

PM 23 228-61

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAR 14 1994

Russell F. Sawyer  
RIVERDALE CHEMICAL CO.  
425 WEST 194TH St  
GLENWOOD, IL 60425

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 10/25/93 in Response to PR Notice 93-7  
EPA Reg. No. 228-61  
RIVERDAE 2,4-D GRANULES

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

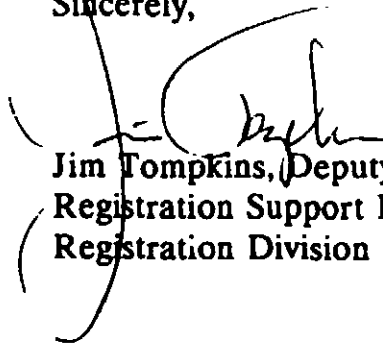
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

Russell Sawyer  
RIVERDALE CHEMICAL COMPANY

Comments for: EPA REG. NO. 228-61  
RIVERDALE 2,4-D GRANULES

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

Place the heading "Personal Protective Equipment" on your label in the location shown in Section A on Part I of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

Remove the Statement "When applying for residential and turf uses the maximum number of broadcast applications per treatment site is two per year" from the Non-Agricultural Use Requirements Box where it does not belong.

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ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
MAR 14 1994

RIVERDALE

2,4-D GRANULES

A SELECTIVE WEED KILLER

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, this pesticide  
registered under EPA Reg. No.  
228-61

For control on broadleaf weeds and certain seedling grasses. Also for use  
in lakes and ponds for the control of certain aquatic weeds.

ACTIVE INGREDIENT:

Isooctyl (2-ethylhexyl) Ester of 2,4-Dichlorophenoxyacetic Acid\* ..... 28.9%

INERT INGREDIENTS: ..... 71.1%

TOTAL ..... 100.0%

\*Isomer Specific AOAC Method, Equivalent to 2,4-Dichlorophenoxyacetic Acid ... 19.18%

KEEP OUT OF REACH OF CHILDREN

CAUTION - CAUCION

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.)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION - CAUCION

Harmful if swallowed. Avoid inhalation and contact with eyes, skin and  
clothing.

NON-WPS USES: Applicators and other handlers who handle this pesticide  
for any use NOT covered by the Worker Protection Standard (40 CFR Part 170)--  
in general, only agricultural plant uses are covered by the WPS -- must wear:  
chemical-resistant gloves, long-sleeved shirt, long pants, socks and shoes.  
Protective clothing must also be worn when repairing or cleaning equipment used  
with this product.

WPS USES: Applicators and other handlers who handle this pesticide for any  
use covered by the Worker Protection Standard (40 CFR Part 170) -- in general,  
agricultural plant uses are covered -- must wear: long-sleeved shirt and  
long pants; waterproof gloves, and shoes plus socks. Follow manufacturers  
instructions for cleaning/maintaining Personal Protective Equipment (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 on  
PPE must not be reused until it has been cleaned.

Engineering control statements: When handlers use closed systems, 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.

*this is  
OK  
↑  
Protective  
clothing*

NOTE: Spanish language is optional

Revised A/O 9/29/93

**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.

**STATEMENT OF PRACTICAL TREATMENT**

In case of contact wash with soap and water; for eyes flush with water for 15 minutes and get medical attention.

**ENVIRONMENTAL HAZARDS**

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 washwaters.

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.

Do not apply at rates higher than recommended. Excessive amounts in the soil may temporarily stop seed germination or plant growth. Do not use on light, sandy soils. If regular insecticide spreader is used to apply Riverdale 2,4-D

Granules, be sure to clean equipment thoroughly before other use. Riverdale 2,4-D Granules will injure vegetables, flowers, grapes, fruit plants, ornamentals, cotton, soybean, and other desirable plants. Make application on cornland in such a way that run off water from rain or irrigation will not come in contact with these plants. Do not contaminate irrigation ditches or water used for domestic purposes. However, treated water (treated as directed under Aquatic Use) may be used for watering turf grasses immediately after application. Do not use in or near a greenhouse. At higher temperatures, vapors may cause injury to sensitive plants growing nearby. Use of this product for water weed control may cause decaying vegetation to deplete the supply of oxygen, causing suffocation of fish. In many states, permits are required to control weeds with herbicides in public water. For additional information regarding State and/or local regulations and the possible need for a permit; it is suggested that the applicator contact one of the following: State Department, Natural Resources or Conservation; State Fish and Game Agency; Cooperative Extension Service; or some local governmental agency.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS

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

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, waterproof gloves, and shoes plus socks.

