Record-Keeping Procedures
Emergency Preparedness and Response Measures
Posting Fumigant Buffer Zones
Buffer Zone Distances
Buffer zone proximity
Structures under the control of the owner of the application block
Areas not under the control of the owner of the application block
Buffer Zone Distances
Buffer Zone Credits
Posting Fumigant Buffer Zones
Restrictions for Difficult to Evacuate Sites
Emergency Preparedness and Response Measures
Triggers for Emergency Preparedness and Response Measures
Fumigant Site Monitoring
Response Information for Neighbors
Notice to State and Tribal Lead Agencies
Site-Specific Fumigation Management Plan (FMP)
Record-Keeping Procedures
PESTS LISTED ON THIS LABEL
Storage and Disposal
LIMITED WARRANTY AND DISCLAIMER
In addition, when an air-purifying respirator is required under this label's Directions for Use, Protection for Handlers, Respiratory Protection and/or Stop Work Triggers section, handlers must wear at minimum either:

- A NIOSH certified full facepiece air-purifying respirator equipped with an organic vapor (OV, NIOSH approval prefix TC-23C) cartridge and a particulate pre-filter (Type N, R, P, or HE, NIOSH approval number prefix TC-84A), or
- A gas mask with a canister approved for organic vapor (NIOSH approval number prefix TC-14G).

Cartridges or canisters may be replaced when odor or sensory irritation from this product becomes apparent during use, if the measured concentration of Methyl Isothiocyanate (MITC) is greater than 6000 ppm (6 ppm), or in the absence of any other instructions or indications of service life, at the end of each day's work period.

User Safety Requirements

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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 gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Dazomet has certain properties and characteristics in common with chemicals that have been detected in groundwater (dazomet is highly soluble in water and has low adsorption to soil).

For untargeted applications, leaching and runoff may occur if there is heavy rainfall after soil fumigation.

Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

DIRECTIONS FOR USE

Restricted Use Pesticide

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 handlers may be in the application block from the start of the application until the entry restricted period ends, and in the buffer zone during the buffer zone period. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Refer to supplemental labeling under "Agricultural Use Requirements" in this section for information about this standard.

All applicable directions, restrictions, precautions and WARRANTY are to be followed. This labeling must be in the user’s possession during application.

Agricultural Use Requirements

Use this product only in accordance with its label and with the Worker Protection Standard, 40 CFR 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.

For the entry restricted period and notification requirements, see the Entry Restricted Period and Notification sections of this labeling. PPE for Entry During the Entry-Restricted Period: PPE for entry that is permitted by this label is listed in the Personal Protective Equipment (PPE) section of this label.

Terms used in this labeling

Soil Fumigant Training Program: Certified applicator training that provides information on

(1) how to correctly apply the fumigant, including how to comply with new label requirements;
(2) how to protect handlers and bystanders;
(3) how to determine buffer zone distances;
(4) how to complete an FMP and the post-application summary;
(5) how to determine when weather and other site-specific factors are not favorable for fumigant application;
(6) how to comply with required GAPs and how to document compliance with GAPs in the FMP;
and
(7) how to develop and implement emergency response plans.

Fumigant Safe Handling Information: Information that must be provided annually to handlers that must include the following:

(1) what fumigants are and how they work,
(2) safe application and handling of soil fumigants,
(3) air monitoring and respiratory protection requirements for handlers,
(4) early signs and symptoms of exposure,
(5) appropriate steps to take to mitigate exposures,
(6) what to do in case of an emergency,
and
(7) how to report incidents.

Application Block: Area within the perimeter of the fumigated portion of a field or greenhouse (including furrows, irrigation ditches, roadways). The perimeter of the application block is the border that connects the outermost edges of total area treated with the fumigant product.

Application Rate: The ratio of fumigant mass applied compared to the soil surface area (e.g., lbs of product in 1000 lbs of soil). The application rate is expressed on this labeling in terms of either the "treated area application rate" or the "broadcast equivalent application rate." The "treated area application rate" relates to the rate of fumigant applied to the entire area of the soil that is fumigated (e.g., rate within the bed or strips). The "broadcast equivalent application rate" relates to the rate of fumigant applied within the entire perimeter of the application block. For bedded and strip applications, the "broadcast equivalent application rate" must be calculated to determine the buffer zone distance required by this labeling.

Start of the Application: The time at which the fumigant is first delivered/dispersed into the soil in the application block.

Application is Complete: The time at which the fumigant has stopped being delivered/dispersed into the soil and the soil has been sealed on Day 1 (see the Water Requirements section).

Entry Restricted Period: This period begins at the start of the application and expires depending on the application method and if tarp are used when the tarp are perforated and removed. Entry into the application block during this period is only allowed for appropriately PPE-equipped handlers performing handling tasks. See the Entry Restricted Period and Notification section for additional information.

Buffer Zone: An area established around the perimeter of each application block. The buffer zone must extend outward from the edge of the application block perimeter equally in all directions.

Buffer Zone Period: Begins at the start of the application and lasts for a minimum of 48-hours after the application is complete. Non-handlers must be excluded from the buffer zone during the buffer zone period.

Difficult to Evacuate Sites: Pre-K to Grade 12 schools, state licensed daycare centers, nursing homes, assisted living facilities, hospitals, in-patient clinics, and prisons.

Owner: Any person who has a present possessory interest (fee, leasehold, rental, or other) in an agricultural establishment. A person who has both leased such agricultural establishment to another person and granted that same person the right and full authority to manage and govern the use of such agricultural establishment is not an owner. See definition of "owner" in WPS (40 CFR §170.3).

Roadway: A portion of a street or highway improved, designed or ordinarily used for vehicular travel, exclusive of the sidewalk or shoulder even if such sidewalk or shoulder is used by persons riding bicycles. In the event a highway includes two or more separated roadways, the term roadway shall refer to any such roadway separately.

Representative Handling Task: For air monitoring, the locations and handler activities sampled must represent each handler's exposure occurring within the application block. For example, for an application consisting of a seven-handler crew (1 tractor driver, 1 tractor co-pilot, 4 shovelers, and 1 certified applicator supervising) two breathing zone samples could be collected: one sample for the tractor co-pilot and one sample for a downwind shoveler. Results of previous sampling may indicate which tasks and locations are worst case and therefore representative of all handlers.

Use Method Restrictions

The use of this product is restricted to the methods described in this label.

Certified Applicator Training

Any certified applicator supervising a soil fumigant application must have successfully completed an applicable soil fumigant training programs listed on the following EPA website: www.epa.gov/fumiganttraining for the active ingredient(s) in this product. The training must be completed in the time frames listed on the website. The FMP must document the date and location where the soil fumigant training program was completed.

Entry Restricted Period and Notification

Entry Restrictions

Entry (including early entry that would otherwise be permitted under the WPS) by any person – other than a correctly trained and PPE-equipped handler who is performing a handling task listed on this labeling – is PROHIBITED - from the start of the application until:

- 25 days (120 hours) after the application is complete for untargeted applications, or
- 5 days (120 hours) after the application is complete if tarp are not perforated and removed for at least 14 days after the application is complete, or
- 48 hours after tarp perforation is complete if tarp will be perforated within 14 days after the application is complete and will not be removed for at least 14 days after the application is complete, or
- tarp removal is completed if tarp are both perforated and removed less than 14 days after the application is complete, or
- 48 hours after tarp perforation is complete if tarps will be perforated within 14 days after the application is complete, or
- 5 days (120 hours) after the application is complete if tarps will be perforated within 14 days after the application is complete, or
- tarp removal is completed if tarp are both perforated and removed less than 14 days after the application is complete.

NOTES:

- See Tarp Perforation and/or Removal section on this labeling for requirements about when tarp are allowed to be perforated.
- If early tarp removal occurs for a broadcast application the entry restricted period is a minimum of 5 days after the application is complete.
- When listing application information for soil fumigant applications to comply with part 170.122 of the WPS, list the entry restricted period time frame in place of the REI.

NOTIFICATION: Notify workers of the application by warning them orally and by posting Fumigant Treated Area signs. The signs must bear the skull and crossbones symbol and state:

(1) DANGER PERILGRO,
(2) Area under fumigation, DO NOT ENTER/NO ENTRE,
(3) Dazomet Fumigant in USE,
(4) the date and time of fumigation
(5) the date and time entry restricted period is over,
(6) Basamid G,
and
(7) Name, address, and telephone number of the certified applicator in charge of fumigation.

Post the Fumigant Treated Area sign instead of the WPS sign for this application but follow all WPS requirements pertaining to location, legibility, text size, and sign size (40 CFR §170.120).

