

100-806

4-13-1999

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
100-806

Date of Issuance:
APR 13 1999
Expiration Date:
MAR 31 2001

NOTICE OF PESTICIDE:
 x Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:
Action Herbicide

Name and Address of Registrant (include ZIP Code):

Novartis Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Note: Changes in labeling 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 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.

Registration is in no way to be construed as an endorsement or recommendation of this product by the 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 sec. 3(c)(7)(C) provided that you:

1. Make the following label changes listed below before you release the product for shipment:

- a. Add the phrase, "EPA Reg. No. 100-806".
- b. The referral statement states "See additional precautionary statements ... inside booklet". Please note that 40 CFR 156.10(i)(1)(ii) only allows that the Directions For Use may appear on printed or graphic matter which accompanies the pesticide. If all of the Precautionary Statements cannot appear on the container label due to size constraints, you should formally submit a request for a size exemption from the regulations.

Signature of Approving Official:

Date:

4-13-99

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c. On pages 6 and 7 clarify the lactofen tank mix directions. We suggest directions similar to the following:

Tank mixes with lactofen containing herbicides will result in reduced velvet leaf control compared to Action Herbicide alone but control is better than when lactofen herbicides are applied by themselves.

d. On page 12 there appears to be a space in the Brand Names "Reflex" and "Rezult". Verify that BASF's product "Rezult" or "Result" is registered for use on soybeans or delete it from the labeling. We could not locate it on our computer data base.

2. Submit production information (pounds or gallons produced) for this product for the fiscal year in which the use on soybeans is conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1, and ends September 30. The product information will be submitted to the Agency no later than November 15, following the end of the preceding fiscal year

This information is to be submitted to:

Registration Support Branch
Registration Division (7505C)
Environmental Protection Agency
Washington, DC 20460

4. Submit one (1) copy 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.

5. Submit by until March 31, 2001 the following Studies conducted with fluthiacet-methyl in accordance with the Good Laboratory Practice Standards, 40 CFR Part 160 and appropriate test guidelines as referenced in EPA's Data Requirements for Registration Regulations, 40 CFR Part 158:

a. Vegetative Vigor with onion, tomato, and cucumber conducted with Action Herbicide plus surfactant [Guideline #123-1].

b. Aquatic Plant Growth with duckweed conducted with Action Herbicide plus surfactant [Guideline #123-2].

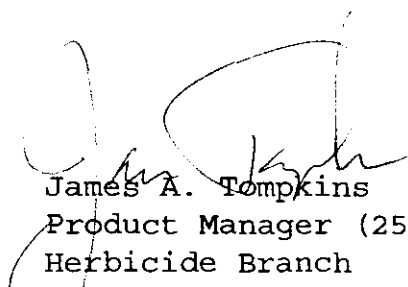
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c. Improved Analytical Methods of two orders of magnitude for fluthiacet-methyl and degradates in soil and water.

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 these conditions.

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



James A. Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

Enclosure

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(Clean Copy Revisions Not Marked)
DRAFT LABEL - Precautionary Statements, Signal Word, Adjuvant Statement
Revised as requested by EPA 4/1/99

Accu-Pak®

ACCEPTED
with **COMMENTS**
In EPA Letter Dated:
APR 13 1999

Action®
HERBICIDE

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
100-801a

For postemergence control of velvetleaf and certain other broadleaf weeds in soybeans

Active Ingredient:	
Fluthiacet-methyl (CAS No. 117337-19-6).....	4.75%
Other Ingredients:	94.25%
Total:	100.00%

Action is a wettable powder packaged in a water-soluble bag.

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-
EPA Est.

5 x 3 oz.
Water-Soluble Packets

15 oz.
Total Net Weight Per Bag

This outer protective bag contains Action in 3 oz. water-soluble packets. Entire inner packets and contents dissolve in water. After opening outer bag, immediately dump the required number of unopened packets into a sprayer or mix tank partially filled with water. Do not excessively handle the inner soluble packets or expose them to moisture since this may cause rupturing.

