

PM 25 7969-81

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U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460	EPA REGISTRATION NO. <b>7969-81</b>	DATE OF ISSUANCE <b>SEP 29 1988</b>
	TERM OF ISSUANCE	
	NAME OF PESTICIDE PRODUCT <b>Pyramin DF Herbicide</b>	

**NOTICE OF PESTICIDE:**  REGISTRATION  
 REREGISTRATION  
 (Under the Federal Insecticide, Fungicide,  
 and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

BASF Corporation  
 Agricultural Chemicals Group  
 100 Cherry Hill Road  
 Parsippany, NJ 07054

**NOTE:** Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

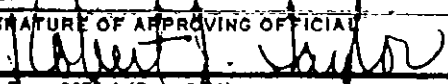
Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) 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:
  - a. Add the phrase "EPA Registration No. 7969-81."
  - b. Change the Environmental Hazards statements to:
 

Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment washwaters.
  - c. Move the Environmental Hazards statements to the top of the side or back panel of the label, preceding the Directions for Use.
  - d. Move the Storage and Disposal instructions to immediately under the "Directions for Use" heading or at the end of Directions for Use.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL 	DATE <b>9/29/88</b>
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e. Comply with the Chemigation PR Notice.

3. Submit the following data by January 1, 1989:

(61-2) Description of Beginning Materials and Manufacturing Process;

(62-2) Certification of Ingredient Limits;

(62-3) Analytical Methods to Verify Certified Limits;

(63-13) Stability; and

(63-17) Storage Stability.

4. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

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

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

Robert J. Taylor  
Product Manager (25)  
Fungicide-Herbicide Branch  
Registration Division (TS-767C)

Enclosures

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Revised 7/16/87

Pyramin DF  
Herbicide

For weed control in sugar beets and red table beets.

A dry flowable formulation containing:

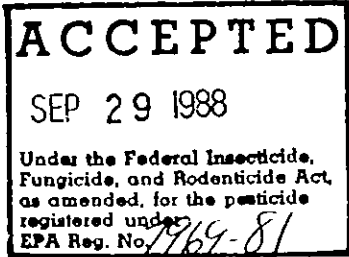
Active ingredients*	.....67.7%
Pyrazon (5-amino-4-chloro-2-phenyl-3(2H)-pyridazinone ...	65.0%
Related aminochloro and dichlorophenyl pyridazinones.....	2.7%
Inert ingredients .....	32.3%

Pyrazon ANSI equals chloridazon BSI et al.

EPA REG. NO. 7969-  
KEEP OUT OF REACH OF CHILDREN.

CAUTION  
Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before reuse.

State of practical treatment:  
In case of contact: for skin, wash with plenty of soap and water; for eyes, flush with plenty of water. Get medical attention if irritation persists.



Net Contents: 10 Pounds

BASF Corporation  
Parsippany, New Jersey 07054

Made in West Germany

## Directions For Use

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

Among the weeds controlled by Pyramin DF herbicide are lambsquarters, pigweed, ragweed, shepherdspurse, fanweed, purslane, nightshade, mustard, henbit, smartweed, nettleleaf goosefoot and velvetleaf (Michigan and Ohio only).

Pyramin DF will not consistently provide acceptable control of annual grasses. Where grasses are a serious problem, follow directions on this label for control of grasses with specific combinations featuring Pyramin DF or use a separate treatment for grasses labeled for use in sugar beets or red table beets.

The correct method of application for Pyramin DF varies depending on area and cultural practices. Always follow the label recommendations which fit your area and cultural system. Check with local experts to ensure that you are applying Pyramin DF according to label directions.

See sections entitled Mixing Directions and Precautions.

For band treatments see section entitled Band Treatment in each crop section.

### Mixing Directions

Use 20 to 40 gallons of water per acre, broadcast basis, or proportionately less for banded applications.

Fill sprayer tank halfway with water. Start agitation with a mechanical or good bypass agitator. Assure adequate hydraulic agitation. While agitating, add the required amount of Pyramin DF. Add water to fill tank to required volume.

Continue agitation during spraying. Mix only the amount of spray that will be used immediately.