**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. No re-entry restrictions for non-crop applications. When applying for residential and turf uses the maximum number of broadcast applications per treatment site is 2 per year. Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until dust has settled.

*New Statements / deviation*

**CROPS**

**IN MIDWESTERN CORN BELT:** For pre-emergence application to aid control of annual grasses such as large and small Foxtail (Pigeon grass), Crabgrass, Barnyardgrass; broadleaved weeds such as Smartweed, Sunflower, Wild Mustard, Cocklebur, Bindweed, Dandelion, Morningglory, Pigweed, Tarweed, Ragweed, Wild radish, Pennyworts, Plantains, Healall, Chicory, Yellow star thistle, Lambsquarters, and Watergrass.

2,4-D Granules should be applied preferably at corn planting time. It may, however, also be applied just before corn emerges through the soil. Plant corn at least 2 inches deep when using pre-emergence 2,4-D applications. This will aid in preventing injury from leaching of weed killer. With this treatment, one should not expect

*not needed in non crop*

season-long control. It is intended to control grasses for 3-4 weeks so that the corn seedlings can get started without competition. It has very little effect on established broadleaf weeds over 6 inches tall; and none at all on grassy weeds once they have germinated.

Use 10 pounds, 2,4-D Granules per acre applying to soil from time of planting up to 2 days before corn seedlings emerge. This application is on a broadcast basis equivalent to 2 pounds of actual 2,4-D (Acid) equivalent. For band or row application approximately 14 inches wide, apply 3½ pounds 2,4-D Granules per acre on 40 inch rows.

**IN CRANBERRIES:** For pre-emergence application to control annual broadleaved weeds in bearing cranberry marshes, apply at a rate of 10-20 lbs. per acre (2 to 4 lbs. 2,4-D equivalent per acre). Application should be made broadcast in the spring after removal of the winter flood from the dormant vines. Weeds controlled are Common Ragweed, Sticktight, Tearthumb, Smartweed, Northern Saint Johnswort, and common species of Annual Smartweed. Careful distribution of granules is necessary if adequate control is to be obtained. (For Wisconsin area granules may also be distributed on ice over plants prior to Spring thaw.)

#### TURF

**ORNAMENTAL TURF:** (such as lawns, golf courses, cemeteries, and parkways). To control Wild onion and broadleaved weeds such as Dandelion, Plantain, Ivy Bitterweed, and Dogfennel, apply 10½ lbs. of granules per acre in early Spring when shoots are young and actively growing, using a mechanical spreader. Repeat application in one month or later to control skipped spots.

DO NOT USE on Bentgrass, St Augustinegrass, Dichondra, Carpetgrass, or newly plugged or seeded turf.

#### AQUATICS

**IN LAKES AND PONDS:** 2,4-D Granules have been chemically formulated on special heat treated attaclay that will resist rapid decomposition in water. These granules sink quickly to the bottom, settling around roots and stems, and release the herbicide there. Selective control of certain specified water weeds listed below, is possible. Fish depend on oxygen, in the water, to maintain normal respiration. Oxygen can be depleted from the water by decaying weeds. If the target weed density is sparse, it may be possible to treat an entire water body at one time. Best results with 2,4-D are likely to be obtained where: (1) The herbicide is applied as part of a lake vegetation management plan (LVMP); (2) The water is poorly buffered. Low calcium carbonate alkalinity (130 or below) generally favors the activity of the herbicide and less herbicide may be required to achieve a desired level of control. If regrowth occurs within a period of 6 to 8 weeks, it is permissible to use less than recommended rate for a second application. (3) There is no flow and little or no water movement. In ponds and lakes with excessive movement, it may be possible to draw down the water, just before and for a few days after treatment. (4) In the Spring and early Summer, during the time weeds start to grow. If desired, this timing can be checked by sampling the lake bottom in areas heavily infested with weeds the year before. Occasionally, a second application will be necessary if heavy regrowth occurs or weeds move in from untreated areas. If treatments are delayed until weeds form a dense mat or reach the surface, two treatments may be necessary. Make the second treatment when weeds show signs of recovery.