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

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 the manner of use or application, all of which are beyond the control of Novartis Crop Protection, Inc. Novartis or the Seller. All such risks shall be assumed by the Buyer.

Novartis 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. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis 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 Novartis.

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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 and the restricted entry interval.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) for 12 hours.

PPE required for early entry into 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
-

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

GENERAL INFORMATION

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Action is a selective postemergence herbicide for control of velvetleaf and other broadleaf weeds in soybeans. Action must be applied after emergence of the crop and weeds. There is a wide application window for use in soybeans. This application window ranges from the first trifoliolate to the full flowering stage. Refer to Table 2 for a list of the weeds controlled.

Action will control velvetleaf up to 36 inches tall. Action will also control or partially control certain other annual broadleaf weeds. Partial control means significant activity but not always at a level generally considered acceptable for commercial weed control. When tank-mixed, Action enhances the performance of other herbicides. Action does not control grasses. If grasses are present at the time of application Action should be mixed with an appropriate postemergence herbicide registered for grass control in soybeans.

The amount of Action to apply and the degree of weed control resulting from Action application depends on the weed species present, stage of growth of the weeds, environmental conditions, and growing conditions. Weeds under stress because of lack of moisture, low soil fertility, or mechanical or chemical injury, may not be controlled as well as actively-growing weeds.

To be effective, Action must contact the weed foliage. Weed death or inhibition can be expected quickly - normally within 48 hours after application. Thorough coverage with the spray solution gives the most effective control. A large crop and/or weed canopy as well as a dense crop and weed canopy can prevent the spray from penetrating the canopy and reaching smaller weeds resulting in reduced control.

Soybeans are tolerant of Action when applied according to label directions. Some bronzing, crinkling, or spotting of soybean leaves may occur. Soybeans rapidly outgrow these effects and develop normally with no reduction in yield.

Note: Cotton is very sensitive to Action. To avoid cotton defoliation, do not allow Action to contact this crop.

Grazing/Feeding

Do not graze or feed treated soybean forage or hay to livestock

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MIXING INSTRUCTIONS

Spray Additives

An adjuvant approved for use on growing crops is required with Action for maximum consistent performance.

1. Adjuvants for Action Alone

Use a spray adjuvant from one of these classes for optimum performance:

Non-ionic surfactant (NIS)

with a minimum of 80% of the constituents effective as spray adjuvant at the rate of 1 quart per 100 gals. of spray volume (concentration of 0.25%)

Crop oil concentrate (COC)

petroleum or vegetable-based containing not less than 12% emulsifier at 1-2 pts. per acre. The concentration should not exceed 2.5% volume/volume. COC is recommended under conditions of dry soil and low relative humidity.

Silicone based surfactant

at a rate of 1 quart per 100 gals. or a spray volume concentration of 0.25% or as specified on the adjuvant label.

In addition to an adjuvant, urea ammonium nitrate (UAN) at 1 to 2 qt./A or spray grade ammonium sulfate (AMS) at 1.5 to 2.5 lbs./A may also be added to the spray solution. Do not use liquid fertilizer as the total carrier solution.

2. Adjuvants for Action in Tank Mixtures With Other Herbicides

When tank mixing with other herbicides, use the adjuvant recommended for use with the tank mix partner. Follow all restrictions and precautions on the tank mix partner's label.

Mixing Instructions

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1. Thoroughly clean the spray equipment before using Action.
2. Maintain maximum agitation throughout the spraying operation.
3. Water-soluble packets must always be the first material put into the spray tank after water. Water-soluble packets must be completely dissolved and dispersed in clean water before any other tank mix partners, including micronutrients or other fertilizers or adjuvants are added to the spray solution. Boron, especially in the form of a micronutrient additive, such as Solubor®, etc. may prevent water-soluble packets from dissolving.
4. Flush the spray equipment thoroughly after each use and apply rinsate to a previously treated area.

