

ACTIVE INGREDIENT:	/ WEIGHT
Oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene	. 22.3%
OTHER INGREDIENTS:	. 77.7%
TOTAL:	. 100.0%
Contains 2 pounds active ingredient per gallon.	
Contains petroleum distillates.	
EPA Reg. No. 70506-295	

WARNING — AVISO

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
If on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If swallowed:	Immediately call a poison control center or doctor. DO NOT induce vomiting unless told to do so by a poison control center or doctor. DO NOT give any liquid to the person. DO NOT give anything by mouth to an unconscious person.
	cian: Probable mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration card. Contains petroleum distillates.
	er: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. cky Mountain Poison Center at 1-866-673-6671 for emergency medical treatment information.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

Shake Well Before Using



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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING

Causes skin irritation. Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. **DO NOT** get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category ${\bf G}$ on an EPA chemical resistance category selection chart.

Mixers, loaders, and applicators using engineering controls (see Engineering Controls requirement) must wear:

- · Coveralls over long-sleeved shirt and long pants
- · Shoes plus socks
- Chemical-resistant gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate
- Chemical-resistant apron when cleaning equipment, mixing or loading

All other mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- · Chemical-resistant footwear plus socks
- Chemical-resistant gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate
- · Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standards (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Engineering Controls: Mixers and loaders supporting aerial applications to fallow land or ground applications to corn, cotton or soybeans must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:

- Wear the personal protective equipment required above for mixers/ loaders using engineering controls
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in case of emergency, such as a broken package, spill, or equipment breakdown, coveralls and chemical-resistant footwear.

Handlers performing applications to corn must use an enclosed cab that meets the definition in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- Wear the personal protective equipment required above for applicators using engineering controls
- Be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemicalresistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure

- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands thoroughly with soap and water after handling. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove contaminated 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

This product is toxic to aquatic invertebrates, and wildlife. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. **DO NOT** contaminate water by cleaning of equipment or disposal of equipment washwaters. Use with care when applying in areas frequented by wildlife or adjacent to any body of water or wetland area. **DO NOT** apply when weather conditions favor drift or erosion from target areas.

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.

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 worker 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 requirement in this box only applied 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 24 hours for all crops, except for the following:

- Onions, garlic and horseradish: the REI is 48 hours
- Conifer seedlings: the REI is 3 days
- Conifer trees: the REI is 6 days

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
- Chemical-resistant gloves made of any waterproof material

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 agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Do not enter or allow others to enter treated areas until sprays have dried.

PRODUCT USE INFORMATION

Collide Herbicide may be applied for preemergence and postemergence weed control in labeled crops as indicted in this label. All use directions as provided in the **Product Use Information** section and crop-specific sections of this label, must be followed.

PRODUCT USE RESTRICTIONS:

THE FOLLOWING USE RESTRICTIONS APPLY TO ALL REGISTERED USES OF THIS PRODUCT: (NOTE: SEE DIRECTIONS FOR USE FOR INDIVIDUAL CROPS FOR CROP-SPECIFIC USE RESTRICTIONS.)

- Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- **DO NOT** apply to irrigation water or water used for domestic purposes.
- DO NOT use any plants treated with Collide Herbicide for feed or forage.
- DO NOT feed or allow animals to graze on any areas treated with Collide Herbicide.
- Collide Herbicide should be applied only by ground application equipment except as otherwise allowed or directed in specific use directions.
- **DO NOT** apply when weather conditions favor drift. Avoid drift to all non-target areas. Collide Herbicide is phytotoxic to plant foliage.
- Some labeled crops are tolerant to over-the-top application of Collide Herbicide if applied during dormancy. DO NOT make over-the-top applications unless specifically allowed in crop-specific use directions.
- DO NOT apply Collide Herbicide in enclosed greenhouses as foliage injury will result.
- Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after each use. Residual Collide Herbicide remaining in spray equipment may damage other crops. To assist removal of Collide Herbicide residues in spray equipment, Latron AG-98 or Latron CS-7 may be added at the rate of 1 quart per 100 gallons of water during flushing.
- Use Collide Herbicide only for label-listed purposes at their specified rates.
- DO NOT treat ditch banks or waterways with Collide Herbicide.

Spray Drift Buffer Restrictions

- A 25-foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not allow spray to drift from the application site and contact people, structures that people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or less at the application site as measured by an anemometer.
- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

ROTATION CROP RESTRICTIONS

- **DO NOT** rotate to small-grain crops (includes barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following an oxyfluorfen treatment.
- DO NOT direct seed any crops, other than Collide Herbicide-labeled crops, within 60 days following a treatment with Collide Herbicide.
- DO NOT transplant seedling crops, other than Collide Herbicide-labeled crops, within 30 days following treatment with Collide Herbicide.

Important: Unless otherwise specified elsewhere in this label, supplemental label or product bulletin, treated soil must be thoroughly incorporated to a depth of 4 inches after harvest (or abandoning) of the treated crop but prior to planting of the rotational crop. Failure to achieve this thorough and complete incorporation or to follow the required minimum plantback interval may result in crop injury, stand reduction and/or vigor reduction of the plant-back crop. See specific fallow bed labeling regarding crop planting information for applications of Collide Herbicide that are made to a fallow bed or fallow field.

WEEDS CONTROLLED

Common Name	Scientific Name
ageratum	Ageratum conyzoides
amaranth, spiny	Amaranthus spinosus
balsam apple	Momordica charantia
barnyard grass, (watergrass)*	Echinocholoa crus-galli
bedstraw, catchweed	Echinocholoa crus-galli
bittercress, lesser	Cardamine oligosperma
bluegrass, annual*	Poa annua
buckwheat, wild	Polygonum convolvulus
burclover	Medicago hispida
buttercup, smallflower	Ranunculus aborvitus
buttonweed	Borreria laevis
camphorweed	Heterotheca subaxillaris
canarygrass (annual)	Phalaris canariensis
carpetweed	Mollugo verticillata
cheeseweed (malva)	Malva parviflora
clover, red*	Trifolium pratense
clover, white*	Trifolium repens
cocklebur, common	Xanthium pennsylvanicum
crabgrass, large (hairy)*	Digitaria sanguinalis
crotalaria	Crotalaria species
croton, tropic	Croton glandulosus
cudweed, narrowleaf	Gnaphalium falcatum
eveningprimrose, cutleaf	Oenothera laciniata
fiddleneck, coast*	Amsinckia intermedia
filaree, broadleaf	Erodium botrys
filaree, redstem	Erodium cicutarium
filaree, whitestem	Erodium moschatum
fireweed (from seed)	Epilobium angustifolium
flixweed	Descurainia sophia

^{*}Highest rate and/or multiple applications may be required for acceptable control.

(continued)

^{**}Preemergence control only.

WEEDS CONTROLLED (continued)

Common Name	Scientific Name
foxtail, giant*	Setaria faberi
foxtail, green	Setaria viridis
foxtail, yellow	Setaria lutescens
geranium, Carolina	Geranium carolinianum
goosegrass*	Eleusine indica
groundcherry, cutleaf	Physalis angulata
groundcherry, Wright	Physalis wrightii
groundsel, common	Senecio vulgaris
henbit	Lamium amplexicaule
horseweed (marestail)	Conyza canadensis
jimsonweed	Datura stramonium
johnsongrass, seedling	Sorghum halepense
knotweed, prostrate	Polygonum aviculare
ladysthumb (smartweed)	Polygonum persicaria
lambsquarters, common	Chenopodium album
lettuce, prickly (china lettuce)	Lactuca serriola
mallow, little (malva)	Malva parviflora
mayweed (dog fennel)	Anthemis cotula
miners lettuce	Montia perfoliata
morning-glory species, annual	Ipomoea species
morning-glory, ivyleaf*	Ipomoea hederacea
morning-glory, tall*	Ipomoea purpurea
mustard, black	Brassica nigra
mustard, blue (purple mustard)	Chorispora tenella
mustard, common yellow	Brassica campestris
mustard, hedge	Sisymbrium officinale
mustard, tumble (Jim hill mustard)	Sisymbrium altissimum
mustard, wild	Brassica kaber
nettle, burning	Urtica urens
nightshade, American black	Solanum americanum
nightshade, black	Solanum nigrum
nightshade, hairy	Solanum sarrachoides
oats, wild	Avena fatua
orach, red	Atriplex rosea
oxalis (bermuda buttercup)	Oxalis pes-caprae
panicum, fall	Panicum dichotomiflorum
pepperweed,Virginia	Lepidium virginicum
pepperwood, yellowflower	Lepidium perfoliatum
pigweed, prostrate	Amaranthus blitoides
pigweed, redroot	Amaranthus retroflexus
pimpernel, scarlet	Anagallis arvensis
poinsettia, wild	Euphorbia heterophylla
*Highest rate and/or multiple applic	

^{*}Highest rate and/or multiple applications may be required for acceptable control.

(continued)

WEEDS CONTROLLED (continued)

Common Name	Scientific Name
puncturevine	Tribulus terrestris
purslane, common	Portulaca oleracea
pusley, Florida	Richardia scabra
ragweed, common	Ambrosia artemisiifolia
redmaids	Calandrinia caulescens
rocket, London	Sisymbrium irio
ryegrass, Italian	Lolium multiflorum
sage, lanceleaf	Salvia reflexa
sandbur, field	Cenchrus inertus
sandspurry, red	Spergularia rubra
sesbania, hemp	Sesbania exaltata
shepherd's purse*	Capsella bursa-pastoris
sicklepod	Cassia obtusifolia
sida, prickly (teaweed)	Sida spinosa
signalgrass, broadleaf	Brachiaria platyphylla
smartweed, Pennsylvania	Polygonum pennsylvanicum
sorrel, red (from seed)	Rumex acetosella
sowthistle, annual	Sonchus oleraceus
speedwell, birdseye	Veronica persica
spurge, garden	Euphorbia hirta
spurge, prostrate**	Euphorbia supine
spurge, spotted**	Euphorbia maculate
spurry, corn	Spergula arvensis
tansymustard	Descurainia pinnata
thistle, bull**	Cirsium vulgare
thistle, Russian	Salsola kali
velvetleaf	Abutilon theophrasti
witchgrass	Panicum capillare
witchweed	Striga asiatica
woodsorrel, common yellow**	Oxalis stricta

^{*}Highest rate and/or multiple applications may be required for acceptable control.

^{**}Preemergence control only.

^{**}Preemergence control only.

Application Methods and Recommended Cultural Practices

Preemergence Weed Control

Apply the specified rate in a broadcast spray volume of 15 or more gallons of water per acre using calibrated spray equipment capable of uniform application to the soil surface. Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence. Preemergence weed control is most effective when Collide Herbicide is applied to soil surfaces that are clean (free of crop or weed residues or clippings) and weed-free. Prior to application, weed or crop residues should be removed by thorough incorporation into the soil using tillage equipment or by blowing the area to be treated. At least 0.25 inch of irrigation or rainfall is required to activate Collide Herbicide and should occur within 3 to 4 weeks after application. For optimum results, Collide Herbicide should be applied to prepared beds or soil surfaces that will be left undisturbed during the time for which weed control is desired. Cultural practices that disturb or redistribute surface soil following treatment with Collide Herbicide such as cutting water furrows will reduce weed control effectiveness.

Application Rates and Rate Ranges: Where rate ranges are given, use the lower rate range on coarse texture soils with less than 1% organic matter and lighter weed infestations. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, heavy weed infestations, or for extended residual preemergence weed control.

Postemergence Weed Control

Apply the specified rate in a broadcast spray volume of 20 or more gallons of water per acre (a minimum 10 gallons if applying Collide Herbicide in tank mix with glyphosate). Because Collide Herbicide is a contact herbicide, complete and uniform coverage of weed foliage is essential for optimum postemergence control. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases or in the presence of heavy trash (weed or crop residue). Postemergence applications of Collide Herbicide are most effective when made to weeds at the seedling stage. Applications made later than the 4-inch or 4-leaf stage may result in partial control or suppression. Postemergence applications should be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% v/v (2 pints per 100 gallons of spray) of an 80% active nonionic surfactant, labeled for application to growing crops, will enhance herbicidal effectiveness in controlling emerged weeds.

Postemergence Application Rates: Where a rate range is given, use a higher rate in the rate range for heavy weed infestations, weeds in advanced stages of growth or for extended residual preemergence weed control following control of existing emerged weeds.

Ground Application

Ground Broadcast: Apply Collide Herbicide using conventional low-pressure ground spray equipment with flat fan spray nozzles. Follow manufacturer's recommendation for spraying pressure and boom height. An off-center (OC) nozzle positioned at the end of the boom may be desired. Check calibration of spray equipment before each use.

Directed Sprays: Apply Collide Herbicide as a coarse, low-pressure spray in a volume of 20 or more gallons of spray per acre (broadcast basis). Follow manufacturer's recommendations for nozzle spacing and operating pressure. Spray should be directed toward the soil at the base of the crop. In row crops, use a minimum of 2 flat fan nozzles per row (one on each side) and for optimum spray coverage use 4 flat fan nozzles per row (two on each side). The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer system, nozzles should be adjusted to cover the weed foliage but minimize contact with the crop. Do not apply with hollow cone nozzles.

IMPORTANT: Collide Herbicide is a contact herbicide. Contact of sprays or drift with foliage or green stems can cause severe crop injury. Use directed sprays and spray shields and/or leaf lifters as necessary to minimize contact of spray or drift with crop foliage or stems. Young green stems of woody plants are also susceptible to injury from spray contact. Potential for injury to woody stems diminishes with loss of green color and the development of relatively impervious non-living corky tissue (bark) on the surface of the stem.

