

AUG - 8 1994

Ms. Nancy Huebl
Sandoz Agro, Inc.
1300 East Touhy Avenue
Des Plaines, IL 60018

Dear Ms. Huebl:

Subject: Sanvel® 720 Herbicide
EPA Registration No. 55947-20
Application Dated July 10, 1994, Requested
Amendments To Add Exclusionary Statements and
Remove Product from WPS

The proposed amendments to descope the subject pesticide product registration from the EPA Worker Protection Standard have been reviewed and found acceptable under the federal Insecticide, Fungicide and Rodenticide Act as amended, provided that you:

1. Delete the phrase "For terrestrial uses," from the wetlands statement in the Environmental Hazards section of the proposed label in compliance with PR Notice 93-8.
2. Submit five (5) printed copies of your final printed labeling before you release the product for shipment.

If these conditions are 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 labeling is enclosed for your records.

Sincerely yours,

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Joanne I. Miller
Product Manager (23)
Fungicide-herbicide branch
Registration Division (7500)

Enclosure

EWilson:DisketteABC13:08-05-94

ACCEPTED
with COMMENTS
In EPA Letter Dated

JULY 1994

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
55947-20

BANVEL® 720 HERBICIDE

**WATER SOLUBLE INDUSTRIAL HERBICIDE FOR CONTROL OF BRUSH AND
BROADLEAF WEEDS ON RIGHTS-OF-WAY, FOREST BRUSH, FENCE ROWS, NON-
IRRIGATION DITCHBANKS, WASTELAND, AND SIMILAR NONCROPLAND AREAS**

Active Ingredients:

Dimethylamine salt of dicamba (3,6-dichloro-o-anisic acid)* 12.82%

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid** 24.58%

Inert Ingredients: 62.60%

TOTAL 100.00%

* This product contains 10.6% 3,6-dichloro-o-anisic acid (dicamba)
or 1 lb. per gallon (120 g/L).

** This product contains 20.4% 2,4-dichlorophenoxyacetic acid (2,4-D)
or 1.9 lbs. per gallon (228 g/L).

** Isomer specific by AOAC method 978.05, 15th Edition.

**SHAKE WELL BEFORE USING
KEEP OUT OF REACH OF CHILDREN
CAUTION**

See side panel for additional precautionary statements

EPA Reg. No. 55947-20
Net Contents:

EPA Est. No. 55947-TX-1
Sandoz Agro, Inc.
Des Plaines, IL 60018

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

Harmful if swallowed. If swallowed, drink 1 or 2 glasses of water and induce vomiting by sticking finger down back of throat. Never induce vomiting or give anything by mouth to an unconscious person. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. In case of contact, wash exposed skin with plenty of soap and water; for eyes flush with water for 15 minutes and get medical attention.

When mixing, loading, or applying this product or repairing or cleaning equipment used with this product, wear eye protection (face shield or safety glasses), chemical-resistant gloves, long sleeved shirt, long pants, socks and shoes. For aerial applicators in enclosed cockpits and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required. ✓

Wash hands, face and arms with soap and water as soon as possible after mixing, loading, or applying this product. Wash hands, face and arms with soap and water before eating, smoking, or drinking. Wash hands and arms before using toilet. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry. Remove saturated clothing as soon as possible and shower. ✓

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. ✓

Apply this product only as directed on label.

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.

DIRECTIONS FOR USE

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

For use on plants in non-crop and non-timber areas only. Not for use on trees, crops, or other plants being grown for sale or other commercial use, or for commercial seed production, or for the production of timber or wood products, or for research purposes. ✓

The following directions apply to all uses of BANVEL 720 Herbicide.

Do not contaminate irrigation ditches or water used for domestic purposes.

Do not apply this product through any type of irrigation system.

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SENSITIVE CROP PRECAUTIONS

BANVEL 720 Herbicide may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. These plants are most sensitive to BANVEL 720 Herbicide during their development or growing stage. FOLLOW THE PRECAUTIONS LISTED BELOW WHEN USING BANVEL 720 HERBICIDE.

Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of BANVEL 720 Herbicide with the roots of desirable plants such as trees and shrubs.

Avoid making application when spray particles may be carried by air currents to areas where sensitive crops and other desirable plants are growing. Always make application where there is some air movement in order to determine the direction and distance of possible spray drift. Leave an adequate buffer zone between the area to be treated and desirable sensitive plants. Coarse sprays are less likely to drift out of target area.

