

Reg 11-7969-17

PM-25

1914

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAY - 2 1991

Karen R. Blundell
BASF CORPORATION
Agricultural Chemicals
P.O. Box 13528
Research Triangle Park, NC 27709-3528

Dear Ms. Blundell:

Subject: Galaxy™ Herbicide
EPA Reg. No. 7969-77
Re: Label Amendments
Your submission dated April 15, 1991

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comment listed below. Please submit five (5) of your final printed labeling before releasing your product for shipment. A stamped copy is enclosed for your records.

1. Please add to your "Statement of practical treatment" section the following: "If on skin: Wash with plenty of soap and water. Consult a physician if irritation persists."

Sincerely,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (H7505C)

enclosure

CONCURRENCES							
SYMBOL	H7505C						
SURNAME	COLE						
DATE	4/30/91						

EPA Form 1320-1 (12-70) *U.S.GPO:1989-024-485/10186 OFFICIAL FILE COPY

2914

BASF

Galaxy™

Postemergence
Herbicide

For broad spectrum weed control in soybeans.

A soluble liquid formulation containing:

Active ingredients*

Sodium salt of bentazon: sodium (3-isopropyl-1H-2,1,
3-benzothiadiazin-4 (3H)-one-2, 2-dioxide.....33.4%

Sodium salt of acifluorfen: sodium 5-
[2-chloro-4-(trifluoromethyl) phenoxy]
-2-nitrobenzoate.....6.8%

Inert ingredients.....59.8%

*Equivalent to 3.00 pounds per gallon bentazon: 3-(isopropyl)-1H-
2,1,3-benzothiadiazin-4 (3H)-one 2,2-dioxide and 0.67 pounds per
gallon of sodium acifluorfen: sodium 5-[2-chloro-4-(trifluoromethyl)
phenoxy]-2-nitrobenzoate.

EPA Reg. No. 7969-77

KEEP OUT OF REACH OF CHILDREN.

DANGER/PELIGRO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto
hasta que la etiqueta haya sido explicada ampliamente.

Net contents 2 1/2 gallons

BEST AVAILABLE COPY

BASF Corporation
P.O. Box 13528
Research Triangle Park, North Carolina 27709

Specimen Label

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAY - 2 1981

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

7969-77

Hazards to Humans

DANGER

Causes eye damage. Harmful if swallowed, inhaled or absorbed through the skin. Do not get in eyes. Wear goggles or face shield when handling. Avoid breathing vapor or spray mist and contact with skin or clothing. In case of contact, immediately remove contaminated clothing and shoes. Wash contaminated clothing with soap and hot water before re-use. May cause allergic skin response.

Statement of practical treatment

If in eyes: Flush with large amounts of water for at least 15 minutes. Get medical attention.

If swallowed: Dilute by giving 2 glasses of water to drink and call a physician. Never give anything by mouth to an unconscious person.

Note to physician: Emesis is recommended.

Environmental hazards

Do not apply directly to lakes, ponds or streams. Do not contaminate water when disposing of equipment washwaters. Do not apply when weather conditions favor drift from target area.

Re-entry and workers' protection statements

Do not apply this product in such a manner as to directly or through drift, expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Directions for use

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

BEST AVAILABLE COPY

Storage and disposal

Keep from freezing. Store above 40°F.

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

Pesticide wastes are acutely hazardous. 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.

Triple rinse container (or equivalent). 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.

Do not re-use empty container.

In case of emergency

In case of large-scale spillage regarding this product, call:

CHEMTREC	800-424-9300
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.

Steps to be taken in case material is released or spilled.

Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing and wash affected skin areas with water. Wash clothing before re-use. Keep spill out of all sewers and open bodies of water.

General information

Galaxy™ herbicide is intended for selective postemergence control of certain broadleaf weeds. Galaxy is effective mainly through contact action; therefore, weeds must be thoroughly covered with spray. Galaxy may cause some soybean leaf-speckling and leaf-bronzing to occur under certain conditions.
(See Restrictions and limitations).

