



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

83529-74

Date of Issuance:

7/3/17

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

Sharda Clopyralid 40.9% EC

Name and Address of Registrant (include ZIP Code):

Sharda USA, LLC  
c/o Wagner Regulatory Associates, Inc.  
P.O. Box 640  
Hockessin, DE 19707

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 83529-74."

Signature of Approving Official:

Kathryn Montague, Product Manager 23  
Herbicides Branch, Registration Division (7505P)

Date:

7/3/17

3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

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 the Federal Insecticide Fungicide and Rodenticide Act 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) list 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.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 02/23/2017

If you have any questions, please contact Beth Benbow by phone at 703-347-8072, or via email at [Benbow.bethany@epa.gov](mailto:Benbow.bethany@epa.gov)

Enclosure

**ACCEPTED**

07/03/2017

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 83529-74**GROUP 4 HERBICIDE**

# Sharda Clopyralid 40.9% EC

**For Use as a Selective Post-Emergence Control of Broadleaf Weeds in Apple, Asparagus, Barley, Oats and Wheat Not Underseeded with Legume, Brassica, Canola (Rapeseed) and Crambe, Christmas Tree Plantations, Corn (Field, Pop, Sweet), Cottonwood/Poplar and Eucalyptus Tree Plantations, Fallow Cropland, Garden Beet, Grasses Grown For Seed, Peppermint and Spearmint, Southern Pine Seedbeds in Forest Nurseries, Spinach, Stone Fruits, 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: 3,6-dichloro-2- pyridinecarboxylic acid, monoethanolamine salt .....	40.9%
<b>OTHER INGREDIENTS:</b> .....	<u>59.1%</u>
<b>TOTAL:</b> .....	<b>100.0%</b>
Acid Equivalent: clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid - 31% (3 lbs./gal.)	

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCIÓN

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

FIRST AID	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call your poison control center at <b>1-800-222-1222</b> .	

[Optional referral statements when booklets and container labels are used:

See Panel for First Aid Instructions and booklet for complete Precautionary Statements and Directions for Use.

See label booklet for complete Precautionary Statements, Directions For Use, and Storage and Disposal.

See label booklet for additional Precautionary Statements Directions For Use, and Storage and Disposal.

See label booklet for complete Directions For Use.]

EPA Reg. No.: 83529-TU

EPA Est. No.: \_\_\_\_\_

Net Contents: \_\_\_\_\_

Manufactured for:

**Sharda USA LLC** 

7217 Lancaster Pike, Suite A  
Hockessin, Delaware 19707

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made out of barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene and PVC or Viton
- Shoes plus socks
- Protective eyewear

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 with soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not clean equipment or dispose of equipment washwaters in a manner that will contaminate water resources.

**GROUND WATER ADVISORY**

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

**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 medium 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 is forecasted to occur within 48 hours.

**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. 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.

Read all Directions for Use carefully before applying.

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

**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), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coveralls
- Chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene and PVC or Viton
- Shoes plus socks
- Protective eyewear

**NON-AGRICULTURAL USE REQUIREMENTS**

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

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

**PRODUCT INFORMATION**

**Sharda Clopyralid 40.9% EC** is for use as a selective, post-emergence herbicide for control of broadleaf weeds in apple, asparagus, barley, oats and wheat not underseeded with a legume, canola (rapeseed), Christmas tree plantations, conservation reserve program (CRP) acres, cottonwood/poplar and eucalyptus tree plantations, crambe, fallow cropland, field corn, garden beet, grasses grown for seed, *Brassica*, peppermint, popcorn, rangeland and permanent grass pastures, southern pine seedbeds in forest nurseries, spearmint, spinach, stone fruits, sugar beet, sweet corn, turnip, and non-cropland areas including fence rows, around farm buildings, and equipment pathways.

**Use Restrictions:**

- Application of **Sharda Clopyralid 40.9% EC** may be made by aircraft on the following crops: canola (rapeseed), crambe, spinach, and sugar beet.
- Re-treatment is allowed, but do not make application of more than the maximum allowable rate per crop growing season. Treatment 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 a treatment to irrigated small grains.
- Use directions in Sharda USA LLC supplemental labeling may supersede directions or limitations in this labeling.
- In California and New York, the maximum application use rate for **Sharda Clopyralid 40.9% EC** is  $\frac{3}{8}$  pint per acre per growing season. Do not exceed a cumulative amount of  $\frac{3}{8}$  pint of clopyralid [0.25 lb. acid equivalent (a.e.)] per acre per crop year, unless specifically allowed.
- Not for sale, use or distribution in Nassau and Suffolk Counties in New York State.
- Do not contaminate irrigation ditches or water used for irrigation or domestic purposes.
- Do not use in greenhouses.
- **Chemigation:** Do not make application of this product through any type of irrigation system.
- Do not spray pastures containing desirable crops or plants, 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.

**SPRAY DRIFT MANAGEMENT**

Avoiding spray drift at the application site is the responsibility of the applicator and grower. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and grower are responsible for considering all these factors when making decisions.

**AERIAL DRIFT REDUCTION ADVISORY INFORMATION****Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity and Temperature Inversions**).

**Controlling Droplet Size**

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

**Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height**

Do not make applications at a height greater than 10 feet above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up-and-downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

**Wind**

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind directions and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**

Because drift potential is high, do not apply during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

**Sensitive Areas**

This product may only when the potential for drift to adjacent sensitive areas (e.g., non-target crops, bodies of water, residential areas, known habitat for threatened or endangered species) is minimal (e.g., when wind is blowing away from the sensitive areas).

Do not make application 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.

**APPLICATION INSTRUCTIONS**

Make application to weeds that are actively growing. Extreme growing and climatic conditions, such as drought or near freezing temperatures before, at, or following treatment, may reduce weed control and increase the risk of crop injury at all stages of growth. This product controls weeds that have emerged at the time of treatment. If foliage is wet at the time of application, performance may be decreased. Treatments of **Sharda Clopyralid 40.9% EC** are rainfast within 6 hours after application.

Typically, use rates at the lower end of the rate range will be sufficient to control young, succulent growth of susceptible weed species. For perennial species that are less sensitive and growing under conditions of stress where control is more difficult (such as, drought or extreme temperatures, dense weed stands and/or larger weeds), use a higher use rate within the rate range. Weeds in fallow land or other areas where competition from crops is not present will typically require higher use rates for control or suppression.

