of less susceptible weeds or cover crops such as alfalfa.

Preemergence: Apply to soil after planting but before corn emerges. Do not use on very light, sandy soils or where soil moisture is inadequate for normal weed growth. Use lower rate of application on heavy soils and higher rate on dry soils. Use high rate on soil high in organic matter. Do not use on clay or silt.

Postemergence: Apply to soil after planting but before corn emerges. Do not use on very light, sandy soils or where soil moisture is inadequate for normal weed growth. Use lower rate of application on heavy soils and higher rate on dry soils. Use high rate on soil high in organic matter. Do not use on clay or silt.

Preharvest: After the last drought or drought stage, apply 1 to 2 pints per acre by air or ground equipment to suppress potential weeds, decrease weed seed production, and control all weeds such as lambsquarters, cocklebur, pigweed, barnyard, ragweed, common velvetleaf, and those that tolerate with harvesting. Do not spray or treat corn fields to be harvested for 7 days following application. Do not use on soil high in organic matter.

Apply when corn is 4 to 12 inches high with secondary roots well established. When corn is over 10 inches tall, use drop nozzles to keep spray off leaves as much as possible. Do not spray from nozzles to high. Do not use on soil high in organic matter. Do not use on soil high in organic matter. Do not use on soil high in organic matter.

RECOMMENDED RATES OF 2,4-D LO-V ESTER WEED KILLER

| Crop | Normal Rate | Higher Rate for Special Situations* |
|-----------------------------------|-------------------|-------------------------------------|
| (See Detailed Instructions Above) | (Quarts per Acre) | (Quarts per Acre) |
| MAIZE (Corn) | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |
| SOYBEANS | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |
| WHEAT | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |
| BARLEY | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |
| RYE | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |
| TRIFOLIUM | | |
| Preemergence | 1/2 Pint | 1 to 2 Pints |
| Postemergence | 1 to 2 Pints | 1 1/4 to 2 Pints |

*The higher rate or recommended above may be necessary to control difficult weed problems such as under dry conditions in the Western states. They should not be used, however, unless possible crop injury is acceptable. Consult State Agricultural Experiment Station or Extension Service Weed Specialist for recommendations or suggestions in local conditions.

**If hand treatment is used, base the dosage rate on the actual area sprayed.

FLR USE IN CROP RESIDUE MANAGEMENT SYSTEMS IN SOYBEANS

2,4-D Lo-V Ester Weed Killer may be used for preemergence control of many susceptible annual and perennial broadleaf weeds. This product may be applied prior to planting soybeans to provide fallow/soybean control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. Make only preplant applications to cover crop weeds prior to planting soybean green in reduced tillage production systems. Apply only according to instructions on this label.

Do not use any other herbicides between herbicide application and planting of soybeans. Making interrow applications of any of amaranths, nightshade, and other weeds sprayed for use on growing crops may be added to spray mixture to increase the herbicidal effectiveness of 2,4-D Lo-V Ester Weed Killer on certain weeds. Read and follow all directions and precautions on the label and on the label of each product added to the spray mixture.

Application Procedures: Apply using air or ground equipment in a spray volume sufficient to provide uniform coverage of weeds. Use 1 or more gallons of spray volume per acre for each application and 10 or more gallons per acre for ground equipment.

APPLICATION TIPS AND USE NOTES

| Product | Application Rate | Time to Apply |
|------------------|------------------|-----------------------|
| 2,4-D Lo-V Ester | 1 Pint | Not Less Than 7 Days |
| | 2 Pints | Not Less Than 30 Days |

For best weed control results, application should be made when weeds are small, actively growing and free of stress caused by herbicide exposure, extreme drought, frost, or insect damage. The control of individual weed species may vary. Consult your local county agent or State Agricultural Experiment Station for crop guidelines for 2,4-D.