Timing of applications

Make postemergence applications of Galaxy early, when weeds are small and actively growing and before weeds reach the maximum size listed in the **Application Rate Table**. Delay in application which permits weeds to exceed the maximum size stated will result in inadequate control.

Cultivation before or during application is not recommended. Cultivation may put weeds under stress, thus making control more difficult to obtain. Timely cultivation 5-7 days after application will usually assist in weed control.

Water volume and spray pressure

Apply recommended rates of Galaxy as follows:

Ground equipment: Use a minimum of 20 gallons of water per broadcast acre and a minimum of 40 psi pressure (measured at the boom, not at the pump or in the line). When crop and weed foliage is dense, use up to 50 gallons of water and up to 80 psi pressure. Use standard high pressure pesticide hollow cone or flat fan nozzles spaced 20 inches apart. Do not use flood, whirl chamber, or controlled droplet applicator (CDA) nozzles.

Air Equipment: Use 5-10 gallons of water per acre and a maximum of 40 psi pressure. Use only diaphragm-type nozzles producing cone or fan spray patterns.

Aerial application-special directions and restrictions

To obtain uniform coverage and to avoid drift hazards, the following application equipment and practices should be used:

Nozzle height: 6 to 10 feet above crop.

Nozzle orientation: Nozzles must be oriented so as to discharge straight back with the air stream (opposite the direction of travel of the aircraft) and not more than 20 degrees downward.

Nozzles must not be located farther out than three-fourths the distance from the center of the aircraft to the end of the wing or rotor.

Do not apply Galaxy[®] herbicide by aircraft when wind is blowing at a velocity above 10 mph. Coarse sprays (larger droplets) are less likely to drift.

Do not apply Galaxy[™] by air if ornamentals or sensitive nontarget crops, such as cotton, sugar beets, sunflowers or okra, are within 200 feet downwind.

Applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

Spray additives

Additives are needed with Galaxy to achieve consistent weed control. Either crop oil concentrate, urea ammonium nitrate (UAN), or ammonium sulfate are recommended. Directions for use of each follow.

Oil concentrate

A nonphytotoxic crop oil concentrate (commonly referred to as oil concentrate) can be added to the spray tank with Galaxy.

The oil concentrate must contain either a petroleum or vegetable oil base and must meet the following criteria:

1) be nonphytotoxic, 2) contain only EPA-exempt ingredients, 3) provide good mixing quality in the jar test, and 4) prove beneficial in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers which provide good mixing quality. For vegetable oil concentrates, it has been observed that highly refined vegetable oils are more satisfactory than unrefined vegetable oils. For additional information see Jar test for estimating suitability of oil concentrates at the end of this section.

With the addition of oil concentrated to Galaxy on soybeans, some leaf burn may occur, but generally all new growth is normal and crop vigor is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. A few oil concentrates have exhibited excessive leaf burn. Refer to your supplier for information concerning successful local experience prior to purchasing any oil concentrate.

Rate of oil concentrate:

Ground application - 2 pints/acre (maximum). Air application - 1 pint/acre (maximum).

Jar test for estimation suitability of oil concentrates

1. **Water supply:** Use only water from intended source and at the source temperature.
2. **Amount of water in jar:** Ground application - For 20 gals./A spray volume use 3 1/3 cups (800 ml) of water. Air application - For 10 gals./A spray volume use 1 2/3 cups (400 ml) of water. For other spray volumes, adjust proportionately to above.
3. **Amount of Galaxy and oil concentrate to add:** Add Galaxy and oil concentrate at the rate of 1 teaspoon (5 ml) for each pint of recommended label rate.
4. **Add components in following sequence, gently mixing between component additions:**
 - a. Galaxy
 - b. Oil concentrate
5. **Cap jar, invert 10 cycles, let stand for 15 minutes, evaluate.**
6. **Evaluation:** An ideal tank mix combination will be uniform; thus, the suitability of the oil concentrate is questionable if any of the following are observed:
 - Free oil (film or globules) at the surface.
 - Flocculation - fine particles which may be suspended in the liquid or found as a precipitated layer at the bottom of the jar.
 - Clabbering - thickening texture (coagulated) resembling yogurt or a curd-like texture as with cottage cheese.

