

PM 23

62719-264

2/16/99

1 of 21

Dennis H. Lade, Ph.D.
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

FEB 16 1999

Dear Dr. Lade:

Subject: scorpion® III
EPA Registration No. 62719-264
Application Dated December 22, 1998, Amendment
of Registration as Described in Your Letter
Dated December 22, 1998; and Your Letter of
Resubmission of Labeling Dated February 9, 1999

The proposed labeling amendments described in your letter dated February 9, 1999 have been reviewed and found acceptable under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, provided that you:

- o Submit one (1) copy of your final printed label prior to your shipment of the subject pesticide product under the enclosed stamped label.

If this condition is 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 this condition.

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

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure

EWilson:Diskette:Flumetsulam:02-16-99

CONCURRENCES

SYMBOL							
SURNAME							

(Base Label):

(Logo) Dow AgroSciences LLC

Scorpion* III

A selective herbicide for postemergence broadleaf weed control in field corn.

Active Ingredients:

flumetsulam: N-(2,6-difluorophenyl)- 5-methyl-1,2,4-triazolo- [1,5a]-pyrimidine-2-sulfonamide.....	9.3%
clopyralid: 3,6-dichloro- 2-pyridinecarboxylic acid.....	25.0%
2,4-D: 2,4-dichlorophenoxyacetic acid.....	50.0%
Inert Ingredients	15.7%
Total Ingredients	100.0%

**ACCEPTED
with COMMENTS
In EPA Letter Dated
FEB 16 1999**

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
62719-264**

Contains 0.843 pounds of active ingredient per pound of product.

U.S. Patents 4,818,273 and 4,954,163

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

DANGER PELIGRO

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

Causes irreversible Eye Damage • Do Not Get In Eyes Or On Clothing • Harmful If Swallowed, Inhaled, Or Absorbed Through The Skin • May Cause Skin Sensitization Reactions In Certain Individuals

Avoid breathing vapors or spray mist and contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

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.

First Aid

If in eyes: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

If swallowed: Do not induce vomiting. Call a physician or Poison Control Center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

If inhaled: Remove individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, give artificial respiration, preferably cardiopulmonary resuscitation assistance, and get medical attention immediately.

If on skin: Immediately wash with plenty of soap and water. Get medical attention if irritation develops.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

One or more of the active ingredients in this product is (are) known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Caution should be exercised when handling this product at mixing and loading sites to prevent contamination of groundwater supplies. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Agricultural Use Requirements

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

Refer to label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

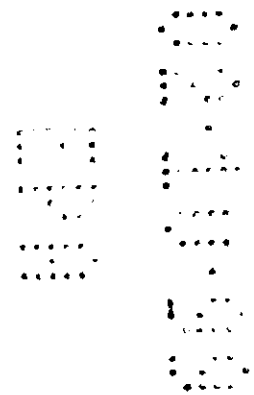
EPA Reg. No. 62719-264

EPA Est. 00000-XX-00

*Trademark of Dow AgroSciences LLC

Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

Broadleaf Blend Herbicide
Net Weight 5 lb (or) contains 5, 8 oz Water Soluble Packets



(Datapack Cover):

(Logo) Dow AgroSciences LLC

Scorpion* III

A selective herbicide for postemergence broadleaf weed control in field corn.

Active Ingredients:

flumetsulam: N-(2,6-difluorophenyl)- 5-methyl-1,2,4-triazolo- [1,5a]-pyrimidine-2-sulfonamide.....	9.3%
clopyralid: 3,6-dichloro- 2-pyridinecarboxylic acid.....	25.0%
2,4-D: 2,4-dichlorophenoxyacetic acid.	50.0%
Inert Ingredients	15.7%
Total Ingredients	100.0%

Contains 0.843 pounds of active ingredient per pound of product.

U.S. Patents 4,818,273 and 4,954,163

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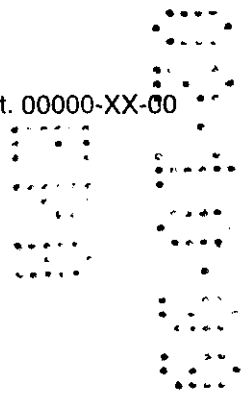
Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-264

EPA Est. 00000-XX-00

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Dow AgroSciences LLC • Indianapolis, IN 46268 U.S.A.

