

19713-298

4/30/2010

1/23



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

CERTIFIED MAIL

APR 30 2010

Luz Chan
1700 Channel Avenue
P.O. Box 13327
Memphis, TN 38113-0327

Subject: Drexel Phume Soil Fumigant
EPA Reg. No. 19713-298
RED Mitigation Amendment dated February 1, 2010
EPA Decision Number D432147

Dear Ms. Chan:

The amended label referred to above, submitted in connection with reregistration of metam-sodium under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following label revisions are made and the following conditions are met:

LABEL REVISIONS

1. Page 1

- a. Replace "watercress" with "watergrass" as this is the species listed on the previous stamped label.
- b. Remove the box from around the PPE section.

2. Page 2

- a. at bottom the Personal Protective Equipment section, add the following statement:
"Do not transport contaminated clothing in a closed vehicle. Store in a sealed Container and wash or dispose of as specified."
- b. In the Protection for Handlers section, revise the sentence beginning with "For fumigant handling activities.." to *"For handling activities..."*
 - In addition, at the end of this paragraph, the following sentence must be added: *"The results of communication activities must be captured in the FMP."*
- c. In the Protection for Handlers section under Fumigation Handlers, the following must be inserted in the first sentence following the words "application block":
"(i.e. the field or portion of a field treated with a fumigant in any 24 hour period, or for center pivot applications which occur over many days, the total acres of a field treated)."
- d. Revise the following paragraph in the Protection for Handlers section to include the below website: "The certified applicator must provide Fumigant Safe

Handling information to each handler involved in the application or confirm that each handler participating in the application has received Fumigant Safe Handling information in a manner they can understand within the past twelve months. Fumigant Safe Handling information will be provided where this product is purchased or at www.epa.gov/fumigantraining.”

3. Page 3

- a. In the Respirator Fit Testing, Medical Qualification, and Training section, the first paragraph after the bulleted paragraphs should be moved to the bullet above because it is a part of the third bullet in this section.
- b. Move the text in the first bullet at the top of the second column to the end of the second bullet in this column.
- c. The bullet in the Respiratory and Stop Work Triggers section that begins :”When respirators are worn, then air monitoring samples..” should be moved above the bullet directly before this statement.
 - In addition, revise the word “monitorying” to “monitoring”

4. Page 4

- a. In the Entry Restrictions section, remove the note regarding installing/monitoring/repairing tarps.
- b. The last sentence in the Notification section should be modified to the following: *“(i.e. the field or portion of a field treated with a fumigant in any 24 hour period, or for center pivot applications which occur over many days, the total acres of a field treated).”*
- c. Modify the last two sentences in the Shank Applications Weather Conditions section to: *“Detailed local forecasts for weather conditions, wind speed, and air-stagnation advisories may be obtained online at <http://www.nws.noaa.gov>, or by contacting your local National Weather Center Forecasting Office.”*

5. Page 5 - In the Soil Conditions, Injection Depth, and Soil Sealing section, the following sentence must be inserted prior to the sentence beginning “The soil surface must be compacted immediately after application”: *“Apply the product mixture on the soil immediately ahead of bed shaping equipment or tiller.”*

6. Page 7-8

- a. In the Soil Moisture section of all application methods:
 - include "(field capacity)" following the term "soil capacity" throughout label
 - change the word "at" to "between" in the phrase "top six inches **between** 60% to 80% soil capacity
- b. In the Center Pivot Applications section, change the Wind Speed section to the following:
 - For sprinkler or chemigation applications: 1) not using a solid stream type nozzle, OR 2) having a release height greater than 4 feet, OR 3)

having 30 lbs or greater PSI at the sprinkler head, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 10 mph.

- For sprinkler or chemigation applications: 1) not using a solid stream type nozzle, AND 2) having a release height greater than 4 feet, AND 3) having 29 lbs or less PSI at the sprinkler head, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 25 mph.
- c. Top of page 8 in the first bullet, and bottom of page 8 in the last bullet, remove the cover crops exception since this was not included in the previously stamped label (that sentence should instead begin with, "Crop residue that is present...").
- d. In the Application and Equipment Considerations sections of the Center Pivot, Solid Set Sprinkler, Drench, Drip, and Flood Basin, Furrow and Border Application sections, make the following changes:
- Change the second bullet (except in Flood Basin, it is the fourth bullet) to "Tanks must be in good condition to ensure product does not spill or leak."
 - In the following bullet (which appears in the above sections except Flood Basin), add "inspection port" as shown: *"The system must contain a functional check valve, vacuum relief valve, inspection port, and low-pressure drain..."*

7. Page 12 -13

- a. Remove the first five sentences in the General Instructions section (it is covered by the GAPS)
- b. Remove all sentences beginning with "Pests that are dormant, protected by large clods..." through the sentence beginning with "Do not apply to soil surface, as in the sprinkler method..."
- c. Remove the first sentence in the Chemigation of this Product section.
- In addition, remove the following text from this section: (including greenhouse systems)
- d. Remove the Sprinkler and Drip Chemigation system section, as well as the Flood Basin, Furrow, and Border Chemigation section.
- Replace this text with the following text from the Cultivation and Planting After Application section from page 2 of the last stamped label:
"Cultivation and Planting After Application
On well drained soils of light to medium texture which are not excessively wet or cold following application, planting may take place 14 to 21 days after treatment. If soils are heavy or especially high in organic matter or remain wet and/or cold (below 60 degrees) following application of Phume, a minimum interval of 30 days should be observed. To avoid reinfesting treated soils, cultural practices should be such that untreated soils are not mixed with treated soils."

8. Page 14 – In the Use Rates and Application Methods section, replace the crop list with the list attached at the back of this letter.
9. Page 15
 - a. In the Field Application Where Entire Area is Being Treated section, in the Soil Injection section:
 - Remove the entire paragraph beginning: “When setting up your soil injection equipment...”
 - b. Remove the Application Over Cover Crops section
 - c. Remove the Effects of Air Temperature and Winds on Sprinkler Applications
 - d. Remove the Drip Irrigation System section
10. Page 16
 - a. Remove the Pacific Northwest Only section
 - b. Replace the two Soil Injection sections in the Field Application section with the following text from the previously stamped label:
“Field Application to Beds or Rows
Soil Injection: Phume at the rate of 75 to 100 gallons per treated acre may be injected into pre-formed beds following the directions given previously under soil injection. If a wider treatment band is desired, space 2 or more shanks at intervals of 5 inches to the desired treating width. Roll immediately.”
 - c. Remove the Drench Application section
 - d. Remove the Additional Use Directions for Seed Treatment and for Peanuts (they were not in the last stamped label)
11. Page 17 – 18
 - a. Remove the entire section Application Directions for this Product (beginning in the second column of page 17, and ending at the bottom of the first column on page 18).
 - b. Update Storage and Disposal statements in accordance with PRN 2007-4.

CONDITIONS

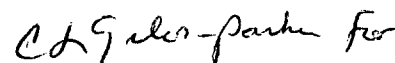
1. EPA has determined that the risk mitigation measures on the revised label for this product are necessary to adequately protect human health and the environment. Therefore, pursuant to 40 CFR § 152.130(d), EPA has decided that no product bearing previously approved labeling may be sold or distributed (release for shipment) by its registrant after December 1, 2010. Wherever state approval is required for sale or distribution of this product with this new labeling, EPA strongly encourages you to submit an application to the state authority as soon as possible. You should be aware that the Agency does not intend to modify the December 1, 2010, deadline because of any failure to obtain

necessary state approvals.

2. One copy of the label stamped "Accepted with Comments" is enclosed for your records. Please submit one copy of the final printed label that incorporates the required change before the product is released for shipment.