Band Application: Application rates listed in this label are for broadcast application. For band application, the rate per broadcast acre should be reduced according to the following formula:

Band Width (in inches)
Row Width (in inches)
Row Width (in inches)
X
Rate per
Broadcast Acre
Broadcast Acre

Amount Needed per Acre
for Banded Application

Spot Application:

For spot application, apply sprays uniformly to soil for preemergence weed control or on a spray-to-wet basis for postemergence weed control. Mix the required amount of Collide Herbicide with the specified amount of water. For preemergence weed control, use one-half to one gallon of spray per 1000 sq ft. For postemergence weed control use a minimum of 1 gallon of spray per 1000 sq ft and add an 80% nonionic surfactant at the rate of 0.5 fl oz (1 tablespoon) per gallon of spray. If making spot applications within an established crop, use coarse low-pressure sprays and direct the spray to the soil beneath the plants. To avoid crop injury, do not allow spray to contact leaves and stems of herbaceous plants or leaves or green stems of woody plants.

		Collide Herb ft. at Specif			
0.5 pt/A	1.0 pt/A	2.0 pt/A	3.0 pt/A	4.0 pt/A	8.0 pt/A
0.2 fl oz (5.5 ml)	0.4 fl oz (11 ml)	0.75 fl oz (22 ml)	1.1 fl oz (33 ml)	1.5 fl oz (44 ml)	3.0 fl oz (88 ml)

1 pint = 16 fl oz; 1 fl oz = 29.6 (30) ml

Aerial Application

Use aerial boom equipment designed for use with herbicides and a minimum spray volume of 10 gallons per acre (5 gallons per acre if tank mixed with glyphosate). Do not aerially apply Collide Herbicide unless crop-specific use directions specifically allow and provide directions for aerial application.

AVOID DRIFT: Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result. Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Adhere to the following guidelines when aerial applications are to be made.

Spray Drift Management (Aerial Application): Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is controlled by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wing span or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator must adhere to the following requirements when Collide Herbicide is aerially applied:

- Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
- 2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except the following:

Maintain a minimum of downwind buffer zone of:

- 150 feet from dormant tree fruit/nut/vine crops and overwintering sugar beets.
- 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted vegetable fallow beds.
- 3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
- 4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any non-targeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control effectiveness. **Important:** Aerial applicators must be familiar with the label for Collide Herbicide and follow all applicable use precautions. Applying Collide Herbicide in a manner other than specified in this label is done at the user's risk. Users are responsible for all loss or damage resulting from aerial spraying. In addition, aerial applicators should follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive limitations apply.

For Aerial Application in Fresno County, California Only (From February 15 through March 31 Only)

In addition to the directions for use for aerial application appearing above, the following guidelines are required between the dates of February 15 and March 31 for applications in the following geographic area:

North: Fresno County line South: Fresno County line East: State Highway 99 West: Fresno County line

Observe the following directions to minimize off-site movement during aerial application of Collide Herbicide. Minimization of off-site movement is the responsibility of the grower, pest control advisor and aerial applicator. A written recommendation must be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation must state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial application of Collide Herbicide is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates are being applied during the commercial use season. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "flyins" constitutes such documentation; or other written records showing calculations and measurements of flight and spray parameters acceptable. Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

CHEMIGATION

DO NOT apply this product through any irrigation system unless the instructions for chemigation are followed. If application by chemigation is not specifically listed under the specific crop use instructions, Collide Herbicide may not be applied to that crop through an irrigation system.

Apply this product only through sprinkler (solid set, portable lateral, or low-volume (micro-sprinkler), drip (trickle), or flood (basin) irrigation systems. Refer to use directions for specific crops for instructions as to which type of irrigation system may be used. **DO NOT** apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

For sprinkler irrigation, sufficient water should be applied at the beginning of the irrigation period to ensure uniform wetting of the plant and/or soil surfaces. Meter Collide Herbicide at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to the vegetation and/or soil surface. Continue irrigation during the final 1/3 of the irrigation period to ensure proper flushing of the irrigation system. During sprinkler irrigation, sufficient water should be applied to ensure water penetration to a depth of two inches.

AVOID DRIFT: Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Use the following guidelines when applications of Collide Herbicide are made through sprinkler irrigation equipment.

- 1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
- 2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except for the following:

Maintain a minimum downwind buffer zone of:

- 150 feet from dormant tree fruit, dormant vines and overwintering sugar beets.
- 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and vegetable fallow beds.
- 3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
- 4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any vegetable fallow bed, crop, or desired vegetation.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection

pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment.

FLOOD (BASIN) CHEMIGATION (SOIL DRENCH USES)

Collide Herbicide should be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results from Collide Herbicide applied through flood (basin) irrigation systems are obtained when a uniform distribution and flow of irrigation water is maintained over level land.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain functional automatic, quickclosing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

DRIP (TRICKLE) CHEMIGATION (SOIL DRENCH USES)

Meter Collide Herbicide at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to the soil surface. For best results, Collide Herbicide should be uniformly positioned across the wetted area to help reduce the "ring effect" of weed escapes, as other products begin to break down around the emitter. Continue irrigation during the final 1/3 of the irrigation period to ensure proper flushing of the irrigation system.

To apply a pesticide using drip (trickle) chemigation, the chemigation system must meet the following specifications:

 The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pipe and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

CHEMIGATION CALIBRATION: FOR LOW-VOLUME SPRINKLERS (MICROSPRINKLERS) AND DRIP (TRICKLE) IRRIGATION SYSTEMS

Calculation of use rate is based on wetted area around emitters - NOT on grove acres. To determine correct amount of Collide Herbicide, use the following formula:

1. Treated area per each emitter = A

 $A = 3.14 \times (radius \times radius)$

Example: If the average distance from emitter to perimeter of wetted area measured at the soil surface is 13 inches, then

 $A = 3.14 \times (13'' \times 13'')$

 $A = 3.14 \times (169)$

A = 530.7 square inches

2. The area in square feet wet in each acre = B

 $B = A \times emitters/acre$

144

Example: If there are 300 emitters per acre, then

 $B = \frac{530.7 \times 300}{144} = B = 1105.6 \text{ square feet wetted per acre}$

3. The total area (in square feet) wet by your system = C

C = B x acres covered by system

Example: If the system covers 20 acres, then

C = 1105.6 square feet per acre x 20 acres

C = 22.112 square feet wetted by system

4. Amount of Collide Herbicide to inject = S

Rate per treated acre of Collide Herbicide = R

 $S = C \times R = quarts$ of Collide Herbicide 43.560

Example: If the desired application rate per treated acre is 1 quart of Collide Herbicide, then

 $S = 22,112 \times 1.0 = S = 0.507$ quarts of Collide Herbicide should be injected into system.

Note: Select the proper rate based on weed spectrum and desired length of control. (See **RATE RANGES** section below).

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

CULTURAL CONSIDERATIONS

In order for Collide Herbicide to provide maximum preemergence activity: Prior to application, the bed or soil surface should be smooth and free of crop and weed trash (decaying leaves, clippings, dead weeds, etc.). Leaves and trash may be removed by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide application.

After application, at least one-quarter inch (1/4 inch) of irrigation or rainfall should occur within 3 or 4 weeks after application. The best results from Collide Herbicide are from applications to established beds or soil surfaces that are left undisturbed during the time period for which weed control is desired. Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of Collide Herbicide. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment.

RATE RANGES

Select proper application rates based on soil conditions, weed spectrum and desired period of residual weed control.

Preemergence Application: Where rate ranges are given, use the lower rate in the rate range on coarse texture soils with less than 1% organic matter. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, or where a longer period of residual weed control is desired.

Postemergence Application: Where a rate range is given, use higher rate in rate range for heavy weed infestations, weeds in advanced stages of growth or where a longer period of residual weed control is desired.

MIXING DIRECTIONS

Shake well before use. Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the specified amount of herbicides to the spray tank. The order of addition to the spray tank should be wettable powders first, flowables second, and liquids last. Complete filling of the spray tank with water. Maintain agitation until spraying is completed.

Use of Surfactants: For all applications of Collide Herbicide where postemergence weed control is desired (except garlic and onions), add a minimum of 2 pints of 80% active nonionic surfactant (cleared for application to growing crops) per each 100 gallons of spray. The addition of 4 pints of nonionic surfactant is recommended to enhance postemergence activity when hard water (greater than 600 ppm) is used. Maintain agitation until spraying is completed.

Tank Mixing Precautions:

- Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.
- Do not exceed specified application rates. Do not tank mix this product
 with another pesticide 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.

Tank Mix Compatibility Testing: A jar test is recommended 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 their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour.

If the mixture balls up, forms flakes, sludges, jells, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Sprayer Clean-up: Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after each use. Residues of Collide Herbicide remaining in spray equipment may damage other crops. The addition of a nonionic surfactant to equipment flushing waters at the rate of 1 quart per 100 gallons is recommended to aid in removal of residues of Collide Herbicide.

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.

CROP-SPECIFIC USE DIRECTIONS ARTICHOKE (GLOBE) Post-Directed Spray Application

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 – 6 pt/A	Application Method: Apply as a directed spray to the soil surface between the rows and at the base of artichoke plants in a minimum spray volume of 40 gallons per acre.
		Timing to Crop: Apply after completion of ditching operations. Separate applications of up to 4 pts/acre may be made 8 to 10 weeks apart or a single application up to 6 pts/acre may be made. Timing to Weeds: Preemergence up to
		8 leaf stage.

Precautions:

Do not apply over-the-top. Contact with direct spray or drift will cause injury to artichoke fronds or severe injury to buds or flowers.

Application of Collide Herbicide to artichoke plantings should be delayed a minimum of 60 days after cutting back or transplanting.

Restrictions:

Do not apply more than 6 pints of Collide Herbicide per acre per season as a result of a single application or multiple applications.

Preharvest Interval: Do not apply within 5 days of harvest.

Key Weeds Controlled:

Preemergence

cheeseweed (malva)
groundsel, common
lambsquarters, common
mustard, common yellow
oxalis (bermuda buttercup)*
shepherd's purse
sowthistle, annual
*Suppression

Postemergence

cheeseweed (malva)
groundsel, common
mustard, common yellow
nettle, burning
oxalis (bermuda buttercup)
shepherd's purse
sowthistle, annual

BROCCOLI/CABBAGE/CAULIFLOWER Pre-transplant (Preplant) Application for Preemergence Broadleaf Weed Control

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	1 – 2 pt/A	Pre-Transplant Application Only: Apply broadcast to final seedbed prior to transplanting. Use lower rate in the rate range on coarse textured soils with less than 1% organic matter. Use the highest rate range on medium to fine textured soils or soils containing greater than 1% organic matter. Transplanting should be accomplished with minimal soil disturbance and soil left undisturbed during the time weed control is desired.

Precautions:

Pre-transplant applications may result in initial, but temporary, crop injury (leaf cupping or crinkling) and is enhanced if crop leaves come in direct contact with treated soil. Crop will rapidly outgrow this condition and develop normally. Severe crop injury may result if transplants are under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides or storage conditions. The use of transplants less than 5 weeks old or use of extremely succulent transplants grown in containers less than 1 inch square may increase the severity of crop injury. Hardening off, increasing the age of transplants or increasing the size of the rooting containers will lessen the possibility and/or severity of potential crop injury.

Collide Herbicide will assist in early season annual grass control; however, a herbicide program for preemergence or postemergence control of annual grasses is recommended.

Note: Do not apply Collide Herbicide if an acetanilide herbicide such as Dual Magnum herbicide, Lasso herbicide, or Ramrod herbicide has been applied to the field during the current growing season as severe crop injury may occur.

Do not apply Collide Herbicide as a preemergence treatment to directseeded broccoli, cabbage or cauliflower.

Do not apply Collide Herbicide post-transplant or over-the-top of broccoli, cabbage or cauliflower.

Applications to muck soils may result in partial weed control or suppression.

Furrow and drip irrigation immediately after transplanting and under high temperatures can result in increased crop injury. Sprinkler irrigation is recommended during early establishment of transplants. If these conditions cannot be met. Collide Herbicide should not be used.

Crop-Specific Restrictions:

Do not apply more than 2 pints of Collide Herbicide per treated acre per season.

Key Weeds Controlled:

Preemergence

carpetweed pigweed, redroot purslane, common smartweed, Pennsylvania

CACAO (BEARING AND NONBEARING) (For Use Only in Hawaii)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	2 – 8 pt/A	Pre-Transplant Application Only: Up to 4 pints per broadcast acre may be applied as a pre-transplant application. Application to Established Plantings: In established plantings, including recently transplanted cacao plants, apply as a directed spray to the orchard floor. Use higher rates in rate range and increase spray volume to control dense growth of existing weeds or for extended residual preemergence weed control.

Precautions:

- Do not apply preplant or preemergence to direct-seeded cacao.
- Collide Herbicide should be applied to only healthy growing trees/ transplants of suitable size to allow directed sprays. Avoid spray contact with foliage.

Crop-Specific Restrictions:

Do not apply more than 8 pints of Collide Herbicide per acre as a single application or more than 24 pints per acre per year.

Preharvest Interval: Do not apply Collide Herbicide within 1 day of harvest.