Post the Fumigant Treated Area signs at all entrances to the application block no sooner than 24 hours prior to application.

Fumigant Treated Area signs must remain posted for no less than the duration of the entry restricted period.

Fumigant Treated Area signs must be removed within 3 days after the end of the entry restricted period.

PPE FOR ENTRY DURING THE ENTRY-RESTRICTED PERIOD: PPE for handler entry that is permitted by the WPS is listed in the Hazards to Humans and Domestic Animals section of this labeling.

2
Protection for Handlers

The following activities are prohibited from being performed by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in WPS (40 CFR 170).

• Monitoring fumigant air concentrations;
• Cleaning up fumigant spills (this does not include emergency personnel not associated with the application);
• Handling or disposing of fumigant containers;
• Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may remain fumigant treated;
• Performing any handling tasks as defined by the WPS (40 CFR 170).

The following activities are prohibited from being performed in the application block from the start of the application until the entry restricted period ends and in the buffer zone during the buffer zone period by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in WPS (40 CFR Part 170).

Prohibited activities (except for trained and equipped handlers) include:

• Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovellers, cross ditchers, or as other direct application participants;
• Installing, repairing, operating, or removing irrigation equipment;
• Performing scouting, crop advising, or monitoring tasks;
• PPE-perforating (cutting, punching, slicing, poking), or removing tarp; and
• Repairing or monitoring tarp until 14 days after application is complete if tarp is not perforated and removed during those 14 days. NOTE: see Tarp Perforation and/or Removal section on this labeling for requirements about when tarps are allowed to be perforated.

Handlers do not include local, state, or federal officials performing inspection, sampling, or other similar official duties.

Supervision of handlers:

For all applications from the start of the application until the application is complete, a certified applicator and the owner of the establishment where the application is taking place must make sure that all persons who are not trained and PPE-equipped and who are not performing one of the handling tasks as stated in this labeling are:

• excluded from the application block during the entry restricted period, and
• excluded from the buffer zone during the buffer zone period (see buffer zone exemption for transit on roadways in Buffer Zone Requirements section).

Local, state, or federal officials performing inspection, sampling, or other similar official duties are not excluded from the application block or the buffer zone by this labeling. The certified applicator supervising the application and the owner of the establishment where the application is taking place are not authorized to, or responsible for, excluding those officials from the application block or the buffer zone.

Providing, cleaning, and maintaining PPE:

The employer of any handler must confirm that an air-purifying respirator and appropriate cartridges of the type specified in the PPE section of this labeling are immediately available for each handler who will wear one. At least one handler must have the appropriate air-purifying respirator and cartridges available (see Respirator Fit Testing, Medical Qualification, and Training section for additional requirements). Exception: After the application is complete, air-purifying respirators do not need to be made available for handlers performing fumigant site monitoring tasks outside of the application block or surrounding buffer zone, or

Respiratory Protection and Stop Work Triggers:

The following procedures must be followed to determine whether an air-purifying respirator is required or if operations must cease for any person performing a handling task (except for fumigant site monitoring outside of the buffer zone) as stated in this label.

If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose), then either:

- An air-purifying respirator must be worn by all handlers who remain in the application block or surrounding buffer zone, or
- Operations must cease and handlers not wearing an air-purifying respirator must leave the application block and surrounding buffer zone.

Handlers can remove air-purifying respirators or resume operations if two consecutive breathing-zone samples taken at the handling site at least 15 minutes apart show that levels of MITC have decreased to less than 6,000 ppb (6 ppm), provided that handlers do not experience sensory irritation. During the collection of air samples, an air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken at the location where the irritation was first experienced or where samples were greater or equal to 6,000 ppb (6 ppm).

When using monitoring devices to monitor air concentration levels, a direct read detection device or a portable electronic device with a breath-by-breath monitor and a rectilinear output (e.g., Draeger, Sensyline) must be used. The devices must have sensitivity of at least 600 ppb (0.6 ppm) for MITC. Persons using direct read detection devices must follow the manufacturer’s directions.

When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a 10 inch radius of the handler’s nose and mouth.

When air-purifying respirators are worn, air monitoring samples must be collected at least every 2 hours in the breathing zone of a handler performing a representative handling task.

If at any time: (1) a handler experiences sensory irritation when wearing an air-purifying respirator, or (2) a MITC air sample is greater than or equal to 6,000 ppb (6 ppm) then all handler activities must cease and handlers must be removed from the application block and surrounding buffer zone.

Handlers can resume work activities without air-purifying respirators if two consecutive breathing-zone samples taken at the handling site at least 15 minutes apart show levels of MITC have decreased to less than 6,000 ppb (6 ppm) and:

- handlers do not experience sensory irritation;
- filter cartridges have been changed;
- During the collection of air samples an air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken at the location where the irritation was first experienced.

Tarp Perforation and/or Removal

IMPORTANT: Persons perforating, repairing, and removing, and/or monitoring tarps are defined, with certain time limitations, as handlers (see Handlers section) and must be provided the PPE and other protections for handlers as required on this labeling and in the Worker Protection Standard for Agricultural Pesticides.

- Tars must not be perforated until a minimum of 5 days (120 hours) have elapsed after the application is complete, unless a weather condition exists which necessitates early perforation or removal (see Early Tarp Removal for Broadcast Applications Only and Early Tarp Perforation during Flood Prevention Activities for Bedded Applications Only requirements).
- If tarps are perforated within 14 days after the application is complete, tarp removal must not begin until at least 2 hours after tarp perforation is complete.
- If tarps are perforated but not removed within 14 days after the application is complete, planting or transplanting must not begin until at least 48 hours after the tarp perforation is complete.
- If tarps are not perforated or removed within 14 days after the application is complete, any fumigation or transplanting tarp are no longer considered to be fumigated.
- Each tarp panel used for broadcast fumigation must be perforated.
- Tars may be perforated manually ONLY for the following situations:
  - At the beginning of each row where a coultor blade (or other device which performs the application) no longer performing its intended function and is creating a hazard.
  - In fields that are 1 acre or less.
  - During flood prevention activities.
  - In all other instances tarps must be perforated (cut, punched, poked, or sliced) only by mechanical methods.
- Tarp perforation for broadcast fumigations must be completed before noon.
- For broadcast fumigations tars must not be perforated if rainfall is expected within 12 hours.

Mandatory Good Agricultural Practices (GAPs)

The following GAPs must be followed during all fumigant applications.

Weather Conditions:

To determine if unfavorable weather conditions exist or are predicted (see Identifying Unfavorable Weather Conditions) and whether application should proceed, the National Weather Service weather forecast must be checked by the certified applicator supervising the application, and whether they have complied with the following requirements.

- on the day of, but prior to the start of the application, and
- on a daily basis during applications if the time period from the start of the application until the application is complete is greater than 24 hours.
• Do not apply if an air-stagnation advisory issued by the National Weather Service is in effect for the area in which the application is planned, during the application, or the 48 hours after the application is complete.
• Do not apply if light wind conditions (< 2 mph) are forecast to persist for more than 18 consecutive hours from the time the application starts until 48 hours after the application is complete.
• Detailed National Weather Service forecasts for local weather conditions, wind speed, and air stagnation advisories may be obtained on-line at: http://www.rws.noaa.gov, or by contacting your local National Weather Service Forecasting Office.

Identifying Unfavorable Weather Conditions
• Unfavorable weather conditions block upward movement of air, which results in trapping fumigant vapors near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist within an hour prior to sunset and continue past sunrise and may persist as late as noontime. Unfavorable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.

Application Restrictions
• Do not use dazomet when the soil temperature is over 90 degrees F, 2 inches deep. The soil temperature must be above 43° F (6° C) and remain at least this high during the entire fumigation period. Application in the field during periods of possible frost must be avoided. If the soil temperature falls below 43° F (6° C), the gas may sink into deeper soil layers when there is danger of frost which can cause crop injury later if the soil is not aerated deeply enough. The best conditions prevail at soil temperatures of 54-69° F (12-20 ° C). Do not apply Basamid® G if the soil temperature exceeds 90° F (32° C), 2 inches deep or the ambient air temperature exceeds 103° F (39° C). If the soil temperature is too high, the gases escape too rapidly from the soil, resulting in inadequate fumigation.
• Do not apply within 3-4 feet of growing plants or closer than the drip line of trees and large shrubs. If slopes are treated with this product, take precautions to prevent the chemical from washing downward to growing plants.
• The area intended for treatment should be in seedbed condition with a fine tilth, free of clods. Do not apply dazomet to dry or improperly tilled soil. Repeated cultivation before treating will improve control of perennial weeds. Ditching around the site will prevent weed seeds, nematodes, and fungi from washing into the treated area and contaminating it.
• Do not apply dazomet if ambient air temperature exceeds 103 degrees F. Do not store dazomet in an open spreader overnight.
• Do not apply dazomet if ambient air temperature exceeds 103 degrees F.
• Do not store dazomet to dry or improperly tilled soil. Repeated cultivation before treating will improve control of perennial weeds. Ditching around the site will prevent weed seeds, nematodes, and fungi from washing into the treated area and contaminating it.
• Do not apply dazomet if ambient air temperature exceeds 103 degrees F. Do not store dazomet in an open spreader overnight.
• Do not apply dazomet if ambient air temperature exceeds 103 degrees F.