Use Precautions and Restrictions:
Important Notice - Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of such injury will depend on weather, temperature and rainfall from herbicide application until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present at the time of application. Injury is more likely under cool rainy conditions and when there is less weed vegetation and crop residue present.

- Do not use on sandy soils with less than 1.0% organic matter.
- Do not make more than one application per season regardless of the application rate used.
- Do not apply when weather conditions such as atmospheric temperature inversion or when wind direction forces drift from the treated area to susceptible plants.
- Do not allow livestock grazing or harvest hay, forage or fodder from treated fields. Livestock should be restricted from foraging of treated cover crops.
- In treated fields, plant soybean seed as deep as practical, but not less than 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is adequately covered.
- Do not apply 2,4-D Lo-V Ester Weed Killer as directed unless you are prepared to accept the results of soybean injury, including possible stand loss and/or yield reduction.
- During the growing season following application, do not plant treated fields with crops other than those labeled for use with 2,4-D Lo-V Ester Weed Killer.

SUBSTANCE: Use 2 pints per acre as a preemergence application before corns appear or 2 quarts per acre as a harvest spray after corn emerges and through leafy, to aid in the control of Johnsongrass seedlings and susceptible broadleaf weeds.

LAWN AND ORNAMENTAL TIPS: Use 1 to 3 pints of 2,4-D Lo-V Ester Weed Killer in enough water to give good coverage to any one established plants of perennial grasses. Do not apply to creeping grasses such as bent grass for spot spraying. Newly seeded turf should not be treated until after the second mowing and the first mowing should be used. Mowing of treated grass should be delayed following treatment. Both grass applications, mowed in the fall with fall application, mowed in the spring. Lawns are usually damaged or killed, therefore, do not treat areas where the lawns are desired. Deep-rooted perennial weeds may require repeated treatments in the same season or in subsequent years. The maximum number of broadcast applications per treatment site is 2 per year.

GRASS SEED CONTROL: Apply 1 to 4 pints of 2,4-D Lo-V Ester Weed Killer in the spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 3/4 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. Do not use on bent unless injury can be tolerated. Do not graze dairy animals nor cut hay for hay within 7 days of application.

FALLOW LAND: On established perennial species such as Canada thistle and Field bindweed, apply up to 2 quarts per acre of 2,4-D Lo-V Ester Weed Killer for annual broadleaf weeds, apply 1 to 2 quarts per acre. Do not plant any crop for 3 months after treatment or until 2,4-D has disappeared from the soil.

PASTURE AND RANGE LAND: Do not graze dairy animals on treated areas within 7 days after application. Do not harvest grass for hay within 30 days of application. Do not graze meat animals on treated areas within 3 days of slaughter. Do not use on bent grass, alfalfa, clover, or other legumes or on newly seeded pastures. Do not apply after heading begins or when grass is in the boot to milk stage unless grass seed production is desired.

Timberland, Broadwood, Croton, Beck, Knots, Marshmallow, Mistletoe, and Other Broadleaf Weeds: Use 4 pints of 2,4-D Lo-V Ester Weed Killer per acre in the amount of water needed for uniform application. If the weeds are young and growing actively, 2 pints 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 4 pints per acre, making three applications (fall-spring-fall or spring-fall-spring) starting in late fall or early spring.

Weed Control in Newly Sown Pasture: Apply 2 to 4 pints per acre preemergence and/or postemergence. **Seed Dispersal:** Use 2 pints in 5 gallons of oil or in 4 gallons of water plus 1 gallon of oil per acre. Apply by aircraft between July 15 and June 15. On the waterway, use 2 pints in 3 gallons of oil per acre and apply by aircraft when foliage is fully expanded and the brush is actively growing.

Big Ragwort and Ragwort: Use 4 pints per acre in 2 to 3 gallons of oil or in 3 to 5 gallons of oil-water emulsion spray. Brush should be treated and growing actively when sprayed. Treatment may be repeated.

