



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

AUG 5 1998

John Wrubel
American Cyanamid Company
Agricultural Research Division
P.O. Box 400
Princeton, NJ 08543-0400

Subject: Cadre DG Peanut Herbicide
EPA Registration Number 241-381
Your submissions dated April 27 and June 9, 1998

Dear Mr. Wrubel:

As you discussed with Tobi Colvin-Snyder of my staff, your April 27 submission was not reviewed because all of the revisions in that submission are also included in your June 9 submission.

The label amendment, submitted June 9, 1998, in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable, provided that you adhere to the following requirements:

1. On page 9, as you suggested in a telephone conversation with Tobi Colvin-Snyder, add the following sentence to the end of the paragraph that begins "Application of products...":

Always follow the more restrictive label limitations and precautions.

2. Submit one copy of your final printed labeling before you release the product for shipment.

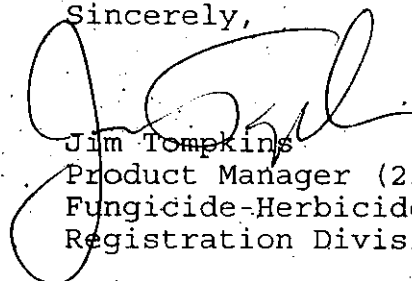
If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

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

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If you have any questions about this letter, please contact
Tobi Colvin-Snyder at 703-305-7801.

Sincerely,



Jim Tompkins
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (7505C)

**CADRE® DG Peanut Herbicide
WATER SOLUBLE PACKETS**

**FOR USE ONLY IN PEANUTS IN THE STATES OF ALABAMA, ARIZONA, ARKANSAS,
FLORIDA, GEORGIA, MISSISSIPPI, NEW MEXICO, NORTH CAROLINA, OKLAHOMA,
SOUTH CAROLINA, TEXAS, AND VIRGINIA**

ACTIVE INGREDIENT:

(±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-methyl-3-pyridinecarboxylic acid..... 70.0%

INERT INGREDIENTS..... 30.0%

TOTAL..... 100.0%

(1 water soluble packet contains 0.125 pounds of active ingredient as the free acid)

U.S. Patent No. 4,798,619

EPA Reg. No. 241-381

EPA Est. No. 3

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

See Next Page for Additional Precautionary Statements

In case of an emergency endangering life or property involving this product, call collect, day or night, area code 973-683-3100

Net Contents:

®Registered Trademark of American Cyanamid Company

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

AUG 5 1998

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
241-381

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users Should:

- Wash hands before eating, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial use only. 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.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

DIRECTIONS FOR USE

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.

This labeling must be in the possession of the user at the time of pesticide application.

Observe all cautions and limitations on this label and on the labels of products used in combination with CADRE DG. Do not use CADRE DG other than in accordance with the instructions set forth on this label. The use of CADRE DG not consistent with this label may result in injury to crops. Keep containers closed to avoid spills and contamination.

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

DO NOT graze or feed treated peanut hay to livestock.

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
- shoes plus socks

STORAGE AND DISPOSAL

PROHIBITIONS: DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: DO NOT reuse outer packaging. Dispose of outer packaging in a sanitary landfill, by incineration or, if allowed by State and local authorities by burning. If burned, stay out of smoke.

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, herbicide resistant weed populations, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF CADRE DG. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

American Cyanamid Company makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY. User assumes the risk of any use contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable by American Cyanamid Company.

USES WITH OTHER PRODUCTS (TANK-MIXES)

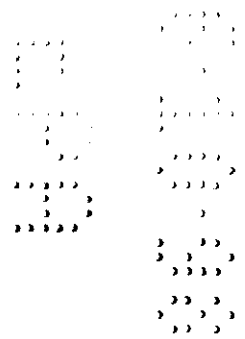
If this product is used in combination with any other product except as specifically recommended in writing by American Cyanamid Company then American Cyanamid Company shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. If used in combination recommended by American Cyanamid Company, the liability of American Cyanamid Company shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the American Cyanamid Company product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the American Cyanamid Company product.

GENERAL INFORMATION

CADRE DG can be applied early postemergence in peanuts. Refer to the specific treatment under the "APPLICATION INSTRUCTIONS" section of the label.