Urea ammonium nitrate (UAN) or Ammonium sulfate

For improved velvetleaf control in soybeans, a UAN solution (commonly referred to as 28%, 30% or 32% nitrogen solution) or ammonium sulfate may be added in place of crop oil concentrate. UAN and ammonium sulfate are agricultural grade fertilizers used by dealers for agricultural applications.

With the addition of UAN or ammonium sulfate, a leaf burn on soybeans may occur, but the new growth is normal and crop vigor is not reduced. Refer to your supplier of Galaxy for information concerning successful local experience prior to using UAN or ammonium sulfate. Do not use brass or aluminum nozzles when spraying with UAN or ammonium sulfate.

Use rate for UAN or Ammonium Sulfate

Ground application: UAN - 1/2 to 1 gallon per acre. Ammonium sulfate - 2.5 lbs. per acre.

Air application: UAN - 1/2 gallon per acre. Ammonium sulfate - BASF does not recommend the application of ammonium sulfate if applied in less than 10 gallons per acre due to potential problems with precipitation in reduced volumes. Ammonium sulfate can be applied by air at 2.5 lbs. per acre if the application is made in more than 10 gallons per acre of total solution. Use ammonium sulfate only if it has been demonstrated to be successful in local experience.

Mixing/spraying

Fill tank of a thoroughly clean sprayer half to two-thirds full with clean water. Start agitation and add Galaxy; allow to mix thoroughly. Add spray additive and remaining volume of water. Maintain constant agitation during application.

Application Rate Table

Applications of Galaxy[™] herbicide should be made when weeds are small and actively growing and before weeds reach the maximum size listed below. Such applications generally correspond to the soybean growth stages of unifoliate to two expanded trifoliate leaves. Soybeans may experience slight yellowing, bronzing, speckling, or burning of leaves under certain conditions. Soybean plants generally outgrow this condition within 10 days.

Weeds Controlled	Application Rates for Weed Growth Stages			
	Leaf State Up to	Max. Height	Rate of Galaxy per Acre	Spray Additives Rate/A
Anoda, Spurred	6	3"	2 pints	See page 5 for details.
Eggarticks	6	6"		
Buckwheat, Wild	4	3"		
Cocklebur ^a	6	6"		
Dayflower	6	4"		
Devilsclaw ^b	6	3"		1-2 pints oil concentrate or if Velvetleaf is the primary weed target and Lambsquarters or Common Ragweed are not a problem, use either 1/2 to 1 gal. UAN or 2.5 lbs ammonium sulfate in place of oil concentrate.
Galinsoga ^b	6	2"		
Jimsonweed	6	6"		
Ladysthumb	6	6"		
Lambsquarters, Common ^b	6	2"		
Mallow, Venice	6	4"		
Morningglories ^c	4	2"		
Mustard, Wild	6	4"		
Nightshade, Black	2	<2"		
Nutsedge, Yellow ^b	-	6-8"		
Pigweed, Redroot	4	2"		
Pigweed, Smooth	4	2"		
Poinsettia, Wild	4	4"		
Purslane, Common	4	1"		
Ragweed, Common	6	3"		
Ragweed, Giant	4	6"		
Redweed	6	6"		
Shepherdspurse ^d	6	4"		
Sida, Prickly, or Teaweed	6	3"		
Smartweed, Pennsylvania	6	6"		
Starbur, Bristly	4	2"		
Sunflower, Wild	4	5"		
Thistle, Canada ^a	-	8" to bud stage		
Velvetleaf	6	5"		
Waterhemp, Tall	4	2"		

^aDo not treat earlier than leaf stage shown and do not count cotyledon leaves

^bControl may be inconsistent with this rate of Galaxy. A later application of Basagran[®] herbicide may be necessary (see label for Basagran).