Crop Or Use Site	Rate Range (Pts./Acre)	Maximum Use Rate <sup>1</sup> (Pts./Acre/Growing Season)
Spinach	$\frac{1}{6} - \frac{1}{3}$	$\frac{1}{2}$
Barley, Oats, Wheat	$\frac{1}{4} - \frac{1}{3}$	$\frac{1}{3}$
Christmas Tree And Cottonwood/Poplar And Eucalyptus Tree Plantations, Fallow Cropland, Field Corn, Grasses Grown For Seed, Sugar Beet	$\frac{1}{4} - \frac{2}{3}$	$\frac{2}{3}$
Canola (Rapeseed), Cole Crops ( <i>Brassica</i> Species), Crambe, Garden Beet, Southern Pine Seedbeds	$\frac{1}{4} - \frac{1}{2}$	$\frac{1}{2}$

Apple, Popcorn, Stone Fruits, Sweet Corn	$\frac{1}{3}$ - $\frac{2}{3}$	$\frac{2}{3}$
Turnip	$\frac{1}{3}$ - $\frac{1}{2}$	$\frac{1}{2}$
Peppermint, Spearmint	$\frac{1}{3}$ - 1	1
Noncropland, Non-Leguminous Trees, Permanent Grasses On CRP Land, Rangeland and Permanent Grass Pastures	$\frac{1}{3}$ - 1 $\frac{1}{3}$	1 $\frac{1}{3}$

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

### Spot Treatments

To prevent misapplication, only make application of spot treatments with equipment (boom or with hand-held sprayers) that has been properly calibrated according to directions provided below.

### Hand-Held Sprayers

Hand-held sprayers may be used for spot treatments. Care should be taken to make application of the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based upon an area of 1,000 sq. ft. Mix the amount of **Sharda Clopyralid 40.9% EC** (fl. oz. or mL) corresponding to the desired broadcast rate in 1 gallon or more of spray. To calculate the amount of **Sharda Clopyralid 40.9% EC** 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 3,500 sq. ft., multiply the table value by 3.5 (calc.  $3,500 \div 1,000 = 3.5$ ). An area of 1,000 sq. ft. is approximately 10.5 x 10.5 yards (strides) in size.

Amount of Sharda Clopyralid 40.9% EC per Gallon of Spray to Equal Specified Broadcast Rate					
$\frac{1}{4}$ Pt./Acre	$\frac{1}{3}$ Pt./Acre	$\frac{1}{2}$ Pt./Acre	$\frac{2}{3}$ Pt./Acre	1 Pt./Acre	1 $\frac{1}{3}$ Pts./Acre
1/10 fl. oz. (2.7 mL)	1/8 fl. oz. (3.6 mL)	1/5 fl. oz. (5.4 mL)	$\frac{1}{4}$ fl. oz. (7.3 mL)	3/8 fl. oz. (11 mL)	0.5 fl. oz. (15 mL)

Use the following table for converting pints to fluid ounces.

Conversion Chart - Pints to Fluid Ounces	
Pints	Fluid Ounces
$\frac{1}{3}$	5
$\frac{1}{4}$	4
$\frac{1}{2}$	8
$\frac{2}{3}$	11

### Band Applications

If treatment of **Sharda Clopyralid 40.9% EC** is made in a band, use the formulas below to calculate the appropriate rate and volume per treated acre:

$$\frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Broadcast Rate per Treated Acre} = \text{Band Rate per Treated Acre}$$

$$\frac{\text{Band Width in Inches}}{\text{Row Width in Inches}} \times \text{Broadcast Volume per Treated Acre} = \text{Band Volume per Treated Acre}$$

### Use of Adjuvants

Addition of surfactants, crop oils, or other adjuvants is not usually necessary when using **Sharda Clopyralid 40.9% EC**. Adding a surfactant to the spray mixture may improve effectiveness on weeds but may reduce selectivity to the crop, particularly under when plants are growing under conditions of stress. When an adjuvant is to be used with this product, Sharda USA LLC 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 make a broadcast application in less than 2 gallons total spray volume per acre. For best product performance, and to minimize spray drift, apply in a minimum of 10 gallons of spray volume 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 A void Injury to Non-Target Plants.

### TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP

#### Sharda Clopyralid 40.9% EC - Alone

1. Add  $\frac{3}{4}$  of the specified spray volume to the spray tank and begin agitation.
2. Add the specified amount of **Sharda Clopyralid 40.9% EC**.
3. If using, add any surfactants, adjuvants, or drift control agents according to manufacturer's label.
4. Agitate during final filling of the spray tank and maintain agitation during application to ensure uniformity of the spray mixture.

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

### Sharda Clopyralid 40.9% EC - Tank Mix

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.

Application of **Sharda Clopyralid 40.9% EC** may be made in tank mix combination with labeled rates of other products providing: -

1. The tank mixture partner 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 tank mixture partner product label.

### Tank Mixing Restrictions:

- 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.
- 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 (Refer to the Sprayer **Clean-Up**).
- Always perform a compatibility test to ensure the compatibility of products to be used in tank mixture (see **Test Procedure** below).

### Test Procedure

A compatibility test should be conducted before tank mixing to ensure compatibility of **Sharda Clopyralid 40.9% EC** and other pesticides or tank mixture ingredients. Use a clear, 1-quart glass jar with lid. Mix the ingredients in the required order and their relative proportions. Place the lid on the jar, and mix the contents by gently inverting the jar containing the mixture several times. Observe the mixture for approximately ½ hour. If the mixture balls-up, forms flakes, sludges, gels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

### Sprayer Clean-Up

- To avoid adverse injury to desirable plants, thoroughly clean equipment used to make applications of **Sharda Clopyralid 40.9% EC** prior to re-using it to make applications of 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 two times with clean water, recirculating and draining each time.
- Remove nozzles and screens and clean them separately.

### FIELD BIOASSAY INSTRUCTIONS

In fields that have been previously treated with this product, plant short test rows of the intended rotational crop across the original direction of treatment 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. Perform the field bioassay at any time before the planting of the intended rotational crop. Observe the test crop for any 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 result, the test crop can be grown. If there is apparent herbicidal activity, it is required to wait one year before repeating the field 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 **Sharda Clopyralid 40.9% EC** in plants that have been treated (including the treated crop or weeds, which have not completely decayed) may affect succeeding crops that are susceptible.

### Crop Rotation Intervals - Florida Only

Crop <sup>1</sup>	Crop Rotation Intervals (Months) <sup>2</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	Immediately



Alfalfa, Asparagus, Grain Sorghum, Onions, Peppermint, Safflower, Spearmint, Strawberry	10.5
Dry Beans, Soybean, Sunflower	18 <sup>3</sup>
Lentils, Peas, Potatoes (Including Potatoes Grown For Seed), and Broadleaf Crops Grown For Seed (Excluding <i>Brassica</i> Species)	18 <sup>3,4</sup>

<sup>1</sup>For optimum performance, conduct a field bioassay before planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following treatment.

<sup>2</sup>**Precaution:** The above intervals are based upon average annual precipitation regardless of irrigation practices. Observance of listed crop rotation intervals should result in acceptable safety to rotational crops. However, **Sharda Clopyralid 40.9% EC** is dissipated in the soil by microbial activity and the rate of microbial activity is dependent upon several factors that interrelate 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.

<sup>3</sup>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. **Precaution:** For these crops, a minimum 10.5-month rotation interval must be observed to avoid illegal residues in the harvested crop.

<sup>4</sup>For optimum performance, conduct a field bioassay before planting these sensitive crops.