Mixing Action alone

1. Add $\frac{1}{4}$ - $\frac{1}{2}$ of the required amount of clean water to the spray or mixing tank.
2. With the agitator running, drop the required number of unopened water-soluble packets of Action into the spray tank.. Continue agitation allowing the packets to completely dissolve and the contents of the packets to fully and uniformly disperse.
3. Add the spray adjuvant and continue agitation while adding the rest of the water.
4. Maintain agitation until all of the mixture has been applied

Action in Tank Mixtures

Action is compatible with most commonly used insecticides, fungicides, and spray adjuvants. BEFORE MIXING ACTION WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR THE USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF ACTION. When using Action in a tank mixture with other pesticides, observe the most restrictive label limitations and precautions of the products being used.

When Action is mixed with acifluorfen or lactofen-containing products (such as Blazer®, Galaxy®, Cobra®, Storm®) velvetleaf control will be improved.

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However, these tank mixes are not as effective in controlling velvetleaf as the use of Action alone.

1. Add $\frac{1}{4}$ - $\frac{1}{2}$ of the required amount of clean water to the spray or mixing tank.
2. Start the agitator running before adding any tank-mix partners. With the agitator running drop the required number of unopened soluble packets of Action and any of the other products packaged in water-soluble packets into the tank all at once. Continue agitation in the spray tank and allow the packets to completely dissolve and the contents of the packets to fully and uniformly disperse.
3. While maintaining agitation, continue filling the spray tank. When the tank is $\frac{3}{4}$ full, add any tank mix partners and allow them to completely and uniformly disperse.
4. Add any other liquid tank mix partners and allow them to completely and uniformly disperse.
5. Add the proper amount of spray adjuvant and continue agitation while adding the remaining water.
6. Complete filling the tank with clean water and maintain sufficient agitation at all times to insure surface action and a uniform mixture.
7. To avoid product degradation, apply Action spray mixture within 48 hours of mixing and do not leave spray in the tank without continuous agitation.
8. After use, thoroughly clean the sprayer according to this label and the tank mix partner's label.

APPLICATION PROCEDURES AND PRECAUTIONS

Chemigation

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

Aerial Application

Do not apply this product aerially.

Ground Application

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Mix the product in a minimum of 15 gals. of water and apply at 20-40 psi pressure at the nozzles. If a dense crop and/or weed canopy is present, use up to 40 gals. of water per acre and 70 psi nozzle pressure. **Note: When using higher nozzle pressures, use extreme caution to avoid spray drift to nearby crops.**

Use a pump with enough capacity to maintain a rippling or rolling action in the spray tank. For a uniform spray mixture, agitation during mixing and application is required.

How Much to Use

Table 1

Acres	Action® Use Rate			
	Number of Packets Required			
	Tank Mixed with Roundup® Original or Roundup® Ultra	Tank Mixed with Another Broadleaf Herbicide	Alone or With a Grass Control Herbicide	
			Standard Rate	Higher Rate for Difficult to Control Weeds*
- oz./ Acre -				
	1.0	1.2	1.5	2.25
1.3				1
2			1	
2.5		1		
3	1			
4			2	3
5		2		
6	2		3	
8			4	6
10		4	5	
12	3		6	9
20		8	10	15
30	10	12	15	
50		20	25	
60	20	24	30	45
80		32	40	60
100		40	50	75

*See Table 2 for list of weeds

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When to Apply

Weed Stage of Growth

Apply Action after weeds have emerged and are actively growing, but before the weeds have reached the maximum height listed in Table 2. Application after weeds have reached the listed maximum height could result in commercially unacceptable weed control.

Avoid applying Action if weeds cannot be evenly covered with the spray or when spray drift is possible. To reduce spray drift, do not apply if wind speed is 10 mph or greater. . Avoid overlapping the spray pattern since this may increase chances for crop injury.

