U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505T)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_X_ Registration
___ Reregistration
(under FIFRA, as amended)

EPA Reg. Number:	**Date of Issuance:**
92311-5	10/29/25

Term of Issuance:
Unconditional

Name of Pesticide Product:
CeraZone

Name and Address of Registrant (include ZIP Code):

Ceradis B.V.
6620 Cypresswood Drive, Suite 250
Spring, TX 77379

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

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

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

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

1. Submit and/or cite all data required for registration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Continues page 2

Signature of Approving Official:

Mindy Ondish, Product Manager 23
Herbicide Branch, Registration Division (7505T)

Date:
10/29/25

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

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

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSFs:

- Basic CSF dated 7/15/2025
- Alternate CSFs 1-3 dated 7/15/2025

If you have any questions, please contact Julia Kerr via phone at 202-566-2810 or by email at kerr.julia@epa.gov.

Enclosure

SULFENTRAZONE	GROUP 14	HERBICIDE

CERAZONE

A soil-applied selective herbicide

ACCEPTED
10/29/2025
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 92311-5

ACTIVE INGREDIENT:	**By Wt.**
Sulfentrazone	26.3%
OTHER INGREDIENTS:	73.7%
TOTAL	100.0%

Contains 2.5 lbs of Sulfentrazone per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See [back][side] panel for additional Precautionary and First Aid Statements]

Ceradis B.V.
Agrobusiness Park 10
6708 PW Wageningen .....
The Netherlands

EPA Reg. No. 92311-5
EPA Est. No.
Batch Code:
Net Contents: 2.5 gallons

FIRST AID	
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
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. • Call a Poison Control Center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center, doctor, or going for treatment. You may also contact **Chemtrec** at **1-800-424-9300** for emergency spill, leak, fire, exposure, accident, or medical information. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 (NPIC Web site: www.npic.orst.edu). For emergencies, call the poison control center 1-800-222-1222, 24 hours a day, 7 days a week.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils.
- Shoes plus socks

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

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater advisory: This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.
Do not use on coarse soils classified as sand, which have less than 1% organic matter.

Surface water advisory: Sulfentrazone can contaminate surface water through spray drift. Under some conditions, Sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

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

Notice: Read the entire label before using this product. Use only according to label directions. If the terms of use at the end of the label booklet are unacceptable, return unopened product at once.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Applicators must not exceed labeled rates of this product. Refer to specific crop directions for use for Maximum use rates. Calculate the 12-month period for the purpose of maximum use rates from when CeraZone is first applied. For any requirements specific to your State or Tribe, consult the Agency responsible for pesticide regulation. Not intended for Residential Use.

SHAKE WELL BEFORE USING

AGRICULTURAL USE REQUIREMENTS

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

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

Personal Protective Equipment (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 over long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton ≥14 mils, and shoes plus socks.

WEED RESISTANCE MANAGEMENT

CeraZone, which contains the active ingredient sulfentrazone is a group 14 herbicide based on the mode of action classification system of the Weed Science Society of America.

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

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program. To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application for weeds for identification of species and sizes.

- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of CeraZone for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect any poor performance or likely resistance in weeds.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your local retailer or county extension agent.
- Contact your crop advisor or extension agent to find out if suspected resistant weeds to this MOA have been found in your region.

Do not assume that each listed weed is being controlled by multiple sites of action. Products with multiple active ingredients are intended to broaden the spectrum of weeds that are controlled by multiple sites of action. Some weeds may be controlled by only one of the active ingredients in this product.

If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 14 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production. Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; or
- Surviving plants mixed with controlled individuals of the same species.

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

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 14 herbicides.
- Avoid making more than two applications of CeraZone and any other Group 14 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

PRODUCT INFORMATION

CeraZone is a soil-applied selective herbicide. It controls listed grasses, sedges and broadleaf weeds. CeraZone is a flowable product that contains 2.5 pounds of active ingredient (sulfentrazone) per gallon.

The active ingredient sulfentrazone inhibits an enzyme required by plants in order to produce chlorophyll. Inhibiting this enzyme leads to the release of singlet oxygen (O) which then disrupts cellular membranes, resulting in cellular leakage and cellular death ultimately resulting in plant death. CeraZone has a selective mode of action because sulfentrazone has a greater affinity for the PPO IX enzyme in listed weed species as opposed to listed crops.

MIXING AND APPLICATION INSTRUCTIONS

Proper handling instructions: DO NOT mix or load this product within 50 feet [(100 feet [in California])] of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pads or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing or washing of this product into or from pesticide handling or application equipment or containers within 50 feet [(100 feet [in California])] of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater and rainwater that may fall on the pad.

Surface water shall not be allowed to either flow over or from the pad which means the pad must be self contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities **Do Not** apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. This product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide spray mixtures or rinsates.

APPLICATION INSTRUCTIONS

Apply this product in one of the following ways:

- as a surface application, pre-emergence treatment (i.e. before crop and/or weed emergence)
- as an incorporated treatment prior to planting
- Post-plant application
- Over-the-top
- Lay-by

For further detail, refer to the Crop Use Directions below.

When used as an incorporated treatment, CeraZone must be incorporated following a uniform surface application to a depth of 2 inches maximum. If it is incorporated to a greater depth, reduced control of target species may result. Applicators must ensure that there is no overlap between areas that have been treated with CeraZone due to soil movement. Such an overlap could cause an adverse crop response.

When CeraZone is soil applied or applied as a post-plant treatment, the herbicidal action of the product must be activated by moisture. The amount of moisture required depends upon a number of factors including:

- soil type
- organic matter content
- tilth
- existing soil moisture at the time of treatment.

For an effective application of CeraZone, 0.5 to 1 inch of irrigation or rainfall is required within 7 to 10 days following treatment. If that level of moisture is not received, shallow incorporation must be undertaken in order to obtain sufficient control of target species. Activating moisture can be delayed for 10 – 14 days, and sometimes longer, depending on the factors listed above. If activating moisture is delayed, however, control of listed species may be reduced, due to the growth of weeds during the delay.

When CeraZone has been activated, it will provide control of listed weed species. The level of control will depend on the size and type of weed species when CeraZone is activated. The control of listed germinating weed species will be reduced when rain or irrigation follows a period of dry weather.

Apply CeraZone prior to the germination of crop seeds in order to avoid damage to emerging seedlings. Crop damage may occur where treatment is delayed if seeds are germinating, or are close to the soil surface.

If CeraZone is applied by surface application and activation has not been triggered by rainfall or irrigation (½” to 1” moisture) within 10 days of treatment, make a shallow incorporation (less than 2”) of the product so that germinating weed species can be controlled. Soil incorporation will also facilitate product activation with existing soil moisture. Consider alternative weed control methods where there are prolonged periods when rainfall/irrigation is not available.

Follow Crop-Specific Use Directions exactly and with care, particularly for post-plant treatments.

Lay-by/Over-the-top applications provide control of listed species through contact and residual control (depending on weed species). Combining this product with a surfactant may improve control of listed species, but may also increase the risk of crop injury. Applicators must be aware that certain crops will react differently to treatment with CeraZone according to the following factors:

- use rate
- specific crop species sensitivity
- soil composition.