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

Crop <sup>1</sup>	Crop Rotation Intervals (Months) <sup>2</sup> (Soils less than 2% organic matter AND rainfall greater than 15 inches during 12 months following application)	Crop Rotation Intervals (Months) <sup>2</sup> (Soils greater than 2% organic matter AND rainfall more 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	Immediately	Immediately
Alfalfa, Asparagus, Grain Sorghum, Onions, Peppermint, Safflower, Spearmint, Strawberry	10.5	10.5
Dry Beans, Soybean, Sunflower	18 <sup>3</sup>	10.5
Lentils, Peas, Potatoes (Including Potatoes Grown For Seed), and Broadleaf Crops Grown For Seed (Excluding <i>Brassica</i> Species)	18 <sup>3,4</sup>	18 <sup>3</sup>

<sup>1</sup>For optimum performance, conduct a field bioassay before planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 10.5 months following application.

<sup>2</sup>**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, **Sharda Clopyralid 40.9% EC** 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.

<sup>3</sup>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. **Precaution:** For these crops, a minimum 10.5-month rotation interval must be observed to avoid illegal residues in the harvested crop.

<sup>4</sup>For optimum performance conduct a field bioassay before planting these sensitive crops.

#### Crop Rotation Intervals - California, Idaho, Nevada, Oregon, Utah, and Washington Only

Crop <sup>1</sup>	Crop Rotation Intervals (Months) <sup>2</sup> (Areas receiving less than 18 inches of rainfall – not including irrigation)	Crop Rotation Intervals (Months) <sup>2</sup> (Areas receiving greater than 18 inches of rainfall – not 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	Immediately	Immediately
Asparagus, Grain Sorghum, Onions, Peppermint, Spearmint, Strawberry	12	12
Alfalfa, Dry Beans, Soybean, Sunflower	18 <sup>3,4</sup>	12
Broadleaf Crops Grown For Seed (Excluding <i>Brassica</i> Species), Carrot <sup>3</sup> , Celery <sup>3</sup> , Cotton <sup>3</sup> , Lentils, Lettuce <sup>3</sup> , Melons <sup>3</sup> , Peas, Potatoes (Including Potatoes Grown For Seed), Safflower, and Tomato <sup>3</sup>	18 <sup>3,4</sup>	18 <sup>3</sup>

<sup>1</sup>For optimum performance, conduct a field bioassay before planting any broadleaf crops that are not listed. Do not rotate to unlisted crops prior to 12 months following application.

<sup>2</sup>**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, **Sharda Clopyralid 40.9% EC** 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.

<sup>3</sup>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. **Precaution:** For these crops, a minimum 12-month rotation interval must be observed to avoid illegal residues in the harvested crop.

<sup>4</sup>Crop injury and/or yield loss may occur up to 4 years after application. For optimum performance, conduct a field bioassay before planting these sensitive crops. See instructions above.

**Avoid Injury to Non-Target Plants:** This product can affect broadleaf plants that are susceptible directly through foliage and indirectly by root uptake from soil that has been treated. Therefore, do not make application of **Sharda Clopyralid 40.9% EC** 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 the **CROP ROTATION INTERVALS** section).

#### Residues in Plants or Manure

##### Restrictions:

- 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 either grazed or consumed forage or hay from treated areas on land used for growing broadleaf plants that are susceptible or make application of such materials to land used for growing broadleaf crops, ornamentals, orchards, or other susceptible desirable plants. Plant materials or manure may contain clopyralid in amounts that may cause injury to plant species that are susceptible. 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 areas that have been treated may be moved or blown to areas containing plants that are susceptible. Wind-blown dust that contains clopyralid may produce visible symptoms, such as epinasty (downward curving or twisting of leaf petioles or stems), when deposited on susceptible plants. Serious plant injury is, however, unlikely. To minimize potential movement of clopyralid on wind-blown dust, avoid application on powdery dry or light sandy soils until soil is settled by rainfall or irrigation or irrigate the treated soil shortly after treatment.

#### Broadleaf Weeds Controlled Co<sup>1</sup>

Life Cycle is indicated by: Annual (A), Biennial (B), or Perennial (P).

Weed Species	Stage of Growth	Rate for Control <sup>2</sup> (Pts./Acre)
Alfalfa, Volunteer (P) (From Seed Only)	Up to 5-Leaf	¼ - ½
Artichoke, Jerusalem (P)	Up to 5-Leaf	¼ - ½
Beans, Volunteer (A)	Up to 5-Leaf	¼ - ½
Buckwheat, Wild (A)	1 - 3-Leaf Stage, but Before Vining	½
Buffalobur (A) <sup>3</sup>	2 - 4-Leaf	½
Burdock, Common (B)	Up to 5-Leaf	¼ - ½
Chamomile, False (Scentless) (A)	Up to 5-Leaf	¼ - ½
Chamomile, Mayweed (Dogfennel) (A)	Up to 5-Leaf	¼ - ½
Clover (A)	Up to 5-Leaf	¼ - ½
Clover, Black Medic (A)	Up to 5-Leaf	¼ - ½
Clover, Hop (A)	Up to 5-Leaf	¼ - ½
Clover, Red (P)	Up to 5-Leaf	¼ - ½
Clover, Sweet (B)	Up to 5-Leaf	¼ - ½
Clover, White (P)	Up to 5-Leaf	¼ - ½
Cocklebur (A)	Up to 5-Leaf	¼ - ½
Cocklebur, Common (A)	Up to 5-Leaf	¼ - ½
Coffeeweed (A)	Up to 5-Leaf	¼ - ½
Cornflower (Bachelor Button) (A)	Up to 5-Leaf	¼ - ½
Curly Dock (P)	Up to 5-Leaf	¼ - ½
Daisy, Oxeye (P)	Up to 5-Leaf	¼ - ½
Dandelion (P)	Up to 5-Leaf	¼ - ½
Galinsoga (A)	Up to 5-Leaf	¼ - ½
Groundsel, Common (B)	Up to 5-Leaf	¼ - ½
Hawksbeard, Narrowleaf (A)	Up to 5-Leaf	¼ - ½
Hawkweed, Orange (P)	Up to 5-Leaf	¼ - ½
Hawkweed, Yellow (P)	Up to 5-Leaf	¼ - ½
Horseweed (A)	Up to 5-Leaf	¼ - ½
Jimsonweed (A)	Up to 5-Leaf	¼ - ½
Knapweeds, Spotted/Diffuse (B)	Up to Bud Stage	½ - ⅔
Knapweed, Russian (P) <sup>4</sup>	Up to Bud Stage	⅔ - 1 ⅓
Ladysthumb (A) <sup>4</sup>	Up to 5-Leaf	¼ - ½
Lentils, Volunteer (A)	Up to 5-Leaf	¼ - ½
Locoweed, Lambert (P)	Up to 5-Leaf	¼ - ½

