



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Niamh McMahon  
Dow AgroSciences  
9330 Zionsville Road  
Indianapolis, IN 46268-1054

SEP 9 2009

Dear Ms. McMahon:

Subject: Revised Label  
Stinger  
EPA Registration No. 62719-73  
Your Submission Dated August 25, 2009

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- In the Rangeland and Permanent Grass Pastures Directions for Use delete the Paragraph and Table concerning export to clopyralid sensitive destinations. The purpose of this section is not clear. If FIFRA labeling is being used to enforce foreign Maximum Residue Levels (MRLs), data should be submitted or referenced supporting the proposed timeframes. If science review is required to support the proposed statements, appropriate PRIA II fees will be required.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

-2-

If you have any questions concerning this letter, please contact Mr. James Stone at 703-305-7391.

Sincerely yours,

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

Enclosure

(Base label):

# Stinger®

## Herbicide

**For selective postemergence control of broadleaf weeds in listed crops, conservation reserve program (CRP) acres, non-cropland, and rangeland and permanent grass pastures**

**Active Ingredient:**

cloprialid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt.....	40.9%
Other Ingredients .....	59.1%
Total .....	100.0%

Acid Equivalent: cloprialid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lb/gal)

[Editor's Note: The following should be included on the label if product is packaged in a Tip 'n Measure bottle.]

**1 - Tip**



**2 - Level**



**3 - Dispense**



Refer to inside of label booklet for detailed container use directions.

**Keep Out of Reach of Children**

## CAUTION

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:  
SEP 9 2009**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

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### Precautionary Statements

62719-73

#### Hazards to Humans and Domestic Animals

**Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin**

**Avoid contact with eyes, skin, or clothing.**

#### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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:

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• Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

### First Aid

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

### Environmental Hazards

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

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

### Physical or Chemical Hazards

**Combustible.** Do not use or store near heat or open flame.

### 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.

### (Storage and Disposal for rigid containers 5 gal or less)

#### Storage and Disposal

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

### (Storage and Disposal for refillable rigid containers larger than 5 gal)

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**Storage and Disposal**

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)****Storage and Disposal**

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

**Pesticide Storage:** Store above 28°F or warm to 40°F and agitate before use.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to label booklet for Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

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

EPA Reg. No. 62719-73

EPA Est. \_\_\_\_\_

®Trademark of Dow AgroSciences LLC

**Produced for**  
**Dow AgroSciences LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

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(Label booklet cover):

# Stinger®

## Herbicide

**For selective postemergence control of broadleaf weeds in listed crops, conservation reserve program (CRP) acres, non-cropland, and rangeland and permanent grass pastures**

**Active Ingredient:**

clopypalid: 3,6-dichloro-2-pyridinecarboxylic acid, monoethanolamine salt.....	40.9%
Other Ingredients .....	59.1%
Total .....	100.0%

Acid Equivalent: clopypalid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lb/gal)

**Keep Out of Reach of Children**

## CAUTION

**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 inside of label booklet for additional precautionary information including Directions for Use.**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

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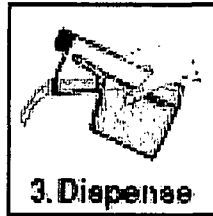
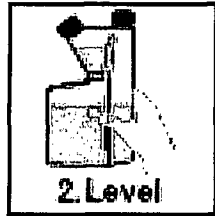
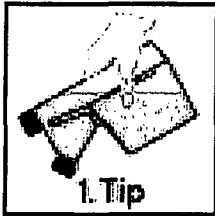
**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

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[Editor's Note: The following Container Use Directions should be included on the label if product is packaged in a Tip 'n Measure bottle.]

**Container Use Directions**





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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****CAUTION****Causes Moderate Eye Irritation • Harmful If Absorbed Through Skin****Avoid contact with eyes, skin, or clothing.****Personal Protective Equipment (PPE)****Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

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.

**First Aid**

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

**Environmental Hazards**

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

Clopyralid is a chemical which can travel (seep or leach) through soil and under certain conditions contaminate groundwater which may be used for irrigation or drinking purposes. Users are advised not to apply clopyralid where soils have a rapid to very rapid permeability throughout the profile (such as loamy sand to sand) and the water table of an underlying aquifer is shallow, or to soils containing sinkholes over limestone bedrock, severely fractured surfaces, and substrates which would allow direct introduction into an aquifer. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

**Physical or Chemical Hazards**

**Combustible.** Do not use or store near heat or open flame.

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**Directions for Use**

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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.

**Not for Sale, Use or Distribution in Nassau and Suffolk Counties in New York State.**

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

**Non-Agricultural Use Requirements**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Entry Restrictions for Non-WPS Uses:** For applications to fallow cropland, rangeland, pasture, and non-crop areas, do not enter treated areas until sprays have dried. For early entry to treated areas, wear eye protection, chemical-resistant gloves made of any waterproof material, long-sleeved shirt, long pants, shoes and socks.

**Storage and Disposal**

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

**Pesticide Storage:** Store above 28°F and warm to 40°F and agitate before use.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Nonrefillable containers 5 gallons or less:**

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refillable containers 5 gallons or larger:**

**Container Handling:** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose.

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**General Information**

Stinger<sup>®</sup> herbicide is a selective, postemergence herbicide for control of broadleaf weeds in asparagus, barley, oats and wheat not underseeded with a legume, canola, Christmas tree plantations, fallow cropland, field corn, garden beet, grasses grown for seed, mint (spearmint and peppermint), popcorn, spinach, stone fruits, sugar beet, sweet corn, turnip, cottonwood/poplar and eucalyptus tree plantations, rangeland and permanent grass pastures, conservation reserve program (CRP) acres, and non-cropland areas including fence rows, around farm buildings, and equipment pathways.

**Precautions and Restrictions**

Use directions in Dow AgroSciences supplemental labeling may supersede directions or limitations in this labeling.

In California and New York, the maximum application rate for Stinger is 2/3 pint per acre per growing season. Do not exceed a cumulative amount of 2/3 pint [0.25 lb acid equivalent (a.e.)] of clopyralid per acre per crop year, unless specifically allowed.

Not for sale, use or distribution in Nassau and Suffolk Counties in New York State.

Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.

Stinger may be applied by aircraft on the following crops: canola (rapeseed), crambe, spinach, and sugar beet. Do not apply Stinger by aircraft to other labeled crops unless otherwise permitted by Dow AgroSciences supplemental labeling.

Do not use in greenhouses.

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

Re-treatment is allowed, but do not apply more than the maximum allowable rate per crop growing season. An application to fallow cropland preceding or following an application to dryland small grains (wheat, barley or oats) is allowed, but is not allowed preceding or following an application to irrigated small grains.

