

PM 22

7969-107

4-30-97

1047

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 05-31-98



United States
Environmental Protection Agency

Washington, DC 20460

Registration
Amendment

OPP Identifier Number

249280

☒ Other

Application for Pesticide - Section I

1. Company/Product Number 7969-107	2. EPA Product Manager Cynthia Giles-Parker	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Pix DF Plant Regulator	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation PO Box 13528 Research Triangle Park, NC 27709		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____
<input type="checkbox"/> Check if this is a new address		

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Change label to water soluble packaging

NOTIFICATION
APR 30 1997

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
				2 oz.	8
					<input checked="" type="checkbox"/> Other (Specify) cardboard
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 1 pound		5. Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Robert Rohde	Title Sr. Registration Specialist	Telephone No. (Include Area Code) 919-547-2985
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature <i>Robert Rohde</i>	3. Title Sr. Registration Specialist	
4. Typed Name Robert Rohde	5. Date 4/29/97	

BASF

207
EPA approved 6-3-96

oz. → WSP

RT 9-16-96

EPA notif.

RT 3-23-97

correx notif.

NOTIFICATION

APR 30 1997

Pix® DF

plant regulator

Plant Regulator

Active ingredient

Mepiquat Chloride:

N,N-dimethylpiperidinium chloride.....35.0%

Inert ingredients.....65.0%

Total.....100.0%

EPA Reg. No. 7969-107

EPA Est. No. 33967-NJ-1

KEEP OUT OF REACH OF CHILDREN.

WARNING/AVISO

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).

Precautionary Statements

May be fatal if swallowed. Do not breathe dust or spray mist. Do not get in eyes, on skin, or on clothing.

Statement of Practical Treatment

If swallowed: Contact a physician or Poison Control Center. Do not induce vomiting or give anything by mouth to an unconscious person.

If on skin: Wash thoroughly with plenty of soap and water. Remove contaminated clothing and launder before re-use. Get medical attention if irritation persists.

If in eyes: Immediately flush eyes with plenty of water. Get medical attention if irritation persists.

Environmental Hazards

For terrestrial uses, do not apply directly to water, 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.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the **Directions For Use** section for information about this standard.

This box contains **Pix® DF plant regulator**, a 35% water-dispersible granule in water-soluble packets inside a foil liner (outer bag). The inner packets dissolve in water and the contents will disperse and dissolve. After opening foil outer bag, place one or more of the inner packets into the mixing tank. If all water-soluble packets are not used, carefully reseal the foil bag. Each foil bag contains eight water-soluble packets. Each packet contains 2 dry ounces (57 grams) of formulated product, equivalent to one pint of 4.2% (liquid) **Pix plant regulator**.

Net contents: 1 pound

BASF Corporation

P.O. Box 13528, Research Triangle Park, NC 27709-3528

Personal Protective Equipment:
Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves and shoes plus socks

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

Engineering Controls Statement

When handlers 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.

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.

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.

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

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

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 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: 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.

In Case of Emergency

In case of large-scale spillage regarding this product, call:
CHEMTREC800-424-9300
BASF Corporation ..800-832-HELP

In case of medical emergency regarding this product, call:

1. Your local doctor for immediate treatment.
2. Your local poison control center (hospital).
3. BASF Corporation 800-832-HELP.

General Information

Pix® DF plant regulator is a foliar applied plant regulator which modifies the cotton plant in several beneficial ways. It is the only such compound which allows the grower to manage the cotton plant for **short-season production** leading to reduced risk of yield and quality loss due to delayed and prolonged harvest. The use of **Pix DF** will also result in several or all of the following: height reduction and more open canopy; better early boll retention and/or larger bolls; less boll rot; improved defoliation; reduced trash and lower ginning costs; better harvest efficiency; and darker green leaf color. Most of these effects often favorably influence the yield potential of the cotton plant.