Broadleaf Blend Herbicide



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Net Weight 5 lb (or) contains 5,-8 oz Water Soluble Packets



(Page 1 through end):

Precautionary Statements

Hazards to Humans and Domestic Animals

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Avoid breathing vapors or spray mist and contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
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If on skin: Immediately wash with plenty of soap and water. Get medical attention if irritation develops.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

One or more of the active ingredients in this product is (are) known to leach through soil into groundwater under certain conditions as a result of agricultural use. Use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Caution should be exercised when handling this product at mixing and loading sites to prevent contamination of groundwater supplies. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

Handling Precautions for Water Soluble Packets: Do not remove water soluble packet from overpack except for immediate use. Do not allow water soluble packet to come into contact with water prior to use. Do not handle water soluble packet with wet hands or wet gloves. Carefully reseal package containing unopened water soluble packets and protect package from moisture.

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 48 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
- Protective eyewear

Storage and Disposal

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

Storage: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 122°F for extended periods of time. If container is damaged or spill occurs, use product immediately or contain material and dispose as waste. Water soluble packets may become brittle when stored below 32°F. Handle carefully when frozen to avoid breakage or allow package to warm above 32°F before handling.

Disposal: Wastes resulting from the use of this product may be disposed of on site according to label use directions or at an approved waste disposal facility.

Container Disposal: When all packets are used, dispose of empty package in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Container Disposal (Plastic Jug): Triple rinse (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.

General: Consult federal, state, or local disposal authorities for approved alternative procedures.

General Information

Scorpion[®] III herbicide is a selective product for soil applied and postemergence broadleaf weed control in field corn. Absorption of Scorpion III occurs through both the foliage and root uptake. Susceptible weeds exposed to Scorpion III stop growing and either die or remain non-competitive with the crop. Scorpion III may provide residual control of weeds that emerge after application. Because uptake and translocation of Scorpion III involves uptake by foliage and/or roots, adequate soil moisture from rainfall or irrigation is necessary for optimal activity.

When applications are made under adverse (dry or cold) conditions or when large weeds or less susceptible species are treated, weed suppression may be observed. Weed suppression is a visual reduction in weed competition (reduced population, size, and/or vigor) as compared to an untreated area. Degree of control can be increased by applying Scorpion III under favorable growing conditions (i.e., adequate moisture and temperature).

[Editor's note: This portion of the label has been reformatted to accommodate addition of soil application of Scorpion III. Sections or paragraphs have been moved; edits are as shown.]

General Use Precautions

- Use of this product in Suffolk and Nassau counties in the state of New York is prohibited.
- ~~Do not exceed 1 application per year.~~
- Do not exceed a total soil applied application rate of 8 oz per acre of Scorpion III (0.047 lb flumetsulam) during a single crop year.
- Do not exceed a total postemergence application rate of ~~0.25 lb~~ 4 oz per acre of Scorpion III (0.023 lb flumetsulam) during a single crop year.
- Do not apply to corn that has previously received a preemergence application of Broadstrike[®]+Dual[®], Broadstrike SF+Dual or Hornet[®] herbicide if application of this product would exceed a total of 0.67 lb active ingredient (a.i.) of flumetsulam per acre. One pint of Broadstrike+Dual contains 0.025 lb of flumetsulam. One pint of Broadstrike SF+Dual contains 0.031 lb of flumetsulam. One ounce of Hornet contains 0.0145 lb of flumetsulam.
- Do not apply postemergence to corn that has entered the tassel stage of growth.
- Do not apply to field corn grown for seed.
- Do not apply Scorpion III to sweet corn or popcorn.

- **Preharvest interval:** An interval of at least 85 days is required between application of Scorpion III and field corn harvest.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Placement of mixing/loading equipment** on an impervious pad to contain spills will help prevent groundwater contamination.
- **Do not aerially apply Scorpion III** unless permitted by EPA approved supplemental labeling.

Adverse Weather Conditions

- When soil applied, extended cold, wet conditions (soil temperatures below 50°F and excessive rainfall with wet soil conditions), following soil application of Scorpion III to field corn, which persist during germination and/or early crop development may result in crop injury. Injury symptoms, which include yellowing of leaves and/or crop stunting, are usually temporary and affected corn plants usually recover without affecting yield.
- Do not apply make postemergence applications when air temperature is near freezing or when freezing conditions are expected for several days following application.
- When postemergence applications are made under adverse (dry or cold) conditions or when large weeds or less susceptible species are treated, weed suppression may be observed. Weed suppression is a visual reduction in weed competition (reduced population, size, and/or vigor) as compared to an untreated area. Degree of control can be increased by applying Scorpion III under favorable growing conditions (i.e., adequate moisture and temperature), and by using a higher rate in the specified rate range.
- Dry weather following preplant surface or preemergence applications of Scorpion III may reduce effectiveness. If sufficient activating rainfall or overhead irrigation does not occur within 7 to 10 days of application, rotary hoe, harrow, or shallowly cultivate to incorporate the herbicide lightly into the soil.
- Postemergence Application applications of Scorpion III to corn that is stressed or damaged by conditions such as cold weather, hail, drought, water saturated soil, disease, or insects may cause further crop injury.
- Do not apply make postemergence applications of Scorpion III to corn that exhibits injury from herbicide applications made to the current crop or previous crop.
- Temporary injury may occur if Scorpion III is applied when corn is growing rapidly under conditions of high temperature and abundant soil moisture. Under such conditions, delay cultivation or other mechanical field operations for 7 to 10 days to allow the crop to overcome any temporary stalk brittleness.

