Reg # 407-429 PM-23 File 199

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

APR 26 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Gene R. Currie
IMPERIAL INC.
P. O. Box 98
Shenandoah, IA 51601

Subject: Label Amendment Submission of 02/11/94 in Response to PR Notice 93-7
EPA Reg. No. 407-429
IMPERIAL 2,4-D 380 LO VOL ESTER WEED KILLER

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

[illegible]

3 9

IMPERIAL
2,4-D
380 LO VOL ESTER
WEED KILLER

ACTIVE INGREDIENTS:
[illegible] of 2,4-Dichlorophenoxyacetic acid ..... [illegible]
INERT INGREDIENTS: ..... [illegible]
Total 100.0%

*Isomer Specific by AOAC Method No. 6.275 12th Edition 1980
*2,4-Dichlorophenoxyacetic acid equivalent ... 44.0%
Contains 3.8 lbs. 2,4-Dichlorophenoxyacetic acid per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 407-429
EPA Est. No. 407-IA-19, 407-MN-1[illegible]
Supersedes [illegible]
Letter in lot number

F-90WPS

ACCEPTED
with COMMENTS
In EPA Letter Dated
[illegible]

Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 407-429

NET CONTENTS

Manufactured By
IMPERIAL INC.
CHENANDOAH, IA 51601

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed. Do not get in eyes, on skin or clothing. In case of contact, wash with soap and water. Avoid inhaling [illegible] mist. In case of contact with eyes, wash with plenty of water.

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 a EPA chemical resistance category selection chart.

Applicators and other handlers must wear:
- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as neoprene, or nitrile rubber or barrier laminate or viton.
- Shoes plus socks.
- Protective eyewear.
- Mixers and loaders who do not use a mechanical system (gauge and pump) to transfer [illegible] of this [illegible] must wear [illegible] chemical-resistant [illegible] in addition to the other required PPE.

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Follow manufacturer's instructions for cleaning or 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 [illegible] PPE must not be reused until it has been cleaned.

IMPERIAL 880 LO VOL WPS PART 2

~~(LESS THAN 5 GALLON STATEMENT)~~

When handling 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.

(5 GALLON OR MORE STATEMENT)

A mechanical system (pump and probe) must be used in transfering 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.

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

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.

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.

DON'T OVERDOSE! Follow directions carefully. Do not let spray drift to sensitive plants such as vegetables, legumes, grapes, flowers or other 2,4-D susceptible plants. Use coarse spray to reduce "wind drift". Local spray conditions will vary. Check local recommendations first. Use separate spray equipment for insecticides and fungicides.

Do not make aerial application near cotton or sensitive plants. Under certain high temperature conditions, vapors from this product will injure nearby susceptible plants.

DIRECTIONS FOR USE

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

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

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 apply only 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.
- Chemical resistant gloves, such as neoprene or nitrile rubber or barrier laminate or viton.
- Shoes plus socks.
- Protective eyewear.

STORAGE AND DISPOSAL

STORAGE: Store in a secure area, in original container only, away from fertilizers, food, or feed. Do not store near insecticides or fungicides.

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

CONTAINER DISPOSAL: Metal containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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

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When stored at temperatures below freezing, it may be necessary to warm contents to 45 degrees Fahrenheit and mix thoroughly before using.

This product will control the listed plants and other susceptible species: Alligatorweed, bull and devil's bugweed, [illegible] (Texas), boxelder, broomweed, buckbrush, buckhorn plantain, burdock, burweed, buttercup, carpetweed, [illegible], [illegible], chickweed, [illegible], coffeeweed, common mullein, [illegible], coyotebush, [illegible], indigo, dandelion, docks, dog fennel, [illegible], dwarfweed, [illegible], [illegible] flixweed, [illegible], gallinsoga, wild garlic, goatsbeard, goldenrod, halogeton, hemp, henbit, jewelweed, jimsonweed, lambsquarters, [illegible], mallow (Venice), marestail, [illegible], [illegible] (Jerusalem), [illegible], IMPERIAL

[illegible] (wild), [illegible] feather, [illegible] pepperweed (field), [illegible] and [illegible] (flixweed), [illegible] [illegible], pokeweed, [illegible] ragweed (common and [illegible]), rape (wild), [illegible] [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible] (bitter), sowthistle (annual), [illegible], tickweed, sumac, sunflower, sweetclover, tansymustard, tansy ragwort, tumbleweed, velvetleaf, Virginia creeper, Waterprimrose, willow, wild sweet potato, witchweed, wormwood, yellow rocket, yellow starthistle.