If you have any questions, please contact Shaja Joyner by phone at: 703-308-3194 or via email at: joyner.shaja@epa.gov

Sincerely,



Shaja B. Joyner
Product Manager (20)
Fungicide Branch
Registration Division (7504P)

Metam Sodium/Potassium List of Eligible Crops

“Only for use on the following:

Cover crops (i.e., crops planted between periods of regular crop production to prevent soil erosion);
Crops grown solely for seed;
as well as (in alphabetical order):

alfalfa; amaranth (including leafy amaranth, Chinese spinach, tampala); anise; apple (including: balsam, crabapple); apricot; artichokes; arugula (roquette); asparagus (nursery production only); barley; basil; beans (including: lima, green, fava, seed beans); beet (including garden);

berry (including black satin berry, blackberry, blueberry, boysenberry, chesterberry, lowberry, wild raspberry, youngberry, darrowberry, dewberry, cloudberry, elderberry, Cherokee blackberry, coryberry, European barberry, huckleberry, hullberry, gooseberry, cranberry, highbush cranberry, Himalayaberry, jostaberry, juneberry, saskatoon berry, lingonberry, loganberry, lavacaberry, lucretiaberry, mammoth blackberry, marionberry, bingleberry, mountain pepper berries, mulberry, olallieberry, dirksen thornless berry, nectarberry, Oregon evergreen berry, partridgeberry, phenomenalberry, rangeberry, raspberry (black and red), ravenberry, riberry, rossberry, schisandra berry, serviceberry, Shawnee blackberry, strawberry)

bok choy; broccoli; brussels sprouts; cabbage (including Napa); calabaza; calamondin; cardoon; carrot; casaba; cauliflower; celeriac; celery (including: Chinese); celtuce; chayote (fruit); che; cherry (including: sweet and tart, chokecherry, pincherry); chervil; cheyenne; Chilean guava; Chinese greens; Chinese okra; Chinese waxgourd (Chinese preserving melon); chinquapin; chironja; chrysanthemum; cilantro; citrus citron; citrus hybrids; collard; corn salad; corn; cotton; cress (including: upland, yellow rocket, winter cress); cucumber (including: Chinese cucumber); cucuzza; currant, (including: black, red, native and other varieties and hybrids);

dandelion; dill; dock (sorrel); eggplant; endive (escarole); fennel, Florence (finocchio); forest seedlings; garland; garlic; gherkin; ginger; gourd; grape; grapefruit; hechima; herbs (all); honey balls; honeysuckle; hyotan; kale; kiwifruit (including: fuzzy and hardy); kohlrabi; kumquat; leek; lemon; lettuce (including: head and leaf); lime; loquat; mandarin (including: tangerine and satsuma); mango; mayhaw; maypop;

melon (including: bitter melon, cantaloupe, hybrids and/or cultivars, citron melon, crenshaw melon, golden pershaw melon, mango melon, honeydew melon, muskmelon, Persian melon, pineapple melon, Santa Claus melon, snake melon, watermelon);

mint; muntries; mustard; nectarine; nursery stock (fruit seedlings and rose bushes only); nursery tree crops (including crops like maple, ash, dogwood);

2
23

nut (including: almond, beech nut, cashew, chestnut, hickory nut, Brazil nut, macadamia nut (bush nut), filbert (hazelnut), pecan, pistachio, walnut (black and English/Persian);

onion; orach; orange (including: sour and sweet); ornamentals; parsley; peas (including: English and garden); peach; peanut; pear (including: oriental and balsam); pepper; phalsa;
plum (including: Chickasaw and Damson); plumcot; potato; prune (fresh); pummelo; pumpkin;
purslane (including: garden and winter); quince;

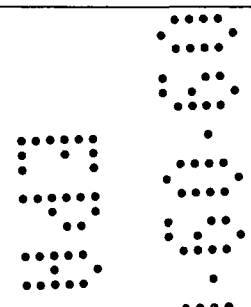
radicchio (red chicory); radish (including Oriental); rappini; rhubarb; rye; salal; sea buckthorn;
soybean; spinach (including: New Zealand, Malabar, Indian); squash, (including: summer, winter, butternut, straightneck, Acorn, crookneck, hubbard, scallop, spaghetti); sugar beet; sweet potato;
swiss chard; tangelo; tangor; tobacco; tomatoes; tree nuts (orchard replant only); turf (including golf courses); turnip; vegetable marrow; wheat; yams; zucchini.”

8/23

RESTRICTED USE PESTICIDE

Due to Acute Inhalation Toxicity to Humans

For retail to and use by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.



Phume

Soil Fumigant

A Soil Fumigant Solution for All Crops.

May be applied by chemigation, soil injection or soil bedding equipment to suppress and/or control soilborne pests which attack Ornamentals, Food, and Fiber crops.

Controls or suppresses weeds such as Bermudagrass, Chickweed, Dandelion, Ragweed, Henbit, Lambsquarter, Pigweed, Watercress, Amaranths species: Watergrass, Johnsongrass, Nightshade, Nutsedge, Wild Morningglory and Purslane, Nematodes and Symphylids; Soilborne diseases such as Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, Oak root fungus, and Club root of Conifers. Refer to specific cropping and application methods to determine control or suppression of the target.

ACTIVE INGREDIENT:

Sodium methylthiocarbamate (anhydrous)*	32.7%
OTHER INGREDIENTS:	67.3%
TOTAL:	100.0%

*Contains 3.18 lbs. Metam Sodium per gallon.

KEEP OUT OF REACH OF CHILDREN DANGER/PELIGRO

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

See **FIRST AID** and **PRECAUTIONARY STATEMENTS** Below

EPA Reg. No. 19713-298

EPA Est. No. 19713-XX-XXX Net Content: _____

FIRST AID	
IF ON SKIN OR CLOTHING:	
<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. 	
IF IN EYES:	
<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. 	
<i>(Continued)</i>	

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

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 do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

EMERGENCY INFORMATION

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

Transportation: Call CHEMTREC at 1-800-424-9300.

Other: Call the National Pesticide Information Center (NPIC) at 1-800-858-7378.

Note to Physician: Possible mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER: Corrosive. Causes skin damage. May be fatal if absorbed through the skin. Do not get on skin or clothing. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals. Harmful if swallowed or inhaled. Irritating to eyes, nose and throat. Avoid breathing vapor or spray mist. Do not get in eyes.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, or Viton. For more options, follow the instructions for Category B on an EPA chemical-resistance category selection chart.

(Continued)



Manufactured For:
Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

PRECAUTIONARY STATEMENTS (Cont.)

Handlers applying via weed sprayer while irrigation sprinklers are running or handlers who may be exposed to liquid spray while repairing a malfunctioning chemigation system or shutting off equipment must wear:

- chemical-resistant coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- chemical-resistant footwear plus socks,
- chemical-resistant headgear,
- protective eyewear, and
- respirator of the type specified in the respiratory protection section in the PPE requirements on this label.

Handlers wearing chemical-resistant attire are limited to 15 minutes of exposure in any 30-minute period and, as required by the Worker Protection Standard (WPS) for Agricultural Pesticides, employers of these handlers must take any necessary steps to avoid heat illness.

Except as required above, handlers transferring or loading liquid formulations, handlers operating motorized ground equipment with open cabs, handlers repairing or inactivating irrigation or chemigation equipment during application, and handlers cleaning up spills or equipment, must wear:

- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- chemical-resistant footwear plus socks,
- chemical-resistant apron if transferring or loading the fumigant or cleaning up spills or equipment,
- protective eyewear, and
- respirator of the type specified in the PPE requirements for respiratory protection section in the PPE requirements on this label if triggered.

All other handlers (except for fumigant handlers who set up and calibrate chemigation and irrigation equipment and start the application from inside the application block) as stated in this labeling must wear:

- long-sleeved shirt and long pants,
- shoes plus socks, and
- respirator of the type specified in the eye and respiratory protection section of the PPE requirements on this label if triggered.

All fumigant handlers who set up and calibrate chemigation and irrigation equipment and start the application from inside the application block must wear:

- long-sleeved shirt and long pants,
- shoes plus socks,
- protective eyewear, and
- respirator of the type specified in the respiratory protection section in the PPE requirements on this label if triggered.

PERSONAL PROTECTIVE EQUIPMENT (PPE) for Respiratory Protection

When respiratory protection is required, in lieu of protective eyewear, handlers must wear at least a NIOSH-approved full-face, or helmet/hood-style respirator with either:

- an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C),
OR
- a respirator with a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

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: 1) Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to mammals, birds, aquatic invertebrates, and fish. 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 washwaters or rinse-water. Metam-sodium and metam-potassium has certain properties and characteristics in common with chemicals that have been detected in groundwater (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.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. Refer to supplemental labeling under "AGRICULTURAL USE REQUIREMENTS" in this section for information about this standard.

PROTECTION FOR HANDLERS

APPLICATION SITE MONITORING AND SUPERVISION OF HANDLERS

For all applications except water run: From the start of the application until the fumigant has stopped being delivered/dispensed into the soil, i.e., after the soil is sealed, the certified applicator must be at the fumigation site in the line of sight of the application and must directly supervise all persons performing handling activities.

