

## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

April 4, 2025

Diego Castaneda Regulatory Leader Corteva Agriscience, LLC 9330 Zionsville Rd. Indianapolis, IN 46268

Subject: Label Amendment – Add Approved Uses to Blueberry, Flax, Pome Fruits, and

Strawberry, Update Crop Table and Warranty Statement & Incorporating Mitigation Measures from the Registration Review Interim Decision for

Clopyralid

Product Name: GF-2551

EPA Registration Number: 62719-747

Application Date: November 3, 2023, May 12, 2021

Case Number: 491617, 479152

## Dear Diego Castaneda:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Clopyralid Interim Decision, and has concluded that your submission is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Derek Corbin at 202-566-2571 or at Corbin.Derek@epa.gov.

Sincerely,

Kable Bo Davis

Kable Bo Davis; Senior Advisor Office of Pesticide Programs Registration Division; Immediate Office

**Enclosure** 

(Base label):

CLOPYRALID GROUP 4 HERBICIDE

# **GF-2551**

[Alternate Brand Name: Stinger® HL]

## **HERBICIDE**

For selective postemergence control of broadleaf weeds in barley, oats and wheat not underseeded with legume, *Brassica*, blueberry, canola (rapeseed) and crambe, Christmas tree plantations, corn (field, pop, sweet), cottonwood/poplar and eucalyptus tree plantations, fallow cropland, flax, garden beet, grasses grown for seed, peppermint and spearmint, pome fruits, southern pine seedbeds in forest nurseries, spinach, stone fruits, strawberry, sugar beet, turnip, rangeland, permanent grass pastures, conservation reserve program (CRP) acres, and non-cropland (including fencerows, around farm buildings, and equipment pathways)

Active Ingredient:	By Weight
clopyralid dimethylamine salt:	
3,6-dichloro-2-pyridinecarboxylic acid dimethylammonium salt	60.22%
Other Ingredients	
Total	

Acid Equivalent: clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid – 48.8% (5 lb/gal)

# Keep Out of Reach of Children

# **CAUTION**

## **Precautionary Statements**

## **Hazards to Humans and Domestic Animals**

## **Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

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

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

## **User Safety Recommendations**

Users should:

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product.

## **Environmental Hazards**

ACCEPTED

04/04/2025

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 202740, 747

62719-747

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.

#### **GROUNDWATER ADVISORY**

Clopyralid is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of clopyralid from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### **NON-TARGET ORGANISM ADVISORY**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

# **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)

## **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.

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Refer to inside of label booklet for additional precautionary information and 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. 62719-747

EPA Est.
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[Shake or Mix Well Before Use] [Avoid Freezing]

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9330 Zionsville Road Indianapolis, IN 46268

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(Cover, shipping container):

CLOPYRALID GROUP 4 HERBICIDE

**GF-2551** 

[Alternate Brand Name: Stinger® HL]

### **HERBICIDE**

For selective postemergence control of broadleaf weeds in barley, oats and wheat not underseeded with legume, *Brassica*, blueberry, canola (rapeseed) and crambe, Christmas tree plantations, corn (field, pop, sweet), cottonwood/poplar and eucalyptus tree plantations, fallow cropland, flax, garden beet, grasses grown for seed, peppermint and spearmint, pome fruits, southern pine seedbeds in forest nurseries, spinach, stone fruits, strawberry, sugar beet, turnip, rangeland, permanent grass pastures, conservation reserve program (CRP) acres, and non-cropland (including fencerows, around farm buildings, and equipment pathways)

Active Ingredient:	By Weight
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(Booklet page 1 through end):

# **Precautionary Statements**

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#### NON-TARGET ORGANISM ADVISORY

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

## **Physical or Chemical Hazards**

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

## **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.

## Not for Sale, Use or Distribution in Nassau and Suffolk Counties within the State of New York.

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
- · Shoes plus socks
- Waterproof gloves

## **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. 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
- Shoes plus socks
- Waterproof gloves

# (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)

# **Storage and Disposal**

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## **Product Information**

GF-2551 herbicide is a selective, postemergence herbicide for control of broadleaf weeds in barley, oats and wheat not underseeded with a legume, *Brassica*, blueberry, canola (rapeseed) and crambe, Christmas tree plantations, conservation reserve program (CRP) acres, cottonwood/poplar and eucalyptus tree plantations, fallow cropland, field corn, flax, garden beet, grasses grown for seed, peppermint, pome fruits, popcorn, rangeland and permanent grass pastures, southern pine seedbeds in forest nurseries, spearmint, spinach, stone fruits, strawberry, sugar beet, sweet corn, turnip, and non-cropland areas including fence rows, around farm buildings, and equipment pathways.

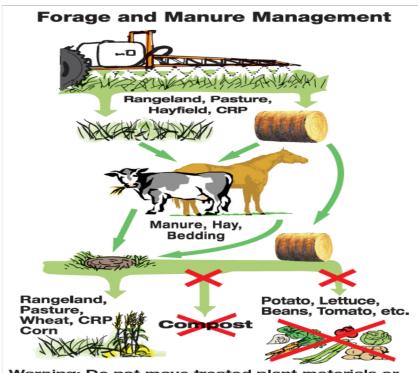
This product may be applied by aircraft on the following crops: canola (rapeseed), crambe, spinach, and sugar beet.