Partial control can be expected on the following less susceptible species: artichoke, bindweeds (hedge, field, and European), buckwheat (wild), creeping jenny, ground ivy, kochia, climbing milkweed, smartweed, thistle (bull, Canadian, musk and Russian). Deep-rooted perennials such as Canadian thistle and field bindweed and woody plants may require repeat applications.
Apply when weather is warm and plants are rapidly growing. Cold weather or dry conditions may cause poor results. **DO NOT** apply if rain is expected within 1 hour.

Consult your Extension Service or Agricultural Experiment Station for local use and crop tolerance situations.

This product may be applied as a water, oil, or [illegible] to [illegible]. Use [illegible] to minimize drift. **DO NOT** apply [illegible] may be [illegible] contact with any desirable plants or susceptible [illegible] than those listed on this label.

DO NOT apply this product through any type of irrigation system.

When using ground equipment, keep boom or nozzles close to crop, apply 3 or more gallons of spray per acre using flooding or flat fan nozzles with 20 pounds or less of pressure. If wind is [illegible] than 5 miles, spray the shelter crop. **DO NOT** apply with hollow cone or [illegible] mist or [illegible] nozzle.

When using aerial equipment, apply a minimum of 3 to 5 gallons of spray per acre at 20 pounds or less nozzle pressure using nozzles that produce a coarse spray pattern. Spray only when wind is blowing less than 5 miles per hour.

Apply the recommended amount of 2,4-D per acre regardless of the amount of diluent used.

Application by any means should take place only when there is no danger of spray drift. Do not apply near cotton, grapes, tomatoes, or other 2,4-D susceptible crops or vegetables. Do not apply when the wind is blowing toward these crops or plants.

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MIXING INSTRUCTIONS:

Water-Based Spray: Fill the equipment half full of water. Agitate while adding this product. Then add rest of water.

Water and Soybean Oil or Petroleum Oil-Based Spray: First mix this product with the oil then add to water. If adequate agitation is possible, the oil can be added first. **DO NOT** [illegible] first.

Soybean Oil or Petroleum Oil-Based Spray: Add this product to straight oil to form a solution. Do not allow water to get into this mixture. If it does, an invert emulsion will occur.

NITROGEN FERTILIZER: The compatibility of this product must be tested with the fertilizer before its use in application equipment. This is done by means of a quart jar test as follows. The amount of this product to add to a pint of liquid nitrogen fertilizer is determined by using this table.

AMOUNT OF 2,4-D PER ACRE	GALLONS OF FERTILIZER PER ACRE				
	10	20	30	40	50
	TEASPOONS OF 2,4-D PER PINT OF FERTILIZER				
1/2 pint	2/3	1/2	1/3	1/4	1/6
1 pint	1-1/4	1	3/4	1/2	1/4
2 pints	2-1/2	2	1-1/2	1	1/2
4 pints	5	4	3	2	1

The amount in the table is based on gallons of finished spray per acre. Different spray volumes will require appropriate changes in the amount of this product added to 1 pint of fertilizer. Add the required amount of this product to 1 pint of fertilizer in a quart jar and shake to mix well. Let the mixture stand and examine it after 5 minutes and again after 30 minutes. The product is incompatible if it balls up, forms flakes, sludges, gels, oily films, layers, or other precipitates.

If the precipitate can be suspended with agitation, the combination can be used if the equipment has vigorous agitation throughout mixing and spraying operations.

In some cases, when incompatibility occurs, the addition of 1/4 teaspoon of a compatibility agent to the jar before adding this product may solve the problem. (1/4 teaspoon is equal to 1 pint per 100 gallons of fertilizer.) IF THIS DOES NOT WORK, DO NOT ATTEMPT THE ADDITION OF THIS PRODUCT TO THE FERTILIZER.

Fertilizer Mixing Sequence: If a compatibility agent is [illegible] half the fertilizer to the tank, make a premix of 1 part this product and parts water and add premix to tank with agitation ON. Then add balance of fertilizer. Apply at once with agitation ON. If a compatibility agent is required, add it to half-full tank before premix addition. Then proceed as above. MAKE SURE TO FOLLOW ALL DIRECTIONS ON THIS AND THE FERTILIZER AND COMPATIBILITY AGENT LABELING.

CORN: Use the lower rate for small annual weeds. Use the higher rate for perennial or hard-to-kill weeds. To avoid injury, do not use with atrazine, oil, or other adjuvants.

Preemergence: Apply 1 to 2 quarts per acre after planting but before corn emerges. DO NOT apply to sandy soils.

Emergence: Apply 1/2 pint per acre just as corn plants are breaking ground.