Key Weeds Controlled:

Preemergence

ageratum buttonweed crotalaria purslane, common spurge, garden

Postemergence

purslane, common spurge, garden

CITRUS (NONBEARING)

Citrus, such as Calamondin, Chironja, Citrus Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Pummelo, Satsuma Mandarin, Sour Orange, Sweet Orange, Tangelo, Tangerine, Tangor

Collide Herbicide may be applied only in non-bearing citrus orchards. Apply only as a directed spray to the orchard floor, avoiding contact with citrus foliage.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	6 pt/A	Preemergence Weed Control: Up to 6 pts/ acre may be applied for residual preemer- gence weed control.
Postemergence	2 - 6 pt/A	Postemergence Weed Control: The 6 pint/ acre rate will control weeds up to 4 inches tall. Weeds greater than 4-leaf or 4 inches tall may be partially controlled. Use sufficient spray volume for complete and uniform coverage of weeds. Increase
		the spray volume with increased weed height and density to ensure complete coverage.

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions.

Preemergence Use: For residual control of grass weeds, Collide Herbicide may be tank mixed with grass herbicides labeled for use in citrus.

Postemergence Use: For broader spectrum postemergence control of emerged grass and broadleaf weeds, Collide Herbicide may be tank mixed with paraquat or glyphosate.

Precautions:

Do not apply during periods of new citrus foliage growth. Applications should be made after foliage has fully expanded and hardened off. Avoid direct spray contact with citrus foliage.

Crop-Specific Restrictions:

Apply Collide Herbicide only to nonbearing citrus (trees that will not bear fruit for one year).

Do not apply more than 6 pints of Collide Herbicide per acre per year as a result of single or multiple applications.

Key Weeds Controlled: (Arizona and California)

Preemergence burclover cheeseweed (malva) fiddleneck, coast

cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem

groundsel, common

henbit knotweed, prostrate lambsquarters, common

lettuce, prickly pigweed, redroot purslane, common

redmaids rocket, London shepherd's purse sowthistle, annual spurge, prostrate spurge, spotted Postemergence

cheeseweed (malva) fiddleneck, coast filaree, broadleaf* filaree, redstem* filaree, whitestem* groundsel, common

henbit

miners lettuce nettle, burning pigweed, redroot

redmaids shepherd's purse

sowthistle, annual

*Collide Herbicide at the 6 pt/acre rate will provide control of filaree and other weeds up to the 4-inch stage. Applications to weeds beyond the 4-inch stage may result in partial control.

Key Weeds Controlled: (Florida, Louisiana and Texas

(Florida, Louisiana and Texas) Preemergence

 Preemergence
 Postemergence

 cudweed
 balsam apple

 evening primrose
 cudweed, narrowleaf***

evening primrose cudweed, narrowlear**
groundcherry eveningprimrose, cutleaf**
lambsquarters groundcherry, cutleaf
nightshade groundcherry, Wright
pepperwood lambsquarters, common
pigweed morning-glory, annual
poinsettia nightshade, American black

pusley nightshade, black sida pepperweed, Virginia smartweed pigweed, redroot sowthistle poinsettia, wild spurge purslane, common pusley, Florida

sida, prickly (teaweed) smartweed, Pennsylvania

sowthistle, annual

CLARY SAGE Clary Sage (Salvia sclarea) Grown and Utilized in the Essence Industry (For Use Only in North Carolina)

pt/A lished clary (Lamium an annual broad	
stage of grov be required flushes thro treatment, h	icide may be applied to estab- resage for control of henbit implexicaule) and other winter dleaf weeds during the winter season. Apply shortly after the f henbit is in the 2- to 4-leaf with. Additional applications may to control subsequent weed ugh the spring season. After nenbit will stop growing and Increase the spray volume if it is dense.

Precautions:

Clary sage may respond to the topical application of this product with some marginal leaf burn, but recovery is rapid.

Crop-Specific Restrictions:

Do not apply more than 6 pints per acre per year.

^{**}Highest rate and/or multiple applications may be required for acceptable

^{* * *} Maximum 0.5-inch diameter.

COFFEE (BEARING AND NONBEARING) (For Use Only in Hawaii)

Collide Herbicide may be applied to established coffee, recently transplanted coffee, or as a pre-transplant treatment. In established non-dormant coffee, apply as a directed spray avoiding contact with crop foliage. Newly established transplants should be healthy and well established and of sufficient size to allow use of directed sprays without contacting crop foliage.

Collide Herbicide may be applied over-the-top of dormant coffee transplants. Transplants are considered to be dormant when active terminal growth has ceased and terminal buds have formed. Do not apply over-the-top of coffee plants after buds start to swell (a sign that new growth has resumed) as it may result in crop injury.

Weed Control	Rate (pt/A)	Specific Use Directions
	2 – 8 pt/A	Preemergence Weed Control: Apply as a directed spray to the orchard floor beneath established coffee plants.
		Up to 4 pints per acre may be applied as a pre-treatment application prior to transplanting coffee plants.
		Postemergence Weed Control: Increase the spray volume when weed growth is dense or trash is present; or use a higher rate within the rate range for extended residual preemergence weed control.

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions: Apply tank mixes only as a directed spray.

Precaution

To prevent foliar injury, do not apply during periods of rapid new growth or allow spray to contact actively growing foliage.

Crop-Specific Restrictions:

Do not apply preplant or preemergence to direct-seeded coffee. Do not apply more than 8 pints per broadcast acre of Collide Herbicide in a single application or 24 pints per broadcast acre per year.

Preharvest Interval: Do not apply Collide Herbicide within one (1) day of harvest.

Key Weeds Controlled:

Preemergence

ageratum buttonweed crotalaria purslane, common spurge, garden

Postemergence

purslane, common spurge, garden

CONIFER SEEDBEDS, TRANSPLANTS, CONTAINER STOCK AND SELECTED FIELD GROWN DECIDUOUS TREES

Product Use Precautions and Restrictions:

- Not for conifer release in forest management programs or for forest regeneration applications.
- Do not apply Collide Herbicide in an enclosed greenhouse structure as injury to plant foliage may result.
- Do not store or transport treated container stock in an enclosed structure until completion of 4 irrigations (minimum 21 days) as injury to nonlabeled plants may occur.
- Apply Collide Herbicide only to healthy conifer stock. Do not apply Collide Herbicide to conifers that are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.
- Do not graze or harvest livestock forage from treated areas.

Key Weeds Controlled:

When Collide Herbicide is applied preemergence or postemergence at specified dosages and weed stages.

barnyardgrass* mustard, blue
bedstraw, catchweed mustard, tumble
bittercress, lesser mustard, wild
bluegrass, annual* nettle, burning
buckwheat, wild nightshade, black
burclover nightshade, hairy
carpetweed oats, wild

clover, red* orach, red

clover, white* pepperweed, yellowflower cocklebur, common pigweed, prostrate crabgrass, large* pigweed, redroot fiddleneck, coast* pimpernel, scarlet filaree, broadleaf purslane, common

filaree, redstem redmaids
fireweed (from seed) rocket, London
flixweed sandspurry, red
foxtail, giant* shepherd's purse*
goosegrass* sida, prickly

groundcherry, cutleaf smartweed, Pennsylvania groundcherry, Wright sorrel, red (from seed) groundsel, common sowthistle, annual henbit speedwell, birdseve spurge, prostrate * * jimsonweed knotweed, prostrate spurge, spotted * * ladysthumb spurry, corn lambsquarters, common tansymustard thistle, bull * * lettuce, prickly thistle, Russian mallow, little velvetleaf mayweed miners lettuce witchgrass

morning-glory, ivyleaf* woodsorrel, yellow**

morning-glory, tall*

^{*}Highest rate and/or multiple applications may be required for acceptable control.

^{**}Preemergence control only.

CONIFER SEEDBEDS

Agricultural Use Requirements

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 3 days.

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 footwear plus socks
- · Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Collide Herbicide provides both postemergence and residual preemergence control of many broadleaf weeds and annual grass species. Seeded conifers are tolerant to preemergence and postemergence applications of Collide Herbicide. For weed control during the establishment of conifer seedlings, Collide Herbicide can be applied after seeding of conifers, but prior to emergence. For weed control in emerged conifers, Collide Herbicide may be applied over-the-top, but application should be delayed a minimum of 5 weeks after seedling emergence. If application is made during cool, cloudy weather, make certain that seedlings have hardened-off prior to spraying.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	1 - 4 pt/A	Application after planting, but prior to emergence of conifer seedlings: Where grass weeds are present, apply 2 to 4 pints of Collide Herbicide per acre. In known areas of high weed competition, apply 4 pints of Collide Herbicide per acre. Broadcast to beds and irrigate with 1/2 to 3/4 inch of sprinkler irrigation before weed emergence. Collide Herbicide is most effective on annual grasses when applied preemergence.
Postemergence	1 - 2 pt/A	Application after emergence of conifer seedlings: Application should be made to seedling weeds less than 4 inches in height (seedling grasses not exceeding the 2-leaf stage). Depending on subsequent weed flushes, multiple applications may be necessary to achieve season-long weed control.

Chemigation: Collide Herbicide may be applied at labeled rates through sprinkler irrigation systems. For center pivot irrigation systems, apply the specified dosage of Collide Herbicide per acre metered at a continuous uniform rate during the entire irrigation period, otherwise meter Collide Herbicide at a continuous uniform rate during the middle 1/3 of the irrigation period. When applying by sprinkler irrigation, follow directions given in the Chemigation Instructions section of this label.

Precautions:

 Occasionally spotting, crinkling, or flecking may appear on leaves of conifers. Leaves that receive direct spray or drift may be injured, but typically outgrow this condition rapidly and develop normally.

Crop-Specific Restrictions:

• Do not apply more than 8 pints of Collide Herbicide per acre per year.

Collide Herbicide may be applied to conifer seedbeds of the following species:

Important: When applied as directed, the conifer species listed on this label have shown tolerance to Collide Herbicide. It is impossible, however, to evaluate this product on all varieties, biotypes and cultivars of listed species under all possible growing conditions. Until familiar with results under local growing conditions, the user should exercise reasonable judgment and caution with this product. Limit application of this product to a few plants in a small area to determine plant tolerance and extent of injury if such occurs, prior to initiating large-scale applications.

Douglas Fir	Pseudotsuga menziesii
Fir	Fraser (Abies fraseri)
	Grand (Abies grandis)
	Noble (Abies procera)
Hemlock	Eastern hemlock (Tsuga canadensis)
Pine	Austrian (Pinus nigra)
	Eastern White (Pinus strobes)
	Himalayan (Pinus wallichiana)
	Jack (Pinus banksiana)
	Loblolly (Pinus taeda)
	Lodgepole (Pinus contorta)
	Longleaf (Pinus palustris)
	Monterey (Pinus radiate)
	Mugho (Pinus mugo)
	Ponderosa (Pinus ponderosa)
	Scotch (Pinus sylvestris)
	Shortleaf (Pinus echinata)
	Slash (Pinus elliottii)
	Virginia (Pinus virginiana)
Spruce	Blue (Picea pungens)
	Dwarf (Picea glauca Conica)
	Alberta (Picea abies)
	Norway (Picea sitchensis)

CONIFER TRANSPLANTS AND CONTAINER STOCK (INCLUDES 2-0 SEEDLING AND CHRISTMAS TREE PLANTINGS)

Agricultural Use Requirements

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 6 days.

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 footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Many container-grown conifers and conifer transplants are tolerant to preemergence and postemergence applications of Collide Herbicide. Applied postemergence, Collide Herbicide provides postemergence control of emerged weeds and preemergence residual control of many broadleaf weeds and grasses (See Key Weeds Controlled) at the beginning of this section.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 - 8 pt/A	Transplanted and Container Grown Conifers: For best results, preemergence applications should be made immediately after transplanting seedlings or to weed-free container stock. Postemergence applications should be made to weeds less than 4 inches in height. Two applications maybe necessary, in fall-transplanted conifer fields, for seasonlong weed control. The addition of a nonionic surfactant (0.25%v/v) labeled for application to growing crops, enhances the activity of Collide Herbicide on emerged weeds.

Precautions:

 Do not make over-the-top applications during periods of active conifer growth. Apply only before bud break or after new terminal growth has hardened off.

Crop-Specific Restrictions:

 Do not apply more than 8 pints of Collide Herbicide per acre in a single application or more than 16 pints per acre per year.

In addition to those conifer species listed under the Conifer Seedbed section, the following conifer species have been shown to be tolerant to Collide Herbicide:

arborvitae	Thuja occidentalis
	Thuja orientalis
juniper	Juniperus chinensis
	Juniperus horizontalis
	Juniperus procumbens
	Juniperus sabina
	Juniperus scopulorum
red cedar	Juniperus virginiana
yew	Taxus spp.

SELECTED FIELD-GROWN DECIDUOUS TREES

Listed field-grown deciduous trees are tolerant only to directed spray applications of Collide Herbicide. Collide Herbicide provides both preemergence and postemergence control of listed broadleaf weeds and grasses.

Timing to Crop: Apply Collide Herbicide to established deciduous trees or after transplanting. For optimum weed control, applications should be made prior to weed germination. Apply only as a directed spray to soil beneath the trees.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	2 - 6 pt/A	Collide Herbicide may be applied to established deciduous trees or after transplanting as a single or split application. Apply as a directed spray to the soil surface. Use of spray shields to reduce exposure of foliage and bark is recommended. The addition of a nonionic surfactant (0.25% v/v) labeled for application to growing crops, will enhance herbicidal activity on emerged weeds.
		Spot Application: Spot treatments at specified rates may be used to control localized weed infestations. See use directions for Spot Application in the Application Methods and Recommended Cultural Practices section.

Tank Mixing: For broader spectrum control, Collide Herbicide may be tank mixed with other preemergence or postemergence herbicides registered for this use in deciduous trees. Refer to the Mixing Directions section for Tank Mixing Precautions.