For all water-run applications (e.g., sprinkler/chemigation, wheel line, center pivot, lateral move, drip, flood, etc.), the certified applicator must be at the fumigation site in the line of sight of the application to start the application including set-up, calibration, and initiation of the application. The certified applicator may leave the site, but must return at least every 2 hours to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered/dispensed into the soil. WPS-trained handlers may perform the monitoring functions in place of the certified applicator but must be under the supervision of the certified applicator and able to communicate with the certified applicator at all times during monitoring activities via cell phone or other means. The results of monitoring activities must be captured in the FMP.

For fumigant handling activities that take place after the fumigant has been delivered/dispensed into the soil until the entry restricted period expires, the certified applicator does not have to be on-site, but must have communicated in writing to the site owner/operator and handlers the information necessary to comply with the label and procedures described in the FMP (e.g., emergency response plans and procedures). **IMPORTANT:** This requirement does not override the requirements in the Worker Protection Standard (WPS) for Agricultural Pesticides for information exchange between owners/operators of agricultural establishments and commercial pesticide applicators.

The certified applicator must provide fumigant safe handling information to each handler involved in the application or confirm that each handler participating in the application has received fumigant safe handling information in the past 12 months.

Fumigation Handlers

The following activities are prohibited from being performed in the fumigant application block by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in the Worker Protection Standard (40 CFR Part 170), from the start of the application until the entry-restricted period ends. Those activities include those persons:

- Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovelers, cross ditchers, or as other direct application participants (the application starts when the fumigant is first introduced into the soil and ends after the fumigant has stopped being delivered/dispensed to the soil);
- Using devices to take air samples to monitor fumigant air concentrations;
- Persons cleaning up fumigant spills (this does not include emergency personnel not associated with the fumigation application);
- Handling or disposing of fumigant containers;
- Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may contain fumigant residues;
- Installing, repairing, or operating irrigation equipment in the fumigant application block;
- Entering the application site during the entry-restricted period to perform scouting, crop advising, or monitoring tasks;

- Installing, perforating (cutting, punching, slicing, poking), removing, repairing, or monitoring tarps:
 - until 14 days after application is complete if tarps are not perforated and removed during those 14 days, or
 - until tarp removal is complete if tarps are both perforated and removed less than 14 days after application; or
 - until 48 hours after tarps perforation is complete if they will not be removed within 14 days after application.
- NOTE: See "TARP PERFORATION AND REMOVAL" section of this label for requirements about when tarps are allowed to be perforated.
- In addition to the above, persons outside the perimeter of the application block who visually monitor application equipment to ensure proper functioning and monitor fumigant air concentrations must also be trained and equipped as handlers in accordance with the requirements in the WPS (40 CFR Part 170).

Exclusion Of Non-Handlers From Application Block

The certified applicator supervising the application and the owner/operator of the establishment where the fumigation 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 defined in this labeling are excluded from application block during the entry restricted period.

Providing, Cleaning, And Maintaining PPE

The employer of any fumigant handler (as stated in this label) must make sure that all handlers are provided and correctly wear the required PPE. The PPE must be cleaned and maintained as required by the Worker Protection Standard for Agricultural Pesticides.

Respirator Availability

The fumigation handler employer must confirm and document in the FMP 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 respirator and cartridges available, and they must be fit-tested, trained, and medically examined.

Respirator Fit Testing, Medical Qualification, and Training

Employers must ensure that any handler that uses a respirator is:

- Fit-tested and fit-checked using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134)
- Trained using a program that conforms to OSHA's requirements (see 29 CFR Part 1910.134)
- Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner at least annually or if their health status or respirator style of use conditions change.

CALIFORNIA ONLY: Application must be in compliance with Technical Information Bulletin for California entitled "Metam Sodium Guidelines for All Application Methods in California." This information bulletin may be obtained from your local pesticide dealer or a Metam Sodium registrant.

RESPIRATORY PROTECTIONS AND STOP WORK TRIGGERS

The following procedures must be followed to determine whether respiratory protection is required or if operations must cease for any person performing a fumigant handling task as defined in this labeling.

- 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
 - Operations must cease and handlers not wearing respirator protection must leave the application block.
- Handlers can remove 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 600 ppb, provided that handlers do not experience sensory irritation. Samples must be taken where the irritation is first experienced.

- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Draeger or Sensidyne device must be used. The devices must have a sensitivity of at least 600 ppb for MITC.
- When respirators are worn, then 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 any sensory irritation when wearing a respirator, or (2) an air sample is greater than or equal to 6,000 ppb, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers can resume work activities without respiratory protection, 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 600 ppb, 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 where the irritation is experienced.
- Work activities can resume if the following conditions exist provided that the appropriate respiratory protection is worn:
 - Two consecutive breathing zone samples for MITC taken at the handling site at least 15 minutes apart must be less than 6,000 ppb,
 - Handlers do not experience sensory irritation while wearing the air-purifying respirator, and
 - 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 where the irritation is first experienced.

TARP PERFORATION AND/OR REMOVAL

IMPORTANT: Persons perforating, repairing, removing, and/or monitoring tarps are defined, within certain time limitations, as fumigant handlers (see definition of fumigant handlers in this labeling) 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.

- Tarps must not be perforated until a minimum of 5 days (120 hours) have elapsed after the fumigant injection into the soil is complete (e.g., after injection of the fumigant product and tarps have been laid or after drip lines have been purged and tarps have been laid), unless a weather condition exists which necessitates the need for early perforation or removal. See "EARLY TARP REMOVAL FOR BROADCAST APPLICATION ONLY" and "EARLY TARP PERFORATION FOR FLOOD PREVENTION ACTIVITIES" sections.
- If tarps will be removed before planting, tarp removal must not begin until at least 2 hours after tarp perforation is complete.
- If tarps will not be removed before planting, planting or transplanting must not begin until at least 48 hours after the tarp perforation is complete.
- If tarps are left intact for a minimum of 14 days after fumigant injection into the soil is complete, planting or transplanting may take place while the tarps are being perforated.
- Each tarp panel used for broadcast fumigation must be perforated.
- Tarps used for fumigations may be perforated manually ONLY for the following situations:
 - At the beginning of each row when a coulter blade (or other device which performs similarly) is used on a motorized vehicle such as an ATV.
 - 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.
- Early Tarp Removal for Broadcast Applications Only:
 - Tarps may be removed before the required 5 days (120 hours) if adverse weather conditions have compromised the integrity of the tarp, provided that the compromised tarp poses a safety hazard. *Adverse weather* includes high wind, hail, or storms that blow tarps off the field and create a hazard, e.g., tarps blowing into power lines and onto roads. A *compromised tarp* is a tarp that due to an adverse weather condition is no longer performing its intended function and is creating a hazard.
 - If tarps are removed before the required 5 days have elapsed due to adverse weather, the events must be documented in the post-fumigation summary section of the FMP.

- Early Tarp Perforation for Flood Prevention Activities
 - Tarp perforation is allowed before the 5 days (120 hours) have elapsed if rain necessitates field drainage.
 - Tarps must be immediately retucked and packed after soil removal.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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), restricted entry interval (REI), and notification of workers. The requirements in this box only apply to uses of this product that are covered by the WPS.

ENTRY RESTRICTIONS

Outdoors: Entry (including early entry that would otherwise be permitted under the WPS) by any person, other than a correctly trained and equipped handler who is performing a handling task permitted on this label, is PROHIBITED from the start of the application until 48 hours after application. In addition, if tarps are used for the application, non-handler entry is prohibited while tarps are being removed.

For entry restricted period and notification requirements, see the following "Entry Restricted Period" below.

Entry Restricted Period: 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:

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

NOTE: See "TARP PERFORATION AND REMOVAL" section of this label for requirements about when tarps are allowed to be perforated.

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 and state:

- "DANGER/PELIGRO,"
- "Area under fumigation, DO NOT ENTER/NO ENTRE,"
- "Metam sodium or Metam potassium Fumigant in USE."
- the date and time of fumigation,
- the date and time entry period is lifted,
- brand name of this product, and
- name, address, and telephone number of the certified applicator in charge of the fumigation.

Post the fumigated warning sign instead of the WPS sign for this application but follow all WPS requirements pertaining to location, legibility, size, and timing of posting and removal.

Post the fumigant warning signs at all entrances to the application block (i.e., the field or portion of a field treated with a fumigant in any 24-hour period).

MANDATORY GOOD AGRICULTURAL PRACTICES (GAPs)

The following GAPs must be followed during all fumigant application. All measurements and other documentation planned to ensure that the mandatory GAPs are achieved must be recorded in the FMP and/or the post-application summary report.

Wind Speed

Wind speed at the application site *must* be a minimum of 2 mph at the start of the application or forecasted to reach at least 5 mph during the application.