Do not transfer livestock from treated grazing areas (or feeding of treated hay) to sensitive broadleaf crop areas without first allowing 7 days of grazing on an untreated pasture (or feeding of treated hay). If livestock are transferred within less than 7 days of grazing untreated pasture or eating untreated hay, urine and manure may contain enough clopyralid to cause injury to sensitive broadleaf plants.

**Field Bioassay Instructions:** 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 prior to the planting of the intended rotational crop. Observe the test crop for herbicidal activity, such as poor stand (effect on seed germination) chlorosis (yellowing), 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, wait one year before repeating bioassay or plant only a labeled crop or crop listed in the table below for which the rotational interval has clearly been met.

**Crop Rotation Intervals**

Residues of Stinger in treated plant tissues, including the treated crop or weeds, which have not completely decayed may affect succeeding susceptible crops. **Note:** Numbers in parenthesis and superscripts refer to footnotes following tables.

**Crop Rotation Intervals for Florida Only**

<b>Rotation Crops (1)</b>	<b>Rotation Interval<sup>4</sup></b> (Soils less than 2% organic matter <b>AND</b> rainfall greater than 15 inches during 12 months following application)
barley, canola (rapeseed), cole crops (includes <i>Brassica</i> species grown for seed), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugar beet, sweet corn, turnip, wheat	anytime
alfalfa, asparagus, grain sorghum, mint, onions, safflower, strawberry	10.5 months
dry beans, soybean, sunflower	18 months (2)
lentils, peas, potatoes (including potatoes grown for seed), and broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months (2, 3)

1. For best results, conduct a field bioassay prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following application.
2. Follow an 18-month crop rotation due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 10.5 month rotation interval. **Note:** For these crops, a minimum 10.5 month rotation interval must be observed to avoid illegal residues in the harvested crop.
3. For best results, conduct a field bioassay prior to planting these sensitive crops.
4. **Note:** The above intervals are based upon average annual precipitation regardless of irrigation practices. Observance of listed crop rotation intervals should result in adequate safety to rotational crops. However, Stinger is dissipated in the soil by microbial activity and the rate of microbial activity is dependent upon several interrelating factors including soil moisture, temperature and organic

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matter. Therefore, accurate prediction of rotational crop safety is not possible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removal of plant residues, supplemental fall irrigation and deep moldboard plowing prior to planting the sensitive crop.

**Crop Rotation Intervals for All States Except California, Florida, Idaho, Nevada, Oregon, Utah and Washington**

<b>Rotation Crops (1)</b>	<b>Rotation Interval<sup>4</sup></b> (Soils greater than 2% organic matter <b>AND</b> rainfall more than 15 inches during 12 months following application)	<b>Rotation Interval<sup>4</sup></b> (Soils less than 2% organic matter <b>AND</b> rainfall less than 15 inches during 12 months following application)
barley, canola (rapeseed), cole crops (includes <i>Brassica</i> species grown for seed), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugar beet, sweet corn, turnip, wheat	anytime	anytime
alfalfa, asparagus, grain sorghum, mint, onions, safflower, strawberry	10.5 months	10.5 months
dry beans, soybean, sunflower	10.5 months	18 months (2)
lentils, peas, potatoes (including potatoes grown for seed), and broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months (2)	18 months (2, 3)

1. For best results, conduct a field bioassay prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following application.
2. Follow an 18-month crop rotation due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 10.5 month rotation interval. **Note:** For these crops, a minimum 10.5 month rotation interval must be observed to avoid illegal residues in the harvested crop.
3. For best results, conduct a field bioassay prior to planting these sensitive crops.
4. **Note:** The above intervals are based upon average annual precipitation regardless of irrigation practices. Observance of listed crop rotation intervals should result in adequate safety to rotational crops. However, Stinger is dissipated in the soil by microbial activity and the rate of microbial activity is dependent upon several interrelating factors including soil moisture, temperature and organic matter. Therefore, accurate prediction of rotational crop safety is not possible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removal of plant residues, supplemental fall irrigation and deep moldboard plowing prior to planting the sensitive crop.

**Crop Rotation Intervals for California, Idaho, Nevada, Oregon, Utah and Washington Only**

<b>Rotation Crops (1)</b>	<b>Rotation Interval<sup>4</sup></b> (Areas receiving greater than 18 inches of rainfall – not including irrigation)	<b>Rotation Interval<sup>4</sup></b> (Areas receiving less than 18 inches of rainfall – not including irrigation)
barley, canola (rapeseed), cole crops (includes <i>Brassica</i> species grown for seed), flax, garden beet, grasses, field corn, oats, popcorn, spinach, sugar beet, sweet corn, turnip, wheat	anytime	anytime
asparagus, grain sorghum, mint, onions, strawberry	12 months	12 months
alfalfa, dry beans, soybean, sunflower	12 months	18 months (2, 3)

broadleaf crops grown for seed (excluding <i>Brassica</i> species), carrot (2), celery (2), cotton (2), lentils, lettuce (2), melons (2), peas, potatoes (including potatoes grown for seed), safflower, and tomato (2)	18 months (2)	18 months (2, 3)
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1. For best results, conduct a field bioassay prior to planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 12 months following application.
2. Follow an 18-month crop rotation due to the potential for crop injury unless previous experience has shown no crop injury with the minimum 12 month rotation interval. **Note:** For these crops, a minimum 12 month rotation interval must be observed to avoid illegal residues in the harvested crop.
3. Crop injury and/or yield loss may occur up to 4 years after application. For best results, conduct a field bioassay prior to planting these sensitive crops. See instructions above.
4. **Note:** The above intervals are based upon average annual precipitation regardless of irrigation practices. Observance of listed crop rotation intervals should result in adequate safety to rotational crops. However, Stinger is dissipated in the soil by microbial activity and the rate of microbial activity is dependent upon several interrelating factors including soil moisture, temperature and organic matter. Therefore, accurate prediction of rotational crop safety is not possible. In areas of low organic matter (<2.0%) and less than 15 inches average annual precipitation, potential for crop injury may be reduced by burning or removal of plant residues, supplemental fall irrigation and deep moldboard plowing prior to planting the sensitive crop.

**Avoid Injury to Non-Target Plants**

This product can affect susceptible broadleaf plants directly through foliage and indirectly by root uptake from treated soil. Therefore, do not apply Stinger directly to, or allow spray drift to come in contact with, vegetables, flowers, tomatoes, potatoes, beans, lentils, peas, alfalfa, sunflowers, soybeans, safflower, or other desirable broadleaf crops or ornamental plants or soil where sensitive crops will be planted the same season. (See guidance on Crop Rotation Intervals.)