### Restrictions and Limitations

Do not use this product on soils classified as sands or loamy sands because this may result in crop injury.

Do not use preemergence on muck and peat.

Do not use on soils with organic matter higher than 5%, except in the Red River Valley (see special section), or less than 2 1/2% in Michigan/Ohio for velvetleaf control (see special section), since this may result in unsatisfactory weed control or crop injury.

Do not use Pyramin DF as a broadcast treatment in the dry irrigated regions.

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Restriction and Limitations (cont.)

If the beet crop is lost due to climatic or soil conditions following application of Pyramin DF, do not plant other crops in the band treated with Pyramin DF during the same season. If fields are replanted to sugar beets reseed into the treated band. Do not use Pyramin DF again as a preemergence treatment on the replanted beets because crop injury may result.

Do not use the same spray equipment for other purposes unless thoroughly cleaned. Coarse sprays are less likely to drift. Do not store near fertilizers, seeds, insecticides, or fungicides. Do not contaminate water used for irrigation or domestic purposes.

Where this material is used in combination with TCA, do not use treated beet tops for feed or forage.

Always follow the restrictions and limitations for all products used in a tank mixture. The most restrictive labeling applies in the case of a tank mixture.

Environmental Hazards

Do not apply directly to lakes, ponds or streams.

Do not contaminate water by cleaning of equipment or disposal of wastes.

Storage and Disposal

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

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

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

SUGAR BEETS

Two applications of Pyramin DF can be used in the Central and Eastern states only. Do not apply more than a total of 11.7 pounds per acre per season as excessive chemical residue may result.

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## Preemergence Applications

CENTRAL AND EASTERN STATES (MI, MN, ND, OH)

### General Information

#### Preemergence without Irrigation

Apply Pyramin DF at the rate of 4.8 to 5.7 pounds per acre in enough water for good coverage. Use the lower rate on sandy loam soils. Spray immediately after beet seeds are planted and before beets and weeds emerge.

Where dry weather follows application and weeds emerge, use a shallow cultivation before weeds are 2 inches tall. Otherwise, do not disturb or cover the treated band.

#### Minnesota, North Dakota

For Soils with Organic Matter of 5% to 7%

In the Red River Valley only, for the control of redroot and prostrate pigweeds, common lambsquarters and wild mustard in soils with organic matter content of 5% to 7%, apply Pyramin DF at the rate of 11.7 pounds per acre as a single preemergence application. Spray immediately after beet seeds are planted and before beets and weeds emerge. Do not follow with a postemergence treatment of Pyramin DF. Do not use the 11.7 pound rate on soils with organic matter higher than 7% or less than 5% since this may result in unsatisfactory weed control or crop injury, respectively.

Where dry weather follows application or where annual grasses are also a problem, refer to section entitled Preemergence without irrigation.

#### Michigan and Ohio

#### For Velvetleaf Control

In Michigan and Ohio only, for the control of velvetleaf, apply Pyramin DF at the rate of 9.3 pounds per acre as a single preemergence application. Spray immediately after beet seeds are planted and before beets and weeds emerge. Do not use the 9.3 pound rate on soils with organic matter higher than 5% or less than 2 1/2% since this may result in unsatisfactory weed control or crop injury, respectively.

Where dry weather follows application or where annual grasses are also a problem, refer to section entitled Preemergence without irrigation.

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PLAINS, MOUNTAIN AND WESTERN STATES  
(CA, CO, ID, KS, NE, OR, TX, UT, WA, WY)

#### Preemergence with Sprinkler Irrigation

If sprinkler irrigation is used, apply Pyramin DF as a banded surface preemergence application. Do not incorporate Pyramin DF where sprinkler irrigation is to be used, as crop injury may result. Do not use broadcast treatments. Prepare the seedbed and preirrigate to the field capacity of the soil. Plant seed 3/4 to 1 inch deep.

Immediately, or within 3 days after planting, apply Pyramin DF at the rate of 4.8 pounds per acre on low organic matter loam soils or 5.7 pounds per acre on loam and clay soils. Follow directions for banded treatments (see section entitled Band Treatment) and adjust application rates accordingly. Follow with no more than 3/4 inch of sprinkler irrigation per set before beets and weeds emerge, as greater amounts may cause beet injury. Repeat as needed to get good beet emergence. Do not exceed 3/4 inch of sprinkler irrigation per set until the beets have 2 true leaves. (Do not count the cotyledonary leaves, which are the first 2 leaves to appear.)