Do not use aerial equipment to apply BANVEL 720 Herbicide when sensitive crops and plants are growing in the vicinity of area to be treated. ~~Broadcast applications of BANVEL 720 Herbicide made to conifer seedlings being grown as a crop or to established conifer plantations may result in injury.~~ ✓

Select nozzles designed to produce minimal amounts of fine spray particles. Drift control agents and equipment designed to minimize fine spray particles may be used.

Do not graze dairy animals on treated areas within 7 days after application.

Remove meat animals from treated areas 3 days prior to slaughter.

Do not cut grass for hay within 30 days of application.

To avoid injury to desirable plants, equipment used to apply BANVEL 720 Herbicide should be thoroughly cleaned (see PROCEDURE FOR CLEANING SPRAY EQUIPMENT on pages) before reusing to apply any other chemicals.

Consult your local or state authorities for possible application restrictions and advice concerning these and other special local use situations.

BANVEL 720 Water Soluble Industrial Herbicide for Brush and Broadleaf Weed Control is recommended for use on rights-of-way (utility, railroad, highway, pipeline), nonselective forest brush control (including site preparation*), fence rows, non-irrigation ditchbanks, wasteland and similar non-cropland areas.

*Do not use in Arizona in forests grown for commercial timber production.

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MIXING AND APPLICATION

If this container has a volume less than 5 gallons, all persons engaged in open pouring of this product must also wear coveralls or a chemical-resistant apron.

If this container has a volume of 5 gallons or more, 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.

BANVEL 720 Herbicide is a water-soluble formulation which can be applied using water or oil/water emulsions as the carrier. Herbicide adjuvants or other spray additives (emulsifiers, surfactants, wetting agents, drift control agents, or penetrants) may be used for wetting, penetration, or drift control. Read and follow all use recommendations and precautions on the label(s) of product(s) used. A COMPATIBILITY TEST (Page 10 of this booklet) should be made prior to tank mixing.

BANVEL 720 Herbicide may be applied with ground or aerial equipment for broadcast treatments, or with handgun, backpack, or similar types of equipment for treatment of individual clumps or small areas (spot treatments).

NOTE: To prepare oil/water emulsions, half fill spray tank with water. Add a suitable emulsifier. Then, with constant agitation, slowly add the appropriate amount of herbicide followed by the necessary oil (or slowly add a premix of emulsifier and oil). Finally, fill the rest of the tank with water. Maintain vigorous agitation during spray operation to prevent oil and water from forming separate layers.

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SPECIES CONTROLLED

When used as directed, BANVEL 720 Herbicide will control or suppress many herbaceous broadleaf weeds (annual, biennial, and perennial) as well as many unwanted woody plant and vine species. Species controlled include:

Buckwheat, Wild
 Carpetweed
 Chickweed
 Clover
 Cocklebur
 Daisy, English
 Henbit
 Knawel

Ragwort, Tansy

Bindweed, Field
 Carrot, Wild
 (*Queen Anne's Lace*)
 Dock, Curly
 Dogfennel
 Knapweed, Russian

Alder
 Ash
 Aspen
 Basswood
 Beech
 Birch
 Blackberry
 Cherry
 Creeper, Virginia
 *Creosotebush
 Cucumbertree
 Dogwood
 Elderberry
 Elm
 Gum
 Hawthorn
 Hemlock
 Honeysuckle
 Ivy, Poison
 Kudzu
 Locust
 Maple
 Oak
 Olive, Russian

*Suppression

ANNUALS

Lambsquarters
 Morningglory
 Mustard
 Pigweed
 Purslane
 Ragweed
 Smartweed
 Velvetleaf

BIENNIALS

Thistle, Musk

PERENNIALS

Milkweed
 Ragweed, Perennial
 Sorrel, Sheep
 Spurge, Leafy
 Thistle, Canada
 Toadflax, Dalmation

WOODY BRUSH AND VINES

Persimmon
 Pine
 Plum, Wild
 Poplar
 Puncturevine
 Raspberry
 Redcedar, Eastern
 Redvine
 Rose, Multiflora
 Sagebrush
 Sassafras
 Schinus
 (*Florida Holly,*
 Brazil Peppertree,
 Christmas-berry)
 Serviceberry
 Snowberry
 Spruce
 Sumac
 Sycamore
 Trumpetcreeper
 Waxmyrtle
 Willow
 Witchhazel
 Yaupon

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DIRECTIONS FOR USE

Regardless of the species to be controlled, spray volumes should be high enough to allow for good spray coverage. Make applications when weeds and brush are actively growing. The addition of surfactants can increase control. Biennials are best controlled when treated in the rosette stage. Regrowth may occur on resistant species. Retreatments may be made as needed; however, do not exceed a total of 6 gallons (6 lbs. a.i. dicamba + 12 lbs. a.i. 2,4-D) of BANVEL 720 Herbicide per treated acre during a growing season. To control additional weed species, BANVEL 720 Herbicide may be tank mixed with any of the products listed on page 8-9.

