

407-430

PM23

1069

Mr. Gene R. Currie
Imperial, Inc.
P.O. Box 98
Shenandoah, IA 51601

SEP 30 1987

Dear Mr. Currie:

Subject: Amendments - Add Uses - Label Revisions
2,4-D 380 Amine Weed Killer
EPA Registration No. 407-430
Your Submission Dated September 21, 1987

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
 - a. In the Environmental Hazards section specify:

Do not contaminate waters used for irrigation or domestic purposes except as indicated in the directions for use on irrigation ditchbanks.
 - b. In the directions for Grasses (Seed Production) add the statement:

Do not graze dairy animals on cut forage for hay within 7 days of application.
3. Submit five (5) copies of your final printed labeling before you release the product for shipment.

15658:I:Mountfort:MF-7:KENCO:9/28/87:10/8/87:rw:vo:ek:rw:

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

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Richard F. Mountfort *RFM*
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Enclosure

3069

September 21, 1987
(Front Panel)

ACCEPTED
with comments
SEP 30 1987
407-430

IMPERIAL INC.

2,4-D
380 AMINE
WEED KILLER

ACTIVE INGREDIENT:

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic acid*	47.3%
INERT INGREDIENTS:	52.7%
Total	100.0%

*Isomer Specific by AOAC Method No. 6.275 13th Edition 1980

*2,4-Dichlorophenoxyacetic acid equivalent ... 39.3%

Contains 3.8 lb. 2,4-Dichlorophenoxyacetic acid per gallon

KEEP OUT OF REACH OF CHILDREN

(12 pt. type size)

DANGER

(18 pt. type size)

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 407-430
EPA Est. No. 407-IA-1^S, 407-MN-1^A
Superscript used corresponds to
letter in lot number

H-87-84-1

NET CONTENTS ----

Manufactured By
IMPERIAL INC.
Shenandoah, IA 51601

(Side Panel)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

Corrosive, causes eye damage. Do not get in eyes. Wear goggles or face shield when handling. Harmful if absorbed through skin. Avoid contact with skin. In case of contact, flush eyes or skin with plenty of water for at least 15 minutes. For eyes, call a physician. Get medical attention if skin irritation persists. Remove and wash contaminated clothing before reuse.

Harmful if swallowed. If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Seek medical attention.

Do not forage or graze treated grain fields within 2 weeks after treatment with 2,4-D. Do not feed treated straw to livestock. Do not graze pastures to dairy animals within seven days after treatment.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water except as indicated under aquatic use directions. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not contaminate waters used for irrigation or domestic purposes *except as indicated in the directions for use on Irrigation ditches.*

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

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

RE-ENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. The PRECAUTIONARY STATEMENTS should be read to workers as well as the instruction not to enter until sprays have dried. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "DANGER: Area treated with 2,4-D on (date of application). Do not enter without appropriate protective clothing until sprays have dried."

STORAGE AND DISPOSAL

(12 pt. type size)

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. If these wastes cannot be disposed of 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: 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.

When stored at temperatures below freezing, it may be necessary to warm contents to 70° F and mix thoroughly before using.

This product will control the listed plants and other 2,4-D susceptible species: Alligatorweed, tall and devil's beggarticks, blueweed (Texas), boxelder, broomweed, buckbrush, buckhorn plantain, burdock, burhead, buttercup, carpetweed, catnip, chamise, chickweed, chicory, cocklebur, coffeeweed, common mullein, cornflower, coyotebrush, croton, curly indigo, dandelion, docks, dog fennel, common duckweed, elderberry, annual fleabane, fanweed, galinsoga, wild garlic, goatsbeard, goldenrod, halogeton, hemp, henbit, jewelweed, jimsonweed, lambsquarters, locoweed, mallow (Venice), manzanita, marshelder, milkvetch, climbing milkweed, morning-glory (annual), nettles, onion (wild), Parrot feather, pennycrest, pepperweed (field), redroot and smooth pigweed, plantain, poorjoe, poison ivy, pokeweed, prickly lettuce, puncturevine, common purslane, rabbitbrush, radish (wild), ragweed (common and giant), rape (wild), redstem, rush, sagebrush (costal, big, sand), salsify, sand shinnery oak, sheep sorrel, shepherds purse, sicklepod, sneezeweed (bitter), sowthistle (annual), Spanishneedles, stinkweed, sumac, sunflower, sweetclover, tansymustard, tansy ragwort, tumbleweed, velvetleaf, Virginia creeper, waterhyacinth, waterlily, 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, nutgrass, 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 six to eight hours.

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

This product may be applied as a water based spray. Use coarse sprays to minimize drift. **DO NOT** apply where spray may come in contact with any desirable plants or susceptible crops other 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 to 4 gallons of spray per acre using flooding or flat fan nozzles with 20 pounds or less of pressure. If wind exceeds 7 miles per hour, spraying should stop. **DO NOT** apply with hollow cone or any other mist producing 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.