Water Requirements
For optimal effect, the soil to be fumigated must have sufficient moisture for good plant growth (at least 50% available water capacity) for 5-14 days (depending on temperature) before the treatment.
• Prior to application, soil moisture should be at 60-80% field capacity for sand, 50% for loam, and 30-40% for clay soils.

For both water incorporated and mechanically incorporated applications:
Apply Basamid® G to the soil after spreading, apply overhead irrigation to activate Basamid® G and seal the soil surface.
• Day 1: Irrigate sufficient to move the water front 4 to 6 inches into the soil profile. Depending on soil type, structure, and weather conditions, apply 0.75 to 1 inches of water. Repeat the application, as necessary, to ensure the soil profile is thoroughly wetted and all granules are activated.

• Day 2: Continue irrigation to ensure the surface area retains sealed but not waterlogged. Typically, half the amount of water applied on Day 1 should be sufficient. Make multiple applications, depending on local conditions, to ensure that no gases escape as they move up through the soil.

• Day 3: Continue irrigations to ensure the surface area does not dry out and no cracks appear in the treated area. Typically half the amount of water applied on Day 2. Make multiple applications, depending on local conditions, to ensure that no gases escape as they move up through the soil.

• Day 4: Irrigate with a minimal amount of water to keep the surface sealed and free of cracks. Typically, half the amount of water applied on Day 3. Make multiple applications, depending on local conditions.

Calculating the Broadcast Equivalent Rate
To calculate the broadcast equivalent rate for bedded or strip applications the following information is needed:
• Pounds of product per treated acre
• Pounds of product per treated acre

= broadcast equivalent rate (pounds product/acre) x area of strip or bed bottom width (inches) x center-to-center row spacing (inches) x application block size (acres)

= 30 inch width beds x 9.75 acres x 0.25 acres
= 60 inch row spacing x 9.75 acres x 10 acres
= 97.5 lbs product/acre

For all use sites
Application with hand equipment is prohibited.
For greenhouse applications
The maximum application block size that can be treated is 50,000 square feet.
During the application keep all doors, vents, and windows to the outside open, and keep all fans or mechanical ventilation systems running within the greenhouse.

For all use sites
Application with hand equipment is prohibited.
The application rates in Table 1 are based on an incorporation depth of 6 inches. Additional Basamid® G is needed when the infestation extends to greater depths. For specific use recommendations, see SITE-SPECIFIC INFORMATION.

Table 1. Basamid® G Application Rates

(Do not exceed the maximum application rates identified in the Maximum Application Rates for Pre-Plant Soil Fumigation section of this label).

<table>
<thead>
<tr>
<th>Weeds, Nematodes, and Diseases</th>
<th>Application Rate at 6 Inch Incorporation Depth</th>
<th>Ounces Per 100 sq feet</th>
<th>Pounds Per 1000 sq feet</th>
<th>Pounds of product/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>To control soil borne pathogens 1/2</td>
<td>10 – 13</td>
<td>6 – 8</td>
<td>257-347</td>
<td>5 – 7</td>
</tr>
<tr>
<td>To control weeds 2</td>
<td>Seed propagated</td>
<td>8 – 17</td>
<td>5 – 10</td>
<td>218-446</td>
</tr>
<tr>
<td>To control ectoparasitic root nematodes 3</td>
<td>Root propagated</td>
<td>8 – 19</td>
<td>5 – 12</td>
<td>218-525</td>
</tr>
<tr>
<td>To control root-knot nematodes</td>
<td>in light soils</td>
<td>11 – 13</td>
<td>7 – 8</td>
<td>302-347</td>
</tr>
<tr>
<td>To reduce infestations of stem and cyst nematodes 4</td>
<td>in heavy soils</td>
<td>13 – 17</td>
<td>8 – 10</td>
<td>347-446</td>
</tr>
<tr>
<td>Product needed per 4 inches of additional soil depth</td>
<td>5 – 7</td>
<td>3 – 4</td>
<td>135-175</td>
<td>--</td>
</tr>
</tbody>
</table>

1) Soils infected with the fungi Verticillium albo-atrum and Fusarium oxysporum must be treated to a depth of 12” (13 ounces per 100 square feet or 8 pounds per 1,000 square feet).
2) If the primary goal is to eliminate annual weeds, 8 ounces per 100 square feet should be incorporated into the top 6 inches.
3) For lighter soils that are heavily infested with nematodes, use the application rates recommended for heavy soils.
4) Mechanically incorporate plant parts into the soil to boost their disintegration and improve the degree of reduction.

Summary of Uses

Basamid® G soil fumigant is intended for pre-planting control of most weeds, nematodes, and soil diseases of turfgrass and ornamental plants:
- Ornamental Sites – such as flowers, bedding plants, ground cover, seed or propagating beds
- Field Nurseries – such as forest, nonbearing and ornamental, shrubs, or Christmas tree seedlings
- Turf Sites - establishment or renovation of existing sites such as golf courses (fairways, tees, greens), athletic fields, soil farms, or lawns
- Greenhouses
- hoop Hoses
- Soil Media - such as potting soil, soil heaps, or compost piles
- Interplanting
- Nonbearing Crops

Weeds controlled

When properly applied, this product will eliminate many weeds such as crabgrass, henbit, pigweed, foxtail, purslane, mustard, witchweed, and many other plants and weed seeds. For a complete list see Table 5 – Germinating Seeds of Annual and Perennial Weeds, Table 6 – Root Propagated Weeds, and Table 7 – Parasitic weeds.

Nematodes controlled

This product will control root knot, stubby root, encephalitic root, and certain additional nematodes. For a complete list see Table 8 – Plant-parasitic nematodes.

Diseases controlled

This product will control root rots, damping off, and wilt diseases caused by Aphanomyces sp., Fusarium sp., Phytophthora cactorum, Pythium sp., Rhizoctonia sp., Thielaviopsis basica, Verticillium albo-atrum, and soil-borne Stramonium gladioloid and corn rot of gladiolus caused by Fusarium sp. For a complete list see Table 9 – Soil-borne Fungi and Table 10 – Soil-borne Bacteria.

APPLICATION INSTRUCTIONS

Preparation Prior to Application
1) Basamid® G can be applied to tilled and non-tilled sites:
   a. Tilled Sites: The area intended for treatment should be in seedbed condition with a fine tilth, free of clods. Repeated cultivation before treatment will improve control of perennial weeds.
   b. Non-Tilled Sites: Remove existing vegetation with a mower or other suitable equipment. The vegetation must be cut to the lowest height possible, 1/8-inch or less. Aerate and/or vertical to improve water penetration and remove surface debris.
2) In till sites, weed seeds or plant material bearing nematodes must be mechanically hoed or plowed into the soil 1-2 weeks before fumigating so that the emerging weeds and nematodes are subject to fumigation.
3) If root-knot nematodes must be controlled, delay application at least 2-3 weeks, until the root-knot infested root residues have begun to decompose and the remaining plant refuse has been incorporated into the soil.
4) Do not apply farmyard manure, peat, other organic fertilizers, burnt lime, or lime nitrogen just before, with, or just after this product.
5) Converting the active ingredient into the gaseous phase depends primarily on soil moisture and temperature (see Application Restrictions and Water Requirements in the GAPs section of this label).

Methods of Application

Apply Basamid® G soil fumigant to properly prepared soils using scoops, shakers, shanks, drop-type fertilizer spreaders, or other suitable equipment. To prevent Basamid® G from sticking to the teeth of the application equipment, the surface of the soil should be dry to the touch at the time of application. Either incorporate the material physically into the soil to the desired depth, or incorporate the material into the soil with water if fumigation is not practical. The soil surface should be seeded as described in the Preparation Prior to Application section. DO NOT store Basamid® G in an unventilated container. DO NOT apply Basamid® G when wind may cause granules to drift from target area.