Weather Conditions

Prior to fumigation, the weather forecast for the day of the application and the 48-hour period following the fumigation must be checked to determine if unfavorable weather conditions exist or are predicted (see "IDENTIFYING UNFAVORABLE WEATHER CONDITIONS" section) and whether fumigation should proceed.

Do not apply if a shallow, compressed (low-level) temperature inver-

sion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of application, or if there is an air stagnation advisory in effect for the area in which the fumigation is planned. Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained online at <http://www.nws.noaa.gov>. For further guidance, contact 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 and cause injury to humans, animals, or property. These conditions typically exist prior to sunset and continue past sunrise and 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 moved laterally in a concentrated cloud.

Soil Conditions, Injection Depth, and Soil Sealing

Soil must be in good tilth and free of large clods at the surface. If sub-surface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to the soil fumigant application.

Field residue and stubble must be worked into the soil with little or no crop residue present on the soil surface. Crop residue that is present must not interfere with the soil seal. Removing the crop residue prior to fumigation is important to limit the natural "chimneys" that will occur in the soil when crop residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and will limit the efficacy of the fumigant. However, crop residue on the field serves to prevent soil erosion from both wind and water and is an important consideration. To accommodate erosion control, fumigant efficacy, and human health protection, clear fields of crop residue as close to the timing of the fumigation as possible to limit the length of time that the soil would be exposed to potentially erosive weather conditions.

For shank injection applications: The injection point for bedded and broadcast shank injection applications shall be a minimum of 3 inches from the post-application soil surface. Chisel traces must be eliminated following an application and the soil surface must be compacted immediately with a culti-packer, ring roller, coil packer, soil-crumbler basket, bed-shaper, or other similar equipment.

For spray blade and rotary tiller applications: Spray or drip the product mixture on the soil immediately ahead of the bed-shaping equipment or tiller. The soil surface must be compacted immediately after application using a culti-packer, ring roller, soil-crumbler basket, bed-shaper, or other similar equipment.

Soil Temperature

For all ground-rig applications, the maximum soil temperature measured throughout the treatment area at a three-inch soil depth must be between 40 to 90°F.

Soil Moisture

Soil moisture, at the start of an application, must be at 60 to 80% field capacity 2 to 6 inches below the soil surface.

To achieve soil moisture at 60 to 80% field capacity, water treatments before or during the application, or tillage before or during the application may be necessary.

To conserve soil moisture, pretreatment water or tillage should be done as close to the time of application as possible.

The soil must contain at the time of application enough moisture 2 to 6 inches below the surface to meet the *Feel Method* test as appropriate for the soil texture.

- **Coarse textured soils** (fine sand and loamy fine sand): There must be enough moisture (50 to 75% available soil water moisture) to form a weak ball with loose and clustered sand grains on fingers, darkened color, moderate water staining on fingers, will not ribbon.
- **Moderately coarse textured soils** (sandy loam and fine sandy loam): There must be enough moisture (50 to 75% available soil water moisture) to form a ball with defined finger marks, very light soil/water staining on fingers, darkened color will not stick.
- **Medium textured soils** (sandy clay loam, loam, and silt loam): There must be enough moisture (50 to 75% available soil water moisture) to form a ball, very light staining on fingers, darkened color, pliable, and form a weak ribbon between the thumb and forefinger.
- **Fine textured soils** (clay, clay loam, and silty clay loam): There must

be enough moisture (50 to 75% available soil water moisture) to form a smooth ball with defined finger marks, light soil/water staining on fingers, ribbons between thumb and forefinger.

- **For fields with more than one soil texture**, soil moisture content in the lightest textured (most sandy) areas must comply with this soil moisture requirement. Whenever possible, the field should be divided into areas of similar soil texture and the soil moisture of each area should be adjusted as needed. Coarser textured soils can be fumigated under conditions of higher soil moisture than finer textured soils; however, if the soil moisture is too high, fumigant movement will be retarded and effectiveness of the treatment will be reduced. Previous and/or local experience with the soil to be treated or the crop to be planted can often serve as a guide to conditions that will be acceptable. If there is uncertainty in determining the soil moisture content of the area to be treated, a local extension service or soil conservation service specialist or pest control advisor (agricultural consultant) should be consulted for assistance.

Prevention of Spillage

Do not apply or allow fumigant to drain onto the soil surface.

Application and Equipment Considerations

Injectors must be placed below the soil surface before product flow begins.

Clear lines before lifting injectors from the soil.

Each injection line must have a check valve located as close a possible to the final injection point.

Use only tank, hoses and fittings approved for metam.

Dry connect fittings (closed transfer system) must be installed on all tanks and transfer hoses.

All systems must be equipped with an individual tank monitoring system to detect flow problems in each individual tank.

Each nozzle must be equipped with a flow monitor, e.g., mechanical, electronic, or Red-ball type monitor.

Prior to applications, the applicator must ensure that:

- Application equipment is in good working order,
- All tanks, hoses, fittings, valves and connections are tightened, sealed and not leaking,
- Tank monitoring equipment, flow monitoring equipment and check valves are functioning properly,
- There is no damage to hoses or piping,
- Sight gauges and pressure gauges are working,
- Nozzles and metering devices are of correct size and are sealed and unobstructed,
- All shields are in place.

Tarps

When tarps are used in tractor applications, the tarps must be installed immediately after application.

A written tarp plan must be developed and included in the FMP that includes:

- Schedule and procedures for checking tarpaulins for damage, tear, and other problems,
- Plans for determining when and how repairs to tarp will be made, and by whom,
- Minimum time following injection that tarp will be repaired,
- Minimum size of damage that will be repaired,
- Other factors used to determine when tarp repair will be conducted,
- Schedule, equipment and methods used to cut tarp,
- Aeration plans and procedures following cutting and/or slitting prior to tarp removal or planting, and
- Schedule, equipment, and procedures for tarp removal.

GENERAL INSTRUCTIONS

Before applying this product, always thoroughly cultivate the area to be treated by breaking up clods and loosening soil deeply and thoroughly. If soil is not at 50 to 80% moisture capacity in the treatment zone, irrigate 1 to 2 weeks before treatment. Moisten soil after cultivation to the desired depth; sprinkle or flood irrigate. This step is essential for all methods of use. Immediately before application, cultivate lightly if the soil has crusted. This product's effectiveness is based on contact of the gaseous phase with a respiring pest. This product will not control or suppress pests not actively respiring. This product does not provide residual control. Pests that are dormant, protected by large clods, harbored by undecomposed plant material, not present at the time of application, or not present in the treatment zone will not be controlled. See "POTATOES" section for specific directions on the application of this product to potato fields where no-till stubble or cover crops exist. To prevent loss from evaporation, use only at times when air temperature is moderate and there is little wind movement (2 to 10 mph). Soil

temperature must be 40°F to 90°F in the treated zone. Treated zone is defined as the depth of treatment that this product achieves at the time of application. For other conditions, see section "DAYS TO PLANTING/CULTIVATION AFTER APPLICATION". Do not apply to soil surface, as in the sprinkler method, when air temperature is over 90°F or when low humidity or high winds would cause loss of this product before it can be drenched into the soil with additional water. If fumes become detectable during treatment, apply more water to seal the fumes into the soil where they should be confined to achieve maximum fumigation benefit. The activity of this product is increased by the use of tarp (plastic, paper or fabric) spread loosely over the treated areas and secured to prevent removal by wind. Keep covered for a minimum period of 48 hours. Seven days after treatment cultivate no deeper than the depth of treatment to aerate the soil. Do not seed or transplant earlier than 21 days or later after application when tarping method is used (see "TESTING OF TREATED SOIL BEFORE PLANTING" section). Use promptly after mixing with water. Do not allow solution to stand. Flush equipment with water after each day's use. Disassemble valves and clean carefully.

Mycorrhizae: There are occasions when this product is known to temporarily reduce mycorrhizae in agricultural soils. For those crops that are mycorrhizae dependent and planted into soils treated with this product, it is necessary to practice a good fertilizer program until the mycorrhizae repopulate the treated area.

PRODUCT INFORMATION

This product is a water-soluble liquid. When applied to properly prepared soil, the liquid is converted into a volatile fumigant. After sufficient interval of time, the fumigant dissipates leaving the soil ready for planting.