Once a treatment with CeraZone has been made, seedlings and germinating seeds absorb sulfentrazone from the soil solution.

The amount of available active ingredient contained in the soil solution, is determined by the following factors:

- soil type
- soil pH
- soil organic matter content.

Sulfentrazone is absorbed by the organic matter and clay parts of soils. This absorption reduces the amount of active ingredient available for weed uptake. Clay content in soil tends to increase as the soil gets finer. Crop Use Directions are indicated by soil types. Refer to the following chart to determine the category of a particular soil type:

Fine soil: Clay, Clay loam, Silty clay, and Silty clay loam.
Medium soil: Silt, Silt loam, Loam, Sandy clay, and Sandy clay loam.
Coarse soil: Sand, Sandy loam, and Loamy sand.

The organic matter in soil will vary widely within soil classifications. In order to assess organic matter soil content, a detailed analysis will be required. The amount of sulfentrazone available for uptake by weed species will increase as the pH of the soil increases. The pH of the soil must be accurately assessed using representative soil samples. In addition, irrigation with water with a high pH (i.e., alkaline water) following treatment, will increase the amount of available sulfentrazone for uptake by target species. However, if irrigation water pH exceeds 7.5, crop damage may result. The likelihood of an adverse response by crops will decrease as the growth stage of crops advances.

The use rate of this product will be determined by the following factors:

- Timing of treatment
- The amount of activating moisture (rainfall/irrigation)
- Soil parameters
- Soil pH

The Crop-Specific Use Directions for each crop below, are based on:

- soil type
- soil organic matter
- soil pH interactions

The performance of CeraZone and crop tolerance is based on strictly following the Crop-Specific Use Directions.

Application by Air

- Apply CeraZone using appropriate nozzles that will allow for optimal coverage, minimize drift, and keep fine spray droplets to a minimum.
- Apply CeraZone in an appropriate volume for sufficient coverage. Use minimum spray volume of 5 gallons per acre.
- Do not apply CeraZone when wind speed is likely to cause drift outside the target area.

Application by Ground

- Apply CeraZone using a boom and nozzle sprayer with the appropriate spray tips, screens and nozzles. Application equipment must be calibrated for optimal coverage and spray distribution at the appropriate pressure.
- Use spray nozzles that will minimize drift by keeping fine spray droplets to a minimum.
- Apply CeraZone in a minimum spray volume of 10 gallons per acre. Overlapping treatment areas can injure crops. When starting, turning or stopping, slower ground speed of application equipment may also lead to excessive treatment.
- Do not apply CeraZone when wind speed is likely to cause drift outside the target area.

Chemigation Application

CeraZone may be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system. Crop injury, lack of effectiveness or illegal residues on or in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact your State Extension Service specialists, equipment manufacturers, or other experts. 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.

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 also 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.

Meter CeraZone into the irrigation system continuously for the duration of the water application. Dilute CeraZone in sufficient volume to ensure accurate application over the area to be treated.

Use the appropriate amount of water to carry the product to the soil surface. Continuous agitation is required to maintain product suspension in the solution tank. Conduct a jar test to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable weed control. Flush the lines at the completion of the application and then turn the water off promptly.

When using water from public water systems; **DO NOT APPLY CeraZone THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.** Public water system 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 of the year. CeraZone may be applied through irrigation systems, which may be supplied by a public water system only if water from the water system is 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 to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Crop response to treatment with CeraZone will depend on the following factors:

- application rate and timing
- volume of water applied and pH
- sensitivity of crop type to treatment with CeraZone
- growth stage of the crop when irrigated.

The amount of sulfentrazone available for uptake by weed species will increase as the pH of the soil increases. The pH of the soil must be accurately assessed using representative soil samples. In addition, irrigation with water with a high pH (i.e., alkaline water) following treatment, will increase the amount of available sulfentrazone for uptake by target species. However, if irrigation water pH exceeds 7.5, crop damage may result. The likelihood of an adverse response by crops will decrease as the growth stage of crops advances**.**

Application in Combination with Dry Fertilizers:

- CeraZone may be impregnated on and applied in conjunction with a dry bulk fertilizer.
- Only apply combinations of this product and dry fertilizer with ground equipment.
- Do not apply via aerial application.
- Applicators using dry fertilizer must follow state regulations on the preparation of the CeraZone/fertilizer combination, including mixture preparation, storage, transportation, selling and treatment.

Directions for Dry Fertilizer Impregnation:

- Use the following method for impregnation:
  1. Ensure that spray nozzles are calibrated and positioned for uniform CeraZone coverage of the dry fertilizer during the mixture process.
  2. Make a slurry with CeraZone and water in a clean container.
  3. Once made, add the CeraZone/water slurry to the impregnation spray tank.
  4. Finish the solution by adding water as required.
- For impregnation and application of CeraZone and dry fertilizer, use a dry bulk fertilizer blender such as a closed rotary-drum mixer that is fitted with appropriate spray application equipment.
- See the CLEANING APPLICATION EQUIPMENT section prior to cleaning equipment used for impregnation, transportation, loading and application of the CeraZone/dry fertilizer combination.
- Do not attempt to impregnate coated ammonium nitrate or limestone with CeraZone as neither can absorb the herbicide.

Application Instructions for CeraZone Impregnated Dry Fertilizers:

- Dry fertilizer impregnated with CeraZone must be applied using a dry fertilizer spreader. The application equipment must be correctly calibrated for sufficient and uniform coverage of the soil surface. If treatment is not uniform, some areas may go untreated which may cause reduced control of target species.
- Avoid overlapping applications, which may cause labeled use rates to be exceeded, and may cause adverse crop response.
- Apply the dry fertilizer/CeraZone combination at a rate of at least 200 pounds of impregnated dry bulk fertilizer per acre in order to provide sufficient soil coverage.
  - ° See the appropriate crop-specific section of this label for the use rate of CeraZone per acre
  - ° Next, use the following equation to calculate the amount of CeraZone that must be used to impregnate 2000 pounds (one ton) of dry bulk fertilizer:

fl. oz. of CeraZone to be applied per ton of Dry Bulk Fertilizer = fl. oz. of CeraZone per acre x 2000 ÷ lbs dry bulk fertilizer applied per acre

Example 1: If use rate of CeraZone is 8 fl. oz. per acre, and 200 lbs fertilizer will be applied per acre: (8) (2000 / 200) = 80 fl. oz CeraZone per ton of dry bulk fertilizer.

Example 2: If use rate of CeraZone is 12 fl. oz. per acre and 400 lbs fertilizer will be applied per acre: (12) (2000 / 400) = 60 fl. oz. CeraZone per ton of dry bulk fertilizer.

Application in Combination with Liquid Fertilizers:

- CeraZone, when applied in combination with a liquid fertilizer will provide control of listed weeds.
- Sufficient soil coverage is crucial for control of target species.
- Fertilizer solutions that may be used as a carrier for CeraZone may be concentrate formulations as blended or diluted in water.