#### Restrictions

- 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.
- In California and New York, the maximum application rate for GF-2551 is 0.4 pint per acre per growing season. Do not exceed a cumulative amount of 0.4 pint of clopyralid per acre per crop year, unless specifically allowed.
- Not for sale, use or distribution in Nassau and Suffolk Counties within the State of New York.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not use in greenhouses.
- Chemigation: Do not apply this product through any type of irrigation system.
- Do not spray pastures containing desirable forbs, especially legumes, unless injury can be tolerated.
- 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.
- This product is persistent and may be present in treated plant materials for months to years after application. Do not sell or transport treated plant materials or manure from animals that have grazed on treated plant materials off-site for compost distribution or for use as animal bedding/feed for 18 months after application.
- Manure from animals that have grazed or eaten forage or hay harvested from treated areas within the previous three days may only be applied to the fields where the following crops will be grown: pasture grasses, grass grown for seed, wheat and corn.
- Animals that have been fed clopyralid-treated forage must be fed forage free of clopyralid for at least 3 days before movement to an area where manure may be collected or sensitive crops are grown.

#### For applications to pasture:

- The applicator must document that they have notified property owners/operators, or customers, in writing, of the compost and animal bedding/feed prohibitions within 14 days of the application. Applicators must keep the records of notification for two years. This record must include date of application, the name of the applicator, the EPA registration number of the product applied, the area(s) treated, and a copy of the written notification provided to the property owner/operator. Notification may be made via email, via mail, via paper handout, or by any other written communication method. Records must be made available to State Pesticide Regulatory Official(s), and to EPA upon request. If this information is already being retained, duplicate records are not needed.
- It is recommended that applicators also transmit at the time of notification relevant educational materials for managing treated plant matter, as available. Additional educational materials for clopyralid will be posted at: <a href="https://www.epa.gov/ingredient-used-pesticide-products/registration-review-pyridine-and-pyrimidine-herbicides#compost">https://www.epa.gov/ingredient-used-pesticide-products/registration-review-pyridine-and-pyrimidine-herbicides#compost</a>.
- Applications by property owners/operators on their own property are exempt from this notification and record keeping requirement.
- Applications to public land (i.e., lands managed directly by federal, state, tribal, or local authorities) are exempt from this notification requirement.



Warning: Do not move treated plant materials or manure from animals who have grazed on treated plant materials to sites where manure may be collected or sensitive crops are grown.

For more information on how to manage clopyralid treated materials and to prevent clopyralid from contaminating compost please visit <a href="https://www.epa.gov/ingredients-used-pesticide-products/registration-review-pyridine-and-pyrimidine-herbicides#compost">https://www.epa.gov/ingredients-used-pesticide-products/registration-review-pyridine-and-pyrimidine-herbicides#compost</a>.

**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 GF-2551 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** 

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

- 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. **Restriction**: For these crops, a minimum 10.5-month rotation interval must be observed.
- 3. For best results, conduct a field bioassay prior to planting these sensitive crops.
- 4. Precaution: 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, this product 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%) 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.</p>

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

wasimigton		
Rotational Crops <sup>1</sup>	Rotation Interval <sup>4</sup> (Soils greater than 2% organic matter AND rainfall more than 15 inches during 12 months following application)	Rotation Interval <sup>4</sup> (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), field corn, flax, garden beet, grasses, oats, popcorn, spinach, sugar beet, sweet corn, turnip, wheat	anytime	anytime
alfalfa, asparagus, grain sorghum, onions, peppermint, safflower, spearmint, strawberry	10.5 months	10.5 months
dry beans, soybean, sunflower	10.5 months	18 months <sup>2</sup>

Rotational Crops <sup>1</sup>	Rotation Interval <sup>4</sup> (Soils greater than 2% organic matter AND rainfall more than 15 inches during 12 months following application)	Rotation Interval <sup>4</sup> (Soils less than 2% organic matter AND rainfall less than 15 inches during 12 months following application)
blueberry, lentils, peas, potatoes (including potatoes grown for seed), and broadleaf crops grown for seed (excluding <i>Brassica</i> species)	18 months <sup>2</sup>	18 months <sup>2, 3</sup>

- 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. **Restriction:** For these crops, a minimum 10.5-month rotation interval must be observed.
- 3. For best results, conduct a field bioassay prior to planting these sensitive crops.
- 4. **Precaution:** 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, this product 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%) 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

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

- 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. **Restriction:** For these crops, a minimum 10.5-month rotation interval must be observed.
- 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. **Precaution:** 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, this product 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%) 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 this product 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 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.

# MANDATORY SPRAY DRIFT MANAGEMENT Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to select a nozzle and pressure combination that delivers a medium or coarser droplet size (ASABE S641).
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed-wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use ¾ swath displacement upwind at the downwind edge of the field.
- Do not apply during temperature inversions.

#### **Ground Boom Applications:**

- Apply with the release height no more than 3 feet above the ground or crop canopy unless making a pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- Applicators are required to select a nozzle and pressure combination that delivers a medium or coarser droplet size (ASABE S572).
- Do not apply when wind speeds exceed 15 mph at the application site.
- Do not apply during temperature inversions.