Physical/Mechanical Incorporation for Combined Disease, Nematode, and Weed Control
1) Apply Basamid® G to the soil.
2) After applying, incorporate the granules into the soil as uniformly as possible to the desired depth. This is best accomplished with an L-shaped lrotoritor or spading machine.
3) Following incorporation, seal the soil surface by smoothing or rolling to impede fumigant escape.
4) The treatment is more successful if the incorporation and sealing is followed by thoroughly wetting the soil, keeping it moist (but not waterlogged) for 72 hours. Alternatively, the soil can be covered with a tarp (e.g. barrier film) (such as polyethylene sheeting or other material) to retain fumigant vapors.

Water Incorporation with Drip Irrigation for Disease and Weed Control
1) Drip irrigation tape or tubing can be applied prior to, or following, the Basamid® G application.
2) Apply Basamid® G to the soil.
3) After applying, cover with tarp (e.g., plastic mulch).
4) Activate the Basamid® G using drip irrigation, wetting entirely to the margins of the treated area (such as bed shoulders).
5) The soil must be kept moist (but not waterlogged) for 72 hours.

Preparation Prior to Planting

Before seeding, planting, or transplanting, all the gaseous residues must be gone from the soil. The time between treatment and replanting depends on soil temperature, structure, moisture, and the method of sealing. Do not plant any crop until all fumigant odors have dissipated from the soil and can no longer be detected. Follow the instructions below to allow any remaining fumigant gases to escape from treated soil before planting. As an added precaution, conduct a cress or lettuce seed germination test as follows:

Safety Germination Test
1) Take soil samples at several places in the treated area. Scrape the surface soil aside and quickly fill a sample into a clear (transparent) glass jar. Do not take soil from below the depth of incorporation. Depending on the size of the jar used, either combine sample from a single jar or fill each sample into a separate jar. Fill the jars about halfway and seal them. As a control, fill an additional jar with untreated soil and seal.
2) Sow a small amount of cress (Lipidium sativum) or lettuce (Lactuca sativa) seeds directly onto the soil and seal the jars. Use the same amount of seed in each jar. The soil should be sufficiently moist to assure quick germination.
3) Place the jars in a room with sufficient temperature to allow for speedy germination. Check for germination after 2 to 3 days. If the seeds have germinated in the jar with the untreated soil but not in the jars with the treated soil, MITC has not yet completely degraded and the treated soil should not be planted. In this case, repeat the germination test after an additional 1-3 days aeration of the treated area. If seeds in all jars germinate normally, and begin to develop normal roots, it is safe to plant the crop.

Soils without Tarps (e.g., Plastic Covers or Mulch)

Aerate the soil with hand implements, rakes, or power tillers above the depth of original incorporation as non-fumigated soil may be transported up from lower layers. A new fumigation can spread very quickly in decontaminated soil and jeopardize the success of the treatment. Avoid planting into treated soil within 1 week after Basamid® G application to allow fumigation to occur and MITC gas to dissipate to levels safe for planting. Table 1 – Planting Recommendations: Soil Temperature and Waiting Period provides recommended waiting periods between treatment and planting based on soil temperature. The waiting period can be shortened by repeated hoeing, digging, or other tillage of the soil to speed aeration.

Longer waiting periods may be required in soils with high concentrations of organic matter. Fail soil treatment is recommended if early spring planting is necessary.

Table 2. Planting Recommendations: Soil Temperature and Waiting Period without Tarps

<table>
<thead>
<tr>
<th>Soil Temperature at 4” Depth</th>
<th>Gas Activity (Days)</th>
<th>Aeration Time (Days)</th>
<th>Germination Test (Days)</th>
<th>Recommended Waiting Period from Treatment to Planting (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>77°F (25°C)</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>68°F (20°C)</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>59°F (15°C)</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>50°F (10°C)</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>41°F (5°C)</td>
<td>25</td>
<td>20</td>
<td>2</td>
<td>47</td>
</tr>
</tbody>
</table>

Soils Covered with Tarps

Transplants, bulbs, or seeds can be planted directly into a previously treated bed if certain precautions are followed. The plastic sheeting used to cover a treated area can also function as a mulch and be left in place in the field. For this application, observe the following steps:
1) A cutting period (see Table 3 – Planting Recommendations: Soil Temperature and Waiting Period with Tarps) is recommended between application and planting.
2) Cut holes in the plastic 4 to 7 days before the intended planting date. Cultivation to aerate treated soil cannot be performed before planting as in situations where plastic mulch is not present.
3) Perform Safety Germination Test.
4) Proceed with planting if the seeds germinate normally as described in the Safety Germination Test.

Table 3. Planting Recommendations: Soil Temperature and Waiting Period with Tarps

<table>
<thead>
<tr>
<th>Soil Temperature at 4” Depth</th>
<th>Recommended Waiting Period from Treatment to Planting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 75°F (24°C)</td>
<td>14 days</td>
</tr>
<tr>
<td>66-75°F (18-24°C)</td>
<td>21 days</td>
</tr>
<tr>
<td>55-65°F (13-18°C)</td>
<td>30 days</td>
</tr>
</tbody>
</table>

5
GENERAL RESTRICTIONS AND LIMITATIONS

Maximum seasonal use rate: Refer to Table 1 – Basamid® G Application Rates for maximum rates of Basamid® G soil fumigant per acre, per season.
1) Preharvest Interval (PHI): Refer to Preparation Prior to Planting.
2) Entry Restricted Period: Refer to Agricultural Use Requirements
3) Crop Rotation Restriction: If all lab procedures are followed correctly and all gases have escaped, no crop rotation restrictions apply.
4) This product cannot be used to formulate or reformulate any other pesticide product.
5) DO NOT use Basamid® G when soil temperatures 4° deep are below 43° F (6° C) or above 90° F (32° C).
6) DO NOT plant any crop until all fumigant gases have dissipated from the soil. A Safety Germination Test is recommended.
7) DO NOT apply within 3-4 feet of growing plants or closer than the drip line of trees and large shrubs.

SITE SPECIFIC INFORMATION

Turf Sites - Establishment or Renovation
Basamid® G can be used for new construction or renovation of existing turf sites such as golf courses (fairways, tees, greens), athletic fields, sod farms, or lawns. Site preparation prior to applying Basamid® G on such sites may differ depending on the type of turf, i.e. cool season vs. warm season grasses.
1) Cool Season Grass – Typically a renovation of a turf site to kill the existing grasses and versus warm season grasses.
2) Warm Season Grass - Most warm season turf situations involve the removal, or mechanical incorporation, of a thatch layer consisting of rhizomes and/or stolons. Under these conditions, the treatments of applications of a broad spectrum herbicide, such as glyphosate, prior to disturbing the soil is generally beneficial.

In both turf situations, follow the instructions in Preparation Prior to Application and apply the recommended rate (see Table 1 – Basamid® G Application Rates) using a drop-type spreader. Incorporate and seal the soil surface by following the instructions in Preparation Prior to Application - Water Incorporation with Overhead Irrigation for Disease and Weed Control. Prior to seeding, sodding, or sprigging follow the instructions in Preparation Prior to Planting. For additional information contact your Certis representative.

Greenhouses
Basamid® G can be used for fumigation in greenhouses. Observe all Personal Protective Equipment (PPE) requirements for use in greenhouses and other enclosed areas. During the application keep all doors, vents, and windows to the outside open, and keep all fans or mechanical ventilation systems running within the greenhouse. Before applying Basamid® G soil fumigant in greenhouses, nursery boxes, etc., all plants and living plant materials must be removed. Leaks through which gases could penetrate into adjacent rooms or greenhouses filled with plants must be sealed. Various ornamentals (e.g., Ficus sp., Hydrogyna macrophylla, Asparagus plumosus) are very sensitive to trace amounts of MITC. Follow instructions in Preparation Prior to Application. Select an appropriate application rate (see Table 1 – Basamid® G Application Rates) and methodology as outlined in Methods of Application. Follow fumigation, and before turning off the heat in a greenhouse closing for the winter, a germination test must be performed to ensure that MITC has completely degraded. Failing to eliminate all the gases from the soil may delay spring planting or cause plant loss. Prior to seeding or transplanting follow the instructions in Preparation Prior to Planting

Requirements for Pre-Plant Greenhouse Soil Fumigations: The maximum application block size that can be treated is 50,000 square feet.