Directions for Liquid Fertilizer Combination:

- The selected spray system must have the spray capacity to allow uniform application of the treatment solution, and must be capable of maintaining agitation in the spray tank throughout the mixture and application procedures.
- Some spray application systems might need separate pumps to apply the solution and maintain agitation at the same time.
- Prior to combining the liquid fertilizer and CeraZone in the application tank, carry out a compatibility test to ensure that the mixture is stable, homogenous and compatible. [In a lidded glass jar (~1 quart size) all mix partners in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, observe mixture for approximately 30 minutes.]

Combine CeraZone and the carrier liquid fertilizer as follows:

1. Fill a clean spray tank ½ full of fertilizer solution.
2. Begin agitation of the fertilizer solution.
3. Use a clean container to create a slurry of CeraZone and water (equal parts of both)*.
4. Add the slurry slowly to the spray tank, continuing agitation throughout.
5. Rinse the slurry mix container and add rinsate solution to spray tank.
6. Finish filling spray tank to required level.
7. Maintain agitation throughout. The CeraZone/water slurry must be mixed thoroughly prior to application. (For best mixing of the CeraZone/water slurry, add the slurry using induction systems on the sprayer fill plumbing system).

*Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Application instructions for CeraZone mixed with liquid fertilizers:

- The spray application solution must be applied immediately following preparation.
- Maintain agitation throughout mixture and application.
- Do not store spray solution in the spray tank for an extended period of time, or overnight.
- A combination of CeraZone and liquid fertilizer must not be premixed in nurse tanks.
- Applicators/sellers of liquid fertilizer must follow state regulations for liquid fertilizers, including those regarding preparation, blending, registration, transportation, selling, treatment and storage.

Band Treatment Applications:
CeraZone can be applied as a banded treatment application. When calculating rates for band treatment, apply the equivalent volume per acre rate for broadcast treatment by using the following equation:

Band Rate or Volume = Broadcast Rate (fl. oz./acre) or Volume per acre X Band width (in inches) ÷ Row width (in inches)

Mixing and Loading Instructions:

- CeraZone may be applied on its own or in combination with other herbicides for a broader spectrum of weed control. Combinations with other products may not have been tested, therefore, carry out a compatibility test before mixing and applying. [In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, observe mixture for approximately 30 minutes.]
- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in the tank mixture. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- Spray equipment must be clean and free of product residue prior to mixing an application solution of CeraZone. Refer to Cleaning Directions below and to the cleaning directions of the product(s) previously applied.
- Mix CeraZone using the following procedure:
  1. Fill a clean spray tank with ½ of water required for treatment.
  2. Begin agitation.
  3. Use a clean container to create a slurry of CeraZone and water*.
  4. Add the slurry slowly to the spray tank, continuing agitation throughout.
  5. Rinse the slurry mix container and add rinsate solution to spray tank.
  6. Finish filling spray tank to required level.
  7. Maintain agitation throughout. The CeraZone/water slurry must be mixed thoroughly prior to application.

  * For best mixing of the CeraZone/water slurry, add the slurry using induction systems on the sprayer fill plumbing system.
- The spray application solution must be applied immediately following mixture.
- Maintain agitation throughout mixture and application.
- Do not store spray solution in the spray tank for an extended period of time, or overnight.
- A tank mixture containing CeraZone must not be premixed in nurse tanks.

Cleaning Application Equipment
Adverse crop reaction may result if residues of this product are left in spray equipment following application. Spray equipment must be cleaned immediately after treatment with CeraZone, and before applications with other products.

- Use the following procedure:
  1. Drain the spray application equipment, including tank, hoses, spray boom and nozzles.
  2. Clean inside the spray tank with a high-pressure detergent, removing residues and sediment.
  3. Thoroughly rinse the spray tank.
  4. Flush the spray system out using water, including hoses, spray boom and spray nozzles.
  5. Combine 3 gallons of ammonia (with a minimum of 3% active ingredient) in 100 gallons of water. Make sufficient cleaning solution to operate the spray application equipment for a minimum of 15 minutes so that the system is thoroughly flushed.
  6. Remove spray tips, and all screens and filters and clean separately using the ammonia solution (step 5).
  7. Leave the cleaning solution or water in the nozzles, spray booms, hoses and spray tank overnight (or during storage) to ensure thorough cleaning.
  8. Drain the system completely prior to re-use. Use clean water to rinse/flush nozzles, spray booms, hoses and the spray tank. Remove spray tips, and all screens and filters and clean separately using the ammonia solution (step 5).
  9. Dispose of rinsate and excess cleaning solution in compliance with Federal, State, and local regulations and guidelines.
- Rinsate and cleaning solution must not be applied to sensitive crops.
- Spray application equipment must not be stored for any extended period while CeraZone application solution remains in the spray lines, nozzles, strainers, or boom plumbing.
- When application equipment has been idle or in storage, flush the nozzles and spray boom with clean water prior to use for application of product.
- If small amounts of this product remain in equipment after cleaning, CeraZone may be released during later applications, which may cause an adverse reaction from certain crops/other vegetation. The applicator is solely responsible for any damage caused by equipment that is not properly cleaned.
- Equipment must not be flushed or drained near desirable plants/trees.
- Ensure that bodies of water are not contaminated with application solution, rinsate or cleaning solution, including water that may be used for other crops, i.e., irrigation water.

MANDATORY SPRAY DRIFT MANAGEMENT

Ground Application

• Utilize a boom and nozzle sprayer equipped with the appropriate nozzles, spray tips and screens and adjusted to provide optimum spray distribution and coverage at the appropriate operating pressures.

• Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE Standard S-572.

• Select coarse to very coarse droplet size when used as a preemergent/preplant application.

• Select medium to very coarse droplet size when used postemergence with a contact burndown herbicide.

• Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).
• Apply a minimum of 10 gallons of finished spray per acre by ground.
• When mixed with a contact burndown herbicide, ground applicators must use a minimum spray volume of 15 gallons per acre. Be aware that overlaps and slower ground speeds while starting, stopping or turning while spraying may result in excessive application and subsequent crop response.
• Do not apply when wind speed favors drift beyond the area intended for treatment. Applicators may spray only when wind speed is between 3 and 10 mph.
• For boom spraying, the maximum release height is 30 inches from the soil.

Aerial Application

• Aerial application is allowed only when environmental conditions prohibit ground application.
• When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.
• The maximum release height must be 10 feet from the top of the canopy, unless a greater application height is required for pilot safety.
• Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE Standard S-572.
• Select coarse to very coarse droplet size when used as a preemergent/preplant application. Select medium to very coarse droplet size when used postemergence with a contact burndown herbicide.
• Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE standard).
• Do not apply when wind speed favors drift beyond the area intended for treatment. Applicators may spray only when wind speed is between 3 and 10 mph

SPRAY DRIFT REDUCTION ADVISORIES

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

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

Controlling Spray Droplet Size

Volume – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

Pressure - When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure. Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation – For aerial application, the required practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles for both ground and aerial applications. Solid stream nozzles oriented straight back usually produce the largest droplets and the lowest drift potential in aerial applications.