Use With Other Products

- If any herbicide with ALS (acetolactate synthesis) inhibiting product inhibition mode of action such as Pursuit, Preview, Canopy, Classic, Scepter, or Squadron herbicide was applied the previous year, apply Scorpion III to corn only if the rotational restrictions to corn for the product(s) in question have been met.
- Corn previously treated with Scorpion III that is stressed or damaged by conditions such as cold weather, hail, drought, water saturated soil, disease or insects should not be treated with Accent, Beacon, Permit, Exceed, Basis or other ALS inhibiting products as this may cause further crop injury.
- Do not apply Scorpion III to corn that exhibits injury from herbicide applications made to the current crop or previous crop.
- Do not tank mix Scorpion III with foliar postemergence insecticides as unacceptable crop injury may result. To avoid crop injury, apply any foliar insecticide treatments at least 7 days before or 7 days after the application of Scorpion III.

[Editor's note: the following statements were taken mainly from the EPA-accepted label of the flumetsulam-containing product, Hornet (62719-253).]

Advisories and Restrictions for Soil Surface Applications

- Application: Uneven application of Scorpion III can result in erratic weed control or crop injury. Over application may result in crop injury or rotational crop damage from soil residue.
- Corn Planting Depth: Minimum planting depth should be at least 1 1/2 inches.

- Do not use apply Scorpion III as a pre plant incorporated treatment.
- Do not use on peat or muck soils.
- Do not apply to areas where the soil pH is greater than 7.8 as this may result in increased crop injury.
- Do not apply to a soil containing greater than 5% organic matter if the soil pH is below 5.9 as reduced weed control will result.
- Use of Scorpion III in soil-applied treatments on soils with less than 1.5% organic matter (O.M.) may result in crop injury. Apply as a soil-treatment to fields which have less than 1.5% O.M. only if the risk of crop injury is acceptable.
- Corn growing in calcareous soils or soils with historically high salt content (soil test results for salinity indicating electrical conductivity greater than 1.0 mmho/cm) may exhibit chlorosis and/or stunting resulting from reduced availability of iron, zinc or other micro nutrients essential for normal crop vigor and growth. The presence of soil-active herbicides, such as Scorpion III may cause additional stress under these conditions resulting in increased leaf chlorosis and/or crop stunting. This added stress may retard crop recovery, especially under conditions of limited rainfall. In fields which contain calcareous or high salt content soils, growers should plant "IR" or IMR" designated varieties, commonly referred to as "imidazolinone resistant" corn hybrids. On these type soils, the likelihood of crop injury can also be reduced by using the lower end of the recommended rate range for the soil type and/or by applying Scorpion III 10-14 days prior to planting.

Soil Insecticide Precautions (Soil Applications of Scorpion III):

When Scorpion III is used for soil applied broadleaf weed control in corn:

- Soil applied organophosphate insecticides should be applied in a T-band or a band to avoid potential crop injury.
- Soil insecticides from other classes of chemistry may be applied in-furrow, T-banded, or banded.
- Do not use Scorpion III if terbufos (Counter insecticide products) or phorate (Thimet insecticide products) have been applied.

Use With Genetically Modified Corn Varieties:

If an "IR" or "IMR" designated hybrid (commonly referred to as "imidazolinone resistant") is planted, any organophosphate insecticide, including Counter or Thimet, can be applied according to label directions without increasing the likelihood of injury to corn from Scorpion III. The adverse interaction between Counter or Thimet insecticide and Scorpion III **does not** occur in corn hybrids identified as "IR" or "IMR". This adverse interaction **does** occur in imidazolinone tolerant "IT", "PT" hybrids which are considered as "standard" hybrids regarding this effect. "IR" or "IMR" hybrids may also be planted to reduce injury to corn from preemergence treatments of Scorpion III on soils with less than 1.5% organic matter or pH greater than 7.8.