^cControl may be partial or inconsistent with this rate of Galaxy. A later application of Blazer[®] herbicide may be necessary (see label for Blazer).

^dDo not treat rosette before seed stalk appears.

Restrictions and limitations

Do not apply more than a total of 3 pints of Galaxy per acre per season. Do not apply more than 1 3/4 pints of Basagran or 1.0 pint of Blazer following an application of 3 pints of Galaxy per acre per season.

Do not apply Galaxy to soybeans that have been subject to stress conditions such as hail damage, flooding, drought, injury from other herbicides, or widely fluctuating temperatures, as crop injury may result.

Do not apply Galaxy to soybeans that show injury (leaf phytotoxicity and/or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced and/or prolonged.

Do not apply Galaxy during prolonged periods of drought or during unseasonably cold weather, as unsatisfactory weed control may result. Rainfall or overhead irrigation soon after application may decrease the effectiveness of Galaxy.

Physical incompatibility, reduced weed control, or crop injury may result from mixing Galaxy with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. BASF does not recommend the use of Galaxy tank mixes other than those listed on BASF labels, supplemental labels, or technical bulletins. Local agricultural authorities may be a source of information when using other than BASF approved tank mixes.

Do not apply Galaxy within 50 days of soybean harvest.

Root crops (such as carrots, turnips, sweet potatoes, etc.) must not be planted in fields treated with Galaxy for a period of 18 months following treatment.

In case of crop failure, only peanuts or soybeans may be immediately replanted.

Do not use treated plants for feed or forage.

Do not apply Galaxy through any type of irrigation equipment.

Tank Mix Applications for Soybeans

Always read and follow all label directions when using Galaxy alone or in tank mix combinations. The most restrictive labeling of either product used applies in tank mixtures.

Galaxy + 2,4 DB Tank Mix in Soybeans

Galaxy may be tank mixed with 2 fl. oz./A of 2,4 DB (Butyrac 200 or Butoxone) for improved postemergence control of pigweed species and annual morningglory species.

The **Galaxy + 2,4 DB** tank mix should be applied to actively growing weeds that have not been subjected to environmental stress.

An 80% active nonionic spray surfactant can be used at a rate of 1 pt/100 gal of spray solution. The addition of a nonionic spray surfactant can increase the hormonal crop response of 2,4 DB. Crop oil concentrate, Urea Ammonium Nitrate (UAN) or Ammonium sulfate should not be used in this tank mixture.

Refer to the soybean tank mix use precautions section for additional information.

Galaxy + Pinnacle® Tank Mix in Soybeans

Galaxy can be tankmixed with up to 1/4 ounce/A of Pinnacle® for improved postemergence control of pigweed, lambsquarters, and wild sunflower.

Adjuvants are needed with the Galaxy plus Pinnacle® tank mix to achieve consistent postemergence weed control. The standard label recommendation is one to two pints of an 80% active nonionic spray surfactant per 100 gallons of water plus 1/2 - 1 gallon per acre of a nitrogen based liquid fertilizer (such as 28% to 32% urea ammonium nitrate).

Refer to the soybean tank mix use precautions section for additional information.

Galaxy + Classic® Tank Mix in Soybeans

Galaxy can be tankmixed with 1/2 to 3/4 ounce per acre of Classic for improved or additional postemergence control of Florida Beggarweed, Sicklepod, Sunflower, and Yellow Nutsedge.

Adjuvants are needed with the Galaxy plus Classic® tank mix to achieve consistent postemergence weed control. The standard label recommendation is one to two pints of an 80% active nonionic spray surfactant per 100 gallons of spray mixture plus 1/2 - 1 gallon per acre of a nitrogen based liquid fertilizer (such as 28% to 32% urea ammonium nitrate).

Refer to the soybean tank mix use precautions section for additional information.