When to use Maximum and Minimum Rates

The application rate of this product is dependent on the soil type to be treated and the position in the soil of the pest to be suppressed or controlled. For maximum control or suppression, an understanding of the pest, its location and its respiring state will ensure maximum performance of this product. Generally, a light sandy soil requires a lower application rate than a heavier mineral soil. In addition, if the pest is in the upper portion of the soil profile (annual weeds), a lower application rate is generally required than if the pest is deeper in the soil profile and deeper penetration is desired (perennial weed seeds and nematodes). When a range of application rates is given in this label, consult your local agricultural extension service for more specific information. This product is used for the suppression or control of the following soil-borne pests that attack Ornamental, Food and Fiber Crops (consult specific cropping and application instructions for directions): Weeds and germinating weed seeds such as Bermudagrass, Chickweed, Dandelions, Ragweed, Henbit, Lambsquarter, Pigweed, Watercress, Johnsongrass, Nightshade, Nutsedge (suppression only), Wild morningglory, and Purslane; Nematodes, (suppression only), Symphyliids (garden centipede), and soil-borne diseases such as Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, Oak root fungus, and Club root of crucifers.

Nematodes and Nutsedge: Nematode suppression is achieved when this product converts to MITC and makes contact with active forms of the nematodes, preferably juveniles. Endoparasites in plant residue may not be suppressed. Plant residues from previously infected crops should be completely decomposed prior to application of this product to ensure maximum exposure. Eggs are more difficult to suppress than juveniles, but are susceptible. Pre-irrigation has been demonstrated to stimulate egg hatch of some species and may enhance overall performance of this product. Nutsedge may be suppressed with this product if actively growing and a high used rate is used (100 gals./acre). More often, rhizomes, roots and shoots will be controlled but the tuber will remain viable and at a later time regrow. Treatments made immediately prior to a crop planting (after the necessary waiting period) will give a weed-free period for crop establishment.

USE PRECAUTIONS

Keep children and pets out of treated areas. Uses of this product described on this label are intended for pre-plant soil preparation only. All plant foliage and any established plants growing on the treatment sites will either be severely damaged or destroyed. Keep the product off of any desirable turf or plants. Do not apply within 3 feet of drop line of desirable plants, shrubs, or trees. Do not use in confined areas without adequate ventilation or when fumes may enter nearby dwellings. Do not use in greenhouses. Keep container tightly closed when not in use. Do not store near feed or food. NOTE: This product will suppress and/or control only those pests in the fumigation zone at the time of

treatment. Reinfestation may occur subsequent to the fumigants dissipation from the soil.

TREATMENT GUIDELINES

For optimum results, certain procedures should be observed at designated times in the treatment program. Described below are important guidelines for each of the four stages of the treatment process. Consult your Sales Representative for the appropriate treatment program for your particular needs.

- Pre-Application
- Field Preparation Prior to Application
- Application
- Pre-Planting After Application of This Product

PRE-APPLICATION

This product is applied postharvest and 14 to 21 days before a new crop is planted (see "TESTING OF TREATED SOIL BEFORE PLANTING" section). In some areas, Fall application is preferred as the product will dissipate over the Winter which allows planting to begin as soon as favorable springtime conditions arrive.

Application Rate

Apply 50 to 100 gallons of this product per treated acre depending on crop, target pest and soil properties. Some of the soil properties to consider when determining the application rate include soil texture, percent organic matter and depth of soil to be treated.

Target Pest and Depth of Treatment

When application rates for this product are given in ranges, use the higher rate if pests (insects, nematodes, etc.) are present in high numbers or if the area to be treated has a history of pest problems. Consult with you State nematologist, entomologist and plant pathologist to determine if crop rotation is more feasible or desirable than fumigation. NOTE: This product will only suppress or control pests that are in the fumigated zone at time of treatment. For control of weeds and fungi, which cause seed or seedling diseases, treatment of only the top 2 to 4 inches of soil may be required. Treatment depths greater than 4 inches may be required for control of nematodes and fungi which occur throughout the rhizosphere. The required application rate should be increased proportionately with the depth of the treatment required. Always choose the appropriate application method to evenly distribute this product through the soil to the required treatment depth.

Soil Characteristics

Soil properties to consider when determining the application rate of this product include the depth of the soil to be treated, soil texture, and percent organic matter. Plant materials under the soil surface (except in this case of cover crops) should be thoroughly decomposed before application. Due to the absorbing effect of humus, soils with high levels of organic matter under the surface require higher rates. For example, muck soil may require twice the rate that would be used in mineral soils. Application rates will also vary with soil texture. For example, heavy clay soils require a higher rate than light sandy soils.

FIELD PREPARATION PRIOR TO APPLICATION

Before applying this product, always thoroughly cultivate the area to be treated breaking up clods and loosening soil deeply and thoroughly, then sprinkle or flood irrigate to moisten loosened soil if needed (see "GENERAL INSTRUCTIONS"). Immediately before treatment, cultivate lightly to break up soil crust. See "POTATOES" section for specific directions on the application of this product to potato fields where no-till stubble of cover crop exist.

Soil Temperature During Treatment

Soil temperature must be from 40°F to 90°F in the treated zone. A treated zone is defined as the depth of treatment that this product achieves at the time of application.

To prevent rapid evaporation of the product from the soil, avoid treating soil during the time of day when soil temperatures exceed 90°F within the first two inches of soil. Instead, make the application at night or in early morning when the soil temperature is coolest.

Soil Moisture at Time of Treatment

Applications should be made only to fields with good seedbed moisture conditions (50 to 80% of field capacity). As a simple field test, squeeze a handful of soil into a ball and then gently try to break it apart with you fingers. If it does not form a ball, the soil is too dry. If it forms a ball but breaks easily, the soil moisture content is sufficient. If it will not break apart easily or if water can be squeezed out, the soil is too wet. When necessary, sprinkle or flood irrigate the soil 1 to 2 weeks prior to treatment to increase the moisture content. The soil must be moistened to at least the desired treatment depth.

Air Temperature During Treatment

To prevent loss from evaporation, use only at times when air temperature is moderate and there is little wind movement (2 to 10 mph). Do not apply to soil surface, as in the sprinkler irrigation method, when air temperature at time of application is 90°F or higher or when high winds or low humidity would cause loss of this product before it can be drenched into the soil with additional water.

Phytotoxicity

This product is phytotoxic. Protect valuable, non-target plants by stopping soil applications of this product at least 3 feet short of the drop line of trees, shrubs and other desirable plants. For sprinkler application, crop injury and lack of effectiveness can result from non-uniform distribution of the treated water.

APPLICATION OF THIS PRODUCT

Apply according to the methods and rates outlined below under the section "USES, RATES AND APPLICATION METHODS".

Use of Diluted PHUME

Do not store the diluted product. Do not allow the diluted solution to stand overnight. Use the diluted solution promptly after mixing with water. Flush all equipment with water after each day's use. Disassemble valves and clean carefully.

Odors During or After Application

Strong odors during or after application are a signal that the fumigant is escaping and needs to be sealed in the soil. If increasingly strong odors are occurring, the application should be stopped immediately and not resumed until the source of the odor problem is identified and corrected. For sprinkler applications or whenever possible with other application methods, a water seal should be applied immediately to the treated areas of the field.

Sealing This Product in the Soil

To be most effective, this product should be sealed in the soil at the time of application. Sealing methods include applying a water seal by sprinkler irrigation, tarping (plastic, paper or fabric), packing soil with a roller, drag or press wheel or covering with an adequate amount of soil. Tarpaulins should be spread loosely over the treated area and secured to prevent removal by wind. They should remain in place for at least 48 hours. If tarped, the sealed area should be cultivated to a depth no deeper than the treated zone to aerate the soil seven days after treatment. When tarpaulins are used to seal the soil, wait at least 21 days before planting.

Application in Tank Mix with Liquid Fertilizer

This product may be injected in a mixture with liquid fertilizers; however, a dual injection system is preferred. Since the composition of liquid fertilizers vary considerably, the physical compatibility of this product/fertilizer tank mix should be checked by using the following procedure:

Mix a small quantity of this product and liquid fertilizer in the same ratio as they will be applied to the field (e.g., if 50 gallons of this product and 50 gallons of liquid fertilizer are to be applied per acre, then the mixture should be mixed in a 50:50 or 1:1 ratio. Mix in a glass container. Mixing should be done outdoors and out of direct sunlight. Agitate the liquid to attain a complete uniform mixture. If the mixture remains uniform for 30 minutes without agitation, the combination may be used. Should the mixture separate after 30 minutes but is readily remixed with agitation, the mixture can be used if adequate agitation is maintained in the tank.