Precautions for Avoiding Injury to Non-Target Plants

- **Avoid all direct contact or indirect contact with nontarget plants.** Do not apply near desirable vegetation. Broadleaf herbicides contained in Scorpion III are highly phytotoxic to nontarget broadleaf plants such as cotton, grapes, tobacco, vegetables, fruit trees or other broadleaf species. Even very small amounts of spray drift not visible to the eye can cause injury. Allow adequate distance between target area and desirable nontarget plants under conditions of application and carefully follow guidelines for avoiding spray drift to minimize potential exposure.
- **Do not apply under conditions which favor runoff or wind erosion of soil containing Scorpion III to nontarget areas. To prevent off-site movement due to runoff or wind erosion:**
 - Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
 - Do not apply to impervious substrates such as paved or highly compacted surfaces, or frozen or snow covered ground.
 - Do not apply to soils when saturated with water.

- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.
- **Do not apply when weather conditions favor drift to nontarget sites. To minimize spray drift to nontarget areas:**
 - Use low pressure application equipment capable of producing a large-droplet spray.
 - Do not use nozzles that produce a fine-droplet spray.
 - Minimize drift by using sufficient spray volume to ensure adequate coverage with large-droplet size sprays.
 - Keep ground-driven spray boom as low as possible above the target surface.
 - Spray when conditions are calm or wind speed is low. Do not spray when wind is gusting or steady wind speed is greater than 10 mph.
- **Do not move treated soil:** Avoid situations where soil particles may blow into areas where susceptible crops are grown. The hazard of movement of this product on dust is reduced if treated fields are irrigated or if rain occurs shortly after application.
- **Crop residues from treated areas:** Crop residues from treated areas cannot be used for composting or mulching on ground where susceptible crops may be grown the following season. To promote herbicide decomposition, plant material should be evenly incorporated or burned. Adequate moisture is also required to promote breakdown of plant residues which contain clopyralid.
- **Sprayer Cleanup:** To avoid injury to or exposure of nontarget crops, thoroughly clean and drain spray equipment used to apply Scorpion III after use. Cleaning should occur as soon as possible after Scorpion III application. Spray equipment should be cleaned after use with Scorpion III by the following procedure:
 1. Drain any remaining Scorpion III from the spray tank and dispose of according to label disposal instructions.
 2. Hose down the interior surfaces of the tank. Flush tank, hoses, boom, and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom, and nozzles and drain the tank. All rinse water must be disposed of in compliance with local, state, and federal guidelines.
 3. Remove the nozzles and screens and clean separately.
 4. If the spray equipment will be used on crops other than field corn, repeat steps 1 and 2 again, and thoroughly wash the spray mixture from the outside of spray tank and the boom.

Rotational Crop Restrictions:

- When tank mixing with companion herbicides, follow the most restrictive crop rotation guidelines on the label of each product used.
- The following rotational crops may be planted at the indicated interval following an application of up to 0.25 lb 12 oz per acre (up to 8 oz/acre soil-applied plus 4 oz/acre postemergence) of Scorpion III and when applications of flumetsulam in products containing this active ingredient does not exceed a total of 0.07 lb a.i. per acre:

Crop ¹	Interval (Months)
barley, oats, rye, wheat	4
rice	6
alfalfa ²⁽¹⁾ , dry beans ²⁽¹⁾ , soybean ² , pop corn, sweet corn (2)	10 1/2
grain sorghum	12
cotton, peas (3), peanuts, potatoes, sunflower, tobacco	18
sugar beets, canola, and all other crops (4)	26

- ¹ **Note:** Rotation to sugar beets, canola, and all other crops requires a 26-month rotation interval and a successful field bioassay.
21. When annual rainfall and/or irrigation is less than 15 inches on soils with less than 2% organic matter, alfalfa, dry beans and soybeans should not be planted until 18 months after application of Scorpion III.
 2. Sweet corn may be planted 10.5 months following postemergence applications of Scorpion III. For soil applications of Scorpion III, certain sweet corn varieties may be planted 10 1/2 months after applications of up to 8 oz per acre of Scorpion III. This interval applies **only to the following varieties of sweet corn grown for processing:** Beretta, Bingo, Bonus, Challenger, Cornucopia, Crisp'N Sweet 710, DMC 20-04, DMC 20-10, DMC 20-35, Eliminator, Empire (GH 2759), Excalibur, Excellency, GH 2628, GH 2683, GH 2684, GH 2690, GG 5, GG 22, GG 23, GG 40, GG 43, GG 46, GG 55, GG 60, GG 520, HM 701, Lumina, Reveille, Reward, Rival, Shaker, Sprint, Tribune, Viking, and Zenith. **The soil applied rotational interval is 18 months for sweet corn varieties not listed.**
 3. Peas should not be planted less than 18 months following a soil application of Scorpion III unless the risk of injury is acceptable. Growers considering planting peas sooner than 18 months after application of Scorpion III are directed to contact the processor company for information and recommendations regarding the tolerance of pea varieties to Scorpion III and/or Stinger* herbicide and previous rotational crop experience with these products. **All risks and consequences associated with planting peas less than 18 months after application of Scorpion III shall be assumed by the grower**
 4. Rotation to sugar beets, canola, and all other crops requires a 26 month rotation interval and a successful field bioassay.