**Residues in Plants or Manure:** Do not use plant residues, including hay or straw from treated areas, or manure or bedding straw from animals that have grazed or consumed forage from treated areas, for composting or mulching where susceptible plants may be grown the following season. Do not spread manure from animals that have grazed or consumed forage or hay from treated areas on land used for growing susceptible broadleaf plants or apply such materials to land used for growing broadleaf crops, ornamentals, orchards, or other susceptible desirable plants. Plant materials or manure may contain enough clopyralid to cause injury to susceptible plant species. To promote herbicidal decomposition, plant residues should be evenly incorporated or burned. Breakdown of clopyralid in crop residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

**Avoid Movement of Treated Soil**

Avoid conditions under which soil from treated areas may be moved or blown to areas containing susceptible plants. Wind-blown dust containing clopyralid may produce visible symptoms, such as epinasty (downward curving or twisting of leaf petioles or stems) when deposited on susceptible plants; however, serious injury is unlikely. To minimize potential movement of clopyralid on wind-blown dust, avoid treatment of powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigate the treated soil shortly after application.

**Avoid Spray Drift**

Avoid spray drift since very small quantities of the spray, which may not be visible, may severely injure susceptible broadleaf plants during active growth or dormant periods. Use coarse sprays to minimize drift. To aid in further reducing drift, a drift control or deposition agent suitable for agricultural use may be used with this product. If used, follow all use directions and precautions on the product label.

**Ground Application:** With ground application, spray drift can be lessened by keeping the spray boom as low as possible, by applying 10 gallons or more of spray per acre, by keeping the operating spray

pressures at the manufacturer's minimum specified pressures for the specified nozzle type used (low pressure nozzles are available from spray equipment manufacturers), and by spraying when the wind velocity is low (follow state regulations). Avoid application under completely calm conditions which may be conducive to air inversion. In hand gun applications, select the minimum pressure required to obtain adequate plant coverage without forming a mist. Do not apply with a mist blower.

**Aerial Application:** With aerial application, drift can be lessened by using straight stream nozzles directed straight back, by using a spray boom no longer than 3/4 of the rotor or wing length of the aircraft, by using drift control systems or drift control additives, and by keeping spray pressures low enough to provide coarse spray droplets. Do not use a thickening agent with the Microfoil or Thru-Valve booms, or other systems that cannot accommodate thick sprays. Spray only when wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to air inversions.

Do not apply by aircraft when an air temperature inversion exists. Such a condition is characterized by little or no wind and a lower air temperature near the ground than at higher levels. The use of a smoke device on the aircraft or continuous smoke column at or near site of application will indicate air direction and velocity, and whether a temperature inversion is present, as indicated by horizontal layering of the smoke.

#### **Sprayer Clean-Out**

To avoid injury to desirable plants, equipment used to apply Stinger should be thoroughly cleaned before re-using it to apply any other chemicals.

- Rinse and flush application equipment thoroughly at least three times with water after use. Dispose of rinse water by applying to treatment area or to non-cropland area away from water supplies.
- During the second rinse, add 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
- Flush the solution out of the spray tank through the boom.
- Rinse the system twice with clean water, recirculating and draining each time.
- Remove nozzles and screens and clean separately.

#### **Mixing Instructions**

1. Add 3/4 of the required spray volume to the spray tank and start agitation.
2. Add the required amount of Stinger.
3. Add any surfactants, adjuvants or drift control agents according to manufacturer's label.
4. Agitate during final filling of the spray tank and maintain sufficient agitation during application to ensure uniformity of the spray mixture.

**Note:** Allow time for thorough mixing of each spray ingredient before adding the next. If allowed to stand after mixing, agitate spray mixture before use.

#### **Tank Mixing**

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; and (2) tank mixing is not prohibited by the label of the tank mix product. Follow all applicable use directions, precautions, restrictions and limitations on the labels for each product used in the tank mix.

#### **Tank Mixing Precautions:**

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates. Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.
- 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 have been adequately cleaned. (See instructions for Sprayer Clean-Out.)

- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** A jar test is recommended prior to tank mixing to ensure compatibility of Stinger and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in the required order and 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.

### Application Directions

#### Application Timing

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at, or following application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be affected. If foliage is wet at the time of application, control may be decreased. Applications of Stinger are rainfast within 6 hours after application.

#### Application Rates

Generally, application rates at the lower end of the rate range will be satisfactory for young, succulent growth of susceptible weed species. For less sensitive species, perennials, and under conditions where control is more difficult (plant stress conditions such as drought or extreme temperatures, dense weed stands and/or larger weeds), a higher rate within the rate range will be needed. Weeds in fallow land or other areas where competition from crops is not present will generally require higher rates for control or suppression.

Crop or Use Site	Rate Range (pt/acre)	Maximum Use Rate <sup>1</sup> (pt/acre/growing season)
spinach	1/6 - 1/3	1/2
barley, oats, wheat	1/4 - 1/3	1/3
Christmas tree and cottonwood/poplar and eucalyptus tree plantations, fallow cropland, field corn, grasses grown for seed, sugar beet	1/4 - 2/3	2/3
garden beet, canola (rapeseed), crambe, cole crops ( <i>Brassica</i> species), southern pine seedbeds	1/4 - 1/2	1/2
mint, stone fruits, popcorn, sweet corn	1/3 - 2/3	2/3
turnip	1/3 - 1/2	1/2
permanent grasses on CRP land, noncropland, non-leguminous trees, rangeland and permanent grass pastures	1/3 - 1 1/3	1 1/3
asparagus	1/2 - 2/3	2/3

<sup>1</sup>Do not exceed maximum rate in rate range per growing season.

#### Spot Treatments

To prevent misapplication, apply spot treatments only with a calibrated boom or with hand sprayers according to directions provided below.

**Hand Held Sprayers:** Hand held sprayers may be used for spot applications. Care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based upon an area of 1000 sq ft. Mix the amount of Stinger (fl oz or mL) corresponding to the desired broadcast rate in 1 gallon or more of spray. To calculate the amount of Stinger required for larger

areas, multiply the table value (fl oz or mL) by the area to be treated in "thousands" of square feet, e.g., if the area to be treated is 3500 sq ft, multiply the table value by 3.5 (calc. 3500 ÷ 1000 = 3.5). An area of 1000 sq ft is approximately 10.5 x 10.5 yards (strides) in size.

Amount of Stinger per Gallon of Spray to Equal Specified Broadcast Rate					
1/4 pt/acre	1/3 pt/acre	1/2 pt/acre	2/3 pt/acre	1 pt/acre	1 1/3 pt/acre
1/10 fl oz (2.7 mL)	1/8 fl oz (3.6 mL)	1/5 fl oz (5.4 mL)	1/4 fl oz (7.3 mL)	3/8 fl oz (11 mL)	0.5 fl oz (15 mL)

Use the following table for converting pints to fluid ounces.