The weed killing activity involves uptake of CADRE DG by weed roots and/or foliage and rapid translocation to the growing points. After CADRE DG application, susceptible weeds may show yellowing and weed growth will stop. Several days may be required before the complete death of susceptible weeds. Adequate soil moisture is important for optimum CADRE DG activity. When adequate soil moisture is present, CADRE DG will have residual activity on susceptible germinating weeds; activity on established weeds will depend on the weed species and the depth of its root system in the soil. A timely cultivation made at least 14 days after CADRE DG application may improve general herbicide performance, particularly when adequate soil moisture is not present.

A CADRE DG application may result in some peanut yellowing and/or a reduction in vine growth. These effects are temporary and will not impact peanut yields.



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Naturally occurring biotypes* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonylureas (e.g., Accent™, Basic™, Classic™, Concert™, Exceed™, Permit™, Pinnacle™, etc.), the sulfonamides (e.g., Broadstrike™, etc.) and the pyrimidyl benzoates (e.g. Staple™, etc.) If naturally occurring ALS/AHAS resistant biotypes are present in a field, CADRE DG and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide should be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

*A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

Use of CADRE DG is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Replanting: If replanting is necessary in a field previously treated with CADRE DG, the field may be replanted to peanuts. Rework the soil no deeper than 2 inches. DO NOT apply a second treatment of CADRE DG.

MIXING INSTRUCTIONS

Fill the spray tank one-half to three-quarters full with clean water. Add the required number of CADRE DG soluble packets to the spray tank while agitating. Fill the remainder of the tank with water.

Add a nonionic surfactant or crop oil concentrate to the spray tank. Maintain agitation while spraying to ensure a uniform spray mixture. An antifoaming agent may be added to the tank if needed.

When tank-mixing CADRE DG with recommended herbicides, add CADRE DG to the spray tank first and make sure it is thoroughly mixed before adding the other herbicide.

To avoid injury to sensitive crops, spray equipment used for CADRE DG applications must be drained and thoroughly cleaned with water before applying other products or spraying other crops.

SPRAYING INSTRUCTIONS

DO NOT apply if wind conditions, temperature inversion conditions, or other conditions may cause drift onto adjacent areas or sensitive crops. Sensitive crops include, but are not limited to, leafy vegetables and cotton. DO NOT apply if rainfall is threatening. Rainfall within 3 hours after CADRE DG application may reduce weed control.

GROUND APPLICATIONS:

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. A spray pressure of 20 to 40 psi is recommended.

Adjust the boom height to ensure proper coverage of weed foliage (according to the manufacturer's recommendation). Use only standard flat-fan nozzle tips.

DO NOT apply by helicopter, airplane, or any other aerial equipment.

Avoid overlaps when spraying.

APPLICATION INSTRUCTIONS

CADRE DG is active on many grass weeds, but a soil-active grass herbicide such as PROWL®, or Sonalan™ should be applied according to label directions before CADRE DG use.

Apply CADRE DG at a rate of 1.44 ounces per acre (0.063 lbs a.i./A) plus an approved spray adjuvant (refer to the SPRAY ADJUVANTS section of this label) early postemergence to control broadleaf and grass weeds in peanuts. Refer to the WEEDS CONTROLLED chart below for weed species controlled.

WEEDS CONTROLLED

An early postemergence application of CADRE DG, at a use rate of 1.44 ounces per acre*, will control or suppress the weeds listed below.

<u>BROADLEAF WEEDS CONTROLLED</u>	<u>MAXIMUM HEIGHT AT APPLICATION</u> (inches)
Anoda, Spurred	2
Burgherkin	2
Carpetweed	2
Citronmelon	2
Cocklebur, Common	6
Crownbeard, Golden	2
Indigo, Hairy	2
Morningglory	
Cypressvine	3
Entireleaf	3
Ivyleaf	3
Pitted	3
Smallflower	3
Tall	3
Pigweed spp.	4
Poinsettia, Wild	2
Pusley, Florida	2
Radish, Wild	4
Redweed	4
Senna, Coffee	3
Sicklepod	3
Sida, Prickly	2
Spurge spp.	2
Starbur, Bristly	2
Velvetleaf	2
 <u>BROADLEAF WEEDS SUPPRESSED</u>	
Beggarweed, Florida	2
Lambsquarter, Common	2
Ragweed, Common	2