Soil Media
Basamid® G can be used for disinfection of soil media, such as potting soils, soil heaps, or compost piles. Mechanically incorporate the recommended amount of product (see Table 1 – Basamid® G Application Rates) per cubic yard of substrate. Soil media should be maintained at 60-80% field capacity for sand, 50% for loam, and 30-40% for clay soils. The soil temperature must be above 43° F (6° C) and remain at least this high during the entire fumigation period. Commercial soil preparation setup, such as conveyors or cement-type mixers, have proved suitable. Any suitable alternative for mixing this product with the soil is acceptable. Following are two examples of acceptable methods:

Methods:
1) Spread moist soil on a solid surface, if possible on a polyethylene sheet.
2) Each soil layer should be 8-10” deep.
3) The required amount of Basamid® G is spread on each soil layer and thoroughly incorporated with a rotary tiller.

Bulk
1) Mix moist soil on a solid surface, if possible on a polyethylene sheet.
2) Using a front loader, or equivalent, thoroughly mix the required amount of Basamid® G with a measured volume of soil by repeated turning of the soil pile.
3) Repeat the procedure until all the untreated soil has been blended.

Treated soil can be heaped up to 1 yard high (36 inches). To seal the surface and reduce gas escape,-covering the soil heap with a plastic tarp is highly recommended. Leave the pile covered for a minimum of 7 days, then remove the cover and leave undisturbed for an additional 7 days to allow residual gas to dissipate. Prior to use, follow the guidelines in Preparation Prior to Planting and utilize the Safety Germination Test.

Interplanting
For soil treatment prior to interplanting in existing orchards, berry fields, and similar areas, thoroughly till a spot large enough to accommodate the root system of the plant. Root systems of nearby existing plants should be completely severed to avoid contact with the treated soil. Soil may be treated in place based on the area and depth tilled using the instructions in Method of Application - Physical Incorporation for Combined Disease, Nematode, and Weed Control. The soil may be removed and treated in a pile (see Soil Media). The soil surface should be tarped for best results. Do not harvest produce within one year of application.

Buffer Zone Requirements
A buffer zone must be established for every fumigation application. The following describes the general buffer zone requirements:

1) The buffer zone must extend outward from the edge of the application block perimeter equally in all directions.
2) All non-handlers, including field workers, residents, pedestrians, and other bystanders, must be excluded from the buffer zone during the buffer zone period except for transit (see Buffer Zone Exemptions for Transit on Roadways).
3) Local, state, or federal officials performing inspection, sampling, or other similar official duties are not excluded from the application block or the buffer zone by this labeling. The certified applicator supervising the application and the owner of the establishment where the application is taking place are not authorized to, or responsible for, excluding those officials from the application block or the buffer zone.
4) The buffer zone period begins at the start of the application and lasts for a minimum of 48-hours after the application is complete.

Buffer zone proximity
Before the start of application, the certified applicator must determine whether their buffer zone will overlap with any other dazomet (or other MITC generating pesticide) buffer zone(s).
1) To reduce the potential for off-site movement from multiple fumigation fields, buffer zones from multiple dazomet (or other MITC generating pesticide) application blocks must not overlap UNLESS:
   1. A minimum of 12 hours have elapsed from the time the earlier application(s) is complete until the start of the later application, and
   2. Fumigant Site Monitoring or Response Information for Neighbors have been implemented. If there are any residences or businesses within 300 feet of any of the buffer zones.

Structures under the control of the owner of the application block
Buffer zones must not include buildings used for storage (e.g., sheds, barns, garages), UNLESS:
1) The storage buildings are not occupied during the buffer zone period, and
2) All of the storage buildings do not share a common wall with an occupied structure.

Areas not under the control of the owner of the application block
Buffer zones must not include residential areas (e.g., employee housing, private property), buildings (e.g., commercial, industrial), outdoor residential areas (e.g., lawns, gardens, play areas) and other areas that people may occupy, UNLESS:
1) The occupants provide written agreement, prior to the start of the application, that they will voluntarily vacate the buffer zone during the entire buffer zone period, and
2) Reentry by occupants and other non-handlers must not occur until, UNLESS:
   1. The buffer zone period has ended, and
   2. Sensory irritation is not experienced upon re-entry.

Buffer zones must not include agricultural areas owned and/or operated by persons other than the owner of the application block, UNLESS:
1) The owner of the application block can ensure that the buffer zone will not overlap with a dazomet (or other MITC generating pesticide) buffer zone from any other property owners, except as provided in the Buffer Zone Proximity section, and
2) The owner of the other property is not held responsible for the applicator that they, their employees, and other persons will stay out of the buffer zone during the entire buffer zone period.

Buffer zones must not include roadways and rights of way UNLESS:
1) The area is not occupied during the buffer zone period, and
2) Entry by non-handlers is prohibited during the buffer zone period.

Buffer Zone Exemptions for Transit on Roadways
Vehicular and bicycle traffic on public and private roadways through the buffer zone is permitted. (NOTE: Buffer zones are not permitted to include bus stops or other locations where persons wait for public transit.)

For all other public owned and/or operated areas such as parks, sidewalks, permanent walking paths, playgrounds, and athletic fields, buffer zones must not include these areas UNLESS:
1) The area is not occupied during the buffer zone period,
2) Written permission to include the public area in the buffer zone is granted by the appropriate state and/or local authorities responsible for management and operation of the area.

Certified applicators must comply with all local laws and regulations. See the Posting section for additional requirements that may apply.

Buffer Zone Distances
Buffer zone distances must be calculated using the application rate and the size of the application block.

Buffer zone distances
1) Buffer zone distances must be based on look-up tables in this labeling (25 feet is the minimum distance regardless of site-specific application parameters).
2) If after applying all applicable buffer zone credits the buffer zone is greater than 1/2 mile (2,640 ft), then the application is prohibited.
3) Tables 1-4 must be used to determine the minimum buffer distances. Round up to the nearest rate and block size, where applicable. Applications are prohibited for rates or block sizes that exceed what is presented in the buffer zone tables.

Interplanting
For soil treatment prior to interplanting in existing orchards, berry fields, and similar areas, thoroughly till a spot large enough to accommodate the root system of the plant. Root systems of nearby existing plants should be completely severed to avoid contact with the treated soil. Soil may be treated in place based on the area and depth tilled using the instructions in Method of Application - Physical Incorporation for Combined Disease, Nematode, and Weed Control. The soil may be removed and treated in a pile (see Soil Media). The soil surface should be tarped for best result. Do not harvest produce within one year of application.

Soil Media
Basamid® G can be used for disinfection of soil media, such as potting soils, soil heaps, or compost piles. Mechanically incorporate the recommended amount of product (see Table 1 – Basamid® G Application Rates) per cubic yard of substrate. Soil moisture should be maintained at 60-80% field capacity for sand, 50% for loam, and 30-40% for clay soils. The soil temperature must be above 43° F (6° C) and remain at least this high during the entire fumigation period. Commercial soil preparation setup, such as conveyors or cement-type mixers, have proved suitable. Any suitable alternative for mixing this product with the soil is acceptable. Following are two examples of acceptable methods:

Methods:
1) Spread moist soil on a solid surface, if possible on a polyethylene sheet.
2) Each soil layer should be 8-10” deep.
3) The required amount of Basamid® G is spread on each soil layer and thoroughly incorporated with a rotary tiller.

Bulk
1) Mix moist soil on a solid surface, if possible on a polyethylene sheet.
2) Using a front loader, or equivalent, thoroughly mix the required amount of Basamid® G with a measured volume of soil by repeated turning of the soil pile.
3) Repeat the procedure until all the untreated soil has been blended.