Precautions:

- For maximum crop safety, directed applications should be made prior to bud break in the spring or after trees have initiated dormancy in the fall. Avoid contact of spray or drift with foliage or stems with green bark. Do not apply after bud swell as this may result in crop injury. If a non-dormant application is required due to weed competition, apply only after foliage has fully expanded and hardened off. Use only directed sprays and spray shields to prevent spray contact with stems with green bark or foliage.
- Do not apply Collide Herbicide to trees that have been weakened or are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, or water injury as severe injury may result.

Crop-Specific Restrictions:

- Do not apply more than 6 pints of Collide Herbicide per acre per year.
- Do not apply to bearing tree fruit, nut or vine crops. For selected bearing tree fruit, nut and vine crops, refer to Tree fruit/Nut/Vine section of this label for use directions.
- Do not graze or feed livestock forage cut from areas treated with Collide Herbicide.

Collide Herbicide may be applied to the following deciduous tree species:

Almond**	Prunus spp.
Apple**	Malus X domestica
Apricot**	Prunus spp.
Ash, Green	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Birch, River	Betula nigra
Cherry**	Prunus spp.
Chestnut**	Castanea spp.
Crabapple**	Malus spp.
Cottonwood	Populus spp.
Dogwood	Cornus florida
Eucalyptus	Eucalyptus viminalis
	Eucalyptus pulverulenta
	Eucalyptus camaldulensis
Filbert**	Corylus spp.
Lilac	Syringa vulgaris
Locust, Black	Robinia pseudoacacia
Maple, Black*	Acer nigrum
Maple, Red*	Acer rubrum
Maple, Sugar*	Acer saccharum
Myrtle, Crepe	Lagerstoemia indica
Nectarine**	Prunus spp.
Nut, Hickory**	Carya spp.
Nut, Macadamia	Macadamia ternifola
Oak, Chestnut	Quercus prinus
Oak, Cherrybark	Quercus pagoda
Oak, Nutt All	Quercus nuttallii
Oak, Pin	Quercus palustris
Oak, Red	Quercus rubra
Oak,Water	Quercus nigra
Oak, Willow	Quercus phellos
Olive, Russian	Elaeagnus angustifolia
Poplar	Populus spp.
Poplar, Tulip	Liriodendron tulipifera
Peach**	Prunus persica
Pear**	Pyrus spp.
Pecan**	Carya spp.
Pistachio**	Pistacia vera
Plum**	Prunus spp.
Prune**	Prunus spp.
Redbud	Cercis canadensis
Sweetgum	Liquidambar styraciflua
Sycamore	Platanus occidentalis
Walnut, Black**	Juglans nigra
·	a trace used for production of maple can or maple

^{*}Do not apply to maple trees used for production of maple sap or maple

CORN

FOR USE ONLY ON FIELD CORN IN CONJUNCTION WITH THE USDA WITCHWEED ERADICATION PROGRAM IN NORTH CAROLINA AND SOUTH CAROLINA

Apply Collide Herbicide only as a directed spray from May through August for preemergence and postemergence control of witchweed (*Striga asiatica*). Corn must be a minimum of 24 inches tall. Examine witchweed infested fields during the early part of the growing season to determine uniformity of corn stand and grass weed pressure. If necessary, cultivate weed-infested fields prior to initial application of Collide Herbicide to allow for optimum soil coverage during the initial application. Fields treated with Collide Herbicide should be inspected regularly for any breakthrough of witchweed. If breakthrough occurs, a second application should be made as soon as possible after appearance of witchweed. Repeat treatments should occur prior to bloom stage to prevent seed set.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	2 - 3 pt/A	Initial Application: Apply as a directed spray over the entire row surface at the rate of 2 pints per acre. Use up to 3 pints per acre.
Postemergence	1 - 2 pt/A	2 pints per acre. Use up to 3 pints per acre in areas of heavy witchweed infestation. Use a minimum spray volume of 20 gallons per acre and a nonionic surfactant at the rate of 2 pints per 100 gallons of spray. Repeat Applications: In case of witchweed breakthrough a repeat application may be made at 1 to 2 pints per acre.

Precautions:

Do not spray over-the-top of the corn, as this may result in severe corn injury. Spray should contact only the lower 3 to 8 inches of the corn stalk and any leaves in this zone. Spray droplets contacting the lower leaves will cause necrotic spotting or streaking of sprayed tissue.

Crop-Specific Restrictions:

Do not apply more than 5 pints (1.25 lb active) of Collide Herbicide per acre during the growing season.

Do not apply within 60 days of harvest.

Do not use corn plants from a treated field for green chop, ensilage, forage, or fodder.

COTTON

Application Methods and Equipment: Collide Herbicide may be applied as a post-direct spray to cotton a minimum of 6 to 8 inches tall. Care must be exercised to avoid spray contact with the cotton leaves. Use rigid precision ground spray equipment and spray shields to prevent spray contact with cotton foliage. Use branch lifters or shields, as necessary, to avoid contact of directed sprays with cotton plant.

Accurate placement of spray nozzles is essential for uniform coverage of weeds and to minimize injury to cotton plants. Use a minimum broadcast spray volume of 20 gallons per acre and operate the sprayer at the minimum spray pressure specified by the spray nozzle manufacturer. Collide Herbicide may be applied as a post-direct spray with only 2 flat fan nozzles per row (1 nozzle on each side of the row). For optimum coverage, use 4 flat fan nozzles per row (2 nozzles on each side of the row). The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either spraying setup, nozzles should be carefully adjusted to cover the weed foliage with minimum contact to cotton plants. Collide Herbicide may also be applied as a band application.

Do not use hollow cone nozzles.

^{**}Apply only to nonbearing trees. For bearing tree fruit, nut and vine crops, refer to specific use directions in the Tree fruit/Nut/Vine section of this label.

Tank Mixing: For control of additional broadleaf and grass weeds, Collide Herbicide may be applied as a postemergence directed spray in tank mix combination with other herbicides registered for postemergence use in cotton (see Tank Mixing Precautions under Mixing Directions).

Weed Control	Rate (pt/A)	Specific Use Directions
Postemergence	1 - 2 pt/A	Apply as a post-directed spray. For optimum control, use the 2 pint per acre rate on actively growing weed seedlings with no more than 4 true leaves (not counting cotyledon leaves). Effective control of succulent weeds at the 2- to 3-leaf stage can usually be obtained at the 1 pint per acre rate. See Mixing Directions for surfactant recommendations. Where available, irrigation maybe applied prior to application of Collide Herbicide to encourage maximum weed emergence. Irrigation following application will improve preemergence activity of Collide Herbicide against nightshade and groundcherry species.

Precautions:

Do not apply to cotton less than 6 inches tall or severe crop injury will result.

Exercise care to avoid spray contact with cotton leaves. Leaves accidentally sprayed will exhibit necrotic (dead) spots and may be dropped from the plant. Crop injury may be enhanced if application is made when excessive soil moisture is present or rainfall occurs immediately after application, however, cotton will outgrow this condition and develop normally.

Crop-Specific Restrictions:

Western Cotton (AZ and CA): Do not apply more than 2 pints (0.5 lb active) of Collide Herbicide per acre in a single application, or more than a total of 4 pints (1.0 lb active) of Collide Herbicide per broadcast acre per season as a result of multiple applications. Do not apply within 75 days of harvest.

Southern Cotton (All other states): Do not apply more than 2 pints (0.5 lb active) of Collide Herbicide per acre per season as a result of a single application or multiple applications. Do not apply within 90 days of harvest.

Key Weeds Controlled:

Postemergence

cocklebur, common nightshade, hairy croton, tropic pigweed, redroot groundcherry, cutleaf poinsettia, wild* groundcherry, Wright purslane, common jimsonweed sesbania, hemp lambsquarters, common sicklepod**

morning-glory, annual (up to 6 leaf) sida, prickly (teaweed)* nightshade, American black smartweed, Pennsylvania

nightshade, black velvetleaf

*Multiple applications may be required for acceptable control.

**Post-direct applications of Collide Herbicide will control or suppress seedlings not exceeding the one true leaf stage.

COTTONWOOD

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 – 6 pt/A	Collide Herbicide maybe applied as a single or split application. Apply as a directed spray to soil at the base of cottonwood trees. Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a nonionic surfactant at 2 pints per 100 gallons of spray will enhance the postemergence activity of Collide Herbicide on emerged weeds.

Precautions:

- Apply Collide Herbicide immediately after transplant only to dormant healthy cottonwood stock.
- In established stands, do not allow sprays of Collide Herbicide to contact cottonwood foliage. In newly established cottonwood plantings, use spray shields, if necessary, to prevent exposure of green bark and foliage.

Crop-Specific Restrictions:

• Do not apply more than 6 pints per acre of Collide Herbicide in a single application or more than 18 pints per acre per year.

Key Weeds Controlled:

groundsel, common mustard, hedge knotweed, prostrate shepherd's purse lambsquarters, common smartweed, Pennsylvania

EUCALYPTUS

Apply Collide Herbicide for preemergence and postemergence control of listed broadleaf weeds in established eucalyptus plantings.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	Preemergence $4-6$	Directed Spray: Collide Herbicide may be applied as a single or split application. Apply as a directed spray to soil at the base of eucalyptus trees. Use the higher rate in the range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a nonionic surfactant at the rate of 2 pints per 100 gallons of spray will enhance the postemergence activity of Collide Herbicide on emerged weeds. Over-the-Top Application: In new plantings, apply Collide Herbicide just before or imme-
		diately after transplanting eucalyptus seedlings that are in a dormant condition (i.e., leaves may be present, but terminal growth has hardened off and terminal buds have formed). In established plantings, Collide Herbicide may be applied as an over-the-top spray when plants are in a dormant condition.

Precautions:

- At transplant, apply Collide Herbicide only to healthy "dormant" eucalyptus stock. In established plantings, use spray shields, if needed, to prevent exposure of foliage and bark of small and/or actively growing plants.
- To avoid phytotoxicity, make over-the-top applications only to eucalyptus trees in a dormant condition. Do not make over-the-top applications after bud break and resumption of active growth.

Crop-Specific Restrictions:

• Do not apply more than 6 pints of Collide Herbicide per acre in a single application or more than 18 pints per acre per year.

Key Weeds Controlled:

shepherd's purse sowthistle, annual spurge, prostrate spurge, spotted

Preemergence	Postemergence
burclover	cheeseweed (malva)
cheeseweed (malva)	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf*
filaree, broadleaf	filaree, redstem*
filaree, redstem	filaree, whitestem*
filaree, whitestem	groundsel, common
groundsel, common	henbit
henbit	miners lettuce
knotweed, prostrate	nettle, burning
lambsquarters, common	pigweed, redroot
lettuce, prickly	redmaids
pigweed, redroot	shepherd's purse
purslane, common	sowthistle, annual
redmaids	
rocket. London	

USE ON FALLOW BEDS

(Do not use prior to planting soybeans in California)

Used alone or in a tank mix combination with glyphosate, Collide Herbicide provides preemergence and/or postemergence control of winter annual broadleaf weeds on land to be planted to crops.

Prior to planting, treated fallow beds should be thoroughly tilled (incorporated) to a depth of at least 2.5 inches.

Collide Herbicide is no longer herbicidally effective once the active layer in the soil surface is disrupted by soil incorporation.

Aerial Application: Collide Herbicide maybe aerially applied for weed control in fallow beds. Follow requirements for Aerial Application in the Product Information section of this label.

Minimum Treatment to Planting Intervals

		nent-to-Planting rval
Direct Seeded Crops	Up to 1 pint/acre (days)	> 1 – 2 pints/acre (days)
carrot	90	90
cotton	7	7
potato	60	60
sugar beet	60	90
other root/tuber crops	90	90
onions	180	180
other bulb vegetables	180	180
cabbage	90	90
cauliflower	90	90
other brassica crops	120	120
lettuce	90	120
other leafy vegetables (except brassica crops)	120	120
pepper	90	120
tomato	60	120
other fruiting vegetables	120	120
cantaloupe	60	90
squash	90	120
watermelon	60	60
other cucurbits	90	120
dry beans	60	60
peanut	60	60
other legume vegetables	60	60
safflower	60	60
soybeans (except California)	7	7
cereal grains, including barley, buckwheat, corn, proso millet, pearl millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, and wild rice	300	300
cotton and soybean	See specified labeling be planted to cotton	ng for fallow beds to n or soybeans.

(continued)

^{*}At the 6-pint rate, Collide Herbicide will provide control of filaree up to the 6-leaf stage.

Minimum Treatment to Planting Intervals (continued)

	Minimum Treatment-to-Planting Interval	
Transplanted Crops	Up to 1 pint/acre (days)	> 1 – 2 pints/acre (days)
celery	30	30
conifer	0	0
garlic	0	30
grape and kiwi	0	0
onion	0	30
pepper	30	30
strawberries	30	30
tomato	30	30
tree fruits, nuts and citrus	0	0

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	1 - 2 pt/A	Use 20 or more gallons of spray volume per acre and increase spray volume for dense weed growth.
		Use the 1 pint per acre rate for up to 4 weeks of preemergence control and postemergence control of susceptible weeds up to the 4-leaf stage. Use the 2 pint per acre rate for up to 8 weeks of preemergence control and postemergence control of susceptible weeds up to the 6-leaf stage. Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks after application. A tank mix with glyphosate is recommended if the treatment area contains dense weed populations, oversized weed seedlings, volunteer grains, annual grasses or under unfa-
		vorable environmental conditions.
		Outside of California: For enhanced contact activity (burndown/suppression), tank mix 6.5 fl oz of Collide Herbicide with the labeled rate of either glyphosate or paraquat. Apply at the application rate and weed growth stages specified in the respective tank mix product label.

Precautions:

Failure to achieve thorough and complete incorporation, or to follow the specified treatment-planting interval, may result in stand reduction and/or vigor reduction of the planted crop.