Locoweed, White (P)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Marshelder (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Nightshade spp. (A)	2 - 4-Leaf	$\frac{1}{2}$
Nightshade, Black (A)	2 - 4-Leaf	$\frac{1}{2}$
Nightshade, Cutleaf (A)	2 - 4-Leaf	$\frac{1}{2}$
Nightshade, Eastern Black (A)	2 - 4-Leaf	$\frac{1}{2}$
Nightshade, Hairy (A)	2 - 4-Leaf	$\frac{1}{2}$
Peas, Volunteer (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Pineappleweed (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Prickly Lettuce (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Ragweeds (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Ragweed, Common (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Ragweed, Giant (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Salsify, Meadow (Goatsbeard) (B)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Sicklepod (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Smartweeds (Suppression)	2 - 3-Leaf	$\frac{1}{2}$
Smartweed, Green (A) <sup>4</sup>	2 - 3-Leaf	$\frac{1}{2}$
Sorrel, Red (P)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Sowthistle (A) (Suppression)	Rosette Up to Bud Stage	Degree of Infestation: Light - $\frac{1}{3}$ Moderate to Heavy - $\frac{1}{2}$ - $\frac{2}{3}$
Sowthistle, Annual (A) (Suppression)	Rosette Up to Bud Stage	Degree of Infestation: Light - $\frac{1}{3}$ Moderate to Heavy - $\frac{1}{2}$ - $\frac{2}{3}$
Sowthistle, Perennial (P) <sup>4</sup>	Rosette Up to Bud Stage	Degree of Infestation: Light - $\frac{1}{3}$ Moderate to Heavy - $\frac{1}{2}$ - $\frac{2}{3}$
Soybean, Volunteer (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Starthistle, Yellow (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Sunflower (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Teasel, Common (B)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Thistle, Bull (B)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Thistle, Canada (P)	Rosette Up to Bud Stage	Degree of Infestation: Light - $\frac{1}{3}$ Moderate to Heavy - $\frac{1}{2}$ - $\frac{2}{3}$
Thistle, Musk (B)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Vetch (A)	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$
Wormwood, Biennial (A, B) <sup>3</sup>	Up to 5-Leaf	$\frac{1}{4}$ - $\frac{1}{2}$

<sup>1</sup>This information is provided as reference only. See the use directions for specific crop or use site for application rates.

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

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

<sup>4</sup>These weeds may only be suppressed. Suppression is defined as a visual reduction in weed competition (reduced population or vigor) as compared to areas that have been left untreated. 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, **Sharda Clopyralid 40.9% EC** will provide control of the top growth and inhibit regrowth during the season of application (season-long control). At higher use rates shown on this label, **Sharda Clopyralid 40.9% EC** 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.

## CROP USES

### APPLE

For post-emergence control of broadleaf weeds listed below in apples.

**Application Timing:** Make applicatin of **Sharda Clopyralid 40.9% EC** to clover and vetch from time weed has emerged up to the 5-leaf stage of growth. Make application of **Sharda Clopyralid 40.9% EC** to nightshade (black and hairy) at the 2- to 4-leaf stage of growth. For control of Canada thistle and annual sowthistle, make applicatin of **Sharda Clopyralid 40.9% EC** from rosette up to bud stage.

**Application Rate:** Make application at  $\frac{1}{3}$  to  $\frac{2}{3}$  pint of **Sharda Clopyralid 40.9% EC** per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher use rate in the rate range for heavy infestations or when greater residual control is desired.

**Tank Mixtures:** **Sharda Clopyralid 40.9% EC** may be tank mixed with other herbicides that are labeled for use on apple. 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.

**Use Precautions - Apples:**

- Make application of **Sharda Clopyralid 40.9% EC** to non-bearing (trees that are well established, 1 year or older) and bearing trees.
- Avoid direct contact with foliage, fruit, or tree trunks.

**Use Restrictions - Apples:**

- Not for use or distribution in Nassau and Suffolk counties in New York State.
- **Pre-Harvest Interval:** Do not make application within 30 days of harvest.
- Make one to two broadcast treatments per crop per year. Do not exceed a total of  $\frac{2}{3}$  pint per acre.
- East of the Rocky Mountains: Do not make application of **Sharda Clopyralid 40.9% EC** during bloom.

Target Broadleaf Weeds	Application Rate (Pint/Acre)
Alfalfa, Volunteer Aster Burdock Clover, Red Clover, White Curly Dock Dandelion Goldenrod Horseweed (Marestail) Nightshade, Black Nightshade, Hairy Pineappleweed Sowthistle, Annual Thistle, Canada Thistle, Musk Vetch	$\frac{1}{3} - \frac{2}{3}$ (0.125 - 0.25 lb. ae/acre)

**ASPARAGUS**

For selective post-emergence control of specific annual and perennial broadleaf weeds in asparagus.

**Application Timing:** Make application prior to or during the asparagus cutting season, or after harvest is complete, but before fern growth. Treat annual weeds before they send up a flower stalk. For optimum performance on perennial weeds, such as Canada thistle, apply **Sharda Clopyralid 40.9% EC** after most of the basal leaves have emerged up to bud stage. Following treatment, wait at least two weeks prior to cultivating.

**Application Rate:** Make application of **Sharda Clopyralid 40.9% EC** at a rate of  $\frac{1}{2}$  to  $\frac{2}{3}$  pint per acre in a total spray volume of 10 to 40 gallons per acre. Use a higher rate in the rate range for more effective control of perennial weeds. A second application may be made as long as the total amount applied does not exceed  $\frac{2}{3}$  pint of **Sharda Clopyralid 40.9% EC** per acre during the growing season.

**Use Precautions - Asparagus:**

- Make post-harvest (layby) treatments as soon as possible after cutting provided weeds are in the proper stage of growth for treatment. Malformed ferns may result from application when spears are longer than 3 inches or have open seed heads.
- When application of **Sharda Clopyralid 40.9% EC** is made during the cutting season, some crooking (twisting) of asparagus spears may occur. Do not apply during the cutting season if crooking cannot be tolerated. Clear-cutting of spears just before applying **Sharda Clopyralid 40.9% EC** may reduce the occurrence of crooking.

**Use Restrictions - Asparagus:**

- Not registered for use in Florida.
- **Pre-Harvest Interval:** Do not make application within 48 hours of harvest.

**BARLEY, OATS, & WHEAT**  
**Not Underseeded With Legume**

**Application Rate:** Make application at  $\frac{1}{4}$  to  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** 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, make application at  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** per acre. Russian knapweed will only be suppressed at this rate.

**Use Restrictions - Barley, Oats, & Wheat:**

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

**BRASSICA (COLE) LEAFY VEGETABLES (CROP GROUP 5)**

(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.)

*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, and rape greens.

**Application Timing:** Make application uniformly with ground equipment in a minimum of 10 to 40 gallons of water spray volume per acre. For suppression of Canada thistle, apply after most of the basal leaves have emerged, but before bud stage, and at least 30 days before harvest.

**Use Restrictions - Brassica (Cole) Leafy Vegetables:**

- Not for use in Nassau or Suffolk counties in New York State.
- **Pre-Harvest Interval:** Do not make application within 30 days of harvest.
- Make one to two broadcast applications per crop per year, not to exceed a total of ½ pint per acre (0.187 lb. a.i./acre) per year.
- In New York and California, the maximum application rate for **Sharda Clopyralid 40.9% EC** is ⅓ pint per acre per growing season. Do not exceed the cumulative amount of ⅓ pint of **Sharda Clopyralid 40.9% EC** (0.25 lb. a.e.) per acre per crop year.
- In Florida, **Sharda Clopyralid 40.9% EC** may be used only on cabbage, Chinese cabbage (napa), and Chinese mustard cabbage (gai choy).