Field Bioassay Instructions: Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with Scorpion III. Plant the strips perpendicular to the direction Scorpion III was applied. The strips should also be located so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury or stand reduction, the field can be seeded with the test crop in the growing season following the bioassay. If visible injury or stand reduction occurs, the test crop should not be seeded, and the bioassay must be repeated the next growing season. In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample field conditions such as soil texture, soil pH, drainage, and any other variable that could affect the seed bed of the new crop. Field bioassay at any time between harvest of the treated crop and the planting of the rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination) chlorosis (yellowing), and necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the test rotational crop; plant only a labeled crop or crop listed in the table above for which the rotational interval has clearly been met.

Mixing and Application

Mixing Directions

Apply Scorpion III at a rate of 0.25 lb per acre.

Apply Scorpion III at a rate of 4 oz per acre for post applications and 6 to 8 oz per acre for soil applications. For soil applications, use a higher rate in the rate range for dense weed infestations.

If the product is packaged in a 5 pound plastic container, the entire container will treat 20 acres. For areas less than 20 acres, use the container's calibrated measuring chamber to deliver the required quantity of Scorpion III.

If product is packaged in water soluble packaging, use the table below to determine the number of packets required for the acreage to be treated. At a rate of 0.25 lb per acre, 1 water soluble packet will treat 2 acres. At a rate of 4 oz per acre, 1 water soluble packet will treat 2 acres.

Number of Water Soluble Packets of Scorpion III Required To Treat Various Acreage

Number of Acres To Be Treated	Number of Water Soluble Packets Required
2	1
4	2
6	3
8	4
10	5
12	6
14	7
16	8
18	9
20	10

Scorpion III Rate (oz/acre)	Acres Per 5 lb Plastic Jug	Acres Per 4 oz Packet
4	20	1.0
6	13.33	0.67
8	10	0.50

If the acres to be treated do not result in a whole number of packets:

1. Do not open the water soluble packets.
2. Round up or down to the nearest whole number of packets. If Broadstrike+Dual, Broadstrike SF+Dual or Hornet was previously applied to the crop, check to make sure that the resulting total seasonal application rate does not exceed 0.07 lb a.i. of flumetsulam per acre.

Spray Preparation:

Scorpion III is a water dispersible granule formulation. Thorough mixing is required.

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load.
2. Start agitation system.
3. Add required amount of product to the spray tank. If product is packaged in water soluble packets, add the required number of water soluble packets by opening the overpack and adding the soluble packet (product in transparent film) directly into the spray tank while agitating. Do not open water soluble packets. Water soluble packets will float on the surface until the water soluble film dissolves and releases the product. Handling packets with hands should be minimized.
4. Continue agitation and complete filling the tank while the packets dissolve.
5. Before spraying, make sure packets have completely disintegrated and product is thoroughly mixed with water. Depending on the water temperature and the degree of agitation, the packet and Scorpion III should be completely dispersed within 5 minutes from the time they were added to the water.

To insure a uniform spray mixture continuous agitation is required during mixing and spraying. Apply within 24 hours after mixing. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying.

Scorpion III in Tank Mix

Tank Mixing Precautions:

This product may be applied in tank-mix combination with labeled rates of other products provided (1) the tank-mix product is labeled for the timing and method of application for the use site to be treated, (2) tank-mixing is not prohibited by the label of the tank mix product and (3) the tank mix combination is compatible as determined by a "jar test" described in the "Tank Mix Compatibility Testing" section below.

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed recommended application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- For products packaged in water soluble packaging, do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned. (See instructions for Sprayer Clean-Out.)

Tank Mix Compatibility Testing: A jar test is recommended prior to tank mixing to ensure compatibility of Scorpion III and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Vigorous, continuous agitation during mixing, filling, and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture. To prevent foaming during filling, keep end of fill pipe below the surface of the liquid in the spray tank. **Note:** When tank mixing Scorpion III with other products, a compatibility test (jar test) using relative proportions of tank mix ingredients should be conducted prior to mixing ingredients in the spray tank.

Mixing Order for Tank Mixes: Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order: Scorpion III and other dry flowables; wettable powders; aqueous suspensions, flowables, and liquids.

Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add emulsifiable concentrates and any solutions.

Note: The non-ionic surfactant and liquid fertilizer solutions required for applications should be added to the spray tank last.