DO NOT PLACE CAPS ON MIX JAR AS INCOMPATIBLE MIXES MAY EVOLVE HYDROGEN SULFIDE GAS. USE PROMPTLY AFTER MIXING WITH WATER OR FERTILIZER. DO NOT ALLOW THE SOLUTION TO STAND. FLUSH ALL EQUIPMENT WITH WATER AFTER EACH DAY'S USE. DISASSEMBLE VALVES AND CLEAN CAREFULLY.

GENERAL PRECAUTIONS FOR IRRIGATION SYSTEMS

Posting of areas to be chemigated is required when (1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or (2) when chemigated area is open to the public such as golf courses.

Posting must conform to the following requirements: 1) Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensi-

tive areas. 2) The printed side of the sign should face away from the treated area towards the sensitive area. 3) The signs shall be printed in English. 4) Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of posting. 5) All words shall consist of letter of a least 2.5 inches tall and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words "KEEP OUT" followed by an octagonal stop sign symbol of at least 8 inches in diameter containing the word "STOP". Below the stop sign symbol shall be the words "PESTICIDES IN IRRIGATION WATER". This sign is in addition to any sign posted to comply with the Worker Protection Standard.

CHEMIGATION OF THIS PRODUCT

When applying by chemigation methods, the following directions or warnings must be observed:

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) row, traveler, big gun, solid set, or hand move, flood (basin), furrow, border, or drip (trickle) irrigation systems. DO NOT apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact your State Extensions Service Specialist, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless prescribed safety devices for public water systems stated on the pesticide label are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.

Chemigation Using a Public Water System

NOTE: DREXEL CHEMICAL DOES NOT ENCOURAGE CONNECTION OF CHEMIGATION SYSTEMS TO PUBLIC WATER SYSTEMS. The following information is provided for users who have evaluated alternative application and water source options before choosing to make such a connection.

OBSERVE THE FOLLOWING PRECAUTIONS IF YOUR CHEMIGATION SYSTEM IS CONNECTED TO A PUBLIC WATER SYSTEM:

A public water system is defined as a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems must contain a functional, reduced pressure zone (RPZ), backflow preventer or the functional equivalents in the upstream water supply line from the point of pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and top of overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid 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 sytem 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, or in the cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of matierials that are compatible with pesticides and capable of being fitted with a system interlock. *Any alternatives to the above safety devices must conform to the list of EPA-approved alternative devices.*

Sprinkler and Drip Chemigation System

See "Field Application Where Entire Area Is Being Treated" under "USE RATES AND APPLICATION METHODS" section of this label. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid toward the injection

pump. The pesticide injection pipeline must also contain a functional, normally-closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Flood Basin, Furrow and Border Chemigation

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

MANDATORY GOOD AGRICULTURAL PRACTICES FOR SPRINKLER AND CHEMIGATION APPLICATIONS

Wind Speed

For mid-release, high-release and end-gun sprinkler or chemigation applications as defined by U.S. EPA, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 8 mph.

For low-release height solid-stream sprinkler or chemigation applications as defined by U.S. EPA, wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach 5 mph during the application and the maximum wind speed is 25 mph.

Wind speed at the application site *must* be a minimum of 2 mph at the start of the application or forecasted to reach at least 5 mph during the application.

Weather Conditions

Prior to fumigation, the weather forecast for the day of the application and the 48-hour period following the fumigation *must* be checked to determine if unfavorable weather conditions exist or are predicted and whether fumigation should proceed.

Do not apply if a shallow, compressed (low-level) temperature inversion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of application, or if there is an air stagnation advisory in effect for the area in which the fumigation is planned. Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained online at <http://www.nws.noaa.gov>. For further guidance, contact you 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 and cause injury to humans, animals, or property. These conditions typically exist prior to sunset and continue past sunrise and 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 smoke 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.

Soil Conditions

Soil must be in good tilth and free of large clods at the surface. If sub-surface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to the soil fumigant application.

Field residue and stubble must be worked into the soil with little or no crop residue present on the soil surface. Crop residue that is present must not interfere with the soil seal. Removing the crop residue prior to fumigation is important to limit the natural "chimneys" that will occur in the soil when crop residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and will limit the efficacy of the fumigant. However,

crop residue on the fields serves to prevent soil erosion from both wind and water and is an important consideration. To accommodate erosion control, fumigant efficacy, and human health protection, clear fields of crop residue as close to the timing of the fumigation as possible to limit the length of time that the soil would be exposed to potentially erosive weather conditions.

Air Temperature

The maximum air temperature is 90°F.

Soil Temperature

The maximum soil temperature, measured at three-inch soil depth, is 90°F.

Soil Moisture

Apply sufficient water before or during the application to ensure moisture at 60 to 80% field capacity at a minimum of 2 to 6 inches below the soil surface at the start of the application.

Flushing Irrigation Lines

Do not allow fumigant to remain in the irrigation system after the application is complete. After application of the fumigant, flush the injection and irrigation system with untreated water. The flush time must be adequate to purge the fumigant from the injection and irrigation system, but should be less than the amount that could over-saturate the beds. If common lines are used for both the fumigant application and the water treatment/seal (if applied), these lines must be adequately flushed before starting the water treatment/seal.

Set-Up, Repair and Maintenance of Equipment

Anti-siphon and backflow prevention devices must be installed and in working order.

Storage tanks must be inspected in good condition, and not past their life expectancy to ensure product does not spill or leak.

Storage tanks must have proper pesticide labels on them.

Install a shut off valve on the tank outlet to secure the bulk storage tank when not in use.

- Use only tanks constructed with materials approved for handling metam-sodium and metam-potassium.
- Inter-connect the pump power supply and injection pump so that, if the center pivot or linear move stops, the injection pump shuts off.

MANDATORY GOOD AGRICULTURAL PRACTICES FOR DRIP APPLICATION

Wind Speed

Wind speed at the application site *must* be a minimum of 2 mph at the start of the application or forecasted to reach at least 5 mph during the application.

Weather Conditions

Prior to fumigation, the weather forecast for the day of the application and the 48-hour period following the fumigation *must* be checked to determine if unfavorable weather conditions exist or are predicted and whether fumigation should proceed.

Do not apply if a shallow, compressed (low-level) temperature inversion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of the application, or if there is an air stagnation advisory in effect for the area in which the fumigation is planned.

Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained online at <http://www.nws.noaa.gov>. For further guidance, contact 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 and cause injury to humans, animals, or property. These conditions typically exist prior to sunset and continue past sunrise and 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 smoke 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.

Soil Conditions

Soil must be in good tilth and free of large clods at the surface. If sub-surface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to the soil fumigant application.

Field residue and stubble must be worked into the soil with little or no crop residue present on the soil surface. Crop residue that is present must not interfere with the soil seal. Removing the crop residue prior to fumigation is important to limit the natural "chimneys" that will occur in the soil when crop residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and will limit the efficacy of the fumigant. However, crop residue on the fields serves to prevent soil erosion from both wind and water and is an important consideration. To accommodate erosion control, fumigant efficacy, and human health protection, clear fields of crop residue as close to the timing of the fumigation as possible to limit the length of time that the soil would be exposed to potentially erosive weather conditions.

Soil Temperature

The maximum soil temperature is 90°F measured at three-inch soil depth.

Set-Up, Repair and Maintenance of Equipment

Properly label metam-sodium storage tanks.

Install a shut-off valve to secure the bulk storage tank when not in use. Use only tanks constructed with materials approved for handling metam products.

The drip irrigation system (main lines, headers, drip tape) must be thoroughly checked for leaks before the start of the application. An adequate run-time and pressure are needed to detect leaks. Look for puddling along major pipes (holes on pipes or leaky joints), at the top and ends of rows (leaky connections, open drip tape), in the furrows and on the bed surface (damaged drip tape, malfunctioning emitters). To inject fumigant, use a metering system, effectively designed and constructed of materials that are compatible with the fumigant and capable of being fitted with system interlocking controls.

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

The fumigant injection system must contain a functional, automatic, quick-closing check valve to prevent the flow of fumigant back toward the fumigant container.

The fumigant injection system must contain a functional, normally closed valve located on the intake side of the injection point and connected to the system interlock to prevent fumigant 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 fumigant injection when the irrigation water flow stops or decreases to the point where the fumigant distribution is adversely affected.

Tarps

When tarps are used in tractor applications, the tarps must be installed immediately after application.