Boom Length – For some aerial use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment – When aerial applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by the path of the aircraft upwind. Swath adjustment or offset distance should increase when conditions favor increased drift potential (higher winds, smaller droplets, etc).

Wind – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially affect spray drift.

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

Temperature Inversions – Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This

cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas – The pesticide should only be applied when the wind is blowing away from sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops).

Off-Target Movement of CeraZone

Drift of dilute spray mixtures containing CeraZone must be prevented. Observation of the preceding environmental conditions, correct application equipment design, calibration and application practices will significantly diminish the risk of off-target spray drift. CeraZone can cause significant symptomology by drift on to sensitive crops and other plants. This symptomology may manifest initially as discreet, localized spots where contacted by CeraZone drift mixtures. Depending on concentration of the spray solution and droplets size (effectively determining the dosage of sulfentrazone) and also depending on the inherent sensitivity of the plants involved, these spots or lesions may or may not coalesce. These effects will usually not have lasting effects on plant growth but will likely reduce the value of affected fruit or foliage where grade or quality is associated with appearance. In severe drift instances with particularly sensitive crops, defoliation of affected foliage could result. Failure to follow these guidelines and environmental prohibitions that then result in off-target movement or drift of CeraZone on to unintended crops or plants, irrespective of severity, constitutes misapplication of this product. Ceradis B.V. accepts no responsibility or liability for potential crop effects that may result from such misapplication of CeraZone.

REPLANTING AND ROTATIONAL CROPS

- During replanting, keep soil tillage to a minimum so that the herbicide barrier is preserved, thereby maximizing weed control.
- In the event that the planting of crops listed in label directions does not produce a stand, only crops specified in this label or the tank mix partner may be planted. Where there is a tank mixture, the most restrictive label directions must be followed.
- The planted area must not be retreated with CeraZone or any other product containing sulfentrazone.

- Do not plant crops in previously treated areas unless in full compliance with the Rotational Restrictions.

Crop Rotation: Refer to the table below for the minimum interval from the time CeraZone was last applied until treated areas can be replanted with listed crops.

Crop	Minimum Rotational Interval
Barley Rye Triticale Wheat	4 months
Corn, Field Rice Sorghum[1]	10 months
Alfalfa Cereal Grains (Buckwheat, Oats, Pearl Millet, Proso Millet, Teosinte, Wild Rice) Sweet Potatoes	12 months
Corn, Pop Corn, Sweet	18 months
Canola	24 months
Sugar Beets	36 months
Dry Peas and Chickpeas Horseradish Lima beans, succulent (TN Only) Mint Soybeans Sugarcane Sunflowers Tobacco Sod Production	Crops can be planted at any point following the application of CeraZone

[1]18-month minimum rotational interval for sorghum where use rates are greater than 12 fl. oz. of CeraZone per acre.

- Certain crops have a rotational interval of more than 12 months because of sensitivity and the risk of crop injury. Carry out a representative bioassay of the target area on the rotational crop in order to assess the crop's sensitivity to applications of this product.
- For all crops not listed in the table above, there must be a minimum rotational interval of 12 months.
- When this product is tank mixed with another product(s), read and follow the directions of all tanks mix partners. The most restrictive directions must apply, including directions for re-cropping.

LISTED WEED SPECIES

When applied in accordance with these label directions (alone or in a tank mixture), CeraZone will provide control of the following weed species (refer to crop-specific section for more details).

Amaranth, livid (*Amaranthus lividus*)
Amaranth, Palmer (*Amaranthus palmeri)*
Amaranth, Powell (*Amaranthus Powell ii*)
Amaranth, spiny (*Amaranthus spinosus*)
Amaranth, spleen (*Amaranthus dubius*)
Anoda, spurred (*Anoda cristata*)
Bedstraw, catchweed (*Galium aparine*)
Carpetweed (*Mollugo verticillata*)
Chickweed, common (*Stellaria media*)
Copperleaf, hophornbeam (*Acalypha ostryeafolia*)
Copperleaf, Virginia (*Acalypha virginica*)
Crabgrass, large (*Digitaria sanguinalis*)
Crabgrass, smooth (*Digitaria ischaemum*)
Crabgrass, Southern (*Digitaria ciliaris*)
Croton, tropic (*Croton glandulosus)*
Crownbeard, golden (*Verbesina encelioides*)
Cupgrass, wooly (*Erichloa villosa*)
Cyperus, hedgehog (*Cyperus compressus*)
Daisy, American (*Eclipta alba*)
Devilsclaw (*Proboscidea Louisiana*)
Dock, curly (*Rumex crispus*)
Eclipta (*Eclipta prostrate*)
Filaree, redstem (*Erodium cicutarium*)
Flixweed (*Descurainia sophia*)
Galinsoga, hairy (*Galinsoga ciliate*)
Goosegrass (*Eleusine indica*)
Groundcherry, clammy (seedling) (Physalis heterophylla)
Groundcherry, cutleaf (Physalis angulate)
Jimsonweed (*Datura stramonium*)
Kochia (ALS and Triazine Resistant) (*Kochia scoparia*)
Ladysthumb (*Polygonum persicaria*)
Lambsquarters, common (*Chenopodium album*)
Lettuce, miners (*Montia perfoliata*)
Mallow, common (*Malva neglecta wall r.*)
Mayweed, Chamomile (*Anthemis cotula l.*)
Milkweed, honeyvine (*Ampelamus albidus*)
Morningglory, entireleaf (*Ipomoea hederacea integriuscula*)
Morningglory, ivyleaf (*Ipomoea hederacea*)
Morningglory, palmleaf (*Ipomoea wrightii*)
Morningglory, purple (*Ipomoea turbinate*)
Morningglory, red (*Ipomoea, coccinea L.*)
Morningglory, scarlet (*Ipomoea coccinea*)
Morningglory, smallflower (*Jacquemontia tamnifolia*)
Morningglory, tall (*Ipomoea purpurea*)
Mustard, tumble (*Sisybrium altissimum*)
Nightshade, black (*Solanum nigrum*)
Nightshade, Eastern black (*Solanum ptycanthum*)
Nutsedge, purple (*Cyperus rotundus*)
Nutsedge, yellow (*Cyperus esculentus*)
Orchardgrass (*Dactylis glomerata*)
Panicum, fall (*Panicum dichotomiflorum*)
Pigweed, redroot (*Amaranthus retroflexus*)
Pigweed, smooth (*Amaranthus hybridus*)
Plantain, blackseed (*Plantago rugelii decne*)
Plantain, narrow-leaved (*Plantago lanceolata*)