#### Preplant Incorporation with Furrow Irrigation

On fields to receive furrow irrigation, use the following planting procedure. Prepare seedbed or form beds for planting. On low organic matter and sandy loam soils apply and incorporate Pyramin DF at the rate of 4.8 pounds per acre. On loams, silt loams and clays, use the 5.7 pounds per acre rate. Follow directions for banded treatments (see section entitled Band Treatment) and adjust application rates accordingly. Use a rotary tiller type of incorporator and incorporate not more than 2 inches deep. Plant beets and furrow irrigate. Since Pyramin DF must have moisture to control weeds effectively, irrigate until tops of beds are thoroughly wetted.

Repeat furrow irrigation as often as necessary to ensure good beet emergence and growth. Sprinkler irrigation can be substituted for furrow irrigation after the beets have developed 2 true leaves. (Do not count the cotyledonary leaves, which are the first 2 leaves to appear.)

To assure planting into treated bands, do the following things all in one tractor operation: (1) spray Pyramin DF, (2) incorporate, and (3) plant beets. Treat a band 1 or 2 inches wider than the tiller head used. Do not incorporate Pyramin DF with a disk because unsatisfactory weed control and sugar beet injury may result.

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TANK MIXES

Pyramin DF + TCA herbicides  
(Michigan, Minnesota, N. Dakota, Ohio)

Where annual grasses are also a problem, apply 4 lbs. to 8 lbs. per acre of TCA with the recommended rate of Pyramin DF. Follow label directions for both products.

Pyramin DF + Nortron<sup>R</sup> EC herbicides for Winter-grown Sugar Beets in California

In fields where wild oats and volunteer cereals are expected to be a problem, use a tank mixture of Pyramin DF plus Nortron at recommended rates listed in the following rate table. When mixing Pyramin DF in the spray tank with Nortron, add Pyramin DF first and agitate spray solution thoroughly; then add Norton.

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**Tank Mix of Pyramin DF + Nortron EC  
Application Rate Table**

Soil Texture	PYRAMIN DF		NORTRON EC <sup>(2)</sup>	
	Per Acre		Per Acre	
	Broadcast (For calibration purposes only)	10-inch Band Width <sup>(1)</sup> 30" Row	Broadcast (For calibration purposes only)	10-inch Band Width <sup>(1)</sup> 30" Row
Coarse Textured Soils: Sands, loamy sands and sandy loams	Not Recommended			
Medium Textured Soils: Silt loams, clay loams which contain less than 3% organic matter	4.8  Pounds	1.6  Pounds	4  Quarts	2 2/3  Pints
Fine Textured Soils: Clay loams which contain more than 3% organic matter and clays	4.8  Pounds	1.6  Pounds	5  Quarts	3 1/2  Pints
(1) For other band or row widths, adjust rates in proportion to the area actually treated. Do not apply this mixture broadcast. (2) Nortron EC (1.5 lb. active ingredient per gallon).				

Under sprinkler irrigation or where natural rainfall is adequate, apply this tank mix preemergence. See Preemergence with Sprinkler irrigation above for directions and precautions regarding application of sprinkler irrigation. Where furrow irrigation is to be used, apply this tank mix preplant. See Preplant Incorporation with Furrow Irrigation above for directions and precautions regarding application of furrow irrigation. Do not use the mixture under conditions where Nortron alone is not recommended. Before use, read label for Nortron for additional information and precautions.

Pyramin DF + Antor<sup>R</sup> 4ES herbicides  
(In California, Northwest, Intermountain States, Michigan and Ohio)

For control of a mixed population of weeds included on the labels for Pyramin DF and Antor 4ES herbicides, apply a tank mix according to the directions presented below by region. Observe all cautions and limitations on labeling of both products.

Mixing directions: Add Pyramin DF to half the spray volume of water, agitate spray solution thoroughly, and then add Antor 4ES. Agitate while filling to final spray volume and during spraying.