MIXING INSTRUCTIONS: WATER-BASED SPRAY -- Fill the equipment half full of water, agitate while adding this product, then add rest of water.

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 one 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	1/8
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 one pint of fertilizer. Add the required amount of this product to one 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 2 pints 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 not required, add half the fertilizer to the tank, make a premix of 1 part this product and 4 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 2 to 3 quarts per acre after planting but before corn emerges. Do not apply to sandy soils.

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

--Postemergence: Apply 1/2 to 1 pint per acre after corn is up. If corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. One to 1-1/2 pints per acre may be needed to control some weeds, but this rate may injure the corn. DO NOT apply from 2 weeks before tasseling to dough stage. DO NOT apply to open whorls. High moisture and temperature conditions may cause injury or brittleness. DO NOT cultivate for a week to 10 days after treatment.

--Late Season Weed Control (To reduce weeds that interfere with harvest and reduce weed seed production): After silks are completely brown apply 1 to 2 pints per acre.

SMALL GRAINS (Not underseeded with a legume) -- NOTE: Do not let dairy animals or animals being finished for slaughter forage or graze treated fields within 2 weeks after treatment. Use the lower dose rate for small annual or biannual weeds. Use the higher dose rate for perennial or hard to kill weeds.

--Spring Wheat, Barley, and Rye: Apply 2/3 to 1-1/3 pint per acre when grain is in full tiller stage (4 to 8 inches high) but before boot stage when weeds are small and actively growing. Two to 3 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 to 1-1/3 pints per acre only in spring before grain is in boot stage.

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

--Fall-seeded Oats Grown For Grain (Southern): Apply 1 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 1-1/2 to 2 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. Crop injury may also be increased by high moisture and temperature conditions. Check with your seed company and Extension Service for advice. Apply 1 pint per acre when plants are 5 to 15 inches tall. A higher rate of 1 1/2 pints per acre may be needed for some weeds, but chances of crop injury may increase. DO NOT use oil. DO NOT treat crop less than 5 inches tall or from boot to early dough stage. Use drop nozzles when crop is over 8 inches tall.

CONSERVATION RESERVE PROGRAMS AND SET-ASIDE ACRES -- DO NOT use on alfalfa, clover, other legumes, or newly seeded pastures.

--Broadleaf Weeds: Apply 1 to 2 quarts per acre in sufficient water for good coverage. Deep-rooted perennial weeds may require a higher rate or repeated treatments.

--Brush: Apply 4 quarts in 5 to 10 gallons of water plus the labeled amount of a crop oil concentrate or other adjuvant per acre for Buckbrush, Rabbitbrush, Sagebrush, Coyotebrush and other Chaparral Species. Apply 4 quarts in 4 gallons of water plus the proper amount of a crop oil concentrate or other adjuvant per acre for Sand Shinnery Oak.

FOR SET-ASIDE ACRES -- Once the Agricultural Stabilization Conservation Services has released Set-Aside Acres for grazing, do not allow dairy animals or animals being finished for slaughter to forage or graze treated fields within 2 weeks after treatment. DO NOT feed treated straw to livestock.

FOR CONSERVATION RESERVE PROGRAMS -- Do not harvest or graze at any time.

PASTURES AND RANGE LAND -- NOTE: DO NOT apply after heads form or when grass is in boot to milk stage when a seed crop is desired. DO NOT use on alfalfa, clover, other legumes, or newly seeded pastures. DO NOT allow dairy animals to graze treated areas within 7 days of application.

--Broadleaf Weeds: Apply 1 to 2 quarts per acre in sufficient water for good coverage. Deep-rooted perennial weeds may require a higher rate or repeated treatments.

--Brush: Apply 4 quarts in 5 to 10 gallons of water plus the labeled amount of a crop oil concentrate or other adjuvant per acre for Buckbrush, Rabbitbrush, Sagebrush, Coyotebrush and other Chaparral Species. Apply 4 quarts in 4 gallons of water plus the proper amount of a crop oil concentrate or other adjuvant per acre for Sand Shinnery Oak.

ESTABLISHED GRASSES -- (SEED PRODUCTION) Apply 1 to 4 pints in sufficient water needed for uniform application (see application section). Apply to established stands in spring from tiller to early boot stage. Do not spray from early boot to milk stage. New spring seedlings can be treated with the lower rate after grasses have at least five leaves. Perennial weed regrowth can be treated in the fall. DO NOT use on bentgrass unless injury can be tolerated. For best results, apply when soil moisture is adequate for good growth. *Do not grow any annuals or cut grass for hay within 7 days of application*

low, firm rate
FALLOW LAND -- Apply 1 to 2 quarts for established annual broadleaf weeds and 2 to 4 quarts for suppression of established perennial weeds such as Canada thistle and field bindweed. Apply when weeds are actually growing. DO NOT plant any crop for 3 months or until this product has disappeared from soil. Consult your Weed Control Specialist for information on local conditions.