Treated soil can be heaped up to 1 yard high (36 inches). To seal the surface and reduce gas escape, covering the soil heap with a plastic tarp is highly recommended. Leave the pile covered for a minimum of 7 days, then remove the cover and leave undisturbed for an additional 7 days to allow residual gas to dissipate. Prior to use, follow the guidelines in Preparation Prior to Planting and utilize the Safety Germination Test.
Buffer Zone Tables

Table 1: Buffer zone distances (in feet) for mechanically incorporated dazomet soil applications except golf course fairways and greenhouses

<table>
<thead>
<tr>
<th>Application Rate (lbs product/A)</th>
<th>Block Size (acres)</th>
<th>Buffer Zone Distances (in feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>421</td>
<td>864</td>
<td>692</td>
</tr>
<tr>
<td>396</td>
<td>770</td>
<td>605</td>
</tr>
<tr>
<td>361</td>
<td>720</td>
<td>580</td>
</tr>
<tr>
<td>326</td>
<td>670</td>
<td>549</td>
</tr>
<tr>
<td>396</td>
<td>690</td>
<td>537</td>
</tr>
<tr>
<td>361</td>
<td>670</td>
<td>503</td>
</tr>
<tr>
<td>326</td>
<td>630</td>
<td>487</td>
</tr>
<tr>
<td>317</td>
<td>610</td>
<td>470</td>
</tr>
<tr>
<td>305</td>
<td>590</td>
<td>454</td>
</tr>
<tr>
<td>297</td>
<td>565</td>
<td>435</td>
</tr>
<tr>
<td>287</td>
<td>545</td>
<td>417</td>
</tr>
<tr>
<td>277</td>
<td>524</td>
<td>400</td>
</tr>
<tr>
<td>267</td>
<td>505</td>
<td>383</td>
</tr>
<tr>
<td>257</td>
<td>487</td>
<td>373</td>
</tr>
<tr>
<td>247</td>
<td>471</td>
<td>353</td>
</tr>
<tr>
<td>237</td>
<td>454</td>
<td>335</td>
</tr>
<tr>
<td>227</td>
<td>437</td>
<td>318</td>
</tr>
<tr>
<td>217</td>
<td>420</td>
<td>297</td>
</tr>
<tr>
<td>207</td>
<td>403</td>
<td>276</td>
</tr>
<tr>
<td>198</td>
<td>375</td>
<td>258</td>
</tr>
<tr>
<td>189</td>
<td>348</td>
<td>231</td>
</tr>
<tr>
<td>180</td>
<td>321</td>
<td>204</td>
</tr>
<tr>
<td>172</td>
<td>297</td>
<td>179</td>
</tr>
<tr>
<td>164</td>
<td>273</td>
<td>157</td>
</tr>
<tr>
<td>156</td>
<td>250</td>
<td>135</td>
</tr>
<tr>
<td>149</td>
<td>227</td>
<td>115</td>
</tr>
<tr>
<td>142</td>
<td>204</td>
<td>95</td>
</tr>
<tr>
<td>135</td>
<td>182</td>
<td>75</td>
</tr>
<tr>
<td>128</td>
<td>160</td>
<td>55</td>
</tr>
<tr>
<td>121</td>
<td>142</td>
<td>35</td>
</tr>
<tr>
<td>114</td>
<td>125</td>
<td>15</td>
</tr>
<tr>
<td>107</td>
<td>108</td>
<td>5</td>
</tr>
<tr>
<td>100</td>
<td>90</td>
<td>25</td>
</tr>
<tr>
<td>93</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>78</td>
<td>60</td>
<td>25</td>
</tr>
<tr>
<td>63</td>
<td>45</td>
<td>25</td>
</tr>
<tr>
<td>49</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>35</td>
<td>15</td>
<td>25</td>
</tr>
</tbody>
</table>

*This buffer table may only be used if the length of the application area is twice the distance of the width (i.e., the length is 80 feet and the width is no greater than 40 feet). If the application area does not meet these requirements, use the buffer zone distances in Table 1.

Buffer Zone Credits

- **10% reduction in buffer zone distance**, IF the organic content of the soil in the application block is ≥1% - 2%, a 20% reduction is buffer zone distance, IF the organic content of the soil in the application block is >2% - 3%, and a 30% reduction in the buffer zone distance, IF the organic content of the soil in the application block is >3%.

Examples of Buffer Calculation if a Credit is Applicable

- If the buffer zone is 50 feet and the application qualifies for a buffer zone reduction credit since the soil organic content is 1.5%, then the buffer zone can be reduced by 10%, i.e., reduced by 5 feet based on the following calculation: 50 feet – (50 feet x 10%) = 45 feet.

Posting Fumigant Buffer Zones

- **Posting of a buffer zone is required unless there is a physical barrier that prevents bystander access to the buffer zone.**

- **Buffer Zone signs must be placed along or outside the perimeter of the buffer zone, at all usual points of entry and along likely routes of approach from areas where people not under the owner’s control may approach the buffer zone.**

- **Signs must be posted no sooner than 24 hours prior to the start of the application and remain posted until the buffer zone period has expired.**

- **Buffer Zone signs must meet the following criteria:**
  - The printed sign of the side of the sign face away from the application block toward areas from which people could approach.
  - Signs must remain legible during the entire posting period and must meet the general standards confined in the WPS for sign size, text size, and legibility (see 40 CFR §170.120).
  - Signs must be posted no sooner than 24 hours prior to the start of the application and remain posted until the buffer zone period has expired.
  - Signs must be removed within 3 days after the end of the buffer zone period.

Buffer Zone Signs which meet the criteria above will be provided at points of sale for applicators to use. Templates may be downloaded from http://www.epa.gov/pesticides/registrationsoil_fumigants/.

(continued)
Emergency Preparedness and Response Measures

If the buffer zone is 25 feet, then the Emergency Preparedness and Response Measures are not applicable.

Restrictions for Difficult to Evacuate Sites

Difficult to evacuate sites: pre-K to grade 12 schools, state licensed daycare centers, nursing homes, assisted living facilities, hospitals, in-patient clinics, and prisons.

- No fumigation with a buffer zone greater than 300 feet is permitted within 1/4 mile (1320 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed day care centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.
- No fumigation with a buffer zone of 300 feet or less is permitted within 1/8 mile (660 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed day care centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.

Emergency Preparedness and Response Measures

If the buffer zone is 25 feet, then the Emergency Preparedness and Response Measures are not applicable.

Triggers for Emergency Preparedness and Response Measures:

The certified applicator must either follow the directions under the Fumigant Site Monitoring section or follow the directions under the Response Information for Neighbors section if:

- the buffer zone is greater than 25 feet but less than or equal to 100 feet, and there are residences or businesses within 50 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 100 feet but less than or equal to 200 feet, and there are residences or businesses within 100 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 200 feet but less than or equal to 300 feet, and there are residences or businesses within 200 feet from the outer edge of the buffer zone, or
- the buffer zone is greater than 300 feet or the buffer zones overlap, and there are residences or businesses within 300 feet from the outer edge of the buffer zone.

Fumigant Site Monitoring

NOTE: Fumigant Site Monitoring is only required if the Emergency Preparedness and Response Measures are triggered AND directions from the Response Information for Neighbors section are not followed.

From the beginning of the application until the buffer zone period expires, a certified applicator/handler under his/her supervision must:

- Monitor for sensory irritation in areas between the buffer zone outer perimeter and residences and businesses that trigger this requirement.
- Monitoring for sensory irritation must begin the evening on the day of application and continue until the buffer zone period expires. Monitor a minimum of 8 times during the buffer zone period, including these periods:
  - 1 hour before sunset,
  - during daylight hours.
- Implement the emergency response plan immediately if a handler monitoring experiences sensory irritation.

Response Information for Neighbors

NOTE: Response Information for Neighbors is only required if the Emergency Preparedness and Response Measures are triggered AND directions from the Fumigant Site Monitoring section are not followed.

The certified applicator supervising the application must ensure that residences and businesses that trigger the requirement have been provided the emergency response information at least 1 week before the application starts. The information provided may include application dates that range for no more than 4 weeks. If the application does not occur when specified, the information must be delivered again.

Information that must be included:

- The location of the application block.
- The fumigant(s) applied including the active ingredient, name of the fumigant product(s), and the EPA registration number.
- Contact information for the applicator and property owner.
- Time period in which the application is planned to take place (must not range more than 4 weeks/Early signs and symptoms of exposure to the fumigant(s) applied, what to do, and who to call if you believe you are being exposed (911 in most cases).
- How to find additional information about fumigants.

The method used to share the response information for neighbors can be accomplished through mailings, door hangings, or other methods that will effectively inform the residences and businesses within the required distance from the edge of the buffer zone.

Notice to State and Tribal Lead Agencies

If your state and/or tribal lead agency requires notice, information must be provided to the appropriate state or tribal lead agency prior to the application. Please refer to www.epa.gov/fumigantstateoffice for a list of states and tribal lead agencies that require notice and information on how to submit the information.

The information that must be provided to state and tribal lead agencies includes the following:

- Location of the application block.
- Fumigant(s) applied including EPA registration number.
- Applicator and property owner/operator contact information.
- Time period that fumigation may occur.

Emergency Response Plan

The certified applicator must include in the FMP a written emergency response plan that identifies:

- evacuation routes,
- locations of telephones,
- contact information for first responders and local/state/federal/tribal personnel, and
- emergency procedures/responsibilities (e.g., adding water to the field, repairing tarps, fixing equipment, evacuating upwind) if:
  - there is an incident,
  - sensory irritation is experienced outside of the buffer zone, and/or there are equipment/terp/seed failure or complaints, or other emergencies.