Crop injury may be enhanced if newly seeded crops or transplants are under stress due to drought, flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.

Crop-Specific Restrictions:

Do not apply more than 2 pints of Collide Herbicide per acre per fallow season.

Key Weeds Controlled:

Collide Herbicide provides preemergence and postemergence control of the following weeds on fallow beds:*

buttercup, smallflower mustard species cheeseweed (malva) nettle, burning

eveningprimrose, cutleaf** oxalis

fiddleneck, coast pigweed, redroot filaree, broadleaf purslane, common

filaree, redstem redmaids
geranium, Carolina rocket, London
groundcherry, cutleaf shepherd's purse
groundsel, common sida, prickly
henbit sowthistle, annual
ladysthumb velvetleaf (wild cotton)

miners lettuce

- *Thorough spray coverage is essential to maximize the postemergence activity of Collide Herbicide. For postemergence control when applied by air, a tank mixture of Collide Herbicide with either glyphosate or paraguat is recommended.
- **Requires maximum rate and/or multiple applications for effective control.

FALLOW LAND (For Use Only in Idaho, Oregon and Washington)

Used alone or in a tank mix combination with glyphosate, Collide Herbicide provides preemergence and/or postemergence control of listed annual broadleaf weeds in a fallow land system. Collide Herbicide may be used to reduce weed growth prior to the establishment of dry soil mulch. Use is restricted to summer fallow on land that will be planted the following year to winter wheat, barley or oats.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	0.5 - 2 pt/A	Collide Herbicide Alone: Preemergence weed control occurs as seedling weeds come in contact with the soil-applied herbicide during emergence. Postemergence weed control is most effective when Collide Herbicide is applied to seedling weeds less than 4 inches in height. Apply Collide Herbicide in 15 or more gallons of water per acre and increase spray volume if weed growth is dense. Use of an 80% active nonionic surfactant cleared for use on growing crops is recommended for optimum postemergence weed control.

Collide Herbicide may be tank mixed with labeled rates of glyphosate. Follow label instructions for Fallow and Reduced Tillage Systems for the glyphosate product. Refer to Mixing Directions section for Tank Mixing Precautions.

Use Restrictions for Fallow Land:

Do not apply more than 2 pints per acre per application or more than 2 pints per use season.

Kev Weeds Controlled:

Collide Herbicide provides preemergence and postemergence control of the following weeds on fallow land.

fiddleneck, coast pigweed, redroot henbit purslane, common lettuce, prickly (china lettuce) shepherd's purse mustard, blue (purple mustard) sowthistle, annual

mustard, tumble (Jim hill mustard)

GARBANZO BEANS (For Use Only in Arizona and California)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	1 pt/A	Apply after planting but prior to weed or crop emergence as a single broadcast application using a spray volume of 20 or more gallons of water per acre.

Precautions:

Garbanzo beans are tolerant to preemergence application of Collide Herbicide; however, under certain conditions, severe but temporary crop injury may occur. A heavy splashing rain shortly after crop emergence or wet soil conditions during early growth stages can cause leaf cupping, crinkling, stunting or defoliation of the garbanzo seedlings. Injury, when it occurs, is usually limited to the first few leaves that develop after plants emerge from the soil. Delays in crop development and/or maturity may result, but Garbanzo beans do recover with little to no impact on yield.

Crop-Specific Restrictions:

Do not apply more than 1 pint per acre of Collide Herbicide in a single application.

Do not use bean vines for livestock feed or hay.

Key Weeds Controlled:

Preemergence

groundsel, common mallow, little rocket, London shepherd's purse

GARLIC

Agricultural Use Requirements

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
- Chemical-resistant footwear plus socks
- · Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Cultural Considerations: For optimum preemergence weed control, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, treated beds should be left undisturbed during the time period for which weed control is desired. Cultural practices that result in soil disturbance or redistribution or untreated soil can result in reduced weed control.

Direct S	Direct Seeded Garlic (Postemergence Application)	
Weed Control	Rate per Acre	Specific Use Directions
Postemergence	2 – 4 fl oz	Northeastern States Including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont: Apply Collide Herbicide at 2 to 4 fl oz per acre to seeded garlic that has at least 3 true leaves using ground equipment. Multiple treatments at 2 to 4 fl oz per acre may be applied up to a maximum of 2 pints (32 fl oz) per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application at later than 4-leaf growth stage may result in reduced weed control.
	0.5 – 1 pint	Western States Including Arizona, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington: Apply Collide Herbicide at 0.5 to 1 pt per acre to seeded garlic that has at least 2 true leaves using ground equipment. Multiple treatments at 0.5 to 1 pt per acre maybe applied up to a maximum of 2.0 pints per acre per use season. For optimum postemergence weed control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application at later than 4-leaf stage may result in reduced weed control.
	0.5 pint	All Other States: Apply Collide Herbicide at 0.5 pt per acre to seeded garlic that has at least 2 true leaves using ground equipment. Multiple treatments at 0.5 pt per acre may be applied up to a maximum of 2 pints per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application at later than 4-leaf growth stage may result in reduced weed control.

Direct Seeded Garlic (California Only)		
Weed Control	Rate per Acre	Specific Use Directions
Preemergence Postemergence	1 pint	Application after planting but Prior to Garlic Emergence: Apply Collide Herbicide after planting, but prior to crop emergence for preemergence control of listed broadlear and grass weeds using ground, air or sprinkler irrigation (chemigation). Aerial Application: Apply in a minimum spray volume of 10 gallons per acre. Follow Aerial Application instructions and precautions in the Product Information section of this label. Postemergence and Directed Application Apply Collide Herbicide as a directed overthe-top spray to garlic that is at least 12 inches tall. Accurate, uniform placement of directed postemergence sprays is essential for effective weed control and to minimize injury to garlic. Use low-pressure sprays and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimizeric minimizes in the planting that is a spray and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimizeric minimizes in the planting to
		imum spray contact with garlic plants directing the spray to the soil at the base or garlic plants and adjacent bed top and furrow area. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing Application at later than 4-leaf growth stage may result in reduced weed control.
		Sprinkler Irrigation (Portable Lateral or Solid Set): Preemergence or Postemergence:
		Apply Collide Herbicide at the specified broad- cast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Apply after
		planting but prior to garlic emergence o
		postemergence when garlic is at least 12 inch

Precautions:

Garlic Response to Preemergence Applications of Collide Herbicide: Following a preemergence application of Collide Herbicide, a chlorotic band around some of the leaves maybe observed after the first irrigation (or rainfall) following garlic emergence.

es tall. Follow the application directions and

precautions for "Sprinkler Chemigation" given

in the Chemigation section of this label.

Transplanted Garlic: Postemergence Application Immediately After Planting		
Weed Control	Rate per Acre	Specific Use Directions
Postemergence	up to 2 pints	All States Except Northeastern States: Transplanted garlic is most tolerant of a postemergence application immediately after transplanting. An application of up to 2 pints per acre may be made within two days after transplanting. If less than 2 pints per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 2 pints per acre of Collide Herbicide per season as a result of multiple applications.
	2 – 4 fl oz	Northeastern States, including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont: Multiple treatments at 2 to 4 fl oz per acre may be applied up to a maximum of 2 pints (32 fl oz) per acre per use season.

Key Weeds Controlled:

canarygrass (annual) puncturevine
evening primrose, cutleaf purslane, common*
groundsel, common rocket, London
mallow, little (malva) sage, lanceleaf
nightshade, black shepherd's purse*
pigweed, prostrate* sowthistle, annual
pigweed, redroot*

Garlic – Crop-Specific Precaution (Postemergence Application):

Postemergence applications of Collide Herbicide may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms may be more severe if garlic emerged under cool, wet, overcast or foggy weather. These conditions are temporary and should not affect the vigor or development of garlic plants.

Garlic - Crop-Specific Restrictions (Applicable to All Methods of Application):

- In all states except Northeastern states, do not apply until direct seeded garlic plants have two (2) fully developed true leaves. In the Northeastern states, do not apply until direct seeded garlic plants have three (3) fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury and is not recommended.
- Do not apply more than a total of 2 pints per acre of Collide Herbicide per use season as a result of multiple applications.
- Do not apply within 60 days of harvest.
- In direct seeded garlic (except in California), do not apply Collide Herbicide as a preemergence treatment.
- Use only on dry bulb garlic.
- Do not apply to garlic grown for seed.
- For weed control in garlic, do not mix Collide Herbicide with oils, surfactants, liquid fertilizers or pesticides except as specified.

^{*}Key weeds controlled at listed rates in Northeastern States.

 Do not apply to garlic plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

GUAVA (Bearing and Non-bearing) (For Use Only in Hawaii)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	5 – 8 pt/A	Preemergence or Postemergence: In established guava plantings, apply preemergence or postemergence to weeds. Increase the spray volume to ensure adequate coverage
Postemergence	2 – 8 pt/A	in high densities of emerged weeds or hear trash. Minimize contact with guava plan by directing the spray to the soil surfact Spray shields are suggested to minimit spray contact in young plantings.
		For broader spectrum postemergence control of grass and broadleaf weeds, Collide Herbicide may be applied in a tank mix combination with paraquat or glyphosate. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products.

Precautions:

Prevent direct spray or drift from contacting green stems, fruit or foliage, as injury may result.

Alone or in tank mix combination, Collide Herbicide should be applied to only healthy growing trees.

Application of Collide Herbicide should be made only after new foliage growth has hardened off.

Crop-Specific Restrictions:

Do not apply more than 8 pints per acre of Collide Herbicide in a single application or more than 16 pints per season.

Do not apply Collide Herbicide within 1 day of harvest.

Key Weeds Controlled:

Preemergence
ageratum
buttonweed
crotalaria
purslane, common
spurge, garden

Postemergence purslane, common spurge, garden

HORSERADISH

Agricultural Use Requirements

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
- Chemical-resistant footwear plus socks
- · Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	2 pt/A	Apply Collide Herbicide after the horseradish roots have been planted but prior to emergence of new horseradish leaves. Emerged leaves that receive direct or indirect spray (drift) contact will be injured. If necessary, cultivate before application to destroy germinated weeds.

Precautions:

 Do not apply Collide Herbicide to horseradish plantings that have been weakened or stressed due to unfavorable temperature conditions, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

Crop-Specific Restrictions:

• Do not apply more than 2 pints of Collide Herbicide per acre per crop.

Key Weeds Controlled:

lambsquarters, common shepherd's purse pigweed, redroot smartweed, Pennsylvania purslane, common

JOJOBA

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 – 6 pt/A	Initial application may be made when jojoba plants have reached a height of 6 inches or more. Use sufficient spray volume to ensure thorough coverage of dense weed growth. Sprays should be directed to the base of jojoba plants to avoid possible phytotoxicity to foliage. Spray shields are suggested for use in young plantings. Use higher rate in rate range for extended residual preemergence weed control. Make follow-up applications as necessary to maintain weed control. For early postemergence control of susceptible seedling weeds (less than 8 inches tall) apply Collide Herbicide at the rate of 4 pints per acre. Collide Herbicide may be applied at the rate of 6 pints per acre for postemergence control of weeds up to 12 inches tall. For optimum residual control, apply during the fall or winter months. Control may be unsatisfactory for weeds greater than 12 inches tall.

Precautions:

- Avoid direct spray or drift contact with jojoba flowers or buds as severe injury may result.
- Over-the-top applications may cause burning, crinkling or bronzing of jojoba foliage, particularly to the youngest leaves, flowers, or buds present at the time of application.

Crop-Specific Restrictions:

Do not apply more than 6 pints per acre per year.

Key Weeds Controlled:

Preemergence	Postemergence
burclover	fiddleneck, coast
fiddleneck, coast	filaree, broadleaf**
filaree, broadleaf	filaree, redstem**
filaree, redstem	filaree, whitestem**
filaree, whitestem	groundsel, common*
groundsel, common	henbit
henbit	mallow, little (malva, cheeseweed)
knotweed, prostrate	miners lettuce
lambsquarters, common	nettle, burning
lettuce, prickly	pigweed, redroot*
mallow, little (malva, cheeseweed)	redmaids
pigweed, redroot	shepherd's purse
purslane, common	sowthistle, annual
redmaids	
rocket, London	
shepherd's purse	
sowthistle, annual	

^{*}Highest rate may be required for acceptable postemergence control.

MINT (SPEARMINT AND PEPPERMINT)

Mint (Spearmint and Peppermint) Grown on Mineral Soils		
Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 – 6 pt/A	Oregon and Washington (East of Cascades), California, Montana, Idaho, Nevada, South Dakota and Utah: Apply from December through March when mint is dormant. When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches. Late winter applications will provide maximum activity on summer weeds, but summer grass control may be inconsistent. For best results, fall-plowed fields should be harrowed to provide a smooth surface for application. In furrow-irrigated fields, corrugating must be done prior to application. Corrugating or harrowing will result in disturbance of treated soil or movement of untreated soil into treated areas, resulting in poor weed control.
Preemergence	2 – 3 pt/A	(Western Oregon Willamette Valley): Apply Collide Herbicide from November through February to dormant peppermint only. Treatments in January or February generally provide better residual preemergence control of annual broadleaf weeds. Full season weed control should not be expected from this treatment.

Precautions:

- Application must be made prior to emergence of new spring growth or severe crop injury may result.
- In the Willamette valley, do not apply Collide Herbicide to mint that has been plowed.
- Apply Collide Herbicide only to healthy stands of spearmint and peppermint. Do not apply to spearmint or peppermint weakened by disease, drought, flooding, excessive fertilizer, soil salts, previously applied pesticides, nematodes, insects, or winter injury, as severe injury may result.