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling, and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to resuspend than when originally mixed.

Premixing: Dry and flowable formulations may be premixed with water (slurried) and added to the spray tank through a 20-35 mesh screen. This procedure assures good initial dispersion of these products in liquid fertilizer or water.

Line screens in the spray tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

Broadcast Spray Application

Apply Scorpion III in sufficient spray volume to provide uniform coverage using only properly calibrated ground equipment. Apply in a total spray volume of 10 to 40 gallons per acre using low pressure (20 to 40 pounds/square inch). Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture.

Banded Spray Application

Scorpion III may be applied as a band treatment. Use the formula below to determine the appropriate rate and volume per treated acre.

Band width in inches		Broadcast RATE		Band RATE
-----	X	per treated	=	per treated
Row width in inches		acre		acre
Band width in inches		Broadcast VOLUME		Band VOLUME
-----	X	per treated	=	per treated
Row width in inches		acre		acre

Application in Liquid Fertilizer (Soil Applications Only)

Scorpion III packaged in a 5 lb jug may be added directly to liquid fertilizer, provided there is vigorous agitation. Premix or slurry with water if inadequate spray tank agitation is a concern. Scorpion III in water soluble packets must be premixed or slurried prior to use in liquid fertilizer. Do not attempt to dissolve water soluble packets in liquid fertilizer. The film used in water soluble packaging is not soluble in liquid fertilizer solutions. Water soluble packets containing Scorpion III should be premixed with water and then added to the spray tank through a 20-35 mesh screen. For best results, use a minimum of 1 pint of water per water soluble packet. Packets can be stirred immediately on addition of water or allowed to dissolve. Stir until packets are dissolved and granules are completely dispersed. Add rinsate from mixing container to spray tank. Do not apply Scorpion III in liquid fertilizer to emerged corn due to the risk of severe crop injury

When necessary, a compatibility agent can be used to ensure that Scorpion III mixes properly. The use of appropriate compatibility agents is especially important when tank mixing Scorpion III and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizers. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are difficult to disperse. A jar test, utilizing relative proportions of the tank mix ingredients is recommended prior to mixing with liquid fertilizers.

Approved Use

Field Corn - Soil Application

Broadcast Application Rates (Preplant Surface Applied, Postplant Preemergence, and Spike Stage Treatments): Apply Scorpion III at a rate of 6 to 8 oz per acre. Use a higher rate in the rate range for dense weed infestations.

Broadleaf Weeds Controlled By Soil Applied Scorpion III

Scorpion III will control "triazine tolerant" biotypes of these weeds, commonly know as "triazine resistant".

Numbers within parentheses (-) refer to "Use Information for Specific Weeds" below.

<u>amaranth, Palmer</u>	<u>pigweed, smooth</u>
<u>anoda, spurred</u>	<u>poinsettia, wild</u>
<u>beggarweed, Florida</u>	<u>puncturevine</u>
<u>buckwheat, wild</u>	<u>purslane</u>
<u>carpetweed</u>	<u>ragweed, common</u>
<u>chickweed</u>	<u>ragweed, giant(1)</u>
<u>cocklebur, common</u>	<u>sicklepod</u>
<u>clover, red</u>	<u>shepherd's purse</u>
<u>henbit</u>	<u>sicklepod</u>
<u>horseweed (marestail)</u>	<u>sida, prickly</u>
<u>jimsonweed</u>	<u>smartweed</u>
<u>kochia(1) (5)</u>	<u>spurge, nodding</u>
<u>ladysthumb</u>	<u>spurge, spotted</u>
<u>lambsquarters, common</u>	<u>spurge, prostrate</u>
<u>mallow, Venice</u>	<u>sunflower, common</u>
<u>morningglory species (1)</u>	<u>thistle, Canada(3)</u>
<u>mustard, wild</u>	<u>velvetleaf</u>
<u>nightshade species(2)</u>	<u>waterhemp species (4)</u>
<u>pigweed, redroot</u>	

Use Information for Specific Weeds:

1. Weeds partially controlled.
2. Control of moderate to heavy infestations of nightshade will be improved with a tank mixture of the appropriate labeled rate of an atrazine premix product or a surface applied acetanilide product such as Dual II, Surpass, TopNotch, Harness, or Frontier herbicide.
3. Burndown control of Canada thistle in minimum and no-till corn only.
4. To aid in control of waterhemp, apply Scorpion III in tank mix combination with the appropriate labeled rate of a surface applied acetanilide product such as Dual II, Surpass, TopNotch, Harness, or Frontier herbicide.
5. Scorpion III will not control ALS resistant or tolerant biotypes of kochia.