Early Application of Pix DF

On both short-staple and Pima cotton, the grower has the option of low-rate multiple applications, or in higher, less frequent dosages which greatly facilitates his management flexibility. The multiple application option gives the producer the ability to discontinue usage of **Pix DF** if any significant stresses occur after an earlier application; in such a case, the total quantity of **Pix DF** used over a season may be reduced. If stress is relieved, the grower has the option of continuing treatments with **Pix DF**. In addition, the rate and timing ranges indicated allow the grower to tailor his usage of **Pix DF** to the degree of vegetative vigor in a given field. In areas where insecticides/miticides or foliar fertilizers are frequently applied, the timings are such that tank-mixing is often possible. (See **Restrictions and Limitations**.)

Fields should be carefully scouted and **Pix DF** should not be applied if plants are under severe stress from weather factors, mite, insect or nematode damage, disease stress, herbicide injury, or fertility stress. In the absence of these stresses, up to five low-rate multiple applications could be made each season.

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After the first application (at match-head square in the absence of stress), the rate and timing of subsequent applications will depend on vegetative vigor; under good growing conditions, additional treatments of 1 packet per 8 acres to 1 packet per 2 acres should be made at 7-14 day intervals. However, if new growth at any time is excessive, higher rates of **Pix DF** up to 1 packet per 4 acres to 1 packet per 1.3 acres can be used.

Do not exceed a total seasonal use of 1 packet per 0.33 acre (3 packets per acre).

If significant loss of squares and/or young bolls has occurred earlier due to insect pressure or other stresses, but now these stresses have been alleviated, the need for **Pix[®] DF plant regulator** is increased - excess vegetative growth is likely because of poor fruit load.

Late Application of Pix DF

Late application of **Pix DF** (approximately during the fourth to sixth week of blooming) can provide certain benefits to cotton. However, it should not and does not substitute for early season use, the time of the greatest benefit from the use of **Pix DF**. Late season application can lead to one or more of the following: reduction in late season vegetative growth or regrowth after cutout or defoliation, more complete and manageable cutout, better defoliation, earlier maturity and reduction in trash and lower ginning costs. Some of these effects may favorably influence the yield potential and fiber quality. A late season application of **Pix DF** should be applied only if fields are not drought or nutrient stressed; that is, those fields likely to experience additional vegetative growth or regrowth. However, fields that are very rank and extremely vigorous due to a combination of poor boll load and excellent growing conditions may not respond as much as desired to late season applications at the suggested rates.

Timing for Late Season Applications

- A. On fields where cotton cuts out and then starts regrowth: apply when regrowth begins, as evidenced by new leaves in the terminal and stem elongation. This would often, but not always, be in the period of 5-6 weeks after the first bloom.
- B. On fields where cotton never completely cuts out, apply **Pix DF** when there are 4-6 nodes above the white flower (NAWF). Measure NAWF by counting the number of mainstem nodes from the first position white bloom (the one closest to the mainstem) to the terminal. Count the node with the first position white bloom as zero and the last node in the terminal, which is counted, should have a leaf at least the size of a quarter.
- Generally, the NAWF first reaches 4-6 during the fourth to sixth week of bloom. During this time period, the NAWF should be decreasing about one node every 5-6 days — if its rate of decrease is less, this means that the plant is not cutting out soon enough (the crop is too vigorous). If the fifth week of bloom arrives and NAWF is still above 5-6, apply **Pix DF**.

Use Rate for Late Season Application

Pix DF should be applied at 1 packet per 2 acres to 1 packet per 0.66 acre. Use the lower rate range on cotton with only moderate additional growth potential, and the higher rate range on fields likely to continue vigorous growth. Total seasonal use per season (early plus late application) must not exceed 1 packet per 0.33 acre (3 packets per acre).

Spray Volume

Water as Diluent

Ground and aerial application:

When applying **Pix DF** with ground equipment, in all states but California, use a minimum of 2 gallons of water per acre; in California, use a minimum of 5 gallons per acre.