Crop-Specific Restrictions:

• Do not make more than one application of Collide Herbicide per season.

oats. wild*

Key Weeds Controlled:

bedstraw, catchweed

bluegrass, annual* orach, red
flixweed pepperweed, yellowflower
groundsel, common pigweed, redroot
lambsquarters, common ryegrass, Italian*

lettuce, prickly (china lettuce) shepherd's purse mustard, blue (purple mustard) sowthistle, annual mustard, tumble (Jim hill mustard) tansymustard nightshade, hairy typegrass, italian rygegrass, italian

*Control of annual grasses is best obtained when Collide Herbicide is applied prior to emergence. Postemergence control of winter annual grasses is generally unsatisfactory if applications are made after the 1 to 2-leaf stage.

^{**}Collide Herbicide at the 6-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

Mint (Spearmint and Peppermint) Grown on Muck Soils: For Use Only on Mint Grown in Indiana, Michigan, Montana, North Dakota and Wisconsin

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	4 – 6 pt/A	Note: Use directions in this section apply only to spearmint and peppermint grown on muck soils (organic matter content of 20% or greater).
		When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.

Precautions:

- Application must be made prior to emergence of new spring growth or severe crop injury may result.
- To avoid excessive crop injury, do not apply within 4 days of planting (sprigging) spearmint or peppermint.
- Apply Collide Herbicide only to healthy spearmint or peppermint. Do not apply to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.

Crop-Specific Restrictions:

• Do not make more than one application of Collide Herbicide per season.

Key Weeds Controlled:

knotweed, prostrate pigweed, redroot purslane, common

NON-CROP USE

(Non-Food-Producing, Non-Cultivated Agricultural or Non-Agricultural Areas, such as Highway and Utility Rights-of-Way, Industrial Sites, Tank Farms, Storage Areas, Airports, Fencerows, and Farmsteads)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	5 – 8 pt/A	Preemergence: Use higher rate in rate range for longer residual control.
Postemergence	2 – 8 pt/A	Postemergence: Use the lower rate in the rate range for control of susceptible weeds in the early postemergence stage less than 4 inches tall. Use the higher rate for weeds up to 12 inches tall. Application to weeds beyond the 4-inch stage may result in partial control.

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

- **Preemergence:** For broader-spectrum residual preemergence weed control, Collide Herbicide may be applied in tank mix combination with diuron (Karmex) or simazine.
- **Postemergence:** For additional postemergence control of susceptible grass and broadleaf weeds, Collide Herbicide may be applied in tank mix combination with paraquat or glyphosate.

Site-Specific Restrictions:

- Do not feed or allow animals to graze on any areas treated with Collide Herbicide.
- Do not apply more than 8 pints per acre in a single application.

Key Weeds Controlled:

 Preemergence
 Postemergence

 burclover
 cheeseweed (malva)

 cheeseweed (malva)
 fiddleneck, coast

 fiddleneck, coast
 filaree, broadleaf

 filaree, broadleaf
 groundsel, common

 filaree, redstem
 henbit

groundsel, common miners lettuce
henbit nettle, burning
knotweed, prostrate pigweed, redroot
lambsquarters, common purslane, common

redmaids

shepherd's purse

sowthistle, annual

pigweed, redroot
purslane, common
redmaids
rocket, London
shepherd's purse

ONIONS

sowthistle, annual

lettuce, prickly

Agricultural Use Requirements

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
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Cultural Considerations: For maximum preemergence activity, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices that result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control. For best results, make applications to established beds that are left undisturbed during the time period for which weed control is desired.

Direct Seeded Onions: Postemergence Application		
Weed Control	Rate per Acre	Specific Use Directions
Postemergence	2 – 4 fl oz	Northeastern States Including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont: Apply Collide Herbicide at 2 to 4 fl oz per acre to seeded onions that have at least 3 true leaves using ground equipment. Multiple treatments at 2 to 4 fl oz per acre may be applied up to a maximum of 2 pints (32 fl oz) per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.5 – 1 pint	Western States Including Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington: Apply Collide Herbicide at 0.5 to 1 pt per acre to seeded onions that have at least 2 true leaves using ground equipment. Multiple treatments at 0.5 to 1 pt per acre may be applied up to a maximum of 2.5 pints per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.5 pint	All Other States: Apply Collide Herbicide at 0.5 pt per acre to seeded onions that have at least 2 true leaves using ground equipment. Multiple treatments at 0.5 pt per acre may be applied up to a maximum of 2 pints per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	(see above)	Sprinkler Irrigation - All Except Northeastern States (Center Pivot, Portable Lateral or Solid Set): Apply Collide Herbicide at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Transplanted Onions: Application Immediately Before Planting		
Weed Control	Rate per Acre	Specific Use Directions
Preemergence Postemergence	1-2 pints	Pre-transplant Application (Not for Use in Northeastern States or Western States): Collide Herbicide may be applied as a broadcast or band application after completion of tillage operations, but before transplanting of onion plants. Transplanting should be accomplished with a minimum of soil disturbance and, for optimum weed control, soil surfaces should be left undisturbed after transplanting for the period for which weed control is desired. However, timely cultivation after weed emergence will assist in weed control. If less than 2 pt per acre was applied as a pretransplant application, postemergence applications may be made as instructed for seeded onions. Do not exceed the maximum use rate of 2 pts per acre per use season as a result of multiple applications.

Transplanted Onions: Application Immediately After Planting		
Weed Control	Rate per Acre	Specific Use Directions
Preemergence	1-2 pints	All States Except Northeastern States: Transplanted onions are most tolerant of a postemergence application immediately after transplanting. An application of up to 2 pints per acre may be made within two days after transplanting. If less than 2 pints per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 2 pints per acre of Collide Herbicide per season as a result of multiple applications.
Preemergence	2 – 4 fl oz	Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont: Multiple treatments at 2 to 4 fl oz per acre may be applied up to a maximum of 2 pints (32 fl oz) per acre per use season.

Onions – Use Precautions (Applicable to All Areas and Methods of Application):

- Collide Herbicide can cause necrotic lesions, twisting, pig-tailing or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

Onions – Crop-Specific Restrictions (Applicable to All Areas and Methods of Application):

- In all states except Northeastern states, do not apply until direct seeded onion plants have at least two (2) fully developed true leaves. In the Northeastern states, do not apply until direct seeded onion plants have at least three (3) fully developed leaves. Do not make applications prior to the specified growth stage as this may result in serious crop injury.
- Do not apply more than a total of 2 pints per acre of Collide Herbicide per use season as a result of multiple applications.
- Do not apply within 45 days of harvest.
- Do not apply Collide Herbicide as a preemergence treatment to direct seeded onions.
- Use only on dry bulb onions.
- Do not apply to onions grown for seed, except as instructed in separate use directions.
- For use in onions do not mix Collide Herbicide with oils, surfactants, liquid fertilizers or pesticides except as specified on approved Collide Herbicide Supplemental Labeling.

Key Weeds Controlled:

Postemergence

canarygrass (annual)

eveningprimrose, cutleaf (a)

groundsel, common

mallow, little (malva)

nightshade, black

pigweed, prostrate (b)

pigweed, redroot (a,b)

puncturevine

purslane, common (a,b)

rocket, London

sage, lanceleaf

shepherd's purse (b)

sowthistle, annual

- (a) Weeds controlled when applied as a pre-transplant application. In addition, Collide Herbicide at the rate of 1 to 2 pints per acre will provide control/suppression of carpetweed, Pennsylvania smartweed, galinsoga, common lambsquarters, and wild mustard. Applications of Collide Herbicide to muck soils may result in partial control or suppression of the weeds listed.
- (b) Specific weeds controlled at rates listed for use in northeastern states (see DOSAGE section).

ONIONS GROWN FOR SEED

Agricultural Use Requirements

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of $48\ \text{hours}.$

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 footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- · Shoes plus socks

Transplanted Onions: Application Immediately after Planting		
Weed Control	Rate per Acre	Specific Use Directions
Preemergence	2 fl oz	Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont: Multiple treatments at 2 fl oz per acre may be applied up to a maximum of 2 pints (32 fl oz) per acre per use season. Prior to initial treatment, seeded onions must have at least four (4) true leaves. Multiple treatments at the aforementioned rate may be applied.
Preemergence	up to 0.5 pt	All other States: Apply Collide Herbicide at up to 0.5 pt per acre to seeded onions that have at least three (3) true leaves. Multiple treatments at 0.5 pt per acre may be applied up to a maximum of 2 pints per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Sprinkler Irrigation - Portable Lateral or Solid Set: Apply Collide Herbicide at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

Use Precautions:

- Notice: Some varieties or inbred lines of onions may be more susceptible to Collide Herbicide. Care should be taken to ensure that the particular onion variety or line being grown is tolerant to Collide Herbicide. It is suggested that all onion varieties or lines be tested in limited areas to ensure an adequate level of crop tolerance prior to an application for postemergence weed control.
- Collide Herbicide can cause necrotic lesions, twisting, pig-tailing or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.

Crop-Specific Restrictions:

- In all states, do not apply Collide Herbicide until the onions have reached the minimum leaf stage specified.
- Do not apply prior to the specified stage of development as this may result in serious injury.
- Do not apply more than a total of 2 pints per acre of Collide Herbicide during one use season.
- Do not apply within 60 days of harvest.
- For seeded onions, do not apply Collide Herbicide with oils, surfactants, liquid fertilizers or other pesticides except as specified in approved Collide Herbicide Supplemental Labeling.

Key Weeds Controlled:

Postemergence

canarygrass (annual) eveningprimrose, cutleaf groundsel, common mallow, little (malva) nightshade, black pigweed, prostrate* pigweed, redroot* puncturevine purslane, common* rocket, London sage, lanceleaf shepherd's purse sowthistle, annual

PAPAYA (For Use Only in Hawaii)

Weed Control	Rate per Acre	Specific Use Directions
Preemergence Postemergence	4 pt/A	The initial application should occur no sooner than 4 months after transplanting or 6 months after direct seeding, and after the papaya has reached a minimum height of 4 feet. Applications may be repeated at approximate 4-month intervals. Apply preemergence or postemergence to weeds. Increase the spray volume to assure adequate coverage of dense growth of emerged weeds. Collide Herbicide must be applied as a directed spray to the orchard floor beneath the papaya plants. Accurate, uniform placement of Collide Herbicide is essential for effective weed control and to minimize crop injury. Collide Herbicide must be applied using rigid precision ground sprayer equipment. Postemergence applications may be made up to the 4 leaf stage of weed growth.

Precautions:

- Do not allow the herbicide solution, spray, drift or mist to contact green bark, stems, fruit or foliage as injury may result.
- Do not use Collide Herbicide on papaya plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

Crop-Specific Restrictions:

- Do not apply more than 4 pints of Collide Herbicide per broadcast acre in a single directed spray or more than 12 pints per broadcast acre per year as a result of multiple applications.
- Do not apply Collide Herbicide within 1 day of harvest.

Key Weeds Controlled:

amaranth spiny spurge, garden purslane, common

SOYBEANS (Not for Use in California)

Soybeans: Early Preplant Application in Conservation Tillage Systems		
Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	1.5 – 3 pt/A	Early Preplant Application: Surface apply Collide Herbicide to the stale seedbed approximately 14 days before planting conservation tillage soybeans for postemergence and preemergence residual broadleaf control. Use a spray volume of 20 or more gallons per acre and increase the spray volume if growth of existing weeds is dense. Collide Herbicide at 2 to 3 pints provides early season suppression of annual grasses, but should not be relied upon as a basic grass herbicide. A planned program utilizing herbicides registered for early preplant, preemergence or postemergence grass control in soybeans is recommended. Use of ridge or slot planter or a similar planting implement that causes minimal soil disturbance is recommended. Movement or redistribution of surface soil will reduce herbicidal effectiveness.
	Soybea	ns: No-Till (Double-Crop)
Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	0.5 – 2 pt/A	Preemergence Application to Soybeans: Applied preemergence, Collide Herbicide provides postemergence and residual pre- emergence control of susceptible broadleaf weeds. Apply Collide Herbicide within one day after planting, as later applications may result in severe crop injury. Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense.
and broadleaf we or glyphosate. F till soybeans, Co	eds, Colli or extend Ilide Hert	ed postemergence control of existing grass de Herbicide may be tank mixed with paraquat led residual control of annual grasses in no- picide may also be tank mixed with a residual

grass herbicide such as Bronco Herbicide, Dual Magnum Herbicide or Lasso Herbicide.

Lasso Herbicide.		
Postemergence	1 pt/A	Postemergence Directed Application: Collide Herbicide may be applied as a post-directed application. Optimum control is achieved when Collide Herbicide is applied to seedling weeds not exceeding 4 true leaves (not counting cotyledon leaves) and actively growing. Use of an 80% nonionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray is recommended whenever postemergence weed control is desired. For postemergence application, soybeans must be a minimum 8 inches tall. Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. Do not use hollow cone nozzles.

^{*}Specific weeds controlled at rates listed for use in northeastern states (see DOSAGE section).

Soybeans: Grown Under Conventional Tillage Systems		
Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence Postemergence	1 – 1.5 pt/A	Preemergence Application to Soybeans: Collide Herbicide provides preemergence control of susceptible broadleaf weeds. Apply Collide Herbicide within one day after planting, as later applications may result in severe crop injury. Apply in a minimum spray volume of 20 gallons per acre and increase spray volume if growth of existing weeds is dense. The 1.5 pint per acre rate will assist in early season annual grass control but should not be relied upon as a basic grass herbicide. Collide Herbicide may also be applied as a preemergence application following a preplant incorporated grass herbicide treatment.