Scorpion III may be soil applied as a preplant surface or preemergence treatment. Apply alone or in tank mix combination with a grass control product such as Dual II, Dual II Magnum, Surpass, TopNotch, Harness, or Frontier herbicide.

Tank Mixing Limitations: Scorpion III may be applied in tank mix combination with other products provided (1) the timing and method of application is the same as recommended for Scorpion III; and (2) tank mixing with Scorpion III is not prohibited by the label of the tank mix product. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

Soil Application Directions

1. Preplant Surface Applied: For minimum-tillage or no tillage systems, Scorpion III alone and with certain tank mixtures may be applied up to 30 days before planting. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide such as Gramoxone Extra herbicide, Touchdown herbicide, or Roundup Ultra herbicide (glyphosate). When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels. To the extent possible do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

2. Canada Thistle Control in Minimum and No-Till Corn: Scorpion III may be applied as a burndown treatment for control of emerged Canada thistle in minimum and no-till corn. The application will result in reduced late season competition. Delay the application until most of the thistle has emerged and averages 4 to 8 inches in height. For applications to Canada thistle, always include crop oil concentrate (See "Adjuvant Systems" in "Postemergence Treatments" section). Tank mix Scorpion III with Roundup Ultra (glyphosate) or Touchdown and non-ionic surfactant for burndown control of existing grass and annual broadleaf weeds. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels. Do not apply in tank mixture with Gramoxone Extra as this will result in reduced control of Canada thistle. Do not cultivate for at least 14 days after application to allow for thorough translocation of the herbicide treatment.

Note: Scorpion III will not control Canada thistle that has not emerged at the time of application in minimum or conventional tillage systems.

3. Burndown Application: When used as a burndown application, Scorpion III will provide foliar control of broadleaf weeds listed in the "Postemergence Treatments" section of this label and residual control of weeds listed under soil application. Foliar burndown applications should always include crop oil concentrate (see "Adjuvant Systems" in "Postemergence Treatments" section). To broaden the spectrum of weeds controlled, Scorpion III may be tank mixed with other herbicides such as Roundup Ultra, Touchdown, Gramoxone Extra, 2,4-D, etc. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

4. Pre-emergence Application: Apply at the time of planting or after planting, but prior to crop or weed emergence. Adequate soil moisture following application is required for optimum herbicidal activity. For surface applications, rainfall, or overhead sprinkler irrigation is necessary to move Scorpion III into the weed germination zone. The amount of rainfall or irrigation required following application depends on existing soil moisture, soil texture, and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is generally adequate. If adequate soil moisture is not received within 7 to 10 days after a surface applied treatment, a shallow cultivation is recommended to control established weeds and move the herbicide into the weed germination zone. When adequate soil moisture is received following dry conditions, performance may vary with weed species and the depth of the weed root system in the soil.

5. Spike Stage Application: Apply from corn emergence (ground cracking stage) until corn is 2 inches in height and before the first leaf is unfurled. Adequate soil moisture is required for optimum herbicidal activity. For those weeds that have not emerged at the time of application, rainfall or overhead sprinkler irrigation is necessary to move Scorpion III into the weed germination zone. The amount of rainfall or irrigation required following application depends on existing soil moisture, soil texture, and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is generally adequate. If adequate soil moisture is not received within 7 to 10 days after a surface applied treatment, a shallow cultivation is recommended to control established weeds and move the herbicide into the weed germination zone. When adequate soil moisture is received following dry conditions, performance may vary with weed species and rooting depth of target weeds.

Tank Mixing (Preplant Surface Applied, and Postplant Preemergence Treatments)

Note: When tank mixing with a companion herbicide, read and follow each manufacturer's label for weeds controlled, applicable use directions, precautions, and limitations.

1. Scorpion III plus Gramoxone Extra, Roundup Ultra (glyphosate) or Touchdown for minimum-tillage or no-tillage systems

In minimum-tillage or no-tillage situations where corn is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Extra, Touchdown or Roundup Ultra (glyphosate) may be tank mixed with Scorpion III. Apply in 10 to 60 gallons of water or fluid fertilizer per acre with ground equipment. When tank mixing, do not exceed recommended application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels.

Application Timing: Apply before, during (behind the planter), or after planting, but before the crop emerges.

Gramoxone Extra: See the label for Gramoxone Extra for weeds controlled, recommended rates for specific weeds, and application instructions. Do not apply combinations containing Gramoxone Extra in suspension type fertilizers as the activity of the active ingredient paraquat will be reduced.

Roundup Ultra: See the Roundup Ultra (or other labeled glyphosate) herbicide label for weeds controlled, recommended rates for specific weeds, and application instructions.