Chenopod, Goosefoot, Amaranth, Ground Sage, Chickweed, and Certain Other Chenopod Species: Use 4 pints per acre in 5 to 10 gallons of water. One gallon of hot 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 treated and growing actively when sprayed. Treatment may be repeated.

Control Weed Control: Amaranth, Nightshade, Ground Sage, Goosefoot, and Certain Other Chenopod Species, and Similar Weeds: Use 1 to 2 quarts per acre. Usually 2 quarts per acre will give adequate control. Do not use on herbaceous ground cover or creeping grass such as bent. Lawns will usually be damaged or killed. Deep-rooted perennials may require repeat treatments. Do not use on freshly planted turf until grass is well established. Daily mowing for 30 days or until 2,4-D has disappeared from soil. The maximum number of broadcast applications per treatment site is 2 per year.

Weeds of Pasture: In control weeds plants susceptible to 2,4-D, such as Alfalfa, Broadleaf, Timothy, Sorghum, and Yellow or Red-top grass, use 2 quarts in 10 gallons of water. Use all parts of the plant structure, including stem and leaves, in the point of application. Higher volumes of up to 400 gallons per acre are necessary when the brush is very dense, and over 5 to 8 feet high. Applications are more effective when made on actively growing plants. Treatment should not be made during time of severe drought or in early fall when leaves lose their green color. Herb to control species may require retreatment next spring.

BEST AVAILABLE COPY

USES IN FOREST MANAGEMENT

Control Weevils: For control of silver, spruce, 1 1/2 to 2 quarts of product per acre in 8 to 25 gallons of water, and apply as a foliage spray between mid-May and mid-June.

For control of weevils, spruce, oak, spruce, and similar species to reduce hardwood, spruce, and fir, apply 2 quarts of product per acre in 8 to 25 gallons of water, just prior to or during budbreak of Douglas fir.

After weevils are controlled, just prior to and after budbreak, and while spruce cones grow and "harden off" in late summer, a spray of 1 1/2 to 2 quarts in 8 to 25 gallons of water per acre may be applied by air to control certain competing hardwood species such as silver, spruce, fir, hemlock, and white pine. This treatment may cause occasional needle injury, do not use if such injury caused is intolerant. Consult your regional or extension forester or state herbicide specialist for recommendations to fit local conditions.

For control of hemlock looper and similar species in the Lake states area, apply 2 quarts of product per acre in 8 to 25 gallons of water, when new shoot growth of hemlock is complete.

Site Preparation:

(As Bark-beetle Spray)—for control of silver prior to planting seedlings, apply 2 quarts of product per acre in 8 to 25 gallons of water, after silver budbreak but before foliage is 1/4 full size.

(As Foliage Spray)—for control of silver prior to planting seedlings apply 2 quarts of product per acre in 8 to 25 gallons of water, after most silver leaves are full size.

Aerial Application:

For Spruce Woods in Lakes, Ponds, Swamps, Shakes, and Marshes: Use 2 1/2 to 4 pints of product in 50 to 100 gallons of water per acre. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed above waterline and plants are actively growing. Your State Conservation Department or Game and Fish Commission will assist you in determining the best time and site for application under local conditions.

DO NOT APPLY to more than 1/3 to 1/2 of a lake or pond in any one month because excessive decaying vegetation may deplete oxygen content of water and kill fish.

Forested and other land to control weevils may require a repeat application to give adequate control.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food, or feed by storage or disposal. Do not store near fertilizers, seeds, insecticides, or herbicides. Do not use or store near heat or open flame.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or dilute is a violation of Federal Law and may constitute 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: Empty containers by evaporation. Then either by recycling or reconditioning, or purchase and dispose of in a secondary market, or incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND LIMITATION OF DAMAGES

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of fitness or of merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material to which a claim is made.

CO-OP® IS A REGISTERED TRADEMARK OF UNIVERSAL COOPERATIVES, INC.

BEST AVAILABLE COPY