Target Broadleaf Weeds	Application Rate (Pint/Acre)
Buckwheat, Wild Chamomile Clover Cocklebur, Common Dandelion Galinsoga Pineappleweed Prickly Lettuce Ragweed Smartweed	¼ – ½
Sowthistle, Annual <sup>1</sup> Thistle, Canada <sup>1</sup>	⅓ – ½
<sup>1</sup> Provides suppression only	

**CANOLA (RAPESEED) and CRAMBE**

**Application Timing:** Make application to canola or crambe in the 2- to 6-leaf stage of crop growth at rates shown in the following table. Apply **Sharda Clopyralid 40.9% EC** uniformly with ground or aerial equipment in 10 to 20 gallons total spray volume per acre (minimum of 5 gallons per acre by air). Refer to the **Broadleaf Weeds Controlled and Guidelines for Control** table for use rates and timing for listed susceptible annual, biennial, and perennial weeds.

**Use Restrictions - Canola (Rapeseed) and Crambe:**

- Not registered for use in California and Florida.
- **Pre-Harvest Interval:** Do not make application within 50 days of harvest.
- Make one broadcast treatment per crop per year.

Target Broadleaf Weeds	Application Rate (Pint/Acre)
Buckwheat, Wild Chamomile, False Chamomile, Mayweed Dandelion Dock, Curly Nightshade spp. Smartweed, Green Sowthistle, Annual Sunflower Wormwood, Biennial	¼ – ½
Thistle, Canada	⅓ for top growth suppression
Sowthistle, Perennial Thistle, Canada	½ for season long control

**CHRISTMAS TREE PLANTATIONS**

**Application Timing:** Apply **Sharda Clopyralid 40.9% EC** as an 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. For control of annual weeds, make application of **Sharda Clopyralid 40.9% EC** from time weeds have emerged up to the 5-leaf stage of growth. For control of wild buckwheat, make application at 3- to 5-leaf stage of growth, but prior to vining. For control of weeds, such as Canada thistle and knapweeds, make application after most of the basal leaves have emerged up to bud stage. Late application may result in less consistent control.

**Application Rate:** Make application at  $\frac{1}{4}$  to  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** per acre for control of annual weeds. Make application at  $\frac{1}{2}$  to  $\frac{3}{4}$  pint of **Sharda Clopyralid 40.9% EC** per acre for difficult to control weeds, such as Canada thistle and knapweeds. Make a broadcast or band application in a minimum of 10 gallons per acre by ground application. Use the formulas under the **Band Applications** section to determine the rate and volume per treated acre.

Application of **Sharda Clopyralid 40.9% EC** may be made as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of  $\frac{1}{2}$  to  $\frac{3}{4}$  pint per acre (See the **Hand-Held Sprayers** section under **APPLICATION DIRECTIONS**).

**Use Restrictions - Canola (Rapeseed) and Crambe:**

- Not registered for use in Florida.
- **Pacific Northwest:** Do not make application in the first year of transplanting because some needle curling has been observed on first year transplants.
- Re-treat as necessary, but do not exceed  $\frac{3}{4}$  pint of **Sharda Clopyralid 40.9% EC** per acre per annual growing season.
- **Blue Spruce:** Do not exceed  $\frac{1}{2}$  pint per acre per annual growing season.
- Tree injury may result with the addition of a surfactant or crop oil with **Sharda Clopyralid 40.9% EC**. Do not use unless previous experience shows injury is tolerable.
- Do not make application with an air blast sprayer.

**CORN (FIELD, POP, SWEET)**

Use **Sharda Clopyralid 40.9% EC** for post-emergence control of annual sowthistle, Canada thistle, common cocklebur, common sunflower, giant and common ragweed, Jerusalem artichoke, jimsonweed and other broadleaf weeds infesting field corn. Make application of **Sharda Clopyralid 40.9% EC** at specified timing and rates for field, pop, and sweet corn as detailed below.

**Weed Control:** For control of common cocklebur, common ragweed, giant ragweed, sunflower, other annual weeds and Jerusalem artichoke, make application at  $\frac{1}{4}$  to  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** 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. Refer to the **Broadleaf Weeds Controlled and Guidelines for Control** table for listed use rates and timing for susceptible annual, biennial, and perennial weeds.

**Control of Canada Thistle:** For effective control of Canada thistle, make application at  $\frac{1}{3}$  to  $\frac{3}{4}$  pint of **Sharda Clopyralid 40.9% EC** per acre as a broadcast treatment to the entire infested area. Make application 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 may disrupt translocation to the roots of Canada thistle. For optimum long-term control, do not cultivate prior to or following application. If cultivation is needed, wait 14 to 20 days following application before cultivating to allow for thorough translocation.

The level of control for Canada thistle is impacted by growing conditions, density and size of thistle plant at treatment, tillage practices used, etc. Light infestations (defined as less than 10 plants per square yard) will typically be adequately controlled with a rate of  $\frac{1}{3}$  pint per acre. For medium to heavy infestations (more than 10 plants per square yard), rates of  $\frac{1}{2}$  to  $\frac{3}{4}$  pint per acre are generally more effective since these Canada thistle stands involve an extensive rhizome system.

The below are descriptions of control that can be expected from each application rate given a medium to heavy population of Canada Thistle. Control of lighter infestations may be better than what is described.

- $\frac{1}{3}$  pint per acre will provide suppression of top growth of Canada thistle for 6 to 8 weeks. Some regrowth may occur by the end of the season. This will not interfere with harvesting of the crop.
- $\frac{1}{2}$  pint per acre will typically provide season-long control of Canada thistle. Note: Not all rhizomes will be killed and some regrowth may occur by the end of the growing season.
- $\frac{3}{4}$  pint per acre will provide season-long control of Canada thistle in addition to suppression into the following season, providing a reduction of the total number of Canada thistle plants in the treated area.

**Use Restriction - Corn (Field, Pop, Sweet):**

- Not registered for use in Florida.

**FIELD CORN**

**Application Timing:** Make application of **Sharda Clopyralid 40.9% EC** to broadleaf weeds that are actively growing any time after corn emergence through corn reaching 24 inches in height. Make application with ground equipment as a post-emergence 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 will provide the best coverage and distribution of the product 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 Mixtures or Sequential Applications:** 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. If application **Sharda Clopyralid 40.9% EC** is made sequentially or in combination with Hornet® WDG broadleaf blend herbicide to the current corn crop, the maximum application rate at which **Sharda Clopyralid 40.9% EC** may be made to field corn is indicated in the following table:

Rate of Hornet WDG Applied to Current Corn Crop (Oz./Acre)	Maximum Application Rate for Sharda Clopyralid 40.9% EC (Fl. Oz./Acre)
2	8.1
3	6.8
4	5.4
5	4.0

**Corn Inbred Lines or Breeding Stock:** Susceptibility of corn to injury from **Sharda Clopyralid 40.9% EC** is highly correlated to varietal response. Inbred lines or any breeding stock may be injured by **Sharda Clopyralid 40.9% EC**. Contact your seed production agronomist for advice prior to making application of **Sharda Clopyralid 40.9% EC** to inbred lines or breeding stock.