Galaxy + Pursuit® Tank Mix in Soybeans

Galaxy may be tank mixed with 2-4 ounces per acre of Pursuit for improved postemergence control of pigweed species, and sunflower. This tankmix offers the additional control of Hairy Nightshade, Jerusalem Artichoke, Marshelder, Kochia, and certain grasses as per the Pursuit label.

Adjuvants are needed with the Galaxy plus Pursuit tank mix to achieve consistent postemergent weed control. The standard label recommendation is one to two pints of an 80% active nonionic spray surfactant per 100 gallons plus 1-2 quarts per acre of a nitrogen based liquid fertilizer [such as 28% to 32% urea ammonium nitrate (UAN)].

Refer to the soybean tank mix use precautions section for additional information.

Tankmix Use Precautions

Do not apply Galaxy alone or in tank mixtures to soybeans that have been subject to stress conditions such as hail damage, flooding, drought, injury from other pesticides, or widely fluctuating temperatures, as crop injury may result.

Observe all recropping restrictions of the respective herbicide used in tank mixture with Galaxy.

Do not apply a tank mix of Galaxy plus 2,4 DB within 60 days of soybean harvest.

Do not apply a tankmix of Galaxy plus Pinnacle within 60 days of soybean harvest.

Do not apply a tank mix of Galaxy plus Classic within 60 days of soybean harvest.

Do not apply a tank mix of Galaxy plus Pursuit within 85 days of soybean harvest.

Appendix

The following are scientific names for the weeds listed in this section. For specific recommendations on control of these weeds, refer to the Application Rate Table.

Broadleaf Weeds

Common Name	Scientific Name
Anoda, Spurred	Anoda cristata
Beggarticks	Bidens frondosa
Buckwheat, Wild	Polygonum convolvulus
Buttonweed (see Velvetleaf)	---
Butterprint (see Velvetleaf)	---
Cocklebur	Xanthium strumarium
Dayflower	Commelina spp.
Devilsclaw	Proboscidea louisianica
Galinsoga	Galinsoga spp.
Jimsonweed	Datura stramonium
Ladysthumb	Polygonum persicaria
Lambsquarters, Common	Chenopodium album
Mallow, Venice	Hibiscus trionum
Morningglory, Common (tall)	Ipomoea purpurea
, Cypressvine	Ipomoea quamoclit
, Entireleaf	Ipomoea hederacea
, Ivyleaf	Ipomoea hederacea
, Palmleaf	Ipomoea wrightii
, Pitted	Ipomoea lacunosa
, Purple Moonflower	Ipomoea muricata
, Smallflower	Jacquemontia tamnifolia
Mustard, Wild	Sinapsis arvensis
Nightshade, Black	Solanum nigrum
Pigweed, Redroot	Amaranthus retroflexus
, Smooth	Amaranthus hybridis
Poinsettia, Wild	Euphorbia heterophylla
Purslane, Common	Portulaca oleracea
Ragweed, Common	Ambrosia artemisiifolia
, Giant	Ambrosia trifida
Redweed	Melochia corchorifolia
Shepherdspurse	Capsella bursa-pastoris
Sida Prickly or Teaweed	Sida spinosa,
Smartweed, Pennsylvania	Polygonum pennsylvanicum
Starbur, Bristly	Acanthospermum hispidum
Sunflower, Wild	Helianthus annuus
Thistle, Canada	Cirsium arvense
Velvetleaf	Abutilon theophrasti
Waterhemp, Tall	Amaranthus tuberculatus

Sedges

Common Name	Scientific Name
Nutsedge, Yellow	Cyperus esculentus

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") of 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 if, 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.

Basagran is a registered trademark of BASF AG.

Galaxy is a trademark and Blazer is a registered trademark of BASF Corporation.

Butyrac is a registered trademark of Rhone-Poulenc Ag Products Co.

Butoxone is a registered trademark of Cedar Chemical Corporation.

Classic and Pinnacle are registered trademarks of E.I. duPont de Nemours and Company, Incorporated.

Pursuit is a registered trademark of American Cyanamid Company.