## **Boom-less Ground Sprayer Applications:**

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

## IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size – Ground Boom**

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift.
   Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

Adjust Nozzles – Follow nozzle manufacturers' recommendations for setting up nozzles.
 Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### WIND

Drift potential generally increases with wind speed.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

### **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

### **Handheld Technology Applications:**

· Take precautions to minimize spray drift.

## **Susceptible Plants**

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

#### Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application herbicides. Where states have more stringent regulations, they must be observed.

## **Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

Additional requirements for aerial applications:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

Additional requirements for ground boom application:

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

#### WEED RESISTANCE MANAGEMENT

This product contains the active ingredient clopyralid, which is a Group 4 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistant.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- If using post-emergence herbicides or tank mixes, control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of this product for the most difficult to control weed in the field at the specified time to minimize weed escapes (consult weed control table).

- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your local company representative, local retailer, or county extension agent.
- Contact your local company representative, crop advisor, or extension agent to find out if suspected
  resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds
  have been reported, use the application rates of this product specified for your local conditions. Tank
  mix products so that there are multiple effective modes of action for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 4 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - · A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum herbicide with other modes of action as a foundation in a weed control program, if appropriate.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 4 herbicides.
- Avoid making more than two sequential applications of this product and any other Group 4
  herbicides within a single growing season unless mixed with an herbicide with a different mode of
  action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields to reduce weed seed production

## **Sprayer Clean-Out**

To avoid injury to desirable plants, thoroughly clean equipment used to apply GF-2551 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 Directions**

#### **GF-2551 – Alone**

- 1. Add 3/4 of the required spray volume to the spray tank and start agitation.
- 2. Add the required amount of GF-2551.
- 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.

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

#### GF-2551 - Tank Mix

This product may be applied in tank mix combination with labeled rates of other products provided that (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. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in the tank mixture. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

## **Tank Mixing Restrictions:**

- 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 Sprayer Clean-Out.)
- Always perform a tank-mix compatibility test to ensure the compatibility of products to be used in tank
  mixture.

**Tank-Mix Compatibility Testing:** Perform a jar text prior to tank mixing to ensure compatibility of this product 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 30 minutes. If the mixture balls-up or forms flakes, sludges, gels, 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 GF-2551 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), use a higher rate within the rate range. 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)	Rate Range (fl oz/A)	Rate Range (lb ae/A)	Maximum Use Rate <sup>1</sup> (pt/acre/growing season)
blueberry	0.1 - 0.2	1.6-3.2	0.06-0.13	0.2 (0.13 lb ae/A)
spinach	0.15 - 0.3	2.4-4.8	0.09-0.19	0.3 (0.19 lb ae/A)
barley, oats, wheat	0.15 - 0.2	2.4-3.2	0.09-0.13	0.2 (0.13 lb ae/A)

Crop or Use Site	Rate Range (pt/acre)	Rate Range (fl oz/A)	Rate Range (lb ae/A)	Maximum Use Rate <sup>1</sup> (pt/acre/growing season)
Christmas tree and cottonwood/poplar and eucalyptus tree plantations, fallow cropland, field corn, grasses grown for seed, sugar beet	0.15 - 0.4	2.4-6.4	0.09-0.25	0.4 (0.25 lb ae/A)
canola (rapeseed), cole crops ( <i>Brassica</i> species), crambe, garden beet, southern pine seedbeds	0.15 - 0.3	2.4-4.8	0.09-0.19	0.3 (0.19 lb ae/A)
apple, popcorn, stone fruits, strawberry, sweet corn	0.2 - 0.4	3.2-6.4	0.13-0.25	0.4 (0.25 lb ae/A)
turnip	0.2 - 0.3	3.2-4.8	0.13-0.19	0.3 (0.19 lb ae/A)
peppermint, spearmint	0.2 - 0.6	3.2-9.6	0.13-0.38	0.6 (0.38 lb ae/A)
noncropland, non- leguminous trees, permanent grasses on CRP land, rangeland and permanent grass pastures	0.2 - 0.8	3.2-12.8	0.13-0.5	0.8 (0.5 lb ae/A)

<sup>&</sup>lt;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 GF-2551 (fl oz or mL) corresponding to the desired broadcast rate in 1 gallon or more of spray. To calculate the amount of GF-2551 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  $3.5 \text{ (calc. } 3500 \div 1000 = 3.5)$ . An area of 1000 sq ft is approximately  $10.5 \times 10.5 \text{ yards}$  (strides) in size.

Use the following table for converting pints to fluid ounces.

Amount of GF-2551 per Gallon of Spray to Equal Specified Broadcast Rate

Specified Broadcast Rate	Amount of GF-2551 per gallon of hand held spray		
Pints	Fluid Ounces	mL	
0.1	0.04	1.1	

Specified Broadcast Rate	Amount of GF-2551 per gallon of hand held spray			
Pints	Fluid Ounces mL			
0.15	0.06	1.6		
0.2	0.07	2.2		
0.3	0.11	3.3		
0.4	0.15	4.3		
0.6	0.22	6.5		
0.8	0.29	8.7		

## **Band Application**

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

Band width in inches	Χ	Broadcast rate	=	Band rate
Row width in inches		per treated acre		per treated acre
Band width in inches	Χ	Broadcast volume	=	Band volume
Row width in inches		per treated acre		per treated acre