Soybean Stage of Growth

Action may be applied to soybeans from the first trifoliolate through the full flowering stage of development. The latest date application date should be no later than 60 days before harvest.

Cultivation

Do not cultivate within 2 days before or 2 days after applying this product.

Application Precautions:

1. Do not apply more than 3 oz./A per cropping season.
2. Do not apply if soybeans are under severe stress due to drought, cold weather, hail, flooding, water-logged or compacted soil, disease, insect damage, nutrient deficiency (especially low nitrogen levels), or other causes.
3. Action can be applied in tank mixtures to weeds taller than the maximum heights listed in Table 2 provided the application follows all timing and rate precautions on the tank mix partner's label.
4. Application to weeds that are under severe stress due to drought or to weeds that are taller than the optimum heights listed in Table 2 may result in reduced weed control.
5. Do not irrigate within 4 hours of application of Action. Rainfall or irrigation may wash Action off of the weeds during this period and reduce performance.

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6. Observe all precautions and limitations on the label of each product used in tank mixture with Action.

Spray Drift Precautions

Do not allow spray from ground equipment to drift onto adjacent land or crops. When drift may be a probable, do everything possible to reduce spray drift, including:

1. Do not spray if winds are gusty or if speeds are or become 10 mph or greater.
2. Use extreme caution when conditions favor drift (high temperatures, low relative humidity).
3. Do not apply during a temperature inversion. If an inversion is suspected, consult the local weather service before applying Action.
4. These practices can further reduce drift:
 - a. Using nozzles that provide a uniform droplet size. Use spray nozzles that provide medium-coarse droplets (250-400 microns VMD). Nozzles that produce extremely small droplets are more likely to cause spray drift.
 - b. Apply as close to target plants as practical while maintaining a good spray pattern for spray coverage.

Cleaning Spray Equipment

The sprayer must be cleaned before and after use of this product. Failure to do so may result in unsatisfactory results with Action or injury to other crops sprayed with the equipment. Refer to the label of the product used previously or tank mixed with Action for additional cleaning instructions.

When Action has been used alone, fill the sprayer with clean water, add a commercial sprayer cleaner, circulate the mixture through the system, and spray approximately ½ through the hose, boom, and nozzles on an area which has already been treated. Drain the remaining solution, rinse the entire system with clean water, and spray the rinsate on an area which has already been treated.

WEEDS CONTROLLED/APPLICATION RATES

1. Action Alone

At the rate and timings listed, Action controls the weeds listed in Table 2 when the product is applied alone after emergence of soybeans and weeds. . .

Action controls emerged weeds listed; it does not provide residual control of weeds that emerge later. Weeds larger than the size in Table 2 may only be partially controlled.

Table 2

Application Rate for Action Applied Alone

Weed Species	1 Packet /2 Acres (1.5 oz./A)		3 Packets/4 Acres (2.25 oz./A)	
	Leaf Stage [†]	Maximum Height (inches)	Leaf Stage [†]	Maximum Height (inches)
Anoda, spurred (<i>Anoda cristata</i>)	2	2	3	4
Burcucumber (<i>Sicyos angulatus</i>)	2	2	2	2
Jimsonweed (<i>Datura stramonium</i>)	2**	2**	4	2
Nightshade, black (<i>Solanum nigrum</i>)	2**	2**	2**	2**
Nightshade, eastern black (<i>S. ptycanthum</i>)	-2**	-2**	2**	2**
Lambsquarters, common (<i>Chenopodium album</i>)	4**	2**	4-6	2-
Pigweed, redroot (<i>Amaranthus retroflexus</i>)	4**	2**	4-6	4
Pigweed, smooth (<i>A. hybridus</i>)	2**	2**	2-4	4
Velvetleaf (<i>Abutilon theophrasti</i>)	-	36	-	36
Waterhemp, common (<i>Amaranthus rudis</i>)	-	-	2	2
Waterhemp, tall (<i>A. tuberculatus</i>)	-	-	2	2

* Count individual leaves except the cotyledons.