Poorjoe (*Diodia feres*)
Porophyllum (*Porophyllum rederale*)
Poinsettia, wild (*Euphorbia heterophylla*)
Purslane, common (*Portulaca oleracea*)
Redmaids (*Calandrinia ciliate*)
Redweed (*Melochia corchorifolia*)
Sedge, annual (*Carex spp.*)
Senna, coffee (*Cassia occidentalis*)
Sheperdspurse (*Capsella bursa-pastoris*)
Sida, prickly (*Sida spinosa*)
Sida, Southern (*Sida acuta*)
Signalgrass, broadleaf (*Brachiaria platyphylla*)
Smartweed, Pennsylvania (seedling) (*Polygonum pensylvanicum*)
Smellmellon (*Cucumis melo*)
Starbur, bristly (*Acanthospermum hispidum*)
Stinkgrass (*Eragrostis cilianensis*)
Toadflax, yellow (*Linaria vulgaris*)
Tassleflower, red (*Emilio sonchifolia*)
Thistle, Russian (*Salsola kali*)
Waterhemp, common (*Amaranthus rudis*)
Waterhemp, tall (*Amaranthus tuberculatos*)
Waterprimrose, winged (*Ludwigia decurrens*)
Witchgrass (*Panicum capillare*)

CROP-SPECIFIC USE DIRECTIONS

CABBAGE (Transplanted only)

To control susceptible weeds, CeraZone can be applied to Cabbage (transplanted only) at the following times: In the fall (Preplant), before spring growing season
In the spring (early preplant, preplant incorporated, preemergence)
When applying preplant to cabbage, the product may be applied only in CO, ID, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY. When applied as indicated on this label, the following weeds in cabbage will be controlled with CeraZone:

Galinsoga, hairy	Lambsquarters, common
Pigweed, redroot	Waterhemp (common, tall)

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 3.4 – 4.5 fl. oz. CeraZone per acre [(0.07-0.09 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 4.5 – 9.0 fl. oz. CeraZone per acre [(0.09-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 – 13.55 fl. oz. CeraZone per acre [(0.18-0.26 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 9.0 – 13.55 fl. oz. CeraZone per acre [(0.18-0.26 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 – 18.0 fl. oz. CeraZone per acre [(0.18-0.35 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 4.5 – 9.0 fl. oz. CeraZone per acre [(0.09-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 9.0 – 13.55 fl. oz. CeraZone per acre [(0.18-0.26 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 – 18.0 fl. oz. CeraZone per acre [(0.18-0.35 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to stubble or to the soil surface, in the fall, or in the spring from 60 days prior to planting or transplanting up to 72 hours after transplant. Unless applying preplant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur.
- If applying preemergence, applications before transplant can be broadcast or banded. Preemergence applications up to 72 hours after transplant should be a banded treatment in the row middles.
- If applying this product preplant incorporated in the spring, prior to transplantation, mix thoroughly or shallowly incorporate the CeraZone into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.
- Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of CeraZone from snowmelt or rain, do not apply CeraZone to soils that are frozen or have an existing snow cover.

Tank Mixes

CeraZone can be split-applied or mixed with burndown herbicides or soil-applied herbicides labeled for use on cabbage to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of cabbage.

Use Restrictions

- The maximum single application rate for this product is 18 fl.oz. (0.35 lbs AI/acre).
- The maximum annual application rate for this product is 18 fl. oz. (0.35 lbs AI/acre).
- Do not apply more than 0.375 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application (including preplant fall application).
- Do not apply more than one application per year.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not incorporate into the soil any deeper than 2 inches.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

DRY FIELD PEAS AND CHICKPEAS

To control susceptible weeds, CeraZone can be applied to dry field peas and chickpeas at the following times: In the fall (Preplant), before spring growing season (only in CO, ID, KS, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY). In the spring (early preplant, preplant incorporated, preemergence)

When applying preplant to dry field peas and chickpeas, the product may be applied (only in CO, ID, KS, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY). When applied as indicated on this label, the following weeds in dry field peas and chickpeas will be controlled with CeraZone:

Amaranth, Palmer	Filaree, redstem
Kochia (ALS and Triazone resistant)	Lambsquarters, common
Morningglory (ivyleaf, tall)	Nightshade, Eastern black
Pigweed (red root, smooth)	Sida, prickly
Thistle, Russian	Waterhemp (common, tall)

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 3.4 – 4.5 fl. oz. CeraZone per acre [(0.07-0.09 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- Greater than 3.0% OM, apply 5.65 – 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 5.65 – 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 6.8 – 10.2 fl. oz. CeraZone per acre [(0.13-0.20 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 6.8 – 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 7.9 – 12.0 fl. oz. CeraZone per acre [(0.15-0.23 lbs AI/acre)]

OM – Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories.

Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to stubble or to the soil surface, in the fall, or in the spring from 60 days prior to planting up to 3 days after planting (if seed furrow is completely closed and if seedlings have not broken the soil furrow).
- When applying preplant fall applications, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. Moisture (in the form of rain or snow) after application will activate and move the product into the soil.
- To prevent runoff of CeraZone from snowmelt or rain, do not apply CeraZone to soils that are frozen or have an existing snow cover.
- When applying in the spring early preplant greater than three weeks prior to planting, use the higher rate listed in 'Application Rates' for appropriate soil and organic matter type. Wait a minimum of 7 days after application to plant in coarse textured soils with less than 1.5% organic matter. Moisture (in the form of rain or snow) should occur after application to move the product into the soil. If dry conditions persist, a shallow incorporation may be needed.
- If applying this product preplant incorporated in the spring prior to planting reduced and conventional tillage dry peas, mix thoroughly and shallowly incorporate the CeraZone into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Tank Mixes

CeraZone can be split-applied or mixed with burndown herbicides or soil-applied herbicides labeled for use on dry peas to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Reduce rate of CeraZone on coarse textured soil with organic matter less than 1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of dry peas.

Use Restrictions

- The maximum single application rate for this product is 12 fl.oz. (0.23 lbs AI/acre).
- The maximum annual application rate for this product is 12 fl. oz. (0.23 lbs AI/acre).
- Do not apply more than 0.25 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application (including preplant fall application).
- Do not apply more than two applications per year when using reduced application rate equal to or less than 6 fl. oz./A of this product.
- Do not apply CeraZone if seedlings are close to soil surface or crop has emerged.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Do not incorporate into the soil any deeper than 2 inches.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

HORSERADISH

To control susceptible weeds, CeraZone can be applied to horseradish at the following times: In the fall (preplant), before spring growing season, in the spring (early preplant, preplant incorporated, preemergence)
When applying early preplant to horseradish, the product may be applied only in CO, ID, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY. When applied as indicated on this label, the following weeds in horseradish will be controlled with CeraZone:

Lambsquarters, common	Morningglory, ivyleaf
Nutsedge, yellow	Pigweed, red root
Waterhemp (common, tall)	

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 3.4 – 6.8 fl. oz. CeraZone per acre [(0.07-0.13 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 6.8 – 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 – 11.3 fl. oz. CeraZone per acre [(0.18-0.22 lbs AI/acre)]

For Medium or Fine Textured Soils

- Less than 1.5% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]

- 1.5% to 3.0% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to stubble or to the soil surface. Unless applying preplant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur.
- If applying preplant in the spring, product can be applied 60 days prior to planting up to planting.
- If applying preemergence, applications before planting, and up to 5 days before crop emergence can be broadcast or banded. After crop emergence, CeraZone can be applied to row middles as a banded treatment. If soil has more than 1% organic matter or is clay, higher rates of CeraZone should be used.
- If applying this product preplant incorporated in the spring, prior to planting, mix thoroughly or shallowly incorporate the CeraZone into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.
- Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of CeraZone from snowmelt or rain, do not apply CeraZone to soils that are frozen or have an existing snow cover.