### **Use of Adjuvants**

Addition of surfactants, crop oils, or other adjuvants is not usually necessary when using this product. 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, Corteva Agriscience 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 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, increase spray volume 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>	up to 5 leaf	0.15 - 0.3
black clover		
black medic clover (a)		
bull thistle (b)		
clover (a)		
cocklebur (a)		
coffeeweed (a)		
common burdock (b)		
common cocklebur (a)		
common groundsel (b)		
common ragweed (a)		
common teasel (b)		

Weed Species	Stage of Growth	Rate for Control <sup>2</sup>
·		(pt/acre)
cornflower (bachelor button) (a)		
curly dock (p)		
dandelion (p)		
false chamomile (scentless) (a)		
galinsoga (a)		
giant ragweed (a)		
hairy beggartick		
hawksbeard, smooth		
hop clover (a)		
horseweed (a)		
Jerusalem artichoke (p)		
joe-pye weed		
jimsonweed (a)		
ladysthumb (a) <sup>4</sup>		
lambert locoweed (p)		
marshelder (a)		
mayweed chamomile (dogfennel) (a)		
meadow salsify (goatsbeard) (b)		
musk thistle (b)		
narrowleaf hawksbeard (a)		
narrow-leaved golden rod		
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 clover (p) white locoweed (p)		
yellow hawkweed (p)		
yellow starthistle (a)		
wild buckwheat (a)	1 2 loof stage	0.3
wild buckwrieat (a)	1 - 3 leaf stage,	0.3
black nightchada (a)	but before vining 2 - 4 leaf	
black nightshade (a)	∠ - 4 I <del>C</del> al	
buffalobur (a) <sup>3</sup>		
cutleaf nightshade (a)		
eastern black nightshade (a)		
hairy nightshade (a)		
nightshade spp. (a)	0 015-4	
green smartweed (a) <sup>4</sup>	2 - 3 leaf	
smartweeds (suppression)		1
annual sowthistle (a) (suppression)	rosette up to bud	degree of infestation:
Canada thistle (p)	stage	light - 0.2

Weed Species	Stage of Growth	Rate for Control <sup>2</sup> (pt/acre)
perennial sowthistle (p) <sup>4</sup> sowthistle (a) (suppression)		moderate to heavy - 0.3 - 0.4
spotted/diffuse knapweeds (b)	up to bud stage	0.3 - 0.4
Russian knapweed (p) <sup>4</sup>		0.4 - 0.8

- 1. This table is provided as a general reference only. Refer to use directions for specific crop or use site for application rates.
- 2. 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.
- 3. Not registered for use in California.
- 4. 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, this product will control the top growth and inhibit regrowth during the season of application (season-long control). At higher use rates shown on this label, this product 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

# Barley, Oats and Wheat not underseeded with legume (Not Registered for Use in Florida)

## **Application Rate**

Apply 0.15 to 0.2 pint (0.09 to 0.13 lb ae/A) of GF-2551 per acre when crop is from the 3-leaf stage up to early boot stage of growth. For control of perennial weeds, such as Canada thistle, apply 0.2 pint of GF-2551 per acre. Russian knapweed will only be suppressed at this rate.

## **Specific Use 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.

## Blueberry

**Application timing:** Blueberry plants are more sensitive to GF-2551 applied in the spring prior to bloom, before and/or during the crop's annual flush of growth, than after bloom. Do not apply GF-2551 from one week prior to bloom until one week after bloom. After bloom, apply GF-2551 up until 30 days prior to harvest. GF-2551 can be applied after harvest. Determine the rate of GF-2551 based upon the targeted weed species and whether one or two sprays will be applied during the growing season. **Note:** GF-2551 is a residual herbicide and applications must be based upon accurate rate per acre calibrations. Applications of GF-2551 can injure the blueberry plant and significantly reduce yields depending upon rates used, timing of application, and environmental conditions.

**Application Rate:** Apply GF-2551 at 0.1 to 0.2 pint (0.06 to 0.13 lb ae/A) per acre directed to the soil from the blueberry plants to the row middle without contacting the foliage or woody portions of blueberry plants. Apply with ground broadcast equipment, backpack sprayer, or wipe applicator in a total spray volume of a minimum of 10 gallons per acre. Hand-held sprayers may be used for spot applications. Refer to the package label for conversion rates, mixing, and application directions for hand-held sprayers.

Use the lower rate in the rate range for young succulent growth for sensitive weed species. Use the higher rate in the rate range for less sensitive weed species, perennials, and under environmental conditions where target weeds are less susceptible. Make a maximum of two applications with the total usage of GF-2551 from all types of applications not to exceed 0.4 pint per acre per year.

**Wipe Treatments:** For wipe treatments, apply a 1.2% solution of GF-2551 in water (0.13 pt or 2.5 fl oz per gallon). Make a maximum of two applications with the total usage of GF-2551 from all types of applications not to exceed 0.4 pint (0.25 lb ae/A) per acre per annual growing season (0.25 lb ae/A). Do not permit GF-2551 to contact desirable foliage or crop injury will result.