Preemergence Tank Mixes (To Control Additional Grass and Broadleaf Weeds): Apply preemergence tank mixes of Collide Herbicide within one day after planting, as later applications may result in severe crop injury.

- Collide Herbicide at 0.6 to 1.5 pints per acre may be applied preemergence to soybeans in tank mix with Dual Magnum Herbicide or Lasso Herbicide. Collide Herbicide may be applied alone as a preemergence application following a preplant incorporated grass herbicide application or as a tank mix in a preemergence application with Dual Magnum, or Lasso herbicides. Refer to the label of tank mix product for additional weeds controlled.
- Collide Herbicide at 0.6 to 0.8 pints per acre may be applied preemergence to soybeans in tank mix with 1 to 1.67 pints of Command 6EC herbicide. Refer to the label for Command 6EC for additional weeds controlled.

Postemergence	1 pt/A	Postemergence Directed Sprays: Collide Herbicide may be applied as a post-directed application at 1 pint per acre. Optimum control is achieved when weeds do not exceed 4 true leaves and are actively growing (do not count cotyledon leaves). Use of an 80% nonionic surfactant cleared for application to growing crops at the rate of 2 pints per 100 gallons of spray is recommended whenever postemergence weed control is desired. For postemergence application, soybeans must be a minimum of 8 inches tall. Use a minimum of 2 flat fan nozzles per row. Use branch lifters or shields to prevent excessive spray contact to the soybean plants. Do not use hollow cone nozzles.

Postemergence Tank Mixes: For broader spectrum control of broadleaf weeds, Collide Herbicide may be applied in tank mix with Butoxone Herbicide or Butyrac 200 Herbicide. Use 1 pint of Collide Herbicide with 1 pint of Butoxone or 0.7 to 0.9 pint of Butyrac 200 per acre. Refer to label of tank mix product for additional weeds controlled.

(continued)

Soybeans - Precautions (All Methods and Timings to Soybeans):

• Soybeans are tolerant to preemergence and post-directed applications of Collide Herbicide at listed rates; however, under certain conditions injury may occur. Heavy splashing rain shortly after crop emergence or cold, wet soil conditions during early growth stages can cause leaf cupping and crinkling. When injury occurs, it is generally limited to the first few leaves that develop after crop emergence. Soybeans recover from this injury and yields are not adversely affected. Soybeans accidentally sprayed during a post-directed application will exhibit necrotic spotting and injury to the sovbean plant. Exercise care to avoid spray contact with the soybean leaves.

Soybeans - Crop-Specific Restrictions:

- Tank Mixing: Read and observe all label directions before using. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive limitations must apply.
- Do not make more than two applications of Collide Herbicide per growing season.
- Do not apply more than 2 pints (0.5 lbs active) of Collide Herbicide per acre during one growing season as a result of preemergence application in no-till (double-crop) or conventional till soybeans, or post-directed in conventional till soybeans. If early preplant application is made, do not apply more than 3 pints (0.75 lb active) of Collide Herbicide per acre during one growing season.
- Do not apply a post-directed application of Collide Herbicide to sovbeans after the initial appearance of blooms.

Key Weeds Controlled (Collide Herbicide Alone):

Preemergence

groundcherry, cutleaf* iimsonweed lambsquarters, common nightshade, American black* nightshade, black* pigweed, redroot poinsettia, wild

shepherd's purse sida, prickly (teaweed) smartweed, Pennsylvania sowthistle, common* velvetleaf

Postemergence

cocklebur, common croton, tropic groundcherry, cutleaf groundcherry, Wright

iimsonweed

lambsquarters, common morning-glory, annual (up to 6-leaf) mustard, wild

nightshade, American black

nightshade, black nightshade, hairy pigweed, redroot poinsettia, wild* purslane, common sesbania, hemp shepherd's purse sicklepod**

sida, prickly (teaweed)* smartweed, Pennsylvania velvetleaf

- *Multiple applications may be required for acceptable control.
- **Post-direct applications of Collide Herbicide will kill or suppress seedlings not exceeding the one true leaf stage.

TARO (For Use Only in Hawaii)

For use only to dry land taro grown in Hawaii. Dry land taro is defined as taro grown without irrigation, or by using irrigation practices that do not result in run-off, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	2 pt/A	Preemergence to Taro and Weeds: A single application of Collide Herbicide at the rate of 2 pints per acre maybe applied within 1 week after transplanting but prior to emergence of taro plants.
Postemergence	1 pt/A	Postemergence to Taro and Weeds: Collide Herbicide may be applied as a post-directed or band application at the rate of 1 pint per acre. Effective control of succulent weed seedlings in the 2-to 3-leaf stage can usually be obtained. Applications to weeds beyond the 3-leaf stage may result in partial control.

Precautions:

- Accurate, uniform placement of Collide Herbicide is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. Collide Herbicide must be applied using rigid precision ground sprayer equipment.
- Occasionally, after the use of Collide Herbicide, spotting, crinkling or flecking may appear on the leaves of the taro. Leaves that receive direct or indirect (drift) spray contact will be injured.
- Do not use Collide Herbicide on taro plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.

Crop-Specific Restrictions:

- Do not apply more than 2 pints of Collide Herbicide per broadcast acre as a single preemergence application.
- Do not apply more than 1 pint of Collide Herbicide per acre in a single post-direct spray or more than 2 pints per acre per season as a result of multiple post-directed applications.
- Do not apply more than 4 pints of Collide Herbicide per acre per season as a result of preemergence and post-direct applications.
- Do not apply Collide Herbicide within 6 months of harvest of taro (corms, leaves).

Key Weeds Controlled:

amaranth, spiny purslane, common spurge, garden

TREE FRUIT/NUT/VINE CROPS (Dormant Application)

Almond, Apple, Apricot, Avocado, Beechnut, Brazil Nut, Butternut, Cashew, Cherry, Chestnut, Chinquapin, Crabapple, Date, Feijoa, Fig, Filbert, Grapes, Hickory Nut, Kiwi, Loquat, Macadamia Nut, Mayhaws, Nectarine, Olives, Peach, Pear, Pecan, Persimmon, Pistachio, Plum, Pomegranates, Prune, Quince, and Walnut

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence (broadcast application)	5 – 6 pt/A	Apply Collide Herbicide in a minimum of 20 gallons of water per acre. Use higher spray volumes to ensure thorough coverage in high densities of emerged weeds or heavy trash. Sprays should be directed to the soil and the base of dormant trees or vines. In California, Collide Herbicide may be applied as an over-the-top or directed spray to dormant nonbearing grape plantings. The use of a low-pressure sprayer is suggested. Do not apply over-the-top to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result.
(banded application)	5 – 8 pt/A	
Postemergence (broadcast application)	2 – 6 pt/A	Apply in a spray volume of 40 or more gallons per acre. For optimum control, apply when weeds are at seedling stage of growth.
(banded application)	2 – 8 pt/A	Use the lower rate in the rate range (2 pints per acre) for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. Higher rates (up to 6 pints per acre) may be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.

Tank Mixing: Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. See labels of tank mix partners to determine suitability and use rates for various crops.

- Postemergence: for broader spectrum postemergence control of listed grass and broadleaf weeds, Collide Herbicide may be applied in tank mix with paraquat or glyphosate. These herbicides may also be added to preemergence tank mixes for enhanced control of existing weeds.
- Preemergence: For broad-spectrum preemergence control of susceptible grass and broadleaf weeds in listed tree fruit, nut or vine plantings, Collide Herbicide may be applied in tank mix with napropamide (Devrinol herbicide), diuron (Karmex herbicide), pronamide (Kerb® herbicide), simazine, norflurazon (Solicam herbicide) or oryzalin (Surflan herbicide).

Chemigation (All States): For dormant season application using sprinkler (low-volume (micro sprinkler)), drip (trickle), and flood (basin) irrigation systems, apply Collide Herbicide at the specified rate per acre. Follow applicable directions in the Chemigation section of this label when making applications using irrigation systems.

Precautions:

- Collide Herbicide or any of the combinations listed on this label should be applied to only healthy growing trees or vines.
- Avoid direct plant contact. Direct spray toward the base of tree or vines unless specific use recommendations allow over-the-top application.

(continued)

Crop-Specific Restrictions:

- In all states, unless otherwise specified, do not apply Collide Herbicide during the period between bud swell and completion of final harvest or when fruit/nuts are present. Collide Herbicide may be applied upon completion of final harvest.
- In Arizona and California, Collide Herbicide may be applied during the period following completion of final harvest up to February 15 (February 1st in the Coachella Valley, California). Applications made after these calendar dates, but prior to bud swell, may result in significant crop injury and are the responsibility of the user.
- For banded applications, up to 8 pints per acre of Collide Herbicide per use season may be applied within the treated band. Do not apply more than a maximum of 6 pints per acre per use season on a broadcast basis.
- Do not apply to grapes or kiwi established less than 3 years unless vines are on a trellis wire a minimum of 3 feet above the soil surface.
- Do not apply to grapes or kiwi that are not staked or trellised unless vines are free standing.

Key Weeds Controlled (Arizona and California):

Preemergence

burclover cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem

 $groundsel,\,common$

henbit

knotweed, prostrate lambsquarters, common

lettuce, prickly pigweed, redroot purslane, common

redmaids rocket, London shepherd's purse sowthistle, annual

Postemergence

cheeseweed (malva) fiddleneck, coast filaree, broadleaf* filaree, redstem* filaree, whitestem* groundsel, common

henbit

miners lettuce nettle, burning pigweed, redroot

redmaids

shepherd's purse sowthistle, annual

*Collide Herbicide at the 6-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

Key Weeds Controlled (All Other States Except Arizona and California):

Preemergence

camphorweed cudweed, narrowleaf eveningprimrose, cutleaf* groundcherry, cutleaf jimsonweed lambsquarters, common nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot

Postemergence

balsam apple
cocklebur, common
cudweed, narrowleaf**
eveningprimrose, cutleaf***
groundcherry, cutleaf
groundcherry, Wright
jimsonweed
lambsquarters, common
morning-glory, annual
nightshade, American black

(continued)

Key Weeds Controlled (All Other States Except Arizona and California): (continued)

nightshade, black poinsettia, wild sida, prickly pepperweed, Virginia smartweed, Pennsylvania pigweed, redroot sowthistle, annual poinsettia, common spurge, prostrate sesbania, hemp spurge, spotted shepherd's purse velvetleaf sida, prickly (teaweed) smartweed, Pennsylvania sowthistle, annual velvetleaf

- * * Maximum 0.5-inch diameter.
- ***Highest rate and/or multiple applications may be required for acceptable control.

APRICOTS, NECTARINES, OLIVES, PEACHES, PLUMS AND PRUNES

(Non-dormant application, California only)

Collide Herbicide provides effective postemergence control of cheeseweed (Malva), fleabane, marestail (horseweed), and young broadleaf weed seedlings in non-dormant apricots, nectarines, olives, peaches, plums and prunes. For enhanced postemergence activity against these target weeds as well as other weed species, tank mix Collide Herbicide with either paraquat or glyphosate to increase the spectrum of weed control by either of these tank mix partners. Compatibility of each mixture must be established before tank mixing and application must be applied by ground equipment. Follow all precautions and restrictions on the labeling of products to be tank mixed.

Dosage

Use Collide Herbicide for postemergence suppression of the target weeds at 0.5 to 1 pint (0.125 to 0.25 lb active) per broadcast acre when applied to susceptible weed seedlings less than 4 inches in height. Repeat applications may be required. Do not exceed 6 pints (1.5 lb active) of Collide Herbicide during the non-dormant stage of apricots, nectarines, olives, peaches, plums and prunes. For a broader spectrum of grass weed and broadleaf weed control in the tree row middles, a tank mixture of Collide Herbicide with either paraguat or glyphosate tank may be used.

Method of Application

Ground Application: Apply a minimum spray volume of 10 gallons of water per acre. Use higher volumes to ensure adequate coverage in high densities of emerged weeds or heavy trash. Use conventional low-pressure ground spray equipment with flat fan spray nozzles at 20 to 40 psi. Position an off-center nozzle at the end of the boom. Calibrate spray equipment carefully before each use.

Chemigation Application: Apply this product only through flood (basin) irrigation systems, low-volume sprinkler (microsprinkler) systems or drip (trickle) irrigation systems designed to distribute irrigation water beneath the tree canopy. For additional information on these systems, see the CHEMIGATION section of this label.

Cultural Considerations for All Applications: In order to provide maximum effectiveness of preemergence activity of Collide Herbicide, the berm or soil surface must be level, smooth and free of crop or weed trash (decaying leaves, clippings, dead weeds etc.). Remove leaves and trash by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide applications.

^{*}Highest rate and/or multiple applications may be required for acceptable control.

Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of Collide Herbicide. Cutting water furrows or cultivations that mix untreated soil into treated areas will also reduce the effectiveness of the treatment. For best results, apply to established berms or soil surfaces that are left undisturbed during the time period for which weed control is desired.

Specific Use Restrictions: In addition to the following also observe the PRODUCT USE RESTRICTIONS listed at the beginning of this label:

- Read and observe all label directions before using. When tank mixing, read and carefully follow all applicable use directions, precautions, and limitations on the respective product labels. In interpreting all labels for the tank mixture, the most restrictive situations must apply.
- When applied as a non-dormant treatment, Collide Herbicide can be applied only to apricots, peaches, nectarines, plums and prunes after May 1. Collide Herbicide can be applied as a non-dormant treatment to olives only after bloom.
- Do not apply Collide Herbicide within 14 days of harvest of fruit.
- Do not apply more than 6 pints (1.5 lb active) of Collide Herbicide per broadcast acre during the non-dormant season.
- Apply Collide Herbicide only under healthy trees.
- Direct spray toward the base of the tree. Avoid spray contact with foliage or fruit.