Tank Mixes

CeraZone can be split-applied or mixed with burndown herbicides, residual soil herbicides or other pesticides labeled for use on horseradish to control emerged weeds or broaden the pesticide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of horseradish.

Use Restrictions

- The maximum single application rate for this product is 12 fl.oz. (0.23 lbs AI/acre).
- The maximum annual application rate for this product is 12 fl. oz. (0.23 lbs AI/acre).
- Do not apply more than 0.25 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application (including preplant fall application).
- Do not apply more than two applications per year when using reduced application rate equal to or less than 6.0 fl. oz./A of this product.
- Do not appliy CeraZone if seedlings are close to soil surface or crop has emerged.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not incorporate into the soil any deeper than 2 inches.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

LIMA BEANS, SUCCULENT (TENNESSEE ONLY)

To control susceptible weeds, CeraZone can be applied preemergence to succulent lima beans (TN only). Make pre-emergence applications before transplanting. When applied as indicated on this label, the following weeds in lima beans will be controlled with CeraZone:

Copperleaf, hophornbeam
Morningglory (entireleaf, ivyleaf)
Pigweed (redroot, smooth)

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 3.4 – 5.65 fl. oz. CeraZone per acre [(0.07-0.11 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- Greater than 3.0% OM, apply 5.65 – 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 4.5 – 9.0 fl. oz. CeraZone per acre [(0.09-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 5.65 - 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 6.8 - 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 5.65 – 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 6.8 - 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 7.9 - 9.0 fl. oz. CeraZone per acre [(0.15-0.18 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions
Apply amount of CeraZone indicated above as a preemergence treatment. Apply product in at least 10 gallons of finished spray per acre. Make application with ground equipment.

Precautions
- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of lima beans.
- Wait a minimum of 7 days after application to plant in coarse textured soils with less than 1.5% organic matter or crop injury may result.
- Reduce rate of CeraZone on coarse textured soil with organic matter <1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Reduced weed control can occur if crop is experiencing extended periods of dry weather.

Use Restrictions
- The maximum single application rate for this product is 9 fl.oz. (0.18 lbs AI/acre).
- The maximum annual application rate for this product is 9 fl. oz. (0.18 lbs AI/acre).
- Do not apply more than 0.1875 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application.
- Do not make more than one application per year.
- Do not appliy CeraZone if seedlings are close to soil surface or crop has emerged.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not incorporate into the soil any deeper than 2 inches.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

MINT

To control susceptible weeds, CeraZone can be applied to established stands of dormant mint or to newly planted mint, prior to emergence of new growth. When applied as indicated on this label, the following weeds in mint will be controlled with CeraZone:

Amaranth, Powell	Bedstraw, catchweed
Chamomile, mayweed	Kochia (ALS and Triazine resistant)
Lambsquarters, common	Morningglory, ivyleaf
Nightshade, Eastern black	Nutsedge, yellow
Pigweed, redroot	Shepherdspurse
Toadflax, yellow	Thistle, Russian
Waterhemp (common, tall)	

See Listed Weed Species section of this label for information on additional weeds.

Application Rates
For Coarse Textured Soils
- Less than 1.5% OM, apply 6.8 – 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- Greater than 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]

For Medium Textured Soils
- Less than 1.5% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 15.2 – 18.0 fl. oz. CeraZone per acre [(0.30-0.35 lbs AI/acre)]

For Fine Textured Soils
- Less than 1.5% OM, apply 12.0 fl. oz. CeraZone per acre [(0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, 15.2 fl. oz. CeraZone per acre [(0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 18.0 fl. oz. CeraZone per acre [(0.35 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to dormant mint in the fall or spring, or preemergence to new mint plantings.
- Dormant Applications: Application can be made to established stands of mint in the spring (after spring cultivation has been completed) or in the fall (after post-harvest cultivation has been completed), prior to emergence of new growth. Split applications of CeraZone can be used for preemergence control of winter and spring annual weeds.
- New Planting Applications: When applying to new mint plantings, reduce rate of application by 25% of the rate listed for established plantings. Apply product preemergence to both weeds and mint.

Tank Mixes

- CeraZone can be mixed with burndown herbicides labeled for use on mint to control emerged weeds. Enhanced control of emerged weeds can be obtained by also adding a surfactant to the tank mix.
- Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of mint.
- Application to mint fields under stress (environmental, cultural, pests, disease) may result in crop injury. Apply to healthy mint fields only.
- To activate herbicide and move product into the soil, moisture (in the form of rain or overhead irritation) is required after application.

Use Restrictions

- The maximum single application rate for this product is 18 fl.oz. (0.35 lbs AI/acre).
- The maximum annual application rate for this product is 18 fl. oz. (0.35 lbs AI/acre).
- Do not apply more than 0.375 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application.
- Do not apply more than two applications per year when using reduced application rate equal to or less than 9 fl. oz./A of this product.
- PHI is 92 days for dormant and new planting applications.
- Do not apply CeraZone to mint plantings once new growth has emerged.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

SOYBEANS

To control susceptible weeds in soybeans, CeraZone can be applied to soybeans in the spring (preemergence or preplant incorporated). CeraZone can also be applied in the fall, before spring planting of soybeans.
When applied as indicated on this label, the following weeds in soybeans will be controlled with CeraZone:

Amaranth, Palmer	Copperleaf, hophornbeam
Kochia (ALS and Triazine resistant)	Lambsquarters, common
Morningglory, spp.	Nightshade
Pigweed, spp.	Prickly sida
Russian Thistle	Waterhemp, spp

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 6.8 to 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- 1.5% to 3.0 % OM, apply 9.0 to 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- Greater than 3.0% OM, apply 12.0 to 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 9.0 to 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 12.0 to 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 15.2 to 18.0 fl. oz. CeraZone per acre [(0.30-0.35 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 12.0 fl. oz. CeraZone per acre [(0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 15.2 fl. oz. CeraZone per acre [(0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 18.0 fl. oz. CeraZone per acre [(0.35 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to the soil surface in the spring, preplant incorporated or preemergence, up to 3 days after planting (applications more than 3 days after planting can result in injury, if seeds are germinating) in conventional, conservation, reduced or no-tillage cropping systems.
- If seedlings are close to soil surface or have emerged, do not apply CeraZone.
- The listed amount of CeraZone can also be applied in the fall in conservation and no tillage cropping systems for burndown of existing crop stubble and weeds and for preemergence control of weeds. For optimum results, fall applications should be a part of weed control programs that include spring herbicide applications the following crop season, as needed. Apply in the fall when soil temperature is sustained at 55 °F down to a depth of 4 inches.
- If using a ridge till production system, form ridges or beds prior to CeraZone application.
- Observe the following date restrictions:
    - Areas north of Interstate 90 – Apply after September 30
    - Areas north of Interstate 70 – Apply after October 15
    - Areas south of Interstate 70 – do not make fall application
- CeraZone can be applied by ground or aerial application. Mix CeraZone in water to make a minimum of 5 gallons of spray solution for aerial application or 10 gallons of spray solution for ground application. Be sure to use enough spray volume for acceptable soil coverage. Spray must be applied with nozzles that produce a minimum amount of fine droplets, but also generate optimum soil coverage.
- If applying the product preplant incorporated, in the spring, mix thoroughly and shallowly incorporate the CeraZone into the soil. Inconsistent weed control can result if product is not uniformly incorporated, or incorporated deeper than the maximum incorporation depth of 2 inches.