Target Weeds	GF-2551 (pint/acre)
common ragweed	0.1 - 0.15
giant ragweed	(0.06 – 0.09 lb ae/A)
hairy beggartick	
volunteer beans	
annual sowthistle	0.15 – 0.2
(suppression)	(0.09 – 0.13 lb ae/A)
black clover	
Canada thistle	
(suppression)	
dandelion	
joe-pye weed	
narrow-leaved golden rod	
white clover	

## **Specific Use Restrictions:**

- Preharvest interval: Do not apply within 30 days of harvest.
- Do not exceed a total of 0.4 pint (0.25 lb ae/A) per acre per year.
- Do not apply within 5 hours of expected rainfall or irrigation.
- Do not apply by aircraft.
- Chemigation: Do not apply through any type of irrigation system.
- Do not apply to low growing varieties of blueberry.

# Brassica (Cole) Leafy Vegetables (Crop Group 5)1

(For use and distribution only in the states of Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, Michigan, Missouri, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, Vermont, Virginia, West Virginia, and Wisconsin)

## (Not for use in Nassau or Suffolk counties within the State of New York)

<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

#### **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.

Target Broadleaf Weeds	GF-2551 (pint/acre)
chamomile	0.15 - 0.3
clover	(0.09 – 0.19 lb
common cocklebur	ae/A)
dandelion	
galinsoga	
pineappleweed	
prickly lettuce	
ragweed	
smartweed	
wild buckwheat	
annual sowthistle <sup>1</sup>	0.2 - 0.3
Canada thistle <sup>1</sup>	(0.13 – 0.19 lb
	ae/A)

<sup>&</sup>lt;sup>1</sup>Suppression only.

### **Specific Use 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 0.3 pint per acre per year.
- In New York and California, the maximum application rate for GF-2551 is 0.4 pint (0.25 lb ae/A) per acre per growing season. Do not exceed the cumulative amount of 0.4 pint (0.25 lb ae/A) of GF-2551 per acre per crop year.
- In Florida, GF-2551 may be used only on cabbage, Chinese cabbage (napa), and Chinese mustard cabbage (gai choy).

# Canola (Rapeseed) and Crambe

(Not Registered for Use in California and Florida)

## **Application Timing**

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 this product 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	GF-2551 (pint/acre)
Canada thistle	0.2 (0.13 lb ae/A)
	for top growth suppression
Canada thistle	0.3
perennial sowthistle	(0.19 lb ae/A)
	for season long control

Target Broadleaf Weeds	GF-2551 (pint/acre)
annual sowthistle	0.15 - 0.3
biennial wormwood	(0.09 – 0.19 lb ae/A)
curly dock	
dandelion	
false chamomile	
green smartweed	
mayweed chamomile	
nightshade species	
sunflower	
wild buckwheat	

## **Specific Use 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 this product 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 this product 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 0.15 to 0.3 pint (0.09 - 0.19 lb ae/A) of GF-2551 per acre for control of annual weeds. Apply 0.3 to 0.4 pint (0.19 - 0.25 lb ae/A) of GF-2551 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.

This product may be applied as a spot treatment using a hand held sprayer at an equivalent broadcast rate of 0.3 to 0.4 pint (0.19 to 0.25 lb ae/A) per acre. Refer to Hand Held Sprayers under Spot Treatment in the Application Directions section.

#### **Specific Use Restrictions:**

- Re-treat as necessary, but do not exceed 0.4 pint (0.25 lb ae/A) of GF-2551 per acre per annual growing season.
- Blue spruce: Do not exceed 0.3 pint 0.19 lb ae/A) per acre per annual growing season.
- Do not apply with an air blast sprayer.

#### **Specific Use Precautions:**

• Tree injury may occur with the addition of a surfactant or crop oil with this product. Do not use unless previous experience shows injury is tolerable.

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

Use GF-2551 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 this product at specified timing and rates for field, pop and sweet corn as indicated below.

#### **Weed Control**

For control of common cocklebur, common ragweed, giant ragweed, sunflower, other annual weeds and Jerusalem artichoke, apply 0.15 to 0.3 pint (0.09 – 0.19 lb ae/A) of GF-2551 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 0.2 to 0.4 pint (0.13 to 0.25 lb ae/A) of GF-2551 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 0.2 pint (0.13 lb ae/A) per acre. For medium to heavy infestations (more than 10 plants per square yard), rates of 0.3 to 0.4 pint (0.19 to 0.25 lb ae/A) 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 application rate given a medium to heavy population of Canada thistle. Control of lighter infestations may be better than that described.

- A rate of 0.2 pint (0.13 lb ae/A) 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 0.3 pint (0.19 lb ae/A) 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 0.4 pint (0.25 lb ae/A) 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 GF-2551 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. Using 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 Directions. If GF-2551 is applied sequentially or in combination with Hornet® Herbicide (EPA Reg. No. 5481-678; Active Ingredients: flumetsulam and clopyralid) broadleaf blend herbicide to the current corn crop, the maximum application rate at which GF-2551 may be applied to field corn is indicated in the following table:

Rate of Hornet Herbicide Applied to Current Corn Crop (oz/acre)	Maximum Application Rate for GF-2551 (pint/acre)
2	0.31
3	0.26
4	0.2
5	0.15

**Restriction:** Maximum use rate for clopyralid is 0.25 lb ae per acre. One ounce of Hornet Herbicide contains 0.031 lb of clopyralid. One fluid ounce of GF-2551 contains 0.04 lb of clopyralid.