For aerial application in all states but California, use a minimum of 2 gallons of water per acre; in California, use a minimum of 5 gallons per acre. Regardless of method or gallonage of application, thorough coverage of the cotton foliage is required.

Rain-safe Period and Compatibility

Rain-safe period

If rain is expected within 8 hours, use a high-quality, EPA-exempt surfactant to make **Pix DF** rain-safe after 4 hours.

Compatibility

Pix DF is readily soluble in water. Once dissolved, it is compatible with most insecticides and miticides. If in doubt, test compatibility by adding a teaspoon of the insecticide or miticide to a pint of ready-to-use spray solution of **Pix DF** with foliar fertilizers if your prior experience has shown the original liquid formulation of **Pix DF** to be compatible and noninjurious under your conditions.

Always add **Pix DF** to water and allow to dissolve before adding other pesticides or fertilizers.

Restrictions and Limitations

Significant insect or mite damage after application(s) of **Pix DF** is likely to eliminate or greatly reduce the benefits derived from **Pix DF**.

Do not apply a single application of 1 packet per 2 acres to 1 packet per 1 acre of **Pix DF** to cotton that is drought stressed; i.e., stressed due to lack of soil moisture. If using the low-rate multiple option, discontinue use until the moisture stress is alleviated.

Do not apply more than 1 packet per 0.33 acre (3 packets per acre, per season).

The sum of all products and formulations containing mepiquat chloride must not exceed 0.132 pounds (60 grams) of mepiquat chloride per acre per season. This maximum equals 3 pints of standard **Pix** (0.35 pounds per gallon) or 8.4 ounces of **Pix Concentrate** (2.0 pounds per gallon) or $\frac{3}{8}$ pounds of **Pix DF** (35%) or 6.0 ounces dry weight per acre.

Do not apply **Pix DF** within 30 days of harvest.

Do not graze or feed cotton forage to livestock.

Do not tank mix with other products other than those mentioned under **Compatibility**.

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

Do not use **Pix DF** in ultra low volume applications.

When using **Pix DF** in a tank mix with insecticides or miticides, always add **Pix DF** to the spray tank before adding the insecticide or miticide.

Time and Rate of Application:
Short-Staple and Long-Staple (Pima) Cotton

The times and rates of application have been carefully researched and the **Directions For Use** should be observed as specified below. Do not apply more than 0.33 packets of **Pix® DF plant regulator** per acre, per season.

Table 1. High Rate Single or Multiple Applications

Geographic Area	Time of Application	Rate Per Acre
AL, AR, AZ, CA, FL, GA, LA, MO, MS, NM, NC, SC, TN, VA	First application: Apply when cotton is actively growing and is 20-30" tall, provided cotton is not more than 7 days beyond early bloom stage (5-6 blooms per 25 row feet). If cotton is 24" tall and has no blooms, apply Pix DF . Use 1 PVA packet per 4 acres on cotton where excessive vegetative growth is not likely to be a problem, and 1 PVA packet per 2 acres in areas tending to have excessive vegetative growth. See Restrictions and Limitations .	1 packet per 2 acres to 1 packet per 1 acre
	Second application for control of excessive vegetative growth: If the cotton field has a history of vigorous growth or if conditions after the first application of Pix DF favor vigorous growth, apply a second application 2-4 weeks after the first application.	1 packet per 2 acres to 1 packet per 1 acre
	Third application for control of excessive vegetative growth: If the cotton field has a history of vigorous growth or if conditions continue to favor vigorous growth, apply a third application 1-2 weeks after the second application.	1 packet per 2 acres to 1 packet per 1 acre
	Late season application: See section titled Late Season Application of Pix DF .	1 packet per 2 acres to 1 packet per 0.66 acre
OK, TX (except Rio Grande Valley)	Areas where excessive vegetative growth is not a problem First application: Apply when cotton is in early bloom stage (5-6 blooms per 25 row feet) and actively growing. If no blooms are present and the cotton is 20" tall and actively growing, apply Pix DF . See Restrictions and Limitations .	1 packet per 2 acres
	Second application: If conditions after the first application of Pix DF favor vigorous growth, apply a second application 2-4 weeks after the first application.	1 packet per 1 acre
	Third application: If conditions after the second application of Pix DF continue to favor vigorous growth, apply a third application 1-2 weeks after the second application.	1 packet per 1 acre
	Late season application: See section titled Late Season Application of Pix DF .	1 packet per 2 acres to 1 packet per 0.66 acre
OK, TX (including Rio Grande Valley)	Areas where excessive vegetative growth is a problem First application: Apply when cotton is actively growing and between 20" and 30" tall, provided cotton is not more than 7 days beyond early bloom stage (5-6 blooms per 25 row feet). If cotton is 24" tall and has no blooms, apply Pix DF .	1 packet per 1 acre
	Second application for control of excessive vegetative growth If cotton field has a history of vigorous growth, and/or conditions after the first application of Pix DF favor vigorous growth, apply a second application 2-4 weeks after the first application.	1 packet per 2 acres to 1 packet per 1 acre
	Third application: If conditions after the second application of Pix DF continue to favor vigorous growth, apply a third application 1-2 weeks after the second application.	1 packet per 2 acres to 1 packet per 1 acre
	Late season application: See section titled Late Season Application of Pix DF .	1 packet per 2 acres to 1 packet per 0.66 acre