Tank Mixes

CeraZone can be mixed with a burndown herbicide to control emerged weeds. For adequate weed coverage when applying in the fall, mix products with water to make a minimum of 20 gallons of finished spray per acre. If weeds are emerged, adjuvants (such as crop oil concentrate (COC) or methalated seed oil (MSO)) can be added to the mix for enhanced burndown activity. For enhanced control of grasses and broadleaf weeds in the spring, CeraZone can be tank mixed with or followed by an application of a postemergence soybean herbicide. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Adverse or poor growing conditions (disease, cool weather, pH of 7.5 and above, prolonged and excessive moisture, poor agronomic practices) can cause undesirable crop response (such as discoloration or stunting). Normal growing conditions will lessen and diminish these effects.
- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of soybean.
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Use Restrictions

- The maximum single application rate for this product is 18 fl.oz. (0.35 lbs AI/acre).
- The maximum annual application rate for this product is 18 fl. oz. (0.35 lbs AI/acre).
- Do not apply more than 0.375 lbs sulfentrazone per acre per 12-month period. If making a preplant fall application, the 12-month period starts at this point.
- Do not apply more than two applications per year when using reduced application rate equal to or less than 9.0 fl. oz./A of this product.
- Do not appliy CeraZone after soybean seed has germinated.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

SUGARCANE

To control susceptible broadleaves, grasses and sedges in sugarcane, CeraZone can be applied to sugarcane at the following times: Preemergent (newly planted) –broadcast or banded; aerial or ground application
Layby – directed spray; ground application
When applied as indicated in this label, the following weeds in sugarcane will be controlled with CeraZone:

Morningglory (entireleaf, ivyleaf, red or tall)
Pigweed, red root
Nutsedge, yellow

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 6.8 – 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 9.0 – 12.5 fl. oz. CeraZone per acre [(0.18-0.24 lbs AI/acre)]
- Greater than 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 15.2 – 18.0 fl. oz. CeraZone per acre [(0.30-0.35 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 12.0 fl. oz. CeraZone per acre [(0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 15.2 fl. oz. CeraZone per acre [(0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 18.0 fl. oz. CeraZone per acre [(0.35 lbs AI/acre)]

OM – Organic Matter
Consult preceding information regarding Coarse, Medium or Fine soil categories.
Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to ratoon or newly planted sugarcane (preemergent) or to sugarcane at lay-by timing (directed spray). CeraZone can be applied aerially (for preemergent application), in a minimum of 5 gallons of spray per acre or by ground equipment (preemergent application or lay-by application), in a minimum of 15 gallons of spray per acre.
- For all applications, use the higher rate on soils with organic matter content higher than 2% or on clay soils.

Tank Mixes

CeraZone can be applied with other herbicides or insecticides registered for use in sugarcane. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of sugarcane.

Use Restrictions

- The maximum single application rate for this product is 18 fl.oz. (0.35 lbs AI/acre).
- The maximum annual application rate for this product is 18 fl. oz. (0.35 lbs AI/acre).
- Do not apply more than 0.375 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application.
- Do not apply more than two applications per year when using reduced application rate equal to or less than 9.0 fl. oz./A of this product.
- Pre harvest interval is 120 days. Do not apply CeraZone within 120 days of harvest.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not contact crop leaves with CeraZone.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

SUNFLOWERS

To control or suppress weeds in sunflowers, CeraZone can be applied at the following times:
In the Fall (Preplant), before spring planting of sunflowers (Fall applications allowed only in ND, SD, MT, MN, WY, CO, NE, KS) In the Spring (Early Preplant, Preemergence, Preplant Incorporated), prior to planting up to three days after planting.
When applied as indicated on this label, the following weeds in sunflowers will be controlled with CeraZone:

Amaranth, Palmer
Filaree, redstem

	Kochia (ALS and Triazine Resistant)	Lambsquarters, common
	Morningglory (ivyleaf and tall)	Nightshade, Eastern black
	Pigweed (red root, smooth)	Sida, prickly
	Thistle, Russian	Waterhemp (common, tall)

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 4.5 to 5.65 fl. oz. CeraZone per acre [(0.09-0.11 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 4.5 – 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- Greater than 3.0% OM, apply 5.65 – 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 4.5 to 6.8 fl. oz. CeraZone per acre [(0.09-0.13 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 5.65 to 9.0 fl. oz. CeraZone per acre [(0.11-0.18 lbs AI/acre)]
- Greater than 3.0% OM, apply 6.8 to 10.2 fl. oz. CeraZone per acre [(0.13-0.20 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 5.65 to 7.9 fl. oz. CeraZone per acre [(0.11-0.15 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 6.8 to 10.2 fl. oz. CeraZone per acre [(0.13-0.20 lbs AI/acre)]
- Greater than 3.0% OM, apply 9.0 to 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]

OM – Organic Matter

Consult preceding information regarding Coarse, Medium or Fine soil categories.

Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Apply amount of CeraZone indicated above to stubble or to the soil surface preplant in the fall (fall use only in ND, SD, MT, MN, WY, CO, NE, or KS), or early preplant, preemergence or preplant incorporated in the spring prior to planting up to three days after planting (if seed furrow is closed completely and seedlings have not broken the soil surface). For applications in the fall, use a mid to high-rate range for your soil type and for applications in the spring greater than three weeks prior to planting, use a high-rate range for your soil type, because of the extended time period between application and planting. Plant a minimum of 7 days after application if soil is coarse textured and contains less than 1.5% organic matter.
- If applying this product preplant incorporated in the spring, to reduced or conventional tillage sunflowers, mix thoroughly or shallowly incorporate the CeraZone into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.
- Moisture (in the form of rain or snow) should occur after application to move the product into the soil. If dry conditions persist, a shallow incorporation may be needed.
- For maximum weed control, disturb the soil surface as little as possible after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. To prevent runoff of CeraZone from snowmelt or rain, do not apply CeraZone to soils that are frozen or have an existing snow cover.

Tank Mixes

CeraZone can be tank mixed or split-applied with burndown herbicides such as paraquat or glyphosate at their full labeled rate to control emerged weeds. CeraZone can be tank mixed with other herbicides labeled for use on sunflowers to enhance weed control and suppression. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings and other restrictions.

Precautions

- Reduce rate of CeraZone on coarse textured soil with organic matter less than 1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of sunflowers.