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

Susceptibility of corn to injury from GF-2551 is highly related to varietal response. Inbred lines or any breeding stock may be injured by GF-2551. Contact your seed production agronomist for advice before applying GF-2551 to inbred lines or breeding stock.

## **Hand Held Sprayers**

This product may be applied as a spot treatment using a hand held sprayer at an equivalent broadcast rate of 0.4 pint per acre. Refer to Hand Held Sprayers under Spot Treatment in the Application Directions section. Make applications on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff.

### **Specific Use Restrictions:**

- Re-treat as necessary, but do not apply more than 0.4 pint (0.25 lb ae/A) of GF-2551 per acre per year.
- Do not apply to field corn more 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 this product any time after popcorn emergence through 24-inch tall popcorn. For sweet corn, apply this product any time after sweet corn emergence through 18-inch tall sweet corn.

## **Application Rate**

Apply 0.2 to 0.4 pint (0.13 – 0.25 lb ae/A) of GF-2551 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 this product 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 this product 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 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 0.4 pint per acre (0.25 lb ae/acre).
- Re-Treatment Interval: 21 days.
- Do not apply to popcorn more than 24 inches tall or sweet corn more than 18 inches tall.
- 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**

This product 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 0.2 to 0.4 pint (0.13-0.25 lb ae/A) per acre. Apply in 10 gallons or more total spray volume per acre using ground equipment only. Multiple applications of this product may be made as long as the total rate per growing season does not exceed 0.8 pints (0.5 lb ae/A) 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 avoid contact with tree foliage or limit it to lower branches. Apply to weeds on a spray-to-wet basis with uniform and complete spray coverage. Do not spray to the point of runoff. Prepare a spray solution by adding 0.15 fl oz of GF-2551 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 0.4 pint (0.25 lb ae/A) per acre.

## **Specific Use Restrictions:**

- Do not tank mix GF-2551 with other herbicides labeled for this use unless spray avoids all contact with tree foliage.
- This product 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**

GF-2551 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 0.15 to 0.4 pint (0.09 – 0.25 lb ae/A) of GF-2551 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, GF-2551 may be applied with 2,4-D. See Tank Mixing section under Mixing Directions.

## Flax, including low linolenic varieties

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

## **Application Timing**

Apply to flax, including low linolenic acid varieties 2 to 4 inches high and when the weeds are actively growing at rates shown in the following table. Consult the table entitled Broadleaf Weeds Controlled and Guidelines for Control for additional information. Apply this product uniformly with ground or aerial equipment in 10 to 20 gallons total spray volume per acre (minimum of 5 gallons per acre by air).

	GF-2551
Target Broadleaf Weeds	(pint/acre)
	(pilitracre)
Canada thistle	0.2
	(0.13 lb ae/A)
	for top growth suppression
Canada thistle	0.3–0.4
perennial sowthistle	(0.19 – 0.25 lb ae/A)
	for season long control
annual sowthistle	0.15 - 0.3
biennial wormwood	(0.09 – 0.19 lb ae/A)
curly dock	
dandelion	
false chamomile	
green smartweed	
mayweed chamomile	
nightshade species	
sunflower	
wild buckwheat	

For the most effective control of perennials, such as Canada thistle and sowthistle, apply 0.3 to 0.4 pint (0.19 to 0.25 lb ae/A) of GF-2551 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.

#### **Tank Mixes**

To control additional broadleaf weeds and provide consistent control of difficult to control weeds such as wild buckwheat, this product may be applied in combination with labeled rates of a product containing MCPA ester or amine, or other products registered for postemergence application in flax. For best results, tank mix 0.2 pint (0.13 lb ae/A) of GF-2551 per acre with a product MCPA ester or amine at a rate of 6–8 fl oz ae/ha. GF-2551 may also be tank mixed with a grass herbicide containing sethoxydim or clethodim. Crop oil or Dash surfactant may be added to the tank mixture to optimize grass weed control. See Tank Mixing section under Mixing Directions.

## **Specific Use Restrictions:**

- Preharvest Interval: Do not apply within 72 days of harvest.
- Make one broadcast application per crop per year.

### Garden Beet

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

Use GF-2551 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 this product to wild buckwheat at the 1- to 3-leaf stage of growth before vining begins. Apply this product to common ragweed and sweet clover from weed emergence up to the 5-leaf stage of growth. Apply this product to all species of nightshade at the 2- to 4-leaf stage of growth. Apply this product 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 0.15 to 0.3 pint (0.09 - 0.19 lb ae/A) of GF-2551 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 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 0.3 pint (0.19 lb ae/A) 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. Postharvest fall treatments may be made to actively growing Canada thistle after the majority of basal leaves have emerged.

#### **Application Rate**

Use 0.15 to 0.4 pint (0.09 - 0.25 lb ae/A) of GF-2551 per acre for control of annual weeds and Canada thistle. Re-treat as necessary, but do not exceed 0.4 pint (0.25 lb ae/A) of GF-2551 per acre per season.

#### **Tank Mixes**

GF-2551 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 Directions. **Precaution:** 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 GF-2551 with 2,4-D, MCPA, or dicamba unless the risk to crop injury is acceptable.