Postemergence: Apply 1/2 pint per acre after corn is up. Three-fourths to 1 pint per acre may be needed to control some weeds, but this rate may injure the corn. If corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. DO NOT apply from tassel stage to dough stage. DO NOT [illegible] when [illegible] high moisture and temperature conditions may cause injury or brittleness. DO NOT [illegible] for [illegible] after [illegible].

Late Season Weed Control (To reduce weeds that [illegible] with harvest and reduce weed seed production): After [illegible] apply 1 to 2 pints per acre.

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[illegible]

SMALL GRAINS (Not underseeded with [illegible]): NOTE: Do not let dairy animals or animals being finished for slaughter [illegible] treated fields within 7 days of application. [illegible]

Spring Wheat, Barley, and Rye: [illegible] when [illegible] in full tiller stage (4 to 8 inches tall) but before boot stage when weeds are small and actively growing. Up to 2 pints per acre may be used to control difficult weed problems, but do not use unless some crop damage is acceptable.

Winter Wheat and Rye: Apply 1/2 to 1 pint per acre only in spring before grain is in boot stage.

Spring-seeded Oats: Apply 1/2 to 2/3 pint per acre at full tiller, but before early boot stage.

Fall-seeded Oats Grown for Grain (Southern): Apply 2/3 to 1 1/2 pints per acre at full tiller, but before early boot stage. Difficult weeds may require higher rate, but some injury may occur since oats are less tolerant to 2,4-D than wheat or barley. DO NOT spray during or just after cold weather.

Preharvest Treatment: Apply 1 to 1 2/3 pints per acre when grain is in hard dough stage to control weeds that will interfere with harvest. Apply when soil moisture is adequate for weed growth for best results. NOTE: DO NOT feed treated straw to livestock.

MILO (GRAIN SORGHUM): NOTE: Some varieties and hybrids are 2,4-D sensitive [illegible] injury may occur if treated in high wind [illegible] temperature [illegible] Check with your seed company and Pioneer Service for advice. Apply 1/2 pint per acre when plants are 5 to 15 inches tall. A higher rate of 2/3 to 1 pint per acre may be needed for [illegible] but chances of crop injury may increase. DO NOT use oil. DO NOT treat crop less than 5 inches tall or from [illegible] to early dough stage. Use drop nozzles when crop is over 2 inches tall.

CONSERVATION RESERVE PROGRAMS AND SET-ASIDE ACRES: NOTE: DO NOT use [illegible] alfalfa, clover, other legumes or newly seeded grass.

Broadleaf Weeds: Apply [illegible] in sufficient water for good coverage. Deep-rooted perennial weeds may require higher rates or repeated treatments.

Brush: Apply 2 1/4 to 3 quarts in 5 to 10 gallons of water plus 1 gallon of oil or the labeled amount of crop oil concentrate or other adjuvant per acre for Buckbrush, Rabbitbrush, Sagebrush, Greasewood and other Chemical Spider. Apply 2 1/4 to 3 quarts in 5 gallons of oil or 4 gallons of water plus 1 gallon of oil or the proper amount of crop oil concentrate per acre for Sand Shinnery Oak.

FOR SET-ASIDE ACRES: Once the Agricultural Stabilization & Conservation Service has released set aside acres for grazing, do not allow dairy animals or animals being finished for slaughter to forage on grass treated fields within 7 days of application. Do not harvest grass for hay within 30 days of application. Remove meat animals from treated pastures or rangeland 7 days before slaughter.

FOR CONSERVATION RESERVE PROGRAMS: DO NOT [illegible]

PASTURES AND RANGE LAND: NOTE: DO NOT [illegible] DO NOT [illegible] DO NOT [illegible] 30 DAY [illegible] DO NOT [illegible] animals [illegible]

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Broadleaf Weeds: [illegible]

Brush: [illegible] adjuvant [illegible] and other chaparral [illegible] oil or 4 gallons of water plus 1 gallon of oil is the proper amount of a crop oil concentrate per acre for Sand Shinnery Oak.

NON-CROP AREAS: To control plants susceptible to 2,4-D in drainage ditchbanks, fencerows, roadsides, and rights-of-way apply 2 quarts for woody plants or 1 quart for broadleaf weeds in 100 gallons of water. Oils or adjuvants may be added to increase effectiveness. Spray woody plants to run-off when fully leafed out and growing. Avoid spraying when plants are not actively growing such as mid-summer. Reseeding the treated areas should be delayed until the following season. Deep-rooted perennials may require repeated treatments.

SPOT TREATMENT: To [illegible] non-crop areas, use 4 oz. to 5 gallons of water, mix thoroughly, and spray to run-off. This high dosage rate may only be used where injury to [illegible] is tolerated.

NOTICE OF WARRANTY: Buyer assumes all risk of use, storage, or handling of this product when not used in strict accordance with directions given herein.

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