Conversion Chart - Pints to Fluid Ounces	
Pints	Fluid Ounces
1/3	5
1/4	4
1/2	8
2/3	11

**Band Application**

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

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per treated acre} = \text{Band rate per treated acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per treated acre} = \text{Band volume per treated acre}$$

**Use of Adjuvants**

Addition of surfactants, crop oils, or other adjuvants is not usually necessary when using Stinger. Adding a surfactant to the spray mixture may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress. When an adjuvant is to be used with this product, Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant. If an adjuvant is added to the spray solution, follow all manufacturer use guidelines.

**Spray Coverage**

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Do not broadcast apply in less than 2 gallons of total spray volume per acre. For best results and to minimize spray drift, apply in a spray volume of 10 gallons or more per acre. As vegetative canopy and weed density increase, spray volume should be increased to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift, follow precautions under Avoid Injury to Non-Target Plants.

**Broadleaf Weeds Controlled and Guidelines for Control<sup>1</sup>**

**Note:** Letter in parentheses (-) after listed weed indicates if life cycle is annual (a), biennial (b), or perennial (p).

Weed Species	Stage of Growth	Rate for Control <sup>2</sup> (pt/acre)
biennial wormwood (a, b) <sup>3</sup> black medic clover (a) bull thistle (b) clover (a) cocklebur (a) coffeeweed (a)	up to 5 leaf	1/4 - 1/2

common burdock (b) common cocklebur (a) common groundsel (b) common ragweed (a) common teasel (b) cornflower (bachelor button) (a) curly dock (p) dandelion (p) false chamomile (scentless) (a) galinsoga (a) giant ragweed (a) hop clover (a) horseweed (a) Jerusalem artichoke (p) jimsonweed (a) ladythumb (a) <sup>4</sup> lambert locoweed (p) marshelder (a) mayweed chamomile (dogfennel) (a) meadow salsify (goatsbeard) (b) musk thistle (b) narrowleaf hawksbeard (a) orange hawkweed (p) oxeye daisy (p) pineappleweed (a) prickly lettuce (a) ragweeds (a) red clover (p) red sorrel (p) sicklepod (a) sunflower (a) sweet clover (b) vetch (a) volunteer alfalfa (p) (from seed only) volunteer beans (a) volunteer lentils (a) volunteer peas (a) volunteer soybean (a) white clover (p) white locoweed (p) yellow hawkweed (p) yellow starthistle (a)		
wild buckwheat (a)	1 - 3 leaf stage, but before vining	1/2
black nightshade (a) buffalobur (a) <sup>3</sup> cutleaf nightshade (a) Eastern black nightshade (a) hairy nightshade (a) nightshade spp. (a)	2 - 4 leaf	3
green smartweed (a) <sup>4</sup> smartweeds (suppression)	2 - 3 leaf	
annual sowthistle (a) (suppression) Canada thistle (p) perennial sowthistle (p) <sup>4</sup>	rosette up to bud stage	degree of infestation: light - 1/3 moderate to heavy - 1/2 - 2/3

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sowthistle (a) (suppression)		
spotted/diffuse knapweeds (b)	up to bud stage	1/2 - 2/3
Russian knapweed (p) <sup>4</sup>		2/3 - 1 1/3

<sup>1</sup>This table is provided as a general reference only. Refer to use directions for specific crop or use site for application rates.

<sup>2</sup>Where a rate range is provided, use a lower rate in the rate range for light to moderate infestations under good growing conditions and a higher rate in the rate range for dense infestations or under less favorable growing conditions such as drought.

<sup>3</sup>Not approved for use in California.

<sup>4</sup>These weeds may only be suppressed. Suppression is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree and duration of weed control will vary with weed size and density, application rate and coverage, and growing conditions before, during, and after treatment. For **perennial weeds**, Stinger will control the top growth and inhibit regrowth during the season of application (season-long control). At higher use rates shown on this label, Stinger may cause a reduction in shoot regrowth in the season following application; however, plant response may be inconsistent due to inherent variability in shoot regrowth from perennial root systems.

## Uses

**Agricultural Use Requirements for Crops:** For the following crop uses, follow PPE and Reentry instructions in the Agricultural Use Requirements section of this label.

### Asparagus

(Not Registered for Use in Florida)

Use Stinger for selective postemergence control of specific annual and perennial broadleaf weeds infesting asparagus.

#### Application Timing

Applications may be made before or during the asparagus cutting season, or after harvest is complete, but prior to fern growth. Treat annual weeds before they send up a flower stalk. For best results on perennial weeds such as Canada thistle, apply Stinger after the majority of basal leaves have emerged up to bud stage. Following application wait at least two weeks before cultivating. **Note:** Postharvest (layby) applications should be made as soon as possible after cutting provided weeds are in the proper stage of growth for treatment. Malformed ferns may result from application when spears are longer than 3 inches or have open seed heads.

#### Application Rate

Apply Stinger at a rate of 1/2 to 2/3 pint per acre in a total spray volume of 10 to 40 gallons per acre. Use a higher rate in the rate range for more effective control of perennial weeds. A second application may be made as long as the total amount applied does not exceed 2/3 pint of Stinger per acre during the growing season.

#### Specific Use Precautions and Restrictions:

- **Preharvest Interval:** Do not apply within 48 hours of harvest.
- When Stinger is applied during the cutting season, some crooking (twisting) of asparagus spears may occur. Do not apply during the cutting season if crooking cannot be tolerated. Clear-cutting of spears just before applying Stinger may reduce the occurrence of crooking.

### Barley, Oats and Wheat

(Not Registered for Use in Florida)

#### Application Rate

Apply 1/4 to 1/3 pint per acre of Stinger when crop is from the 3 leaf stage up to early boot stage of growth. For control of perennial weeds such as Canada thistle, 1/3 pint of Stinger per acre should be used. Russian knapweed will only be suppressed at this rate.

**Specific Use Precautions and Restrictions:**

- Do not permit lactating dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 1 week after treatment.
- Do not harvest hay from treated grain fields.

**Brassica (Cole) Leafy Vegetables (Crop Group 5)<sup>1</sup>**

<sup>1</sup>Brassica (cole) leafy vegetables (crop group 5) including broccoli, broccoli raab (rapini), Brussels sprouts, cabbage, cauliflower, cavalo broccolo, Chinese broccoli (gai ion), Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens

(Registered for Use in Arizona, Arkansas, California, Colorado, Florida, Georgia, Missouri, New Mexico, New York, North Carolina, Oklahoma, South Carolina, Texas and Wisconsin)

**Target Broadleaf Weeds and Application Rates**

Target Broadleaf Weeds	Stinger (pint/acre)
chamomile clover common cocklebur dandelion galinsoga pineappleweed prickly lettuce ragweed smartweed wild buckwheat	1/4 - 1/2
annual sowthistle <sup>1</sup> Canada thistle <sup>1</sup>	1/3 - 1/2

<sup>1</sup>Suppression only.