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

This product 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 this product 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 total spray volume per acre 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 and Weeds Controlled	GF-2551 (pint/acre)
fall treatment only (Sept. 15 to first frost)	
annuals	0.3
	(0.19 lb ae/A)
perennials	0.4
	(0.25 lb ae/A)
hard-to-kill perennials (Canada thistle, dandelion)	0.6
, , , , , , , , , , , , , , , , , , ,	0.38 lb ae/A)
spring treatment only	
annuals	0.2
	(0.13 lb ae/A)
perennials	0.3
	(0.19 lb ae/A)
fall plus spring treatment	maximum of 0.4 (0.25 lb
· · · · ·	ae/A) in fall plus 0.2 (0.13
	ĺb ae/A) in spring

#### **Specific Use Restrictions:**

- Preharvest Interval: Do not apply within 45 days of harvest.
- Do not apply more than 0.6 pint per acre (0.38 lb ae/acre) per growing season.
- Treated peppermint and spearmint may be used for distillation (oil extraction) only.
- Do not feed spent peppermint and spearmint hay slugs to livestock.
- Peppermint and spearmint 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.)

#### **Specific Use Precautions:**

- Discoloration or malformation of peppermint and spearmint leaves may occur following treatment. This effect is generally temporary and does not reduce oil yields.
- This product will not control many broadleaf weeds such as chickweed, field bindweed henbit, kochia, lambsquarters, mustards, pigweed, and Russian thistle.

# Pome Fruits (Crop Group 11-10)<sup>1</sup> (Not for Use or Distribution in Nassau and Suffolk Counties within the State of New York)

<sup>1</sup>Pome fruits (crop group 11-10) including apple, and azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, tejocote, cultivars, varieties, and/or hybrids of these

Use this product for postemergence control of broadleaf weeds listed that are infesting pome fruits.

Target Broadleaf	Application Rate
Weeds	(pint/acre)

annual sowthistle	0.2 - 0.4
Aster spp.	(0.13 – 0.25 lb
black nightshade	ae/A)
burdock	,
Canada thistle	
curly dock	
dandelion	
goldenrod	
hairy nightshade	
horseweed (marestail)	
musk thistle	
pineappleweed	
red clover	
vetch	
volunteer alfalfa	
white clover	

## **Specific Use Restrictions:**

- Preharvest interval: Do not apply within 30 days of harvest.
- Make one to two broadcast applications per crop per year. Do not exceed a total of 0.4 pint (0.25 lb ae/A) per acre.
- Apply this product to non-bearing (well established trees, 1 year or older) and bearing trees.
- East of the Rocky Mountains, do not apply this product during bloom.

### **Specific Use Precautions:**

Avoid direct contact with foliage, fruit or tree trunks.

## **Application Timing**

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

#### **Application Rate**

Apply 0.2 to 0.4 pint (0.13 - 0.25 lb ae/A) of GF-2551 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.

**Tank Mixtures:** This product may be tank mixed with other herbicides labeled for use on pome fruits. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Southern Pine Seedbeds in Forest Nurseries

(Registered for Use in Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia) (Not Registered for Use in Florida)

This product 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 0.15 to 0.3 pint (0.09 – 0.19 lb ae/A) 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 handheld 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 0.11 fl oz (3.3 mL) of GF-2551 per gallon of spray and direct spray onto weeds. Avoid spraying pine seedlings whenever possible.

#### **Specific Use Restrictions:**

 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.

## **Specific Use Precautions:**

• Application of GF-2551 during active growth of conifers may cause some needle curling.

## **Spinach**

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

Use this product 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 this product 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 this product 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 0.15 to 0.3 pint (0.09 - 0.19 lb ae/A) per acre of GF-2551 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 Restrictions:**

- Preharvest Interval: Do not apply within 21 days of harvest.
- Make one to two broadcast applications per crop per year, not to exceed a total of 0.3 pint (0.19 lb ae/A) per acre.

#### **Specific Use Precautions**

• 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> (Not Registered for Use in California and Florida)

<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

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

## **Application Rate**

Apply 0.2 to 0.4 pint (0.13 - 0.25 lb ae/A) of GF-2551 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 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 0.4 pint (0.25 lb ae/A) per acre.

## Strawberry

## **Broadcast Applications**

Apply uniformly with ground equipment in 20 to 75 gallons of water per acre.

**Post-Harvest Application:** Make a ground application after harvest at 0.2 to 0.4 (0.13 - 0.25 lb ae/A) pint per acre. For control of Canada thistle from after harvest to early fall, apply GF-2551 after the majority of basal leaves have emerged but prior to bud stage.

**New Planting**: Do not make an application within 4 months of planting. If planted in the spring, make a post-harvest application that year (per directions on the GF-2551 package label). If needed, make a spring application the following year.

**Spring Application:** If needed, make a ground application in the spring prior to first bloom and no later than 30 days prior to harvest at 0.2 pint (0.13 lb ae/A) per acre.