A written tarp plan must be developed and included in the FMP that includes:

- Schedule and procedures for checking tarpaulins for damage, tear, and other problems,
- Plans for determining when and how repairs to tarp will be made, and by whom,
- Minimum time following injection that tarp will be repaired,
- Minimum size of damage that will be repaired,
- Other factors used to determine when tarp repair will be conducted,
- Schedule, equipment and methods used to cut tarp,
- Aeration plans and procedures following cutting and/or slitting prior to tarp removal or planting, and
- Schedule, equipment, and procedures for tarp removal.

Flushing Drip Lines

After application of the fumigant, flush the injection and irrigation system with untreated water. Do not allow fumigant to remain in the irrigation system after the application is complete. The total volume of water must be adequate to completely remove the fumigant from the irrigation system. If common lines are used for both the fumigant application and the water treatment/seal (if applied), these lines must be adequately flushed before starting the water treatment/seal.

PRE-PLANTING AFTER APPLICATION OF THIS PRODUCT

Effects of Rain

If rain occurs within 24 hours of application of this product, lack of control at and near the soil surface may occur.

Recontamination

Precautions must be taken to prevent recontamination of treated fields with plant pathogenic fungi, plant parasitic nematodes or weed seed. Use clean seeds or plants. Before farm equipment is driven into the treated area, it should be rinsed free of untreated soil and weed seeds from other fields.

Days to Cultivating or Planting After Application

Because this product is harmful to germinating seeds and living plants, an appropriate interval must be observed between treatments and planting. On well-drained soils which have a light to medium texture and which are not excessively wet or cold following the application, planting can begin 14 to 21 days after treatment. If soils are heavy or especially high in organic matter or if the soil remains wet and/or cold (below 60°F) following the application, a minimum interval of 21 days or greater should be observed. The interval before planting should be extended until the soil is sufficiently dry to allow for cultivation.

Cultivation of Soil Before Planting

IMPORTANT: Heavier soils including soils high in clay or organic matter should be allowed to aerate and dry thoroughly after treatment with this product. During cold and/or wet weather, frequent shallow cultivation can aid dissipation of this product from the treated soil.

On heavy, wet soils, light surface cultivation to break up crusting and promote drying should be done 5 to 7 days after treatment if planting is to occur within 14 to 21 days after treatment. This cultivation may be repeated as necessary.

NOTE OF CAUTION: To avoid contaminating treated soils, care should be taken to assure that untreated soils are not mixed with treated soils.

Testing of Treated Soils Before Planting

Fields are fumigated to control soil-borne fungi, nematodes, insects, and weeds. The length of time required for fumigants to escape from the soil before plants can safely be planted varies greatly. Typically 14 to 21 days are needed typical conditions; however, circumstances which do not favor evaporation of the fumigant can greatly lengthen the waiting period as much as up to 30 days. The release period is short with (1) low rates of fumigants, (2) light soil, (3) high soil temperatures, (4) low soil moisture, (5) shallow application depth, and (6) repeated cultivations after fumigation. Seeded crops are less susceptible to residual soil fumigant injury than transplanted crops. In general, fumigants escape slowly from cold, wet, heavy soils.

If in doubt, perform either the Lettuce Seed Test or the Tomato Transplant Test as described elsewhere in this label. If germination occurs in 1 to 3 days or if Tomato plant shows signs of wilting or root burn in 2 days, the product is still available and an extended wait period must be observed.

PACIFIC NORTHWEST STATES OF IDAHO, NEVADA, OREGON AND WASHINGTON

NOTE: When applied in the Spring, allow a minimum of 14 to 21 days before planting providing no fumes are detectable. When the soil temperature is below 60°F, allow a minimum of 21 days before planting. Check for noxious fumes and aerate as needed. Use a seedling indicator plant with a hot cap to check for activity or fumes (or follow instructions in preceding paragraph). **DO NOT** plant if fumes are detectable or injury to plant has occurred. Re-aerate the soil and check again.

The information below describes two simple test to assay for harmful residual soil fumigants before planting.

Lettuce Seed Test

1. With a trowel, dig into the treated soil to or just below the depth of application. Remove 2 to 4 small (1 to 2 ozs.) soil samples, mix lightly, and immediately place a portion in an air-tight jar so that fumes will not escape. Use mason, wheat germ or similar jars with gas-tight lids.
2. Sprinkle lettuce seeds on the moistened surface of the soil and recap immediately. Prepare a similar jar with untreated soil (untreated check) for comparison.
3. Keep the jars at 65°F to 85°F; do not place in direct sunlight. Direct sunlight may kill the seed by overheating. Lettuce seed will germinate in the dark.
4. Inspect the jars for germination in 1 to 3 days.
5. The soil is safe for planting if seeds in the treated jar germinate the same as seeds in the untreated jar.

IMPORTANT: Be sure (1) to sample the field properly in several areas, particularly low, wet areas; (2) that the lids are air tight and have no grit

under the seal; and (3) that the jars are placed in indirect sunlight.

Tomato Transplant Test

Transplant 5 to 10 succulent, fast-growing tomato seedlings into fumigated beds approximately 4 to 6 inches deep. Do the same in a non-fumigated area. If there is variation in the field, plant into the heaviest, wettest soil. Inspect the seedlings in 2 days for wilting or "root burn". If plants in the fumigated zone look the same as those in the non-fumigated zone, it is safe to plant.

Which Test is Best?

Both the lettuce seed and tomato transplant tests can serve the purpose. The response of tomato seedlings varies somewhat depending on how succulent they are, the relative humidity, soil moisture and temperature. Relative differences between plants in fumigated and non-fumigated areas are key to detecting low level residues. High concentrations should produce clear-cut symptoms. Lettuce seed tested in jars are not subjected to the variation in the field that can affect the response of tomato transplants. However, the process of collecting a soil sample allows some fumigant to escape prior to sealing the jar. In addition, excess soil moisture can inhibit normal lettuce seed germination reducing the sensitivity of the test.

SITE-SPECIFIC FUMIGATION MANAGEMENT PLAN (FMP)

Prior to the start of fumigation, the certified applicator supervising the application must verify that a site-specific fumigation management plan (FMP) exists for each application block. Agricultural operations fumigating multiple application blocks as part of a larger fumigation may format their 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, separate sections.

The FMP may be prepared by the certified applicator, the site owner/operator, registrant, or other party. The certified applicator must verify in writing the site-specific FMPs reflects current site conditions before the start of fumigation. Each site-specific FMP must contain the following elements:

- Applicator information (Name, Phone number, License number, Employer name, Employer address)
- General site information
 - Application block location, address, or global positioning system (GPS) coordinates
 - Name, address, and phone number of owner/operator of the application block
- General application information (Target application date/Window, brand name of fumigant, EPA registration number)
- Tarp Information and procedures for repair, perforation and removal (if tarp is used)
 - Brand name, lot number, thickness
 - Name and phone number of person responsible for repairing tarps
 - Schedule for checking tarps for damage, tear, and other problems
 - Maximum time following notification of damage that the person(s) responsible for tarp repair will respond
 - Minimum time following application that tarp will be repaired
 - Minimum size of damage that will be repaired
 - Other factors used to determine when tarp repair will be conducted
 - Name and phone number of person responsible for cutting and/or removing tarps (if other than certified applicator)
 - Equipment/methods used to cut tarps
 - Schedule and target dates for cutting tarps
 - Schedule and target dates for removing tarps
- Soil conditions (description of soil texture in application block, method used to determine soil moisture)
- Weather conditions (summary of forecasted conditions for the day of the application and the 48-hour period following the fumigant application)
 - Wind speed
 - Inversion conditions (e.g., shallow, compressed (low-level) temperature inversion)
 - Air stagnation advisory
- Respirators and other personal protective equipment (PPE) for handlers (handler task, protective clothing, respirator type, respirator cartridge type, respirator cartridge replacement schedule, eyeprotection, gloves, other PPE)
- Emergency procedures (evacuation routes, locations of telephones, contact information for first responders, local/state/federal contacts, key personnel and emergency procedures/responsibilities in case of an incident, equipment/tarp/seal failure, odor complaints, or other emergencies)

- Treated area posting procedures (Name, Address, and Phone number of person(s) who will post signs, location of posting signs, procedures for sign removal)
- Plan describing how communication will take place between applicator, land owner/operator, and other on-site handlers (e.g., tarp cutters/removers, irrigators) for complying with label requirements (e.g., treated area location, timing of tarp cutting and removal, PPE)
 - Name and phone number of persons contacted
 - Date contacted
- Authorized on-site personnel
 - Names, address and phone numbers of all handlers
 - Employer name, addresses, and phone numbers for all handlers
 - Tasks that each handler is authorized and trained to perform
 - Date of PPE training for each handler
 - For handlers designated to wear respirators when respiratory protection is required (minimum of one handler), date of medical qualification to wear a respirator and date of fit-testing for respirator
- Air monitoring
 - *For handlers without respirator protection:*
 - If sensory irritation is experienced, indicate whether operations will be ceased or operations will continue with respiratory protection
 - If the intention is to cease operations when sensory irritation is experienced, provide the name, address, and phone number of the handler that will perform monitoring activities prior to operations resuming
 - *For handlers with respirator protection:*
 - Representative handler tasks to be monitored
 - Monitoring equipment to be used and timing of monitoring
- Good Agricultural Practices (GAPs)
 - Description of applicable mandatory GAPs (registrants may also include optional GAPs)
 - Measurements and documentation to ensure GAPs are achieved (e.g., measurement of soil and other site conditions)
- Description of hazard communication. (The treated area has been posted in accordance with the label. Pesticide product labels and material safety data sheets are on-site and readily available for employees to review.)
- Record keeping procedures (the owner/operator of the application block as well as the certified applicator, must keep a signed copy of the site-specific FMP and post-application summary for 2 years from the date of application).