**FOR FULL TREATMENT OF LARGE AREAS:** Use a fertilizer spreader or mechanical seeder such as the Gerber or Gandy. When using boats and power equipment, the proper dose rate is

achieved by adjusting (1) boat speed (2) rate of delivery from the spreader, and (3) width of swath covered by the granules.

**FOR HALF TREATMENT OF LARGE AREAS:** If treatments must be applied later in the season when the target weed mass is dense and repeat treatments are needed, treat one-half at a time by spreading granules in lanes, leaving buffer strips which can then be treated when vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. This avoids excessive weed decomposition which would reduce oxygen levels in the water to a point harmful to fish life.

**FOR SMALL AREAS - AROUND DOCKS OR ISOLATED PATCHES OF WEEDS:** Use a portable spreader such as the Cyclone seeder. Estimate or measure out the area you want to treat. Weigh out the amount of material needed and spread this uniformly over the area. More uniform coverage is obtained by dividing the required amount in two and covering the area twice, applying the second half at right angles to the first.

**RATE OF APPLICATION:** (100 pounds per acre is equivalent to 1 pound per 430 square feet) Rates of application vary with the resistance of weed species to the herbicide, density of weed mass at time of treatment, water depth, and rate of water flow through the treated area, and alkalinity (hardness). Use the higher rate for dense weeds, when water is more than 8 feet deep and where there is a large volume turnover. Generally, weeds are difficult to control in lakes where water replacement comes from bottom springs.

WEEDS	RATE PER ACRE
Arrowhead ( <i>Sagittaria</i> spp)	200 lbs.
Bladderwort ( <i>Utriculatia</i> spp)	100-150 lbs.
Bulrush ( <i>Scirpus</i> spp.)	200 lbs.
Coontail or Hornwort ( <i>Ceratophyllum demersum</i> )*	200 lbs.
Creeping Waterprimrose ( <i>Jussiaea repens</i> )	200 lbs.
Pickeralweed ( <i>Pontederia</i> spp.)	200 lbs.
Spatterdock, Cow Lily, Yellow Water Lily ( <i>Nuphar</i> spp.)*	150 lbs.
Burreed ( <i>Sparganium</i> spp.)	200 lbs.
Waterweed ( <i>Elodea</i> or <i>Anacharis</i> )*	100 lbs.
Waterchestnut ( <i>Trapa natans</i> )	100 lbs.
Watermilfoil ( <i>Myriophyllum</i> spp.)	100-150 lbs.
Water Smartweed ( <i>Polygonum</i> spp.)	200 lbs.
Water Stargrass ( <i>Heteranthera dubia</i> )	150-200 lbs.
White Waterlily ( <i>Nymphaea</i> spp.)	100 lbs.
Naiad ( <i>najas flexilis</i> )*	200 lbs.
Pondweed ( <i>Potamogeton</i> spp.)*/**	200 lbs.
Watershield ( <i>Frasenia</i> spp.)	150-200 lbs.

\*Repeat Treatments may be needed

\*\*Check with state weed control service as results depend much on species and environment.

**SPECIAL PRECAUTIONS:** Always check with State Agricultural Experiment Station or Extension Service specialist so as to comply with existing regulations regarding the introduction of herbicides into water for aquatic weed control. Also, check on local variations of rates required. Do not allow chemical to be applied to adjacent desirable shoreline vegetation.



**STORAGE AND DISPOSAL**

**STORAGE:** Always use original container to store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. Do not stack more than two pallets high. Do not contaminate water, food or feed by storage or disposal. It is recommended that a SARA Title III emergency response plan be created for storage facilities. Do not transport in the passenger compartment of any vehicle.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, clean up all spilled material. Improper disposal of excess pesticide, spray mixtures 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:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay away from smoke.

**WARRANTY AND LIMITATION OF DAMAGES**

RIVERDALE CHEMICAL COMPANY 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 all risk of any use contrary to such directions. SELLER MAKES NO OTHER WARRANTY EXPRESSED OR IMPLIED AS TO FITNESS OR MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO EXCEPT IN WRITING WITH SPECIFIC REFERENCE TO THIS WARRANTY. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made. (ERP 102393)(PR933&7 042194/RV 092993)

EPA REG. NO. 228-61

NET WEIGHT LBS.

EPA EST. NO. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

GLENWOOD, ILLINOIS 60425-1584