Site-Specific Fumigation Management Plan (FMP)

Prior to the start of application, the certified applicator supervising the application must verify that a site-specific FMP exists for each application block. In addition, an agricultural operation fumigating multiple application blocks may format the FMP in a manner whereby all of the information that is common to all the application blocks is captured once, and any information unique to a particular application block or blocks is captured in subsequent sections.

The FMP must be prepared by the certified applicator, the site owner, registrant, or other party.

The certified applicator must verify in writing (sign and date) that the site-specific FMPs reflects current site conditions before the start of application.

Each site specific FMP must contain the following elements:

- Certified Applicator Supervising the Application
  - Name,
  - Phone number,
  - Pesticide applicator license and/or certificate number,
  - Specify if commercial or private applicator,
  - Employer name,
  - Employer address, and
  - Date and location of completing EPA approved soil fumigant training program.

- General site information
  - Application block location (e.g., county, township-range-section quadrant), address, or global positioning system (GPS) coordinates
  - Name, address, and number of application block owner
  - Map, aerial photo, or detailed sketch showing:
    - application block location
    - application block dimensions
    - buffer zone dimensions
    - property lines
    - roadways
    - rights-of-ways
    - sidewalks
    - permanent walking paths
    - bus stops
    - nearby application blocks
    - surrounding structures (occupied and non-occupied)
    - locations of Buffer Zone signs, and
    - locations of difficult to evacuate sites with distances from the application block labeled.

- General application information
  - Target application date/window,
  - Fumigant Product Name, and
  - EPA registration number.

- Tarp Plan (if tarp is used)
  - Schedule for checking tarps for damage, tears, and other problems,
  - Minimum size of damage that will be repaired,
  - Factors used to determine when tarp repair will be conducted,
  - Equipment/methods used to perforate tarps,
  - Target dates for perforating tarps, and
  - Target dates for removing tarps.

- Soil conditions
  - Description of soil texture and moisture in application blocks,
  - Method used to determine soil moisture, and
  - Soil temperature measurement.

- Buffer zones
  - Application method,
  - Application rate from lookup table on label,
  - Application block size from lookup table on label,
  - Credits applied and measurements taken (if applicable),
  - Organic matter content
  - Clay content
  - Soil temperature
  - Buffer zone distance, and
  - Description of areas in the buffer zone that are not under the control of the owner of the application block. If buffer zones extend onto areas not under the control of the owner, attach the written agreement and keep it with the FMP.

- Record Emergency Response Plan as described in the Emergency Response Plan section.

- Posting of Fumigant Treated Area and Buffer Zone
  - Person(s) who will post and remove (if different) Fumigant Treated Area and Buffer Zone signs, and
  - Location of Buffer Zone signs.

- Emergency Preparedness and Response Measures (if applicable)
  - Fumigant site monitoring (if applicable):
    - When and where it will be conducted,
  - Response information for neighbors (if applicable):
    - List of residences and businesses informed,
    - Name and phone number of person providing information, and
    - Method of providing the information.

- State and/or tribal lead agency advance notification (if state and/or tribal lead agency requires notice, provide a list of contacts that were notified and date notified).
Plan describing how communication will take place between the certified applicator supervising the application, the owner, and other on-site handlers (e.g., tarp perforators/removers, irrigators) for complying with label requirements (e.g., buffer zone location, buffer zone start and end times, timing of tarp perforation and removal, PPE).

- Name and phone number of persons contacted by the certified applicator, and
- Date contacted.

- Handler (including Certified Applicators) Information and PPE

- Names, addresses and phone numbers of handlers

- Names, addresses, and phone numbers for employers of handlers

- Tasks that each handler is authorized and trained to perform

- Date of PPE training for each handler

- Applicable handler PPE including:
  - coveralls over short-sleeved shirt and short pants when in the treated application block
  - chemical resistant gloves
  - shoes plus socks
  - Protective eyewear
  - Air-purifying respirators
    - Respirator make, model, type, style, size, cartridge type, and cartridge replacement schedule
  - Other PPE

- For handlers: Confirmation of receipt of Fumigant Safe Handling Information.

- For certified applicator(s) supervising the application: Completion date and location of the soil fumigant training program listed on the following EPA website www.epa.gov/fumiganttraining, for the active ingredient(s) in this product.

- For handlers designated to wear air-purifying respirators:
  - date of medical qualification to wear a respirator,
  - date of respirator training, and
  - date of fit-testing for the respirator.

- Unless exempted in the Protection of Handlers section, verify that:
  - at minimum 1 handler has the appropriate respirators and cartridges during handler activities, and
  - the employer has confirmed that the appropriate respirator and cartridges are immediately available for each handler who will wear one.

- Air monitoring plan

- If sensory irritation is experienced, indicate whether operations will cease or operations will continue with use of an air-purifying respirator

- For monitoring the breathing zone:
  - Representative handler tasks to be monitored,
  - Monitoring equipment to be used, and
  - Timing of the monitoring.

- Fumigant site monitoring:
  - Monitoring equipment to be used.

- Good Agricultural Practices (GAPs)

- Identify (e.g., list, attach applicable label section) applicable mandatory GAPs.

- Pesticide Product Labels and Material Safety Data Sheets (MSDS)

- Ensure that labels and MSDS are on-site and readily available for employees to review.

- Record-Keeping Procedures

The owner of the application block as well as the certified applicator supervising the application, must keep a signed copy of the Post-Application Summary for 2 years from the date of application.

- Post-Application Summary

The Post-Application Summary must contain the following elements:

- Actual date and time of the application,

- Application rate

- Size of application block

- Weather Conditions

- Summary of the National Weather Service weather forecast during the application and the 48-hours after the application is complete including:
  - wind speed, and
  - air stagnation advisory (if applicable).

- Forecast must be checked on the day of, but prior to the start of the application, and on a daily basis during the application if the time period from the start of the application until the application is complete is greater than 24 hours.

- Tarp damage and repair information (if applicable):
  - Date of tarp damage discovery,
  - Location and size of tarp damage,
  - Description of tarp/tarp seal/tarp equipment failure, and
  - Date and time of tarp repair completion.

- Tarp perforation/repair/removal (if applicable):
  - Date and time tarp(s) were perforated,
  - Date and time tarp(s) were removed,
  - Record if tarp(s) were perforated and/or removed early. Describe the conditions that caused early tarp perforation and/or removal.
### Table 6. Root Propagated Weeds