GRASS WEEDS CONTROLLED**

Crabgrass	
Large	4
Smooth	4
Crowfootgrass	2
Johnsongrass	
Rhizome***	8-10
Seedling	4
Panicum	
Fall	4
Texas	2
Sandbur spp.	4
Signalgrass, Broadleaf	4

GRASS WEEDS SUPPRESSED

Goosegrass	2
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SEDGES CONTROLLED

Nutsedge	
Purple	4
Yellow	4

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- * One water soluble packet of CADRE DG will treat 2 acres of peanuts at the 1.44 ounce per acre rate.
 - ** CADRE DG will control many grass weeds which escape from the application of a soil-applied grass herbicide. However, CADRE DG should be used as a component of a grass weed control program and following the application of a soil-applied grass herbicide. Grass weeds must be present at the time of application to obtain control.
 - *** For control of rhizome johnsongrass, weeds must be at least 8 to 10 inches tall at application. Smaller weeds do not generally have enough leaf surface area to take up enough CADRE DG for complete control.

SPRAY ADJUVANTS

Always include a nonionic surfactant or crop oil concentrate with CADRE DG applications. Use a nonionic surfactant with at least 80% active ingredient at one quart of surfactant for each 100 gallons of spray solution. If using crop oil concentrate, add one quart per acre. Under adverse application conditions (dry weather, larger weeds), the use of a crop oil concentrate at one quart per acre, and fertilizer (spray grade ammonium sulfate at 2.5 lbs per acre or liquid fertilizer at 1-2 quarts per acre), is recommended.

CULTIVATION

The control of difficult weeds (such as Florida beggarweed) and weeds treated under dry conditions is often greatly enhanced by a timely cultivation. Cultivation should be done at least 14 days after CADRE DG application. DO NOT cultivate prior to 14 days after CADRE DG application since this timing is too early to take full advantage of the weed control activity offered by CADRE DG. In addition, cultivations should be shallow to avoid excessive movement of treated soil and to avoid exposing weed seed buried deep within the soil.

WEED SCIENTIFIC NAMES

BROADLEAF WEEDS

Anoda, Spurred
 Beggarweed, Florida
 Burgherkin
 Carpetweed
 Citronmelon
 Cocklebur, Common
 Crownbeard, Golden
 Indigo, Hairy
 Lambsquarters, Common
 Morningglory
 Cypressvine
 Entireleaf
 Ivyleaf
 Pitted
 Smallflower
 Tall
 Pigweed spp.
 Poinsettia, Wild
 Pusley, Florida
 Radish, Wild
 Ragweed, Common
 Redweed
 Senna, Coffee
 Sicklepod
 Sida, Prickly
 Spurge spp.
 Starbur, Bristly
 Velvetleaf

(Anoda cristata)
(Desmodium tortuosum)
(Cucumis anguria)
(Mollugo verticillata)
(Citrullus lanatus var. citroides)
(Xanthium strumarium)
(Verbesina encelioides)
(Indigofera hirsuta)
(Chenopodium album)

(Ipomoea quamoclit)
(Ipomoea hederacea var. integruscula)
(Ipomoea hederacea)
(Ipomoea lacunosa)
(Jacquemontia tamnifolia)
(Ipomoea purpurea)
(Amaranthus spp.)
(Euphorbia heterophylla)
(Richardia scabra)
(Raphanus raphanistrum)
(Ambrosia artemisiifolia)
(Melochia corchorifolia)
(Cassia occidentalis)
(Cassia obtusifolia)
(Sida spinosa)
(Euphorbia spp.)
(Acanthospermum hispidum)
(Abutilon theophrasti)

GRASS WEEDS

Crabgrass
 Large
 Smooth
 Crowfootgrass
 Goosegrass
 Johnsongrass
 Panicum
 Fall
 Texas
 Sandbur spp.
 Signalgrass, Broadleaf

(Digitaria sanguinalis)
(Digitaria ischaemum)
(Dactyloctenium aegyptium)
(Eleusine indica)
(Sorghum halepense)

(Panicum dichotomiflorum)
(Panicum texanum)
(Cenchrus spp.)
(Brachiaria platyphylla)

SEDGES

Nutsedge
 Purple
 Yellow

(Cyperus rotundus)
(Cyperus esculentus)

American Cyanamid Company
North America Agricultural Products Division
Crop Protection Products Department
Parsippany, New Jersey 07054 ©1998