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Table 2. Low-Rate Multiple Applications

Geographic Area (States)	Time of Application	Avg. Historical Pix (4.2%) Use Rate = 0.5 pint per acre (Or New Users of Pix DF)	Avg. Historical Pix (4.2%) Use Rate = 1 pint per acre (Or Fully Irrigated)
AL, AR, AZ, CA, FL, GA, LA, MO, MS, NC, NM, OK, SC, TN, TX, VA	First application: Optimal results will be achieved when plants are in the matchhead square ¹ stage of growth.	1 packet per 8 acres	1 packet per 4 acres
	Second application: 7-14 days later, or when regrowth occurs.	1 packet per 8 acres ²	1 packet per 4 acres ²
	Third application: 7-14 days later, or when regrowth occurs.	1 packet per 8 acres to 1 packet per 4 acres ²	1 packet per 4 acres to 1 packet per 2 acres ²
	Fourth application: 7-14 days later, or when regrowth occurs.	1 packet per 8 acres to 1 packet per 2 acres ²	1 packet per 4 acres to 1 packet per 1.33 acres ²
	Fifth application: (If needed) 7-14 days later, or when regrowth occurs.	1 packet per 4 acres to 1 packet per 2 acres ²	1 packet per 4 acres to 1 packet per 1.33 acres ²
	Late season: See Late Season Application of Pix DF	1 packet per 2 acres to 1 packet per 1 acre ²	1 packet per 1.3 acres to 1 packet per 0.66 acre ²

¹ Matchhead square is when the first square of a typical cotton plant is 1/8-1/4 inch in diameter. The first application should be applied when 50% of the plants have one or more matchhead squares.

² Use higher rates if previous application was not made or if growing conditions are conducive to vigorous growth.

Table 3. Conversion Chart

Rate of Pix DF compared to original Pix (4.2%)	
Amount of Pix DF per acre (Ounces Dry Weight)	Amount of Pix (4.2%)
1/8 packet (0.25 ounce)	0.125 pint per acre
1/4 packet (0.5 ounce)	0.25 pint per acre
1/2 packet (1 ounce)	0.5 pint per acre
1 packet (2 ounces)	1 pint per acre
1.5 packets (3 ounces)	1.5 pints per acre
2 packets (4 ounces)	2 pints per acre
2.5 packets (5 ounces)	2.5 pints per acre
3 packets (6 ounces)	3 pints per acre

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Additional Information

For additional information, call
COMM SERV® at 1-800-874-0081.

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.

*Pix is a registered trademark of BASF AG.
CommServ is a registered trademark of BASF Corporation.
Patent numbers 5,380,350 and 5,516,521.*

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