NON-CROP AREAS -- To control plants susceptible to 2,4-D in drainage ditchbanks, fencerows, roadsides, and rights-of-way apply 4 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 -- For weeds in non-crop areas, use 6 ounces in 3 gallons of water, mix thoroughly, and spray to run-off. This high dosage rate may only be used where injury can be tolerated.

WEEDS AND BRUSH ON 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, Wyoming.

For control of annual and perennial broadleaf weeds, apply 1 to 2 quarts of product per acre in approximately 20 to 100 gallons of total spray. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder to control weeds, a repeat spray may be needed after 3 to 4 weeks for maximum results, using the same rates.

Apply no more than 2 treatments per season. For woody brush and patches of perennial broadleaf weeds, mix one gallon of product in 150 gallons of water. Wet foliage thoroughly, using approximately 1 gallon of spray solution per square rod.

SPRAYING INSTRUCTIONS: Low pressure (10 to 40 psi) power spray equipment should be used and mounted on a truck, tractor, or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is calm, 5 mph or less. Do not use on small canals (less than 10 CFS) where water will be used for drinking purposes.

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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 with an average of less than one-foot overspray 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 AQUATIC WEEDS IN LAKES, PONDS, DRAINAGE DITCHES, AND MARSHES -- Use 2-1/2 to 4-1/2 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 water line, and plants are actively growing. Your State Conservation Department or Game and Fish Commission may require permits for aquatic applications. Check with appropriate agencies.

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.

Do not contaminate water for irrigation or domestic purposes except as indicated in directions for use on irrigation ditchbanks.

Refer to product labeling for use restrictions to protect ENDANGERED SPECIES.

ENDANGERED SPECIES RESTRICTIONS

The following restrictions apply to use of this product after February 1, 1988.

Before use of this pesticide on range and/or pastureland in the counties listed below, you must obtain the PESTICIDE USE BULLETIN FOR PROTECTION OF ENDANGERED SPECIES for the county in which the product is to be used. The bulletin is available from your County Extension Agent, State Fish and Game Office, or your pesticide dealer. Use of this product in a manner inconsistent with the PESTICIDE USE BULLETIN FOR PROTECTION OF ENDANGERED SPECIES is a violation of Federal laws. ✓

ALABAMA: Cherokee, DeKalb, Etowah, Jackson and Marshall. **ARIZONA:** Cochise, Coconino, Gila, Graham, Maricopa, Mohave, Navajo, Pima, Pinal, and Yavapai. **CALIFORNIA:** Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Inyo, Lake, Los Angeles, Mendocino, Merced, Nevada, Orange, Sacramento, San Benito, San Bernardino, San Clemente Island, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Barbara Island, Solano, Sutter, Tehama, Ventura, and Yolo. **COLORADO:** Delta, Jackson, La Plata, Mesa, Montezuma and Montrose. **FLORIDA:** Charlotte, Franklin, Jefferson, Lee, Liberty, and Orange. **GEORGIA:** Brantley, Towns, and Wayne. **HAWAII:** Islands of Hawaii and Maui and the District of Lahaina. **IDAHO:** Idaho. **ILLINOIS:** DuPage, Lee, McHenry, Ogle, and Winnebago. **IOWA:** Butler, Clarke, Dickinson, Emmet, Howard, Kossuth, Lucas, Osceola, Story, and Winneshiek. **KENTUCKY:** Fleming, Nicholas, and Robertson. **MINNESOTA:** Cottonwood, Goodhue, Jackson, and Renville. **MISSOURI:** Christian, Dade, and Greene. **NEBRASKA:** Cherry, Garden, and Hooker. **NEVADA:** Nye. **NEW MEXICO:** Catron, Chaves, Dona Ana, Eddy, Lincoln, McKinley, Otero, San Juan, and Sierra. **NORTH CAROLINA:** Henderson. **OREGON:** Harney and Wallowa. **SOUTH CAROLINA:** Greenville and McCormick. **TENNESSEE:** Davidson, Rutherford, and Wilson. **TEXAS:** Bandera, Brazos, Brewster, Burleson, Culberson, Edwards, El Paso, Grimes, Harris, Hays, Hudspeth, Jim Wells, Kerr, Kimble, Kleburg, Nueces, Pecos, Presidio, Real, Refugio, Robertson, Runnels, San Augustine, Starr, Terrell, Uvalde, Val Verde, and Zapata. **UTAH:** Beaver, Cache, Carbon, Duchesne, Emery, Garfield, Grand, Iron, Kane, Piute, San Juan, Sanpete, Sevier, Uintah, Utah, Washington, and Wayne. **WISCONSIN:** Dane, Pierce, Rock, and Sauk.

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