California

For preplant incorporation with furrow irrigation, apply the tank mix to the soil surface prior to, or at time of planting and incorporate to a depth of 1 to 2 inches using a rotary type tiller. Use the recommended rates in Application Rate Table. Irrigate until tops of beds are thoroughly wetted.

For preemergence application with sprinkler irrigation, apply the tank mix to the soil surface at time of planting or shortly after, but prior to weed germination, using the rates recommended in Application Rate Table. Irrigate prior to crop and weed germination. Follow directions and precautions on this label for use preemergence with sprinkler irrigation. Do not exceed 3/4 inch of sprinkler irrigation per set until the sugar beets have two true leaves.

Northwest, Intermountain States

For use preemergence under sprinkler irrigation only, apply the tank mix to the soil surface at the time of planting or shortly after, but prior to weed germination, using the rates recommended in Application Rate Table. Irrigate prior to crop and weed germination. Follow directions and precautions on this label for use preemergence with sprinkler irrigation. Do not exceed 3/4 inch of sprinkler irrigation per set until the sugar beets have two true leaves.

## Michigan and Ohio

For use preemergence without irrigation, apply the tank mix to the soil surface at the time of planting or shortly after, but prior to weed germination using rates recommended in Application Rate Table.

Tank Mix of Pyramin DF & Antor 4ES Application Rate Table			
Area	Soil Texture	Broadcast Rate/Acre	
		Pyramin DF	Antor 4ES
California, Northwest, Intermountain States, Michigan and Ohio	Coarse: Sandy loams only.	4.0 Pounds	2 Quarts
	Medium: Loams, silt loams and clay loams containing less than 3% organic matter.	4.8 Pounds	2 to 3 (2) Quarts
	Fine: Clay loams and clays containing 3%-5% organic matter.	4.8 Pounds	3 Quarts
(1) See section of both labels on Band Application for calculation of proportional amounts.			
(2) Use higher rate on clay loam soils.			

### Postemergence Application (All States) General Information

Timing is very important. Observe weed growth daily. Treat after beets have 2 expanded true leaves (do not count the cotyledonary leaves, which are the first 2 leaves to appear) and before any weeds have more than 2 to 4 true leaves. Treatments on larger weeds will not be effective.

Good soil moisture prior to treatment is necessary. If soil is dry, irrigation is recommended prior to chemical application. For optimum performance, a postemergence application should be followed with moisture. Where furrow irrigation is possible, irrigate shortly after application to the point that top surface of beds has reached maximum water-holding capacity. If sprinkler irrigation is used, do not apply more than 3/4 inch of water on the first set after the herbicide is applied.

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Do not apply Pyramin DF if weeds are stressed by lack of moisture, excessive heat, high winds, frost or low temperature, as insufficient weed control may result. Wait until more favorable conditions prevail before applying.

In the Central and Eastern States, these combinations can follow preemergence use of Pyramin DF provided a total of 11.7 lbs. Pyramin DF per acre per season is not exceeded.

The addition of a surfactant, or its equivalent, often improves results of postemergence treatments. However, certain surfactants will seriously injure sugar beets. Consult your Experiment Station or Extension Service Weed Specialist for the suggested surfactant in your area.

TANK MIXES

Pyramin DF + Crop Oil Concentrate or Nonphytotoxic Emulsifiable Oil

Addition of crop oil concentrate or a nonphytotoxic emulsifiable oil to Pyramin DF may improve broadleaf weed control and allow greater flexibility in timing of successful applications relative to size of weeds. Apply 4.8 to 5.7 lbs. Pyramin DF per acre according to soil type and organic matter content with 1 quart of crop oil concentrate or 1 gallon of nonphytotoxic, emulsifiable oil per acre (broadcast basis). Use sufficient spray solution for good coverage, 40-100 gallons per acre treated.

A nonphytotoxic oil should contain 2% emulsifier and be characterized as having an unsulphonated residue of over 95%.

Add Pyramin DF first to half the spray volume of water and mix thoroughly in the spray tank; then add the emulsifiable oil with the agitator running. Finally, fill the tank with water to required volume.