GRAPES GROWN FOR WINE OR RAISINS (Non-dormant application, California only)

Collide Herbicide may be applied as a directed spray or, for supplemental preemergence weed control, through low-volume sprinkler (micro sprinkler) or drip irrigation systems for control or suppression of listed broadleaf weeds in non-dormant grapes (raisin and wine grapes only). Collide Herbicide may also be applied to all grapes (raisin, table, and wine) as a dormant season application. Refer to Tree fruit/Nut/Vine Crops (Dormant Application) section above for use directions for dormant season application to grapes.

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	2 pt/A	Collide Herbicide may be applied preemergence or postemergence to weeds either as a directed spray in a minimum spray volume of 20 gallons per acre or through low-
Postemergence	1 – 2 pt/A	volume sprinkler (micro sprinkler) or drip irrigation systems. Repeat applications may be required. Applications may be made from completion of bloom up to 14 days before to harvest. When applied as a postemergence directed spray, add 1 quart 80% active nonionic surfactant cleared for application to growing crops per 100 gallons of spray. Sprays should be directed to the soil and the base of vines.

Tank Mixing:

When applied as a directed postemergence spray using ground equipment, Collide Herbicide may be applied in tank mix with paraquat or glyphosate in a minimum spray volume of 10 gallons per acre.

Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

(continued)

Chemigation: Follow chemigation instructions in Product Information section.

• Low Volume Sprinkler (Micro-sprinkler) and Drip (Trickle) Irrigation: Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the canopy. Meter Collide Herbicide at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to ensure proper flushing of the irrigation system. Use of Collide Herbicide through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

Precautions:

- Crop Tolerance: The use of Collide Herbicide may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Grape leaves that are immature or expanding at the time of contact with Collide Herbicide are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) on the fruit.
- Collide Herbicide is phytotoxic to plant foliage. Avoid drift to all other crops and nontarget areas. Do not apply when weather conditions favor drift.

Crop-Specific Use Restrictions:

- The total amount of Collide Herbicide applied during one season (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed 6 pints per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation system.)
- Do not apply within 14 days of harvest.
- Do not initiate application of Collide Herbicide in non-dormant grapes until the completion of the bloom period.
- Do not apply to grapes established less than 3 years unless vines are either on a trellis wire a minimum of 3 feet above the soil surface, or protected by grow tubes.
- Collide Herbicide should be applied only by ground application equipment or through low-volume sprinkler (micro sprinkler) or drip (trickle) irrigation systems.
- Apply Collide Herbicide as a non-dormant application to wine grapes or raisin grapes only.

Key Weeds Controlled or Suppressed:

Preemergence burclover cheeseweed, malva fiddleneck, coast groundsel, common henbit knotweed, prostrate lambsquarters, common miners lettuce mustard, black nettle, burning nightshade, black pigweed, redroot purslane, common redmaids

Postemergence cheeseweed, (malva) fiddleneck, coast groundsel, common henbit miners lettuce morning-glory species, annual mustard, black nettle, burning nightshade, black pigweed, redroot purslane, common redmaids rocket, London sowthistle, annual

rocket, London

sowthistle, annual

SUCKER CONTROL IN NON-DORMANT GRAPES (Washington and Oregon Only) (Grapes for Wine and Processing Only)

Weed Control	Rate (pt/A)	Specific Use Directions
Grape suckers less than 12 inches in length	1 – 2 pt/A	Apply Collide Herbicide in a three-foot band directed towards newly emerging suckers at the base of the grapevine. The highest rate and/or a second application may be required to achieve an acceptable level of control/suppression of grape suckers. Avoid spray contact on flowers, grape clusters, or fruit. Use mounted nozzles to deliver the spray solution. Thorough spray coverage of sucker growth is essential for optimal activity. Use a spray volume of 50 or more gallons per acre (broadcast basis).

Tank Mixing: For enhanced postemergence sucker activity, a tank mixture of Collide Herbicide with either glufosinate (Rely Herbicide) or paraquat can be used. Apply at the listed rates and growth stages in a manner described on the respective labels. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

Precautions:

 The use of Collide Herbicide may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift or soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally.

Leaves that are immature or expanding at the time of contact with Collide Herbicide are the most susceptible to injury. Grape fruit may exhibit some small blemishes (spots or flecks) on the fruit.

Crop-Specific Restrictions:

- The total amount of Collide Herbicide applied during one crop year (dormant and non-dormant) cannot exceed 6 pints per acre as a result of multiple applications in any given area (broadcast or banded).
- Collide Herbicide should be applied only by ground application equipment.
- Apply Collide Herbicide as a non-dormant application for sucker control only to wine or processed grapes.
- Do not apply Collide Herbicide within 60 days of harvest.

PISTACHIOS, WALNUTS, ALMONDS (CALIFORNIA AND ARIZONA ONLY) (Non-Dormant Application)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence	5 – 6 pt/A	Preemergence: For residual weed control of listed weeds.
Postemergence	1 – 2 pt/A	Postemergence (Suppression): Apply to seedling weeds less than 4 inches in height. Repeat applications may be required.
	2 – 6 pt/A	Postemergence (Cleanup): Contact (post- emergence) control for cleanup sprays and preharvest applications. Apply to seedling weeds less than 4 inches in height. Applications to weed seedlings beyond the 4-inch stage may result in partial control.

CALIFORNIA ONLY: Collide Herbicide may be applied at a rate of no more than 5 pts/acre (1.25 lbs. a.i.) before February 15, and no more than 0.5 pt/acre (0.125 lb. a.i.) up to 30 days before harvest and/or no more than 0.5 pt/acre (0.125 lb. a.i.) between 30 and 15 days before harvest. Do not apply more than 6 pints of Collide Herbicide or 1.5 lb. oxyfluorfen a.i. per broadcast acre during the non-dormant season.

Tank Mixing: For broader spectrum grass and broadleaf weed control in tree row middles, Collide Herbicide may be tank mixed with either paraquat or glyphosate. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

Chemigation: Follow chemigation instructions in Product Information section.

Flood (Basin) Irrigation: For flood (basin) irrigation systems, meter continuously into the water during the entire irrigation period. Best weed control results are obtained when a uniform distribution and flow of irrigation water is maintained over level land. Irrigation water treated with Collide Herbicide must be contained on the treated area until the water is absorbed by the soil.

Low Volume Sprinkler (Micro-sprinkler) and Drip (Trickle) Irrigation: Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the tree canopy. Applications should be made prior to weed emergence; otherwise postemergence activity may be inconsistent due to uneven coverage. Meter Collide Herbicide at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to ensure proper flushing of the irrigation system. Use of Collide Herbicide through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

Precautions:

- Direct spray toward the base of trees. Avoid direct contact with foliage or nuts.
- Collide Herbicide should be applied only to healthy growing trees.

(continued)

Crop-Specific Use Restrictions:

- When applied as a non-dormant treatment, Collide Herbicide can only be applied to pistachio plantings between May and 7 days prior to harvest.
- When applied as a non-dormant treatment, Collide Herbicide can only be applied to almond plantings between April 1 and September 30 and to walnut plantings between May 1 and September 30.
- Do not apply Collide Herbicide within 7 days of harvest of pistachios.
- Do not apply Collide Herbicide within 30 days of harvest of almonds (AZ only) or within 15 days of harvest of almonds (CA only).
- Do not apply Collide Herbicide within 7 days of harvest of walnuts.
- Do not apply more than 6 pints of Collide Herbicide or 1.5 lb. oxyfluorfen active ingredient per acre during the non-dormant season.

Key Weeds Suppressed and/or Controlled:

cheeseweed, (malva) morning-glory species, annual

fiddleneck, coast mustard, black filaree, broadleaf nettle, burning filaree, redstem pigweed, redroot filaree, whitestem purslane, common

groundsel, common redmaids
henbit rocket, London
miners lettuce sowthistle, annual

Additional Weeds Controlled in Tank Mix with Glyphosate or Paraquat:

barnyard grass horseweed (marestail)
bluegrass, annual rocket, London
chickweed, common ryegrass, Italian

WINDBREAKS AND SHELTERBELTS (For Use Only in Minnesota, North Dakota, South Dakota and Wyoming)

Weed Control	Rate (pt/A)	Specific Use Directions
Preemergence 4 – 6 Postemergence pt/A	Collide Herbicide may be applied as a broad-cast, banded or post-directed postemer-gence spray. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Pre-transplant applications must be made after completion of soil preparation but prior to transplanting. Transplanting should be completed with minimal soil disturbance. For optimum weed control results, treated soil surfaces should be left undisturbed during the time period for which weed control is desired.	
		Postemergence Weed Control: For best results, apply before 4-leaf stage for broadleaf weeds or 2-leaf stage for grass weeds. Conifers: Collide Herbicide can be applied pre-transplant, post-directed or postemergence (over-the-top) to conifers. Post-emergence or post-directed applications
		should be applied prior to bud break or after new growth foliage has hardened off and new terminal buds have formed.
		Deciduous Hardwoods: Collide Herbicide has exhibited selectivity to many deciduous species when applied pre-transplant or as a post-directed spray prior to bud break.

Precautions and Restrictions:

- Important: Some varieties or cultivars of conifers or deciduous species listed may be susceptible to Collide Herbicide. Care should be taken to ensure that the particular variety to be sprayed with Collide Herbicide is tolerant. For unfamiliar species, it is suggested that Collide Herbicide be tested on a limited number of plants prior to large-scale application.
- Occasionally after the use of Collide Herbicide, a spotting, crinkling
 or flecking may appear on the leaves of the deciduous species. Leaves
 that receive direct or indirect (drift) spray contact will be injured.
 Deciduous species typically rapidly outgrow these symptoms and
 develop normally.
- Do not apply after bud break, as this may result in injury to deciduous species. If non-dormant application is required, apply only after foliage has fully expanded and hardened off. Avoid direct or indirect spray contact with the foliage by applying to the soil surface as a directed spray.
- Apply Collide Herbicide only to healthy deciduous and/or conifer trees. Do not apply Collide Herbicide to conifers or deciduous trees that have been weakened or under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.

Specific Use Restrictions for Shelterbelts:

• Do not apply more than 6 pints of Collide Herbicide per acre in a single application or more than 18 pints per acre per year.

Key Grasses Controlled:

barnyard grass foxtail, giant bluegrass, annual goosegrass crabgrass, large witchgrass

Key Broadleaf Weeds Controlled:

buckwheat, wild

burclover

carpetweed

dock, curly

groundcherry, cutleaf

groundcherry, Wright

groundsel, common

henbit

jimsonweed

knotweed, prostrate

kochia

ladysthumb

lambsquarters, common

lettuce, prickly

mallow, little

mayweed

mustard, blue

mustard, tumble

mustard, wild

nettle, burning

nightshade, black

nightshade, hairy

oats, wild

orach, red

pepperweed, yellow flower

pigweed, prostrate

pigweed, redroot

purslane, common

rocket, London

shepherd's purse*

smartweed, Pennsylvania

sowthistle, annual

tansymustard

thistle, Russian (seedling)

velvetleaf

Collide Herbicide may be applied to numerous conifer and deciduous species, including the following:

Common Name	Scientific Name
Conifer Species	
Douglas fir	Pseudotsuga menziesii
fir	
grand	Abies grandis
fraser	Abies fraseri
noble	Abies procera
hemlock	
eastern hemlock	Tsuga Canadensis
western hemlock	Tsuga heterophylla
pine	
Austrian	Pinus nigra
eastern white	Pinus strobes
jack	Pinus banksiana
Himalayan	Pinus graffithii
loblolly	Pinus taeda
lodgepole	Pinus contorta
longleaf	Pinus palustris
monterey	Pinus radiate
mugo	Pinus mugo
ponderosa	Pinus ponderosa
scotch	Pinus sylvestris
shortleaf	Pinus echinata
slash	Pinus elliottii
Virginia	Pinus virginiana
spruce	
blue	Picea pungens
dwarf Alberta	Picea glauca conica
Norway	Picea abies
Sitka	Picea sitchensis
arborvitae	Thuja occidentalis
	Thuja orientalis
juniper	Juniperus chinensis
	Juniperus horizontalis
	Juniperus procumbens
	Juniperus sabina
	Juniperus scopulorum
red cedar	Juniperus virginiana
yew	Taxus spp.

^{*}The highest rate or multiple applications may be required for acceptable control.

Common Name	Scientific Name	
Deciduous Hardwood Species		
ash	Fraxinus spp.	
eucalyptus	Eucalyptus spp.	
crabapple	Malus spp.	
lilac	Syringa vulgaris	
maple, black	Acer nigrum	
oak, northern red	Quercus rubra	
olive, Russian	Elaeagnus angustifolia	
poplar (cottonwood)	Populus spp.	
sweet gum	Liquidambar styraciflua	
sycamore	Platanus occidentalis	
walnut, black	Juglans nigra	

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage and disposal.

Pesticide Storage: Keep from freezing. Store above 32°F.

Pesticide Disposal: Pesticide Wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Clean container promptly after emptying. After rinsing, 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. 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.

Steps to be Taken In Case Material Is Released or Spilled: Ventilate area. Avoid breathing vapors. Use MSHA/NIOSH self-contained breathing apparatus or airline respirator for large spills in confined areas. Dike the spill with inert material (sand, earth, etc.) and transfer the liquid or solid diking material to separate containers for recovery or disposal. Remove contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before reuse. Keep spill out of all sewers and bodies of water.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

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 reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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