**Application Timing**

Apply uniformly with ground equipment in a minimum of 10 to 40 gallons of water per acre. For suppression of Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage and at least 30 days prior to harvest.

**Specific Use Precautions Restrictions:**

- **Preharvest interval:** Do not apply within 30 days of harvest.
- Make one to two broadcast application per crop per year, not to exceed a total of 1/2 pint per acre (0.187 lb ai/acre) per year.
- In New York and California, the maximum application rate for Stinger is 2/3 pint per acre per growing season. Do not exceed the cumulative amount of 2/3 pint (0.25 lb a.e.) of clopyralid per acre per crop year.
- In Florida, Stinger may be used only on cabbage, Chinese cabbage (bok choy and napa), and Chinese mustard cabbage (gai choy).

**Canola (Rapeseed) and Crambe  
(Not Registered for Use in California and Florida)**

**Application Timing**

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Apply to canola or crambe in the 2 to 6 leaf stage of crop growth at rates shown in the following table. Consult the table entitled Broadleaf Weeds Controlled and Guidelines for Control for additional information. Apply Stinger uniformly with ground or aerial equipment in 10 to 20 gallons total spray volume per acre (minimum of 5 gallons per acre by air).

#### Target Broadleaf Weeds and Application Rates

Target Broadleaf Weeds	Application Rate (pint/acre)
Canada thistle	1/3 for top growth suppression
Canada thistle perennial sowthistle	1/2 for season long control
annual sowthistle biennial wormwood dandelion dock, curly false chamomile green smartweed mayweed chamomile nightshade species sunflower wild buckwheat	1/4 - 1/2

#### Specific Use Precautions and Restrictions:

- **Preharvest Interval:** Do not apply within 50 days of harvest.
- Make one broadcast application per crop per year.

#### Christmas Tree Plantations (Not Registered for Use in Florida)

##### Application Timing

Use Stinger for over the top application to actively growing balsam fir, blue spruce, Douglas fir, Fraser fir, grand fir, lodgepole pine, noble fir, ponderosa pine, and white pine. In the Pacific Northwest, do not apply in the first year of transplanting because some needle curling has been observed on first year transplants. For control of annual weeds, apply Stinger from weed emergence up to the 5-leaf stage of growth. For control of wild buckwheat, apply at 3 to 5 leaf stage of growth, but before vining. For control of weeds such as Canada thistle and knapweeds, apply after the majority of the basal leaves have emerged up to bud stage. Later application may result in less consistent control.

##### Application Rate

Apply 1/4 to 1/2 pint of Stinger per acre for control of annual weeds. Apply 1/2 to 2/3 pint of Stinger per acre for difficult to control weeds such as Canada thistle and knapweeds. Apply as a broadcast or band application in a minimum of 10 gallons per acre by ground application. Use the formulas under Band Application to determine the rate and volume per treated acre.

Stinger may be applied as a spot treatment using a hand held sprayer at an equivalent broadcast rate of 1/2 to 2/3 pint per acre. Refer to instructions for Hand Held Sprayers under Spot Treatment in the Application Directions section.

#### Specific Use Precautions and Restrictions:

- Re-treat as necessary, but do not exceed 2/3 pint of Stinger per acre per annual growing season.
- **Blue spruce:** Do not exceed 1/2 pint per acre per annual growing season.
- Tree injury may occur with the addition of a surfactant or crop oil with Stinger. Do not use unless previous experience shows injury is tolerable.
- Do not apply with an air blast sprayer.

**Corn (Field, Pop, Sweet)  
(Not Registered for Use in Florida)**

Use Stinger for postemergence control of annual sowthistle, Canada thistle, common cocklebur, common sunflower, giant and common ragweed, Jerusalem artichoke, jimsonweed and other broadleaf weeds infesting field corn. Apply Stinger at specified timing and rates for field, pop and sweet corn as indicated below.

**General Weed Control**

For control of common cocklebur, common ragweed, giant ragweed, sunflower, other annual weeds and Jerusalem artichoke, apply 1/4 to 1/2 pint of Stinger per acre from weed emergence up to the 5 leaf stage of growth. Use a higher rate in the rate range for heavy infestations or when greater residual control is desired. Consult the table entitled Broadleaf Weeds Controlled and Guidelines for Control for additional information.

**Control of Canada Thistle**

For effective control of Canada thistle, apply 1/3 to 2/3 pint of Stinger per acre as a broadcast treatment to the entire infested area. Apply when the majority of thistle plants have emerged and thistles are at least 6 to 8 inches in diameter or height up to bud stage. Cultivation can disrupt translocation to the roots of Canada thistle. For best long-term control, do not cultivate before or after application. If cultivation is necessary, wait 14 to 20 days after application before cultivating to allow for thorough translocation.

Control of Canada thistle is influenced by growing conditions, density and size of thistle plant at application, tillage practices used, etc. Light infestations (less than 10 plants per square yard) will generally be adequately controlled with a rate of 1/3 pint per acre. For medium to heavy infestations (more than 10 plants per square yard), rates of 1/2 to 2/3 pint per acre are generally more effective since these Canada thistle stands involve an extensive rhizome system.

The following are general descriptions of control to be expected from each rate of application given a medium to heavy population of Canada thistle. Control of lighter infestations may be better than that described.

- A rate of 1/3 pint per acre will suppress top growth of Canada thistle for 6 to 8 weeks. Some regrowth may occur by the end of the season, but this will not interfere with harvesting of the crop.
- A rate of 1/2 pint per acre will generally provide season long control of Canada thistle. Not all rhizomes will be killed and some regrowth may occur by the end of the growing season.
- A rate of 2/3 pint per acre will provide season long control of Canada thistle plus suppression into the following season, resulting in a reduction of the total number of Canada thistle plants in the treated area.

**Field Corn****Application Timing**

Apply Stinger to actively growing broadleaf weeds any time after corn emergence through 24 inch tall corn. Apply with ground equipment as a postemergence broadcast or directed spray in 10 gallons or more of spray volume per acre to ensure uniform and thorough spray coverage of the weed foliage. Use only spray nozzles designed for herbicide application. The use of flat fan nozzles provides the best coverage and distribution of chemical on the plant foliage. Use spray pressures (at the boom) specified by nozzle manufacturers to obtain desired spray volume. Use higher spray volumes when weed foliage is dense.