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnyardgrass</td>
<td>Echinochloa crus-galli</td>
</tr>
<tr>
<td>Birdweed</td>
<td>Convolvulus arvensis</td>
</tr>
<tr>
<td>Blackgrass</td>
<td>Alopecurus myosuroides</td>
</tr>
<tr>
<td>Briistlegrass</td>
<td>Setaria spp.</td>
</tr>
<tr>
<td>Buckwheat, Wild</td>
<td>Polygonum convolvulus</td>
</tr>
<tr>
<td>Catla, Brazil</td>
<td>Richardia brasiliensis</td>
</tr>
<tr>
<td>Chamomile, Wild</td>
<td>Matricaria chamomilla</td>
</tr>
<tr>
<td>Chysweed</td>
<td>Stellaria media</td>
</tr>
<tr>
<td>Cinquefoil, Rough</td>
<td>Potentilla norvegica</td>
</tr>
<tr>
<td>Cleavers</td>
<td>Galium aparine</td>
</tr>
<tr>
<td>Clover</td>
<td>Trifolium spp.</td>
</tr>
<tr>
<td>Cocklefoot</td>
<td>Dactylis glomerata</td>
</tr>
<tr>
<td>Com Flower</td>
<td>Centurea cyanus</td>
</tr>
<tr>
<td>Crabgrass</td>
<td>Digitaia spp.</td>
</tr>
<tr>
<td>Cress, Hyary</td>
<td>Cardaria draba</td>
</tr>
<tr>
<td>Dock, Broadleafed</td>
<td>Rumex obtusifolius</td>
</tr>
<tr>
<td>Fescuegrass</td>
<td>Festuca arundinacea</td>
</tr>
<tr>
<td>Foxtail, Short-awned</td>
<td>Alopecurus aequalis</td>
</tr>
<tr>
<td>Fumitory, Common</td>
<td>Fumaria officinalis</td>
</tr>
<tr>
<td>Gainsoga, Small-flowered</td>
<td>Gaiansoga parviflora</td>
</tr>
<tr>
<td>Groundsel</td>
<td>Baraico xuligum</td>
</tr>
<tr>
<td>Hempnetta</td>
<td>Galeopsis tetrahit</td>
</tr>
<tr>
<td>Herbit</td>
<td>Lamium amplexicaule</td>
</tr>
<tr>
<td>Ichgrass</td>
<td>Rotocelia exalata</td>
</tr>
<tr>
<td>Jimsonweed</td>
<td>Datura stramonium</td>
</tr>
<tr>
<td>Knotgrass</td>
<td>Polygonum avolvare</td>
</tr>
<tr>
<td>Ladythumb</td>
<td>Polygonum paracana</td>
</tr>
<tr>
<td>Lambiquarten</td>
<td>Chenopodium album</td>
</tr>
<tr>
<td>Marigold, Corn</td>
<td>Chrysanthemum segetum</td>
</tr>
<tr>
<td>Marigold, Oxall</td>
<td>Solanum xinnia</td>
</tr>
<tr>
<td>Meadowgrass, Annual</td>
<td>Pisum annua</td>
</tr>
<tr>
<td>Medio</td>
<td>Medicago spp.</td>
</tr>
<tr>
<td>Mustard, Wild</td>
<td>Brassica kaber</td>
</tr>
<tr>
<td>Nettle, Small</td>
<td>Lactia urese</td>
</tr>
<tr>
<td>Nettle, Stinging</td>
<td>Lactia ahloca</td>
</tr>
<tr>
<td>Nightshade, Black</td>
<td>Solanum xinum</td>
</tr>
<tr>
<td>Oats, Wild</td>
<td>Avena fatua</td>
</tr>
<tr>
<td>Pennycrest, Field</td>
<td>Thipar arvense</td>
</tr>
<tr>
<td>Pigweed</td>
<td>Amaranthus spp.</td>
</tr>
<tr>
<td>Purslane, Common</td>
<td>Portulae cloraceae</td>
</tr>
<tr>
<td>Quackgrass</td>
<td>Agropyron repens</td>
</tr>
<tr>
<td>Radish, Wild</td>
<td>Raphanus raphanistrum</td>
</tr>
<tr>
<td>Rapeseed</td>
<td>Brassica spp.</td>
</tr>
<tr>
<td>Sedges</td>
<td>Cyperus spp.</td>
</tr>
<tr>
<td>Shepardspursa</td>
<td>Capsalia runa-pastosis</td>
</tr>
<tr>
<td>Smartweed, Pale</td>
<td>Polygonum lapathifolium</td>
</tr>
<tr>
<td>Spurge, Sain</td>
<td>Euphorbia helioscopia</td>
</tr>
<tr>
<td>Veitch, Tufted</td>
<td>Vicia cracca</td>
</tr>
<tr>
<td>Witchweed</td>
<td>Striga asiatica</td>
</tr>
<tr>
<td>Yellowroot</td>
<td>Barbarea vulgaris</td>
</tr>
</tbody>
</table>

* Not for use in California

### Table 7. Parasitic weeds

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broomrape</td>
<td>Orobanche spp.</td>
</tr>
<tr>
<td>Dodder</td>
<td>Cuscuta spp.</td>
</tr>
<tr>
<td>Witchgrass</td>
<td>Slinga spp.</td>
</tr>
</tbody>
</table>

### Table 8. Plant-parasitic nematodes

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyst-forming root nematodes</td>
<td></td>
</tr>
<tr>
<td>Eelworm, Beet Cyst</td>
<td>Heterodera schachtii</td>
</tr>
<tr>
<td>Eelworm, Pea Cyst</td>
<td>Heterodera geointera</td>
</tr>
<tr>
<td>Eelworm, Yellow Potato Cyst</td>
<td>Globodera rostochiensis</td>
</tr>
<tr>
<td>Free-living (migratory) root nematodes</td>
<td></td>
</tr>
<tr>
<td>Eelworm, Digger</td>
<td>Rogjanychus spp.</td>
</tr>
<tr>
<td>Nematode, Lace</td>
<td>Hypoatoma spp.</td>
</tr>
<tr>
<td>Nematode, Root</td>
<td>Tylenchus spp.</td>
</tr>
<tr>
<td>Nematode, Spiral</td>
<td>Tylenchorynthius spp.</td>
</tr>
<tr>
<td>Nematode, Stub</td>
<td>Xiphinema spp.</td>
</tr>
</tbody>
</table>

### Table 9. Soil-borne Fungi

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blight</td>
<td></td>
</tr>
<tr>
<td>Blossom blight</td>
<td>Chaanaphora cucurbitarum</td>
</tr>
<tr>
<td>Early blight</td>
<td>Alternaria solani</td>
</tr>
<tr>
<td>Molds</td>
<td></td>
</tr>
<tr>
<td>Black mold</td>
<td>Aludgerus niger</td>
</tr>
<tr>
<td>Black mold</td>
<td>Cladosporium herbarum</td>
</tr>
<tr>
<td>Citrus mold</td>
<td>Ponisium app.</td>
</tr>
<tr>
<td>Grey mold</td>
<td>Botrytis spp.</td>
</tr>
<tr>
<td>Mods</td>
<td>Mucor circinodlesi</td>
</tr>
<tr>
<td>White mold</td>
<td>Mycospora perlmicia</td>
</tr>
<tr>
<td>Rots</td>
<td></td>
</tr>
<tr>
<td>Bitter rot</td>
<td>Glareosporum fructigenum</td>
</tr>
<tr>
<td>Blackroot rot</td>
<td>Allocropora phaseolina</td>
</tr>
<tr>
<td>Blackroot rot</td>
<td>Phomopsis aesthetoides</td>
</tr>
<tr>
<td>Blackroot rot</td>
<td>Thielaviopsis basicola</td>
</tr>
<tr>
<td>Butrot</td>
<td>Fomes spp.</td>
</tr>
<tr>
<td>Citrus bitter rot</td>
<td>Tricholomium roseum</td>
</tr>
<tr>
<td>Club root</td>
<td>Plasmopora brassicae</td>
</tr>
<tr>
<td>Corky root of tomato</td>
<td>Pyrenochaeta tlycerisci</td>
</tr>
<tr>
<td>Root diseases</td>
<td>Rhizoctonia spp.</td>
</tr>
<tr>
<td>Root diseases*</td>
<td>Rosellina spp.</td>
</tr>
<tr>
<td>Wils</td>
<td></td>
</tr>
<tr>
<td>Will disease</td>
<td>Verticillium spp.</td>
</tr>
<tr>
<td>Wila</td>
<td>Phialaphora spp.</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Blackleg</td>
<td>Phoma spp.</td>
</tr>
<tr>
<td>Damping off</td>
<td>Pythium spp.</td>
</tr>
<tr>
<td>Mushroom pathogen</td>
<td>Myrcoosporum spp.</td>
</tr>
<tr>
<td>Mushroom pathogen</td>
<td>Thielaviopsis spp.</td>
</tr>
<tr>
<td>Mushroom pathogen</td>
<td>Diactinomyces microspores</td>
</tr>
<tr>
<td>Silver leaf</td>
<td>Stereum purpureum</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Chaetomycosis spp.</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Chimerella cinacuta</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Collectotrichium spp.</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Cyllindrocarpon spp.</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Allospira sacchari</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Sponborchum spirobus</td>
</tr>
<tr>
<td>Soil pathogen</td>
<td>Stemphylium radicinum</td>
</tr>
</tbody>
</table>

### Table 10. Soil-borne Bacteria

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gall, Crown</td>
<td>Aproactobacter tumefaciens</td>
</tr>
<tr>
<td>Sicabo</td>
<td>Streptomyces spp.</td>
</tr>
</tbody>
</table>

*Not approved for use in California
<table>
<thead>
<tr>
<th><strong>Storage and Disposal</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pesticide Storage:</strong> Store this product in a dry, cool place below 95° F (35° C) -- it will decompose at higher temperatures. This material reacts nonviolently with moisture, releasing fumigant vapors. Keep the container tightly sealed when not in use. Do not re-use the empty container. Keep this product and its vapors away from desirable plants, seeds, fertilizers, insecticides, and other agricultural chemicals as plant injury or loss may result from contamination.</td>
</tr>
<tr>
<td><strong>Pesticide Disposal:</strong> Wastes resulting from the use of this product may be disposed of on site or an approved waste disposal facility.</td>
</tr>
<tr>
<td><strong>Container Handling:</strong> Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available or dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.</td>
</tr>
<tr>
<td><strong>Steps to be taken in case material is released:</strong> Keep the spill out of all sewers and open bodies of water. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use.</td>
</tr>
</tbody>
</table>

---

**LIMITED WARRANTY AND DISCLAIMER**

"TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CERTIS DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CERTIS, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF CERTIS IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN, TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF CERTIS, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT CERTIS’ ELECTION, THE REPLACEMENT OF THE PRODUCT."