Use Restrictions

- The maximum single application rate for this product is 12 fl.oz. (0.23 lbs AI/acre).
- The maximum annual application rate for this product is 12 fl. oz. (0.23 lbs AI/acre).
- Do not apply more than 0.25 lbs sulfentrazone per acre per 12 month period. The 12 month period starts at the point of first application.
- Do not apply more than two applications per year when using reduced application rate equal to or less than 6.0 fl. oz./A of this product.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not incorporate into the soil any deeper than 2 inches.

- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.
- Do not apply using a mechanically pressurized handgun.

TOBACCO (Burley, Flue-Cured, and Dark)

CeraZone can be applied preemergence or preplant incorporated to tobacco transplants, for control of susceptible weeds. When applied as indicated on this label, the following weeds in tobacco will be controlled with CeraZone:

Amaranthus, livid	Filaree, redstem
Galinsoga, hairy	Lambsquarters, common
Morningglory (ivyleaf, tall)	Pigweed (redroot, smooth)
Sida, prickly	Signalgrass, broadleaf
Smartweed, Pennsylvania	

See Listed Weed Species section of this label for information on additional weeds.

Application Rates

For Coarse Textured Soils

- Less than 1.5% OM, apply 6.8 – 9.0 fl. oz. CeraZone per acre [(0.13-0.18 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- Greater than 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]

For Medium Textured Soils

- Less than 1.5% OM, apply 9.0 – 12.0 fl. oz. CeraZone per acre [(0.18-0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 12.0 – 15.2 fl. oz. CeraZone per acre [(0.23-0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 15.2 – 18.0 fl. oz. CeraZone per acre [(0.30-0.35 lbs AI/acre)]

For Fine Textured Soils

- Less than 1.5% OM, apply 12.0 fl. oz. CeraZone per acre [(0.23 lbs AI/acre)]
- 1.5% to 3.0% OM, apply 15.2 fl. oz. CeraZone per acre [(0.30 lbs AI/acre)]
- Greater than 3.0% OM, apply 18.0 fl. oz. CeraZone per acre [(0.35 lbs AI/acre)]

OM – Organic Matter

Consult preceding information regarding Coarse, Medium or Fine soil categories.

Use rate is inversely dependent on soil pH – use higher CeraZone rates with lower soil pH rates (7.0 and lower) and lower CeraZone rates with higher soil pH rates (greater than 7.0).

Application Instructions

- Amount of CeraZone indicated above can be broadcast applied to the soil surface preplant or preplant incorporated, in a minimum of 10 gallons of finished product per acre, from 14 days to 12 hours before transplanting tobacco.
- If applying the product preplant incorporated, shallowly incorporate the CeraZone into the soil. Inconsistent weed control can result if product is not uniformly incorporated, or incorporated deeper than the maximum incorporation depth of 2 inches.
- When applying on Non-Bedded Fields (i.e., raised beds not formed prior to transplanting) and CeraZone is surface applied – use light finishing equipment to remove equipment tracks from the field after application, and do not disturb the soil to a depth greater than 2 inches. Reduced or unacceptable weed control could occur in the drill if pre-transplant surface applications are not followed by timely cultivations.
- When applying to Bedded Fields (i.e., raised beds formed prior to transplanting), any dragging or knocking down of beds prior to transplanting must occur prior to CeraZone application. CeraZone can concentrate in the bed if the product is not mixed thoroughly and uniformly into the soil, or incorporated deeper than the maximum incorporation depth of 2 inches.
- New tobacco transplants can be replanted if the first transplant does not produce a uniform stand. If replanting:
    - Do not re-treat fields with a second application of CeraZone or any other sulfentrazone product.
    - Do not reform beds prior to replanting; plant new transplants into existing beds that have already been treated with CeraZone.

Tank Mixes

CeraZone can be mixed with a grass herbicide (or grass herbicide can be applied separately), to give optimum broad-spectrum grass weed control. Read and follow the label of each product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Precautions

- Adverse or poor growing conditions (disease, cold weather, unfavorable pH soils, excessive moisture or drought, poor agronomic practices or other unfavorable conditions) can cause undesirable crop response in tobacco transplants, particularly if they are weakened and are in conditions of compacted or saturated soil or poor drainage. Normal growing conditions will lessen and diminish these effects.
- If transplants are set too shallowly, if heavy rainfall occurs after transplant, temporary stunting of transplants can occur.
- Observe responsible transplanting practices to avoid exposure (i.e., washing or crusting over) of transplants to treated soil. Necrosis (typically localized and inconsequential) can be caused if treated soil is splashed onto tobacco leaves.
- Consult with university or extension weed management specialists for information on using CeraZone with specific local varieties or cultivars of tobacco, and for agronomic recommendations for local conditions and specific tobacco varieties.
- Mix thoroughly and uniformly to avoid inconsistent weed control or concentrating CeraZone into the soil (which can result in crop injury.) Additionally, do not perform other tillage practices that could concentrate CeraZone into the soil..

Use Restrictions

- The maximum single application rate for this product is 18 fl.oz. (0.35 lbs AI/acre).
- The maximum annual application rate for this product is 18 fl. oz. (0.35 lbs AI/acre).
- Do not apply more than 0.375 lbs sulfentrazone per acre per 12-month period. The 12-month period starts at the point of first application.
- Do not apply more than two applications per year when using reduced application rate equal to or less than 9.0 fl. oz./A of this product.
- Do not apply CeraZone to shade grown tobacco, tobacco seedling beds, or tobacco in greenhouses.
- To avoid unacceptable injury, do not apply CeraZone post-transplant.
- Do not use on soils that contain less than 1% organic matter (soils classified as ‘sand’).
- Do not incorporate into the soil any deeper than 2 inches.
- Do not perform other tillage practices that could concentrate CeraZone into the soil.
- Do not apply to frozen soils or existing snow cover to prevent runoff from rain or snowmelt that may occur following application.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep pesticide in original container. Store product away from direct sunlight between 40°F and 90°F.

PESTICIDE DISPOSAL: Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of empty bag in a sanitary landfill or by other procedures approved by State and local authorities.

Conditions of Sale and Warranty

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product.

Crop injury, ineffectiveness, or other unintended consequences may result due to such factors as weather or crop conditions, manner of use or application, presence of other material or other influencing factors in the use of the product, which are beyond the control of Ceradis B.V., the manufacturer or the seller. Buyer and User agree to hold Ceradis B.V. and Seller harmless for any claims relating to such factors, to the extent permitted by applicable law.

To the extent consistent with the applicable law, Ceradis B.V. makes no other warranties of merchantability or fitness for a particular purpose.

To the extent consistent with the applicable law, the exclusive remedy of the User or Buyer for any and all claims, losses, injuries or damage resulting from the use or handling of this product (including claims based on contract, warranty, negligence, strict liability, tort or otherwise) shall not exceed the purchase price paid by the User or Buyer for the quantity of this product involved.

To the extent consistent with the applicable law, in no event shall Ceradis B.V. or the Seller be liable for special, incidental or consequential damages resulting from the use, handling, application, storage or disposal of this product.

No agent or employee at Ceradis B.V. or seller is authorized to modify the terms of the warranty disclaimer or the product's label. Buyer and User accept the Conditions of Sale and Warranty by opening and using the product.