**Tank Mixes or Sequential Applications**

See Tank Mixing section under Mixing Instructions. If Stinger is applied sequentially or in combination with Hornet® WDG broadleaf blend herbicide to the current corn crop, the maximum application rate at which Stinger may be applied to field corn is indicated in the following tables:

Rate of Hornet WDG Applied to Current Corn Crop (oz/acre)	Maximum Application Rate for Stinger (fl oz/acre)
2	8.1
3	6.8
4	5.4
5	4.0

**Note:** Maximum use rate for clopyralid is 0.25 lb a.e. per acre. One ounce of Hornet WDG contains 0.031 lb of clopyralid. One ounce of Stinger contains 0.023 lb of clopyralid.

#### **Corn Inbred Lines or Breeding Stock**

Susceptibility of corn to injury from Stinger is highly related to varietal response. Inbred lines or any breeding stock may be injured by Stinger. Contact your seed production agronomist for advice before applying Stinger to inbred lines or breeding stock.

#### **Hand Held Sprayers**

Stinger may be applied as a spot treatment using a hand held sprayer at an equivalent broadcast rate of 2/3 pint per acre. Refer to instructions for Hand Held Sprayers under Spot Treatment in the Application Directions section. Applications should be made on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff.

#### **Specific Use Precautions and Restrictions:**

- Re-treat as necessary, but do not apply more than 2/3 pint of Stinger per acre per year.
- Do not apply to field corn greater than 24 inches tall.
- Do not allow livestock to graze treated areas or harvest treated corn silage as feed within 40 days after last treatment.

#### **Popcorn and Sweet Corn (Not Registered for Use in California)**

##### **Application Timing**

For popcorn, apply Stinger any time after popcorn emergence through 24-inch tall popcorn. For sweet corn, apply Stinger any time after sweet corn emergence through 18-inch tall sweet corn.

##### **Application Rate**

Apply 1/3 to 2/3 pint of Stinger per acre uniformly with ground equipment as a broadcast or directed spray in 10 to 20 gallons total spray volume per acre. For control of Canada thistle, apply Stinger when the majority of thistle plants have emerged and thistles are at least 6 to 8 inches in diameter or height, but before bud stage. For control of annual sowthistle, common cocklebur, Jerusalem artichoke, jimsonweed, ragweed (common and giant), and sunflower, apply Stinger from weed emergence up to the 5 leaf stage of growth. Use a higher rate in the rate range for heavy infestations or when greater residual control is desired. Consult the table entitled Broadleaf Weeds Controlled and Guidelines for Control for additional information.

#### **Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 30 days of harvest for ears and forage and within 60 days of harvest for stover.
- Make one to two broadcast applications per crop per year, not to exceed a total of 2/3 pint per acre.
- **Re-Treatment Interval:** 21 days.
- Do not apply to popcorn greater than 24 inches tall or sweet corn greater than 18 inches tall.



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- Apply only to sweet corn or popcorn that is to be used for processing.

### **Cottonwood/Poplar and Eucalyptus Tree Plantations (Not Registered for Use in Florida)**

#### **Application Timing**

Stinger may be used for selective postemergence control of labeled broadleaf weeds in new and established plantings of cottonwood/poplar and eucalyptus tree plantations.

#### **Application Rate**

Apply as a broadcast foliar spray over trees or as a banded or directed spray at a rate of 1/3 to 2/3 pint per acre. Apply in 10 gallons or more per acre total spray volume using ground equipment only. Multiple applications of Stinger may be made as long as the total rate per growing season does not exceed 1 1/3 pints per acre. Apply to new plantings only after they are well established as indicated by several inches of new healthy growth.

See Broadleaf Weeds Controlled and Guidelines for Control for specified rates and timing for specific susceptible annual, biennial, and perennial weeds.

#### **Hand Held Sprayers**

Spot applications using hand held equipment are also allowed, but contact with tree foliage should be avoided or limited to lower branches. Apply to weeds on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff. Prepare a spray solution by adding 1/4 fl oz of Stinger per gallon of water. When applied at 1 gallon of spray per 1000 sq ft, this spray concentration is equivalent to a broadcast rate of 2/3 pint per acre.

#### **Specific Use Precautions and Restrictions:**

- Do not tank mix Stinger with other herbicides labeled for this use unless spray avoids all contact with tree foliage.
- Stinger will not control certain broadleaf weeds including mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle and bindweed.

### **Fallow Cropland (Not Registered for Use in Florida)**

#### **Application Timing**

Stinger can be applied either postharvest, in the spring/summer (during fallow period), or to set aside acres to control or suppress listed weeds (refer to rotation restrictions). Apply to young, emerged weeds under conditions that promote active growth. For best results on perennial weeds such as Canada thistle, apply after the majority of the basal leaves have emerged up to bud stage. Later applications may result in less consistent control.

For best results, wait 14 to 20 days after application before cultivating or fertilizing with shank-type applicators to allow for thorough translocation.

#### **Application Rate**

Apply 1/4 to 2/3 pint of Stinger per acre. Use a higher rate in the rate range on perennial weeds or when the condition of weeds at treatment may prevent optimum control.

#### **Tank Mixes**

To improve control of certain broadleaf weeds, Stinger may be applied with 0.5 to 2 lb a.e. of 2,4-D per acre. See Tank Mixing section under Mixing Instructions.

### **Garden Beet (Not Registered for Use in California and Florida)**

Use Stinger for postemergence control of common ragweed, galinsoga, nightshade (black, cutleaf, Eastern black and hairy), prickly lettuce, sowthistle, sweet clover, and wild buckwheat infesting garden beet.

**Application Timing**

Apply to garden beet in the 2 to 8 leaf stage of crop growth when weeds are young and actively growing. Apply Stinger to wild buckwheat at the 1 to 3 leaf stage of growth before vining begins. Apply Stinger to common ragweed and sweet clover from weed emergence up to the 5 leaf stage of growth. Apply Stinger to all species of nightshade at the 2 to 4 leaf stage of growth. Apply Stinger to sowthistle from rosette up to bud stage. Apply in 10 gallons or more total spray volume per acre with ground equipment.

**Application Rate**

Apply 1/4 to 1/2 pint of Stinger per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate in the rate range for heavy infestations or when greater residual control is desired.

**Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Make one to two broadcast applications per crop per year, not to exceed a total of 1/2 pint per acre.

**Grasses Grown for Seed  
(Not Registered for Use in Florida)****Application Timing**

Apply only to established grasses before the boot stage of growth. Applications in the boot stage and beyond can result in increased potential for injury. Do not apply to bentgrass unless injury can be tolerated. For control of late emerging Canada thistle, a preharvest treatment may be made after grass seed is fully developed. Treatment of Canada thistle at the bud stage or later may result in less consistent control. Post-harvest fall treatments may be made to actively growing Canada thistle after the majority of basal leaves have emerged.