Do not use oil when maximum temperatures are expected to exceed 90°F at any time during the five-day period following the application, as excessive crop injury may result.

For specific directions for using a nonphytotoxic oil with Pyramin DF in your locality and for recommended brands of oil to use, consult your local sugar company fieldman or BASF representative.

Increased temporary sugar beet injury has been observed where Pyramin DF in combination treatments has followed preplant applications of Tillam<sup>R</sup> or Ro-Neet<sup>R</sup> herbicides.

Pyramin DF + Dalapon herbicides

Where grass and broadleaf weeds are present, use 4.8 to 5.7 lbs. of Pyramin DF per acre mixed with dalapon, according to state recommendations and directions on the dalapon product label.

Where broadleaf weeds are the principal problem, use Pyramin DF with 1 gallon per acre of nonphytotoxic, emulsifiable oil (for directions, see above). These mixtures may burn beet leaves or cause temporary stunting under some conditions. Do not apply when sugar beet foliage is wet.

Pyramin DF + Betamix or Betanex EC herbicides

Michigan and Ohio

For broad spectrum weed control including pigweed, kochia, wild buckwheat, lambsquarters, smartweed, mustard, nightshade, ragweed and green and yellow foxtails, combine 4.8 lbs. of Pyramin DF and 3 quarts of Betanex or Betamix per acre. This combination provides residual as well as quick postemergence weed control. Follow the directions on the labels of both products. Add the Betamix or Betanex to the half-full spray tank after the Pyramin DF is adequately suspended. Do not add additional surfactants to the mixture. Do not apply in more than 30 gallons of water per acre.

Band Treatment

When spraying a band over the row, the amount of Pyramin DF applied per banded acre is reduced in proportion to the area actually treated. Example: to spray a 7-inch band over beets in rows 28 inches apart, the amount of Pyramin DF applied per banded acre is 1/4 the amount recommended for broadcast applications. 4.8 lbs/acre x 1/4 of area banded = 1.2 lbs. per banded acre.

Band and Row Width	Pounds Pyramin DF Per Banded Acre for Broadcast Rate of:	
	4.8 Lbs/Acre	5.7 Lbs/Acre
7-inch band on 22-inch rows	1.6	2.0
7-inch band on 28-inch rows	1.2	1.6
10-inch band on 22-inch rows	2.0	2.8
10-inch band on 28-inch rows	1.6	2.0

Using planter-mounted band sprayers ensures that all planted beets are treated, and that band width and rate of chemical are uniform.

RED TABLE BEETS

Preemergence Application

Apply 4.8 to 5.7 lbs per acre of Pyramin DF in enough water for good coverage. Use lower rate on sandy loam soils. Spray after beet seeds are planted but before beets and weeds emerge.

If rain does not fall within 5 to 10 days after treatment, beets should be irrigated to activate Pyramin DF. If irrigation is not possible, use a shallow cultivation before weeds are 2 inches tall.

Early Postemergence Application

Apply 5.7 lbs. per acre of Pyramin DF.

Timing is very important. Observe weed growth daily. Treat after beets have 2 expanded true leaves and before any weeds have more than 2 to 4 true leaves. This is usually within 2 weeks after planting. Treatment on larger weeds will not be effective.

Note: Pyramin DF may be used both pre and postemergence in the same season. Follow directions given on this label for each type of application.

Band Treatment

When spraying a band over the row, the amount of Pyramin DF applied per acre is in proportion to the area actually treated.

Beet Rows 24 inches apart and band width of:	Pounds Pyramin DF Per Banded Acre For Broadcast Rate of:	
	4.8 Lbs./Acre	5.7 Lbs./Acre
6-inch band	1.2	1.6
12-inch band	2.4	2.8

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CONDITIONS OF SALE AND WARRANTY

The Directions for Use of this product reflect the opinion of experts based on field use and tests. 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, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL BASF OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

Pyramin is a registered trademark of BASF Ag.

Antor, Betanal, Betamix and Nortron are registered trademarks of NOR-AM Chemical Company.

Tillam and Ro-Neet are registered trademarks of Stauffer Chemical Company, U.S.A.

U.S. Patent 3,210,353.

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