**Hand-Held Sprayers:** Application of **Sharda Clopyralid 40.9% EC** may be made as a spot treatment using a hand-held sprayer at an equivalent broadcast rate of  $\frac{3}{8}$  pint per acre (See the **Hand-Held Sprayers** section under **APPLICATION DIRECTIONS**). Make applications on a spray-to-wet basis with spray coverage uniform and complete. Do not spray to the point of runoff.

#### Use Precautions - Field Corn:

- Maximum use rate for clopyralid is 0.25 lb. a.e. per acre. One ounce of Hornet WDG contains 0.031 lb. of clopyralid. One fluid ounce of **Sharda Clopyralid 40.9% EC** contains 0.023 lb. of clopyralid.

#### Use Restrictions - Field Corn:

- Re-treat as necessary, but do not apply more than  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** per acre per year.
- Do not make application 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

**Application Timing:** For popcorn, apply **Sharda Clopyralid 40.9% EC** any time after popcorn emergence through 24-inch tall popcorn. For sweet corn, make application of **Sharda Clopyralid 40.9% EC** any time after sweet corn emergence through 18-inch tall sweet corn.

**Application Rate:** Make application at  $\frac{1}{8}$  to  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** 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, make application of **Sharda Clopyralid 40.9% EC** when the majority of thistle plants have emerged and thistles are at least 6 to 8 inches in diameter or height, but prior to bud stage. For control of annual sowthistle, common cocklebur, Jerusalem artichoke, jimsonweed, ragweed (common and giant), and sunflower, make application **Sharda Clopyralid 40.9% EC** from weed emergence up to the 5-leaf stage of growth. Use a higher use rate in the rate range for heavy infestations or when greater residual control is desired. See **Broadleaf Weeds Controlled and Guidelines for Control** table for use rates and timing for specific susceptible annual, biennial, and perennial weeds.

#### Use Restrictions - Popcorn & Sweet Corn:

- Not registered for use in California.
- Pre-Harvest Interval:** Do not make application within 30 days of harvest for ears and forage and within 60 days of harvest for stover.
- Make one to two broadcast treatments per crop per year, not to exceed a total of  $\frac{3}{8}$  pint per acre.
- Re-Treatment Interval: 21 days
- Do not make application to popcorn more than 24 inches tall or sweet corn more than 18 inches tall.
- Make application only to sweet corn or popcorn that is to be used for processing.

#### COTTONWOOD/POPLAR and EUCALYPTUS TREE PLANTATIONS

**Application Timing:** Application of **Sharda Clopyralid 40.9% EC** may be made as a selective post-emergence control of listed broadleaf weeds in new and established plantings of cottonwood/poplar and eucalyptus tree plantations.

**Application Rate:** Make application as a broadcast foliar spray over trees or as a banded or directed spray at a rate of  $\frac{1}{8}$  to  $\frac{3}{8}$  pint per acre. Make application in 10 gallons or more total spray volume per acre using ground equipment only. Multiple treatments of **Sharda Clopyralid 40.9% EC** may be made if the total rate per growing season does not exceed 1  $\frac{1}{8}$  pints per acre. Make application 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** table for specified rates and timing for specific susceptible annual, biennial, and perennial weeds.

**Hand-Held Sprayers:** Spot treatments using hand-held equipment are also allowed, but avoid contact with tree foliage or limit it to lower branches. Make application to weeds on a spray-to-wet basis with uniform and complete spray coverage (refer to the **Hand-Held Sprayers** section under **APPLICATION DIRECTIONS**). Do not spray to the point of runoff. Prepare a spray solution by adding ¼ fl. oz. of **Sharda Clopyralid 40.9% EC** per gallon of water. When applied at 1 gallon of spray per 1,000 sq. ft., this spray concentration is equivalent to a broadcast rate of ⅔ pint per acre.

**Use Precautions - Cottonwood/Poplar and Eucalyptus Tree Plantations:**

- **Sharda Clopyralid 40.9% EC** will not provide control of certain broadleaf weeds (including mustards, henbit, chickweed, kochia, lambsquarters, pigweed, Russian thistle, and bindweed).

**Use Restrictions - Cottonwood/Poplar and Eucalyptus Tree Plantations:**

- Not registered for use in Florida.
- Do not tank mix **Sharda Clopyralid 40.9% EC** with other herbicides labeled for this use unless spray avoids all contact with tree foliage.
- Do not exceed 2/3 pint per acre per year.

**FALLOW CROPLAND**

**Application Timing:** Application of **Sharda Clopyralid 40.9% EC** can be made either post-harvest, in the spring/summer (during fallow period), or to set aside acres to control or suppress listed weeds (See the **CROP ROTATION INTERVALS** section). Make application to young, emerged weeds under conditions that promote active growth. For optimum performance on perennial weeds, such as Canada thistle, make application after most of the basal leaves have emerged up to bud stage. Later treatments may result in less consistent control.

For optimum performance, wait 14 to 20 days after application prior to cultivating or fertilizing with shank-type applicators to allow for thorough translocation.

**Application Rate:** Make application at ¼ to ⅔ pint of **Sharda Clopyralid 40.9% EC** per acre. Use a higher use rate in the rate range on perennial weeds or when the condition of weeds at the time of treatment may prevent optimum control.

**Tank Mixtures:** To improve control on certain broadleaf weeds, application of **Sharda Clopyralid 40.9% EC** may be made with 0.5 to 2 lbs. a.e. of 2,4-D per acre (see the **Sharda Clopyralid 40.9% EC - Tank Mix** section under **TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP**). 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.

**Use Restrictions - Fallow Cropland:**

- Not registered for use in Florida.
- Do not exceed 2/3 pint per acre per year.

**GARDEN BEET**

**Sharda Clopyralid 40.9% EC** may be used in post-emergence 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:** Make application to garden beet in the 2- to 8-leaf stage of crop growth when weeds are young and actively growing. Apply **Sharda Clopyralid 40.9% EC** to wild buckwheat at the 1- to 3-leaf stage of growth before vining begins. Make application of **Sharda Clopyralid 40.9% EC** to common ragweed and sweet clover from weed emergence up to the 5-leaf stage of growth. Apply **Sharda Clopyralid 40.9% EC** to all species of nightshade at the 2- to 4-leaf stage of growth. Make application of **Sharda Clopyralid 40.9% EC** to sowthistle from rosette up to bud stage. Make application in 10 gallons or more total spray volume per acre with ground equipment.

**Application Rate:** Make application at ¼ to ½ pint of **Sharda Clopyralid 40.9% EC** per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher use rate in the rate range for heavy infestations or when greater residual control is desired.

**Use Restrictions - Garden Beet**

- Not registered for use in California and Florida.
- **Pre-Harvest Interval:** Do not make application within 30 days of harvest.
- Make one to two broadcast treatments per crop per year, not to exceed a total of ½ pint per acre.



**GRASSES GROWN FOR SEED**

**Application Timing:** Make application only to established grasses prior to the boot stage of growth. Treatments made 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 pre-harvest application may be made after grass seed is fully developed. Treatment of Canada thistle at the bud stage or later may result in inconsistent control. Post-harvest fall applications may be made to actively growing Canada thistle after most basal leaves have emerged.