**Application Rate**

Use 1/4 to 2/3 pint of Stinger per acre for control of annual weeds and Canada thistle. Re-treat as necessary, but do not exceed 2/3 pint of Stinger per acre per season.

**Tank Mixes**

Stinger may be tank mixed with 2,4-D, MCPA, dicamba, or bromoxynil to control additional broadleaf weeds. Refer to the manufacturer's label for use rates and tank mix guidelines. See Tank Mixing section under Mixing Instructions. **Note:** Dicamba or bromoxynil tank mixes may be useful in broadening the annual weed control spectrum, but may reduce long-term control of perennials such as Canada thistle. Do not tank mix Stinger with 2,4-D, MCPA, or dicamba unless the risk to crop injury is acceptable.

**Peppermint and Spearmint  
(Not Registered for Use in Florida)**

Stinger may be used for selective postemergence control of specific annual and perennial broadleaf weeds infesting peppermint and spearmint.

**Application Timing**

Treat annual weeds when they are small and actively growing before they send up a flower stalk. For Canada thistle, apply Stinger after the majority of basal leaves have emerged but prior to bud stage.

**Application Rate**

Apply as a broadcast foliar spray in 10 gallons or more per acre total spray volume using ground equipment only. A nonionic surfactant of at least 80% active ingredient may be added at a rate of 1 pint per 100 gallons of spray solution.

**Application Timing, Rates, and Weeds Controlled:**

<b>Application Timing and Weeds Controlled</b>	<b>Application Rate (pint/acre)</b>
fall treatment only (Sept. 15 to first frost)	
annuals	1/2
perennials	2/3
hard-to-kill perennials (Canada thistle, dandelion)	1
spring treatment only	
annuals	1/3
perennials	1/2
fall plus spring treatment	maximum of 2/3 in fall plus 1/3 in spring

**Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 45 days of harvest.
- Do not apply more than 1 pint per acre per growing season.
- Treated mint may be used for distillation (oil extraction) only.
- Do not feed spent mint hay slugs to livestock.
- Mint straw, hay or spent hay (slugs) from treated areas cannot be used for composting or mulching. If hay slugs are disposed of on cropland, distribute in a thin layer and incorporate. Do not dispose of hay slugs on land to be rotated to a susceptible crop. (See Residues in Plants or Manure section.)
- Discoloration or malformation of mint leaves may occur following treatment. This effect is generally temporary and does not reduce oil yields.
- Stinger will not control many broadleaf weeds such as chickweed, field bindweed henbit, kochia, lambsquarters, mustards, pigweed, and Russian thistle.

**Southern Pine Seedbeds in Forest Nurseries**

(Registered for Use in Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia)

Stinger may be applied over the top of loblolly pine, slash pine, and longleaf pine to control sicklepod and other susceptible broadleaf weeds in southern pine seedbeds in forest nurseries. Apply as a broadcast or spot treatment from May through July when weeds are actively growing.

**Application Timing**

For best results, apply when weeds are small and actively growing. For control of sicklepod, apply after the majority of basal leaves have emerged.

**Application Rate**

Apply at a broadcast rate of 1/4 to 1/2 pt per acre in a spray volume of 20 gallons or more per acre. Application may be made any time after May 1, but some needle curling may occur if applied during active conifer growth. When making spot applications, use a calibrated boom, or if a hand-held sprayer is used, care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Otherwise, do not use more than 1/5 fl oz (1 tsp.) of Stinger per gallon of spray and direct spray onto weeds. Avoid spraying pine seedlings whenever possible.

**Specific Use Precautions and Restrictions:**

- Application of Stinger during active growth of conifers may cause some needle curling.
- Do not use surfactants or crop oils in spray mixtures as the potential for tree injury in the form of needle curling may be increased.

**Spinach**

(Not Registered for Use in California and Florida)

Use Stinger for postemergence control of annual sowthistle, black nightshade, Canada thistle, clover, common cocklebur, common groundsel, hairy nightshade, jimsonweed, pineappleweed, prickly lettuce, and ragweed infesting spinach.

**Application Timing**

Apply to spinach in the 2 to 5 leaf stage of crop growth. Apply Stinger to clover, common cocklebur, common groundsel, jimsonweed, prickly lettuce, pineappleweed and ragweed from weed emergence up to the 5 leaf stage of growth. For top growth suppression of annual sowthistle and Canada thistle, apply Stinger from rosette up to bud stage. For control of Canada thistle, apply after the majority of basal leaves have emerged but prior to bud stage and at least 21 days prior to harvest.

**Application Rate**

Apply 1/4 to 1/2 pint per acre of Stinger uniformly with ground or aerial equipment in 10 to 20 gallons total spray volume per acre (minimum of 5 gallons per acre by air). Use a higher rate in the rate range for heavy infestations or when greater residual control is desired.

**Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 21 days of harvest.
- Make one to two broadcast application per crop per year, not to exceed a total of 1/2 pint per acre.
- Some leaf curling may be observed on smaller spinach, particularly at higher use rates. Crop tolerance may be optimized by selecting the lower application rate necessary for weed control, especially where non-uniform emergence has caused variable plant sizes.

**Stone Fruits (Crop Group 12)<sup>1</sup>**

<sup>1</sup>Stone fruits (crop group 12) including apricot, chickasaw plum, damson plum, fresh prune, Japanese plum, nectarine, peach, plum, plumcot, sweet cherry, tart cherry

**(Not Registered for Use in California and Florida)**

Use Stinger for postemergence control of annual sowthistle, Canada thistle, clover, dandelion, horseweed, musk thistle, nightshade (black and hairy), and vetch infesting stone fruits.

**Application Timing**

Apply Stinger to clover and vetch from weed emergence up to the 5 leaf stage of growth. Apply Stinger to nightshade (black and hairy) at the 2 to 4 leaf stage of growth. For control of Canada thistle and annual sowthistle, apply Stinger from rosette up to bud stage.

**Application Rate**

Apply 1/3 to 2/3 pint of Stinger per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate in the rate range for heavy infestations or when greater residual control is desired.

**Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 30 days of harvest.
- Make one to two broadcast applications per crop per year, not to exceed a total of 2/3 pint per acre.

**Sugar Beet****(Not Registered for Use in Florida)**

Use Stinger for the control of various annual and perennial broadleaf weeds infesting sugar beet.

**Application Rate**

Apply 1/4 to 2/3 pint of Stinger per acre with ground equipment as a broadcast foliar spray or band treatment or with aerial equipment in 5 gallons or more per acre of total spray volume. See instructions for band application under Application Directions in the General Information section. Apply in 10 gallons or more total spray volume per acre when the sugar beets are in the cotyledon to 8-leaf stage of growth and the weeds are young and actively growing

For annual weed control apply 1/4 to 1/2 pint of Stinger per acre from weed emergence up to the 5 leaf stage of growth. Application to wild buckwheat should be made at the 1 to 3 leaf stage of growth before vining begins.