2. Scorpion III plus 2,4-D for minimum-tillage or no-tillage systems

Where heavy crop residues exist, add 0.5 to 1.5 pints per acre of an appropriately labeled 3.8 pounds a.e. per gallon 2,4-D amine or ester to the spray tank and apply in a minimum of 20 gallons of carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers applied before corn emergence enhance burndown of existing weeds and, therefore, are recommended instead of water. Add a crop oil concentrate or non-ionic surfactant at 1.0 to 2.0 quarts per 100 gallons diluted spray or another appropriate surfactant at its recommended rate. Apply before weeds reach 6 inches in height. This tank mixture will not control emerged grasses.

3. Scorpion III plus atrazine may also be used to broaden the spectrum of weeds controlled in soil applications.

Scorpion III Soil-Applied Followed By Postemergence Treatments

Broadleaf weeds not controlled by soil applications of Scorpion III may be controlled with postemergence herbicide products such as Scorpion III, Banvel, Clarity, 2,4-D, Marksman, Buctril, or Beacon herbicide. Read and follow each manufacturer's label for weeds controlled, applicable use directions, precautions, and limitations before use.

Field Corn - Postemergence Application

Application Rate

Apply Scorpion III as a postemergence spray at a rate of ~~0.25 lb~~ **4.0 oz** per acre.

(If product is packaged in water soluble packets refer to Mixing Directions section to determine the number of water soluble packets required for the acreage to be treated. At a rate of ~~0.25 lb~~ **4.0 oz** per acre, 1 packet will treat 2 acres).

Application Timing

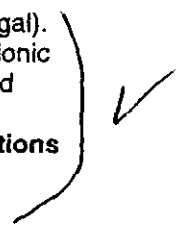
Apply as a broadcast, or band treatment over the top of field corn up to 8 inches tall or prior to 5 fully exposed leaf collars (V5), whichever comes first. Apply when broadleaf weeds are 2 to 6 inches in height. Weeds too large for optimum control will be suppressed, but may recover after 2 to 3 weeks. Spraying at the cotyledon stage is not recommended. Do not apply if rainfall is expected within 6 hours after application. Applications when the corn is taller than 8 inches or V5 growth stage should be made as a directed spray with drop nozzles and kept off the corn leaves to reduce the potential for brace root injury.

Tank Mixing

Scorpion III may be applied alone or in tank mix combination with other herbicides registered for postemergence application in field corn unless tank mixing is specifically prohibited by the label of the tank mix product. When Scorpion III is tank mixed with a companion herbicide, follow relevant use directions, including precautions, restrictions, and limitations listed on the manufacturer's label.

Use of Surfactants

All applications of Scorpion III must include a non-ionic surfactant at 0.25% volume/volume (1 qt/100 gal). Use a good quality surfactant with at least 80% active ingredient (of which at least 50% is actual non-ionic surfactant). Under extremely dry growing conditions, use of an agriculturally approved sprayable liquid fertilizer together with the non-ionic surfactant may enhance control. Use 28%, 30%, or 32% urea ammonium nitrate at 2.5% volume/volume (2.5 gal/100 gal). **Note: Do not use liquid fertilizer solutions or suspensions as the total carrier because excessive crop injury may occur.** Use only EPA approved surfactants for use on food crops.



Factors Affecting Weed Control

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures before, at, or following application may result in reduced weed control. Degree of control will depend on coverage of treated weeds and weed susceptibility as well as growing conditions at the time of treatment.

Note (Cultivation): For best results, do not cultivate for 10 days after application. Root pruning resulting from cultivation occurring less than 10 days after application may interfere with herbicide uptake and reduce weed control.

Weeds Controlled:

Numbers within parentheses (-) refer to "Use Information for Specific Weeds" below.

amaranth, Palmer	pigweed, smooth [†] (3)
anoda, spurred	purslane, common
artichoke, Jerusalem ^{††} (1)	ragweed, common
chickweed	ragweed, giant
cocklebur, common	sicklepod
Florida beggarweed	sida, prickly
jimsonweed	smartweed
kochia (2)	spurge, spotted
lambsquarters, common [†]	spurge, nodding
(3)	spurge, prostrate
mallow, Venice	sunflower, common
marshelder	thistle, Canada ^{††} (1)
morningglory species	thistle, Russian
mustard, wild	velvetleaf
nightshade, black	waterhemp, tall
pigweed, redroot [†] (3)	

Use Information for Specific Weeds:

^{††}1. Partial control.

2. Scorpion III will not control ALS resistant kochia bio-types.

[†]3. Includes triazine "resistant" varieties (triazine tolerant biotypes) of this weed species

Note: For improved consistency of control of kochia, nightshade, and waterhemp, apply when weeds are less than 2 inches tall.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences **MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

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