HERBACEOUS BROADLEAF WEED CONTROL: Apply 1 to 4 quarts BANVEL 720 Herbicide in 20 to 100 gallons of water per treated acre. 1 to 2 quarts of BANVEL 720 Herbicide is recommended for annuals, 2 to 4 quarts for biennials and easy-to-kill perennials, and 4 quarts for established perennials. Do not apply more than 2 gallons of product per treated acre.

BRUSH AND VINE CONTROL - High Volume Foliar Spot Applications: Mix 1 to 2 gallons of BANVEL 720 Herbicide in enough water to make 100 gallons of spray mix. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 2 gallons of product per treated acre. Direct the spray to treat all foliage, stems, and root collars to wet.

BRUSH AND VINE CONTROL - Broadcast Applications with Ground Equipment: Apply 1 to 2 gallons BANVEL 720 Herbicide in 20 to 100 gallons of water per treated acre. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 2 gallons of product per treated acre. Spray all foliage, stems and root collars to wet.

AERIAL APPLICATIONS: Aerial applications may be made to control either herbaceous or woody plants. Apply 1 to 4 quarts BANVEL 720 Herbicide (for herbaceous weeds) or 1 to 2 gallons BANVEL 720 Herbicide (for woody brush and vines) in 5 to 40 gallons of water per treated acre. Coverage is important, so increase spray volume when treating dense stands of brush or weeds. Do not apply more than 2 gallons of product per treated acre.

TANK MIX TREATMENTS

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, AND OTHER RESTRICTIONS. For broader spectrum control, BANVEL 720 Herbicide may be tank mixed with one or more of the following herbicides for noncropland uses (e.g. railroad, highway, pipeline, etc.) including forest management applications, if permitted by product labeling (e.g. 2,4-D). Add water to the spray tank prior to the addition of the tank mix products. Do not premix concentrates.

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Herbicide	Rate (lbs. a.i./treated acre)
Amitrol*	1.8 to 8.0
Asulam (Asulox®)	2.92 to 6.68
Atraton	4.77 to 39.96
Bromacil (Hyvar®)	1.6 to 24.0
Chlorflurecol (Maintain®)	2.0 to 3.0
Chlorsulfuron (Telar®)	0.1875 to 2.25 oz.***
Dalapon	4.25 to 12.75
Dicamba (Banvel®)	0.25 to 8.0****
Diquat	0.5 to 1.0
Diuron (Karmex®)	4.0 to 48.0
Fenac (Fenatrol®)	4.5 to 18.0
Fosamine ammonium (Krenite®)	6.0 to 12.0
Glyphosate (Roundup®)	0.75 to 3.75
Hexazinone (Velpar®)	0.675 to 10.8
Imazapyr** (Arsenal®)	0.5 to 1.5
Limit***	0.625
Maleic hydrazide (Royal Slo-Gro®)	2.25 to 4.5
Mefluidide (Embark®)	0.25 to 1.0
MSMA	1.0 to 2.475
Paraquat*	0.5
Picloram* (Tordon®)	2.0 to 3.0
Simazine* (Princep®)	4.8 to 40.0
Sulfometuron methyl (Oust®)	0.75 to 9.0 oz.***
Tebuthiuron (Spike®)	1.0 to 16.0
Triclopyr (Garlon®)	0.75 to 12.0
2,4-D	0.475 to 3.5*****
2,4-DP	0.5 to 11.1

Due to variations that may occur in formulated products and specific use ingredients (e.g. water supplies) a COMPATIBILITY TEST as described on page 10 of this booklet is recommended prior to actual tank mixing.

- * Restricted use pesticides limited to certified applicators.
- ** Imazapyr is the proposed common name for Arsenal.
Limit does not have a common name.
- *** Telar = 0.1875 to 2.25 oz. a.i./A (0.25 to 3.0 oz. product/A)
Oust = 0.75 to 9.0 oz. a.i./A (1.0 to 12.0 oz. product/A)
- **** Do not exceed a total of 8 lbs. a.i. dicamba per treated acre per growing season.
(BANVEL 720 Herbicide contains 1 lb. a.i. dicamba per gallon.)
- ***** Use of extremely hard water (500 ppm) may cause this product to form a precipitate when used in a tank mix with BANVEL 720 Herbicide. Do not exceed 4 lbs. total 2,4-D acid equivalent per acre per application per site. Do not exceed 16 lbs. total 2,4-D acid equivalent per treated acre per growing season.
(BANVEL 720 Herbicide contains the equivalent to 1.9 lbs./gal. 2,4-D acid.)