For the most effective control of perennials such as Canada thistle and sowthistle, apply 1/2 to 2/3 pint of Stinger per acre as a broadcast treatment to the entire infested area. Apply when the majority of basal leaves have emerged up to the bud stage. Cultivation can disrupt translocation to the roots of perennials such as Canada thistle. For best results, do not cultivate thistle patches.

To promote herbicidal efficacy, wait a minimum of 7 days after application before flood or furrow irrigation.

#### **Tank Mixes**

To control additional broadleaf weeds and provide consistent control of difficult to control weeds such as wild buckwheat, Stinger may be applied in combination with labeled rates of a product containing phenmedipham/desmedipham, desmedipham, triflusaluron, or other products registered for postemergence application in sugar beets. For best results, tank mix 1/4 pint of Stinger per acre with a product containing phenmedipham/desmedipham or desmedipham followed one to two weeks later by a second application of 1/4 to 1/3 pint of Stinger per acre tank mixed with a product containing phenmedipham/desmedipham or desmedipham. Stinger may also be tank mixed with a grass herbicide containing sethoxydim. Crop oil or Dash surfactant may be added to the tank mixture to optimize grass weed control. See Tank Mixing section under Mixing Instructions.

#### **Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 45 days of harvest.
- Re-treat as necessary, but do not exceed 2/3 pint of Stinger per acre per season.

#### **Turnip**

**(Not Registered for Use in California and Florida)**

Use Stinger for postemergence control of common ragweed, galinsoga, prickly lettuce, sweet clover, and wild buckwheat and postemergence suppression of sowthistle infesting turnip harvested for roots and tops.

#### **Application Timing**

Apply Stinger to wild buckwheat at the 1 to 3 leaf stage of growth before vining begins. Apply Stinger to common ragweed and sweet clover from weed emergence up to the 5 leaf stage of growth. For suppression of sowthistle, apply Stinger from rosette up to bud stage.

#### **Application Rate**

Apply 1/3 to 1/2 pint of Stinger per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher rate in the rate range for heavy infestations or when greater residual control is desired.

#### **Specific Use Precautions and Restrictions:**

- **Preharvest Interval:** Do not apply within 30 days of harvest of turnip roots or within 15 days of harvest of turnip tops.
- Make one broadcast application per crop per year.

#### **Rangeland, Pasture, CRP and Non-Crop Uses**

**(Not Registered for Use in Florida)**

**Rotation to Broadleaf Crops:** Do not plant broadleaf crops in treated areas until an adequately sensitive bioassay shows that no detectable clopyralid is present in the soil. (See Crop Rotation Restrictions in General Information section.)

**Rangeland and Permanent Grass Pastures**

Apply 1/2 to 1 1/3 pint of Stinger per acre when weeds are young and actively growing. Established grasses are tolerant to Stinger, but new grass seedlings may be injured to varying degrees until the grass has become well established as indicated by vigorous growth and development of tillers and secondary roots.

**Note:** Some forbs (desirable broadleaf forage plants) are susceptible to Stinger. Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated. However, the stand and growth of established perennial grasses is usually improved after spraying, especially when rainfall is adequate and grazing is deferred.

Do not use hay or straw from treated areas for composting or mulching on susceptible broadleaf crops. (See Residues in Plants or Manure section.)

If the target grass crop will be exported to clopyralid-sensitive destinations, follow the directions below for application timing and cuttings.

Timing of Application	Spring Cutting	Fall Cutting	Spring Cutting Subsequent Year <sup>1</sup>	Fall Cutting Subsequent Year <sup>1</sup>
before spring cutting	do not export	may be exported	may be exported	may be exported
after spring cutting	N/A	do not export	may be exported	may be exported
after fall cutting	N/A	N/A	may be exported	may be exported

N/A – not applicable

<sup>1</sup>If no clopyralid applications are made in subsequent year.

- Fall applications should be made while grass and weeds are actively growing.
- Fall applications should be made as close to last cutting as possible in order to reduce clopyralid residues in hay the following year.
- Adequate soil moisture, particularly with fall applications, will help weed control as well as reduce clopyralid residues in hay.
- In areas where three cuttings can be made, avoid exporting the first cutting after a clopyralid application.

There are no further restrictions on grazing or hay harvest following application of Stinger at labeled rates.

**Conservation Reserve Program (CRP) for Seeding to Permanent Grasses Only**

Do not use Stinger if legumes or bentgrass are a desired cover during CRP.

Conditions of plant stress, such as drought, will increase potential for injury to grasses at all stages of growth. Do not apply to newly seeded areas until grass is established.

**Application Timing:** Apply Stinger when perennial grasses are well established as indicated by vigorous growth and development of tillers and secondary roots. At this stage, most perennial grasses have shown adequate tolerance to Stinger. For optimum results, apply prior to the flowering stage (still in the bud stage).

**Application Rate:** For control of actively growing weeds such as Canada thistle, knapweed (spotted, diffuse, and Russian), and musk thistle, apply 2/3 to 1 1/3 pint of Stinger per acre after the majority of basal leaves have emerged up to bud stage. For control of musk thistle rosettes, volunteer sunflower, and wild buckwheat, apply 2/3 pint of Stinger per acre. For best results, use in 10 gallons or more of water per acre by ground. Increasing the rate of application can increase the risk of injury.

**Tank Mixes:** Stinger can also be tank mixed with 1/2 to 1 lb of 2,4-D per acre where species present are sensitive to 2,4-D. See Tank Mixing section under Mixing Instructions.

#### **Non-Cropland**

Stinger may be applied in non-cropland areas such as fencerows, around farm buildings and equipment pathways. **Note:** Stinger is not registered for use in landscaping or on turfgrass or lawns.

**Application Rate:** For control of broadleaf weeds, apply 1/4 to 1 1/3 pint of Stinger per acre. The lower rate of 1/4 pint per acre provides acceptable control of weeds only under highly favorable growing conditions and when plants are 1 to 3 inches tall. Apply 1/2 pint per acre when weeds are 3 to 6 inches tall or under dry conditions. Where Canada thistle or knapweeds are the primary pest, best results are obtained by applying 2/3 to 1 1/3 pint of Stinger per acre.

**Tank Mixes:** To improve spectrum of weed control or to increase control of more mature weeds, Stinger may be tank mixed with 0.5 to 2 lb a.e. of 2,4-D amine per acre or low volatile ester herbicide or other herbicides registered for this use site. See Tank Mixing section under Mixing Instructions.

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

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