**Application Rate:**  $\frac{1}{4}$  to  $\frac{2}{3}$  pint of **Sharda Clopyralid 40.9% EC** per acre for control of annual weeds and Canada thistle. Re-treat as needed, but do not exceed  $\frac{2}{3}$  pint of **Sharda Clopyralid 40.9% EC** per acre per season.

**Tank Mixtures:** **Sharda Clopyralid 40.9% EC** may be tank mixed with 2,4-D, MCPA, dicamba, or bromoxynil to control additional broadleaf weeds (refer to the **Sharda Clopyralid 40.9% EC - Tank Mix** section under **TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP**). 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.

**Use Precautions - Grasses Grown For Seed:**

- Dicamba or bromoxynil tank mixes may be useful in providing broader spectrum annual weed control, but may reduce long-term control of perennials, such as Canada thistle.

**Use Restriction - Grasses Grown For Seed:**

- Not registered for use in Florida.
- Do not tank mix Sharda Clopyralid 40.9% EC with 2,4-D, MCPA, or dicamba unless the risk to crop injury is acceptable.
- Do not exceed  $\frac{2}{3}$  pint per acre per year.

**PEPPERMINT AND SPEARMINT**

**Sharda Clopyralid 40.9% EC** may be used for selective post-emergence 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 flower stalk stage. For Canada thistle, make application **Sharda Clopyralid 40.9% EC** after most of the basal leaves have emerged, but before bud stage.

**Application Rate:** Make application as a broadcast foliar spray in 10 gallons or more total spray volume per acre using ground equipment only. A non-ionic surfactant of at least 80% active ingredient may be added at a rate of 1 pint per 100 gallons of spray solution.

**Use Precautions - Peppermint and Spearmint:**

- Treated peppermint and spearmint may be used for distillation (oil extraction) only.
- 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 (refer to the **Residues in Plants or Manure** section).
- Discoloration or malformation of peppermint and spearmint leaves may occur following treatment. This effect is generally temporary and does not reduce oil yields.
- **Sharda Clopyralid 40.9% EC** will not provide control of many broadleaf weeds, such as chickweed, field bindweed henbit, kochia, lambsquarters, mustards, pigweed, and Russian thistle.

**Use Restrictions - Peppermint and Spearmint:**

- Not registered for use in Florida.
- **Pre-Harvest Interval:** Do not make application within 45 days of harvest.
- Do not make application of more than 1 pint per acre per growing season.
- Do not feed spent peppermint and spearmint hay slugs to livestock.

Weeds Controlled	Application Rate (Pint/Acre)
<b>Fall Treatment Only (September 15th to First Frost)</b>	
Annuals	$\frac{1}{2}$
Perennials	$\frac{2}{3}$
Hard-To-Kill Perennials (Canada Thistle, Dandelion)	1
<b>Spring Treatment Only</b>	
Annuals	$\frac{1}{3}$
Perennials	$\frac{1}{2}$
<b>Fall Plus Spring Treatment</b>	
Maximum of $\frac{2}{3}$ in Fall plus $\frac{1}{2}$ in spring	

**SOUTHERN PINE SEEDBEDS IN FOREST NURSERIES**  
(Registered for Use in Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia)

Application of **Sharda Clopyralid 40.9% EC** may be made 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. Make application as a broadcast or spot treatment from May through July when weeds are actively growing.

**Application Timing:** For optimum performance, make application when weeds are small and actively growing. For control of sicklepod, make application after most of basal leaves have emerged.

**Application Rate:** Make application at a broadcast rate of  $\frac{1}{4}$  to  $\frac{1}{2}$  pint per acre in a spray volume of 20 gallons or more per acre. Application may be made any time after May 1<sup>st</sup>, but some needle curling may occur if applied during active conifer growth. When making spot treatments, use a calibrated boom, or if a hand-held sprayer is used, care should be taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Otherwise, do not use more than  $\frac{1}{8}$  fl. oz. (1 tsp.) of **Sharda Clopyralid 40.9% EC** per gallon of spray and direct spray onto weeds. Avoid spraying pine seedlings whenever possible.

**Use Precautions - Southern Pine Seedbeds in Forest Nurseries:**

- Application of **Sharda Clopyralid 40.9% EC** during active growth of conifers may cause some needle curling.

**Use Restrictions - Southern Pine Seedbeds in Forest Nurseries:**

- Not registered for use in Florida.
- 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.
- Do not exceed  $\frac{2}{3}$  pint per acre per year.

**SPINACH**

Use **Sharda Clopyralid 40.9% EC** for post-emergence 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:** Make application to spinach in the 2- to 5-leaf stage of crop growth. Make application of **Sharda Clopyralid 40.9% EC** 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, make application of **Sharda Clopyralid 40.9% EC** from rosette up to bud stage. For control of Canada thistle, make application after most of the basal leaves have emerged but prior to bud stage and at least 21 days prior to harvest.

**Application Rate:** Make application  $\frac{1}{4}$  to  $\frac{1}{2}$  pint per acre of **Sharda Clopyralid 40.9% EC** 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 use rate in the rate range for heavy infestations or when greater residual control is desired.

**Use Precautions - Spinach:**

- Some leaf curling may be seen on smaller spinach, particularly when the higher use rates are used. Crop tolerance may be optimized by selecting the lower application rate required for weed control, especially where non-uniform emergence has caused variable plant sizes.

**Use Restrictions - Spinach:**

- Not registered for use in California and Florida.
- **Pre-Harvest Interval:** Do not make application within 21 days of harvest.
- Make one to two broadcast treatments per crop per year, not to exceed a total of  $\frac{1}{2}$  pint per acre.

**STONE FRUITS (CROP GROUP 12)**

Stone fruits (crop group 12) including apricot, chickasaw plum, damson plum, fresh prune, Japanese plum, nectarine, peach, plum, plumcot, sweet cherry, and tart cherry.

**Sharda Clopyralid 40.9% EC** may be used for post-emergence control of annual sowthistle, Canada thistle, clover, dandelion, horseweed, musk thistle, nightshade (black and hairy), and vetch infesting stone fruits.

**Application Timing:** Make application of **Sharda Clopyralid 40.9% EC** to clover and vetch from weed emergence up to the 5-leaf stage of growth. Make application of **Sharda Clopyralid 40.9% EC** to nightshade (black and hairy) at the 2- to 4-leaf stage of growth. For control of Canada thistle and annual sowthistle, make application of **Sharda Clopyralid 40.9% EC** from rosette up to bud stage.

**Application Rate:** Make application at  $\frac{1}{3}$  to  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher use rate in the rate range for heavy infestations or when greater residual control is desired.

**Use Restrictions - Stone Fruits:**

- Not registered for use in California and Florida.

- **Pre-Harvest Interval:** Do not make application within 30 days of harvest.
- Make one to two broadcast applications per crop per year, not to exceed a total of  $\frac{3}{8}$  pint per acre.

### SUGAR BEET

**Sharda Clopyralid 40.9% EC** may be used for the control of various annual and perennial broadleaf weeds infesting sugar beet.