COMPATIBILITY TEST

Before mixing in the spray tank, it is advisable to test compatibility by mixing all components in a small container in proportionate quantities (see following table).

**Amount of Herbicide to Add to One Pint of Spray Carrier
(Assuming Volume is 25 Gallons per Acre)**

<u>HERBICIDE FORMULATIONS</u>	<u>RATE PER ACRE</u>	<u>LEVEL TEASPOONS</u>
Dry	1 lb.	1 ½
Liquid	1 pt.	½

If herbicide(s) do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested components are compatible. Usually incompatibility in any of the above described forms will occur within 5 minutes after mixing.

If components are incompatible, the use of a compatibility agent is recommended. Rerun the above COMPATIBILITY TEST with a suitable compatibility agent (¼ teaspoon is equivalent to 2 pints per 100 gallons of spray solution).

PROCEDURE FOR CLEANING SPRAY EQUIPMENT

The steps listed below are suggested for thorough cleaning of spray equipment following applications of BANVEL 720 Herbicide or tank mixes of BANVEL 720 Herbicide plus 2,4-D amine.

- 1) Hose down thoroughly the inside as well as outside surfaces of equipment while filling the spray tank half full of water. Flush by operating sprayer until the system is purged of the rinse water.
- 2) Fill tank with water while adding 1 quart of household ammonia for every 25 gallons of water. Operate the pump to circulate the ammonia solution through the sprayer system for 15 to 20 minutes and discharge a small amount of the ammonia solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
- 3) Flush the solution out of the spray tank through the boom.
- 4) Remove the nozzles and screens and flush the system with two full tanks of water.

The steps listed below are suggested for thorough cleaning of spray equipment used to apply BANVEL 720 Herbicide as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. BANVEL 720 Herbicide tank mixes with water-dispersible formulations require the use of a water/detergent rinse.

- 5) Complete step 1.
- 6) Fill tank with water while adding 2 lbs. of detergent for every 40 gallons of water. Operate the pump to circulate the detergent solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
- 7) Flush the detergent solution out of the spray tank through the boom.
- 8) Repeat step 1, and follow with steps 2, 3 and 4.

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STORAGE AND DISPOSAL

PROHIBITIONS

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

STORAGE

Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained and absorbed with clay granules, sawdust, or equivalent material for disposal.

PESTICIDE DISPOSAL

Pesticide wastes are toxic. Triple rinse pesticide from containers and use rinsates in the pesticide application. 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.

CONTAINER DISPOSAL

Plastic or Metal: After triple rinsing (or equivalent), offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, such as burning of plastic containers. If burned, stay out of smoke.

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REGISTERED TRADEMARKS

Arsenal® is a registered trademark of American Cyanamid Company.
Asulox® is a registered trademark of Rhone-Poulenc Chemical Company.
Embark® is a registered trademark of 3M.
Fenatrol® is a registered trademark of Union Carbide Agricultural Products Co., Inc.
Garlon®, and Tordon® are registered trademarks of Dow Chemical Company.
Hyvar®, Karmex®, Klonite®, Oust®, Telar®, and Velpar® are registered trademarks of E. I. duPont de Nemours & Co., Incorporated.
Limit® and Roundup® are registered trademarks of Monsanto Agricultural Products Company.
Maintain® is a registered trademark of U.S. Borax & Chemical Corporation.
Princep® is a registered trademark of Ciba-Geigy Corporation.
Royal Slo-Gro® is a registered trademark of Uniroyal, Incorporated.
Spike® is a registered trademark of Elanco Products Company.
BANVEL® is a registered trademark of Sandoz Ltd.

LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY

Notice: Read this Limitation of Warranty and Limitation of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Sandoz or seller. All such risks shall be assumed by buyer or user.

Sandoz warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, under normal use conditions, subject to the risks described above. Sandoz makes no other express or implied warranty of fitness or of merchantability or any other express or implied warranty.

In no event shall Sandoz or seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. The exclusive remedy of the user or buyer, and the exclusive liability of Sandoz or seller for any and all claims, losses, injuries or damages (including claims based on breach of warranty, contract, negligence, tort, strict liability or otherwise) resulting from the use or handling of this product, shall be the return of the purchase price of the product or, at the election of Sandoz or seller, the replacement of the product.

Sandoz and seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, which may not be modified by any oral or written agreement.

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