** Partial control or suppression.

2. Action in Tank Mixtures With Other Postemergence Herbicides for Improved Broadleaf Weed Control

Action may be applied postemergence at 1 packet per 3 acres (1 oz./A) with Roundup® Original or Roundup® Ultra or at 1 packet per 2.5 acres (1.2 oz./A) with other labeled postemergence broadleaf herbicides as a tank mixture.

Action enhances the performance of these herbicides by increasing the speed of activity and/or level of control of the weeds listed in Table 2. When mixed with any of the tank mix partners listed in Table 3 Action also controls velvetleaf up to 36 inches tall. .

Refer to Table 3 for a list of recommended tank mix partners and follow all recommendations, restrictions and precautions for each product in the tank mixture. Refer to Table 1 for the amount of Action to use. If a second application is needed, do not apply more than a total of 3 oz. Action per acre per season.

Table 3**Action - Recommended Tank- Mix Partners - Soybeans**

Basagran®	Raptor®
Blazer®	R eflex®
Classic®	Reliance™ STS® SP
Cobra®	R ezult®
Concert® SP	Roundup® Original
Flexstar® HL	Roundup® Ultra
Galaxy®	Scepter® O.T.®
Manifest®	Status®
Pinnacle®	Storm®
Pursuit®	

3. Action in Tank Mixtures for Grass Weed Control

Action does not provide grass control, but it can be tank mixed at 1 packet/2 acres (1.5 oz./A) to 1 packet/1.3 acres (2.25 oz./A) with any postemergence grass herbicide registered for use in soybeans to provide control of the weeds listed in Table 2 and the grasses listed on the tank mix partner's label.

Crop Failure

If soybeans treated with Action are lost due to a natural catastrophe such as hail or frost, soybeans can be replanted immediately, provided this is not restricted on the label of a product used previously or by a product applied in a tank mixture with Action.

For control of weeds in the replanted crop, Action may be applied postemergence a second time but the total amount of Action applied during the cropping season must not exceed 3 oz./A.

Rotational Crops

If soybean crop failure occurs, to avoid illegal residues replant soybeans only. All other crops may be planted at normal rotation intervals following application of Action.

Note: For rotational crop restrictions when Action is used in tank mixtures or sequentially with other products, refer to the rotation intervals on the other product label for possible additional restrictions.

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STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage

Store in a cool, dry place. Do not store this product under wet conditions. Handle outer bag carefully to avoid breakage of inner water-soluble packets.

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 container. Dispose of empty container in a sanitary landfill, or incinerate, or if allowed by state and local authorities, dispose of by burning. Stay out of smoke from burning container.

For minor spills, leaks, etc. follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

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

First Aid

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

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of

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throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

Note to Physician: If ingested induce emesis and lavage stomach. Treat symptomatically.

Personal Protective Equipment

Applicators and other handlers must wear:

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

Engineering Control Statements

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.

Environmental Hazards

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

Physical and Chemical Hazards

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Do not use, pour, spill, or store near heat or open flame.

Accu-Pak® , Action® trademarks of Novartis
Basagran® , Blazer® , Galaxy® , Manifest® , Result® , Storm® trademarks of
BASF Company

Classic® , Concert® , Pinnacle® and Reliance® trademarks of E.I. DuPont de
Nemours and Company, Inc.

Cobra® trademark of Valent Corporation
Flexstar® Reflex® trademarks of Zeneca
Pursuit® , Raptor® , Scepter® O.T® , Status® trademarks of American Cyanamid
Roundup® trademark of Monsanto
Solubor® trademark of United States Borax and Chemical Corporation

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Novartis Crop Protection
Greensboro, North Carolina 27419

NCP

April 6, , 1999