Target Broadleaf	GF-2551
Weeds	(pint/acre)
annual sowthistle	Post-harvest application:
(suppression)	0.2 - 0.4
black clover	(0.13 – 0.25 lb ae/A)
black medic clover	
black nightshade	Spring application:
bull thistle	0.2
(suppression)	(0.13 lb ae/A)
Canada thistle	
(suppression)	
common cocklebur	
common groundsel	
common ragweed	
curly dock	
cutleaf nightshade	
dandelion	
eastern black nightshade	
giant ragweed	

hairy nightshade Jerusalem artichoke jimsonweed nightshade spp. pineappleweed prickly lettuce red sorrel smartweed (suppression) smooth hawksbeard sunflower	
vetch	
smartweed (suppression) smooth hawksbeard sunflower	

## **Specific Use Restrictions:**

- Make 1 to 2 applications per year not to exceed 0.4 pint (0.25 lb ae/A) per acre per year. Make only 1 application in the spring.
- **Do not** use GF-2551 with a surfactant on strawberries.
- **Do not** tank mix with other pesticides registered for use on strawberry.
- Spring applications: Do not apply within 30 days of harvest.
- Do not apply by aircraft.
- Chemigation: Do not apply GF-2551 through any type of irrigation system.
- **Do not** apply within 6 to 8 hours of expected rainfall or irrigation.
- Do not compost treated vegetation if compost will be used on sensitive plants.

**Note:** Some minor leaf cupping or berry distortion may occur. Therefore, some berries may not be marketable. Do not use if unwilling to accept minor leaf injury or berry distortion.

#### Sugar Beet

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

Use this product to control various annual and perennial broadleaf weeds infesting sugar beet.

#### **Application Rate**

Apply 0.15 to 0.4 pint (0.09 - 0.25 lb ae/A) of GF-2551 per acre with ground equipment as a broadcast foliar spray or band treatment or with aerial equipment in 5 gallons or more total spray volume per acre. See instructions for band application under Application Directions in the Product 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 0.15 to 0.3 pint (0.09 - 0.19 lb ae/A) of GF-2551 per acre from weed emergence up to the 5-leaf stage of growth. Apply to wild buckwheat 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 0.3 to 0.4 pint (0.19-0.25 lb ae/A) of GF-2551 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, this product may be applied in combination with labeled rates of a product containing phenmedipham/desmedipham, desmedipham, triflusulfuron, or other products registered for postemergence application in sugar beets. For best results, tank mix 0.15 pint (0.09 lb ae/A) of GF-2551 per acre with a product containing phenmedipham/desmedipham or desmedipham followed one to two weeks later by a second application of 0.15 to 0.2 pint (0.09 – 0.13 lb ae/A) of GF-2551 per acre tank mixed with a product containing phenmedipham/desmedipham or desmedipham. GF-2551 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 Directions.

## **Specific Use Restrictions:**

- Preharvest Interval: Do not apply within 45 days of harvest.
- Re-treat as necessary, but do not exceed 0.4 pint (0.25 lb ae/A) of GF-2551 per acre per season.
- Aerial application of GF-2551 in sugar beet is allowed only in the states of Colorado, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, and Wyoming.

## **Turnip**

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

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

#### **Application Rate**

Apply 0.2 to 0.3 pint (0.13 -0.19 lb ae/A) of GF-2551 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 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 Product Information section.)

## **Rangeland and Permanent Grass Pastures**

Apply 0.2 to 0.8 pints (0.13-0.5 lb ae/A) of GF-2551 per acre when weeds are young and actively growing. Established grasses are tolerant to GF-2551, 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.

## **Specific Use Restrictions:**

 Do not use hay or straw from treated areas for composting or mulching on susceptible broadleaf crops. (See Residues in Plants or Manure section.) There are no further restrictions on grazing or hay harvest following application of GF-2551 at labeled rates.

**Specific Use Precaution:** Some forbs (desirable broadleaf forage plants) are susceptible to GF-2551. However, the stand and growth of established perennial grasses is usually improved after spraying, especially when rainfall is adequate and grazing is deferred.

Conservation Reserve Program (CRP) for Seeding to Permanent Grasses Only Do not use GF-2551 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 this product 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 this product. 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 0.4 to 0.8 pints (0.25 – 0.5 lb ae/A) of GF-2551 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 0.4 pint (0.25 lb ae/A) of GF-2551 per acre. For best results, use in 10 gallons or more of water per acre by ground. Increasing the application rate increases the risk of injury.

**Tank Mixes:** GF-2551 can also be tank mixed with 2,4-D where species present are sensitive to 2,4-D. See Tank Mixing section under Mixing Directions.

### Non-Cropland

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

**Application Rate:** For control of broadleaf weeds, apply 0.15 to 0.8 pints (0.09-0.5 lb ae/A) of GF-2551 per acre. The lower rate of 0.15 pint (0.09 lb ae/A) per acre provides acceptable control of weeds only under highly favorable growing conditions and when plants are 1 to 3 inches tall. Apply 0.3 pint (0.19 lb ae/A) 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 0.4 to 0.8 pints (0.25-0.5 ln ae/A) of GF-2551 per acre.

**Tank Mixes:** To improve spectrum of weed control, or to increase control of more mature weeds, GF-2551 may be tank mixed with 2,4-D amine or low volatile ester herbicide or other herbicides registered for this use site. See Tank Mixing section under Mixing Directions.

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If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

## Warranty Disclaimer

Corteva Agriscience 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 for

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## 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 Corteva Agriscience or the seller. To the extent consistent with applicable law, Corteva Agriscience will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by Corteva Agriscience. To the extent consistent with applicable law, all such risks associated with non-directed use shall be assumed by buyer and/or user.

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To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, tort, strict liability, or other legal theories), shall be limited to, at Corteva Agriscience's 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.

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