**Application Rate:** Make application at  $\frac{1}{4}$  to  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** 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 the **Band Applications** section under **APPLICATION INSTRUCTIONS**). Make application 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  $\frac{1}{4}$  to  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** per acre from weed emergence up to the 5-leaf stage of growth. Make application to wild buckwheat at the 1- to 3-leaf stage of growth prior to vining begins.

For the most effective control of perennials, such as Canada thistle and sowthistle, make application at  $\frac{1}{2}$  to  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** 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 prior to flood or furrow irrigation.

**Tank Mixtures:** To control additional broadleaf weeds and provide consistent control of difficult to control weeds, such as wild buckwheat, **Sharda Clopyralid 40.9% EC** may be applied in combination with labeled rates of a product containing phenmedipham/desmedipham, desmedipham, triflusal, or other products registered for post-emergence application in sugar beets. For optimum performance, tank mix  $\frac{1}{4}$  pint of **Sharda Clopyralid 40.9% EC** per acre with a product that contains phenmedipham/desmedipham or desmedipham followed one to two weeks later by a second treatment of  $\frac{1}{4}$  to  $\frac{1}{8}$  pint of **Sharda Clopyralid 40.9% EC** per acre tank mixed with a product containing phenmedipham/desmedipham or desmedipham. **Sharda Clopyralid 40.9% EC** 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 (refer to the **Sharda Clopyralid 40.9% EC - Tank Mix** section under **TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP**). 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.

#### Use Restrictions - Sugar Beet:

- Not registered for use in Florida.
- **Pre-Harvest Interval:** Do not make application within 45 days of harvest.
- Re-treat as necessary, but do not exceed  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** per acre per season.
- Aerial application of **Sharda Clopyralid 40.9% EC** in sugar beet is allowed only in the states of Colorado, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, Oregon, Washington, and Wyoming.

### TURNIP

**Sharda Clopyralid 40.9% EC** may be used for post-emergence control of common ragweed, galinsoga, prickly lettuce, sweet clover, and wild buckwheat and post-emergence suppression of sowthistle infesting turnip harvested for roots and tops.

**Application Timing:** Make application of **Sharda Clopyralid 40.9% EC** to wild buckwheat at the 1- to 3-leaf stage of growth prior to vining begins. Make application of **Sharda Clopyralid 40.9% EC** to common ragweed and sweet clover from weed emergence up to the 5-leaf stage of growth. For suppression of sowthistle, apply **Sharda Clopyralid 40.9% EC** from rosette up to bud stage.

**Application Rate:** Make application at  $\frac{1}{8}$  to  $\frac{1}{2}$  pint of **Sharda Clopyralid 40.9% EC** per acre with ground equipment in 10 gallons or more total spray volume per acre. Use a higher use rate in the rate range for heavy infestations or when greater residual control is desired.

#### Use Restrictions - Turnip:

- Not registered for use in California and Florida.
- **Pre-Harvest Interval:** Do not make application within 30 days of harvest of turnip roots or within 15 days of harvest of turnip tops.
- Make one broadcast treatment per crop per year.
- Do not exceed  $\frac{2}{3}$  pint per acre per year.

### RANGELAND, PASTURE, CRP, AND NON-CROP USES

#### Rangeland and Permanent Grass Pastures

**Application Rate:** Make application at  $\frac{1}{2}$  to 1  $\frac{1}{8}$  pints of **Sharda Clopyralid 40.9% EC** per acre when weeds are young and actively growing. Established grasses are tolerant to **Sharda Clopyralid 40.9% EC**, 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.

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

**Application Timing:** Make application at **Sharda Clopyralid 40.9% EC** 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 **Sharda Clopyralid 40.9% EC**. For best results, make application before 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  $\frac{3}{8}$  to  $1\frac{1}{8}$  pints of **Sharda Clopyralid 40.9% EC** 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, make application at  $\frac{3}{8}$  pint of **Sharda Clopyralid 40.9% EC** per acre. For optimum performance, use in 10 gallons or more of water per acre by ground. Increasing the application rate increases the risk of injury.

**Tank Mixtures:** **Sharda Clopyralid 40.9% EC** can also be tank mixed with  $\frac{1}{2}$  to 1 lb. of 2,4-D per acre where species present are sensitive to 2,4-D (see the **Sharda Clopyralid 40.9% EC - Tank Mix** section under **TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP**). 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.

#### Non-Cropland

**Sharda Clopyralid 40.9% EC** may be used in non-cropland areas, such as fencerows, around farm buildings and equipment pathways.

**Application Rate:** For control of broadleaf weeds, make application at  $\frac{1}{4}$  to  $1\frac{1}{8}$  pints of **Sharda Clopyralid 40.9% EC** per acre. The lower use rate of  $\frac{1}{4}$  pint per acre provides acceptable control of weeds only under highly favorable growing conditions and when plants are 1 to 3 inches tall. Make application at  $\frac{1}{2}$  pint per acre when weeds are 3 to 6 inches tall or under dry conditions. Where Canada thistle or knapweeds are the primary pest, optimum performance is obtained by applying  $\frac{3}{8}$  to  $1\frac{1}{8}$  pints of **Sharda Clopyralid 40.9% EC** per acre.

**Tank Mixtures:** To improve weed control spectrum, or to increase control of more mature weeds, **Sharda Clopyralid 40.9% EC** may be tank mixed with 0.5 to 2 lbs. a.e. of 2,4-D amine per acre or low volatile ester herbicide or other herbicides registered for this use site (see the **Sharda Clopyralid 40.9% EC - Tank Mix** section under **TANK MIXING INSTRUCTIONS AND SPRAYER CLEAN-UP**). 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.

#### Use Precautions - Rangeland, Pasture, CRP, and Non-Crop Uses:

- **Rangeland and Permanent Grass Pastures:** Some desirable broadleaf forage plants are susceptible to **Sharda Clopyralid 40.9% EC**. 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:** 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.

#### Use Restrictions - 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 the **CROP ROTATION INTERVALS** section).
- **Rangeland and Permanent Grass Pastures:** Do not use hay or straw from treated areas for composting or mulching on susceptible broadleaf crops (see the **Residues in Plants or Manure** section). There are no further restrictions on grazing or hay harvest following application of **Sharda Clopyralid 40.9% EC** at labeled rates.
- **Conservation Reserve Program (CRP) for Seeding to Permanent Grasses Only:** Do not use **Sharda Clopyralid 40.9% EC** if legumes or bentgrass are a desired cover during CRP.
- **Non-Cropland:** **Sharda Clopyralid 40.9% EC** is not registered for use in landscaping or on turfgrass or lawns.

### STORAGE AND DISPOSAL

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

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

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

#### Container Handling:

**[Nonrefillable Container (five gallons or less):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple 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  $\frac{1}{4}$  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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Nonrefillable Container (greater than five gallons):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container

on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or 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 reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Refillable Container (greater than five gallons:)]** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. DO NOT transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

**SPILL, FIRE, LEAK OR OTHER CHEMICAL EMERGENCY:** In case of spill or leak on floor or paved surfaces, soak up with sand earth or synthetic absorbent. Remove to chemical waste area.

#### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Sharda USA LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Sharda USA LLC and Seller harmless for any claims relating to such factors.

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