For situations where an initial FMP is developed and certain elements do not change for multiple fumigation sites (e.g., applicator information, authorized on-site personnel, record keeping procedures, emergency procedures, etc.), only elements that have changed need to be updated in the site-specific FMP provided the following:

- The certified applicator supervising the application has verified that those elements are current and applicable to the application block before it is fumigated and has documented the verification in the site-specific FMP; and
- Recordkeeping requirements are followed for the entire FMP (including elements that do not change)

Once the application begins, the certified applicator must make a copy of the FMP available for viewing by handlers involved in the fumigation. The certified applicator or the owner/operator of the application block must provide a copy of the FMP to any federal, state, tribal, or local enforcement personnel who request the FMP. In the case of an emergency, the FMP must be made available when requested by federal/state/local emergency response and enforcement personnel.

Within 30 days of completing the application portion of the fumigation process, the certified applicator supervising the application must complete a post-fumigation application summary that describes any deviations from FMP that have occurred, measurements taken to comply with GAPs, as well as any complaints and/or incidents that have been reported to him/her. The summary must include the actual date of the application, application rate, and size of application block fumigated. The Post-Application Summary must contain the following elements:

- Actual date of the application, application rate, and size of application block fumigated
- Summary of weather conditions on the day of the application and during the 48-hour period following the fumigant application
- Tarp damage and repair information (if applicable)
 - Location and size of tarp damage
 - Description of tarp/tarp seal/tarp equipment failure
 - Date and time of tarp repair
- Tarp perforation/removal details (if applicable)
 - Description of tarp removal (if different than in the FMP)

- Dates tarps were perforated
- Date tarps were removed
- Complaint details (if applicable)
 - Person filing complaint (e.g., on-site handler, person off-site)
 - If off-site person, name, address, and phone number of person followed after complaint
 - Description of control measures or emergency procedures followed after complaint
 - Description of incidents, equipment failure, or other emergency procedures followed (if applicable)
 - Details of elevated air concentration monitored on-site (if applicable)
 - Location of elevated air concentration levels
 - Description of control measures or emergency procedures followed
 - Air monitoring results
 - *When sensory irritation was experienced:*
 - Date and time of sensory irritation
 - Handler task/activity
 - Handler location where irritation was observed
 - Resulting action (e.g., cease operations, continue operations with respiratory protection)
 - *When using a direct read instrument:*
 - Sample date and time
 - Handler task/activity
 - Handler location
 - Air concentration
 - Sampling method
 - Date of treated area sign removal
 - Any deviations from the FMP

The certified applicator who supervised the fumigation and the owner/operator of the agricultural establishment where the fumigation took place must keep a signed copy of the site-specific FMPs and the post-application summary record for at least 2 years following the application.

USE RATES AND APPLICATION METHODS

Only for use on the following: Alfalfa; Asparagus (nursery production only); Artichokes; Barley; Basil; Beet; Berries [includes all EPA Crop Group 13, Berries Group, i.e., blackberry (*Rubus eubatus*), bingeberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, lavacaberry, lowberry, lucretiaberry, mammoth blackberry, marionberry, nectarberry, olalieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry and varieties and/or hybrids of these, blueberry (*Vaccinium spp.*), currant (*Ribes spp.*), elderberry (*Sambucus spp.*), gooseberry (*Ribes spp.*), huckleberry (*Gaylussacia spp.*), loganberry (*Rubus loganobaccus*), raspberry-black and red (*Rubus occidentalis*, *Rubus strigosus*, *Rubus idaeus*); Broccoli; Brussels sprouts; Cabbage; Carrot; Cauliflower; Celeriac; Chinese greens or bok choy; Cilantro; Citrus (orchard replant only) [includes all of EPA Crop Group 10, Citrus Fruits, i.e., calamondin (*Citrus mitis* X *Citrofortunella mitis*), citrus citron (*Citrus medica*), citrus hybrids (*Citrus spp.*) (includes: chironja, tangelo, tangor), grapefruit (*Citrus paradisi*), kumquat (*Fortunella spp.*), lemon (*Citrus jambhiri*, *Citrus limon*), lime (*Citrus aurantiifolia*), mandarin (tangerine) (*Citrus reticulata*), orange-sour (*Citrus aurantium*), orange-sweet (*Citrus sinensis*), pummelo (*Citrus grandis*, *Citrus maxima*), satsuma mandarin (*Citrus unshiu*); Collard; Corn; Cover crops (i.e., crops planted between periods of regular crop production to prevent soil erosion, control weeds, and improve soil quality that are incorporated into the soil before the next crop is planted and may not be harvested for food or feed); Crops grown solely for seed; Cucurbits [includes all of EPA Crop Group 9, Cucurbit Vegetables Group, i.e., chayote (fruit) (*Sechium edule*), Chinese waxgourd (Chinese preserving melon) *Benincasa hispida*, citron melon (*Citrullus lanatus* var. *citroides*), cucumber (*Cucumis sativus*), gherkin (*Cucumis anguria*), gourd-edible (*Lagenaria spp.*) [includes hyotan, cucuzza (*Luffa acutangula*, *L. cylindrica*, includes hechima, Chinese okra)], *Momodica spp.* (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), muskmelon [hybrids and/or cultivars of *Cucumis melo* (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon)], pumpkin (*Cucurbita spp.*), squash, summer (*Cucurbita pepo* var. *molopepo*) (includes: crookneck squash, scallop squash, straightneck squash, vegetable marrow, and zucchini), squash, winter (*Cucurbita maxima*; *C. moschata*) (includes: butternut squash, calabaza, hubbard squash) and (*C. mixta*; *C. pepo*) (includes acorn squash, spaghetti squash)

and watermelon (includes hybrids and/or varieties of *Citrullus lanatus*); Dill; Eggplant; Forest seedlings; Ginger; Grape (vineyard replant only); Kale; Kohlrabi; Leafy greens [includes all of EPA Crop Group 4, Leafy Vegetables (Except Brassica Vegetables), i.e., amaranth (leafy amaranth, Chinese spinach, tampala) (*Amaranthus spp.*), arugula (roquette) (*Eruca sativa*), cardoon (*Cynara cardunculus*), celery (*Apium graveolens* var. dulce), celery-Chinese (*Apium graveolens* var. secalinum), celituce (*Lactuca sativa* var. *angustana*), chervil (*Anthriscus cerefolium*), chrysanthemum-edible leaved (*Chrysanthemum coronarium* var. *coronarium*), chrysanthemum-garland (*Chrysanthemum coronarium* var. *spatiosum*), corn salad (*Valerianella locusta*), cress-garden (*Lepidium sativum*), cress-upland (yellow rocket, winter cress) (*Barbarea vulgaris*), dandelion (*Taraxacum officinale*), dock (sorrel) (*Rumex spp.*), endive (escarole) (*Cichorium endivia*), fennel-Florence (finochio) (*Foeniculum vulgare Azoricum* Group), lettuce-head and leaf (*Lactuca sativa*), orach (*Atriplex hortensis*), parsley (*Petroselinum crispum*), purslane-garden (*Portulaca oleracea*), purslane-winter (*Montia perfoliata*), radicchio (red chicory) (*Cichorium intybus*), rhubarb (*Rheum rhubarbarum*), spinach (*Spinacia oleracea*), spinach-New Zealand (*Tetragonia tetragonioides*, *T. expansa*), spinach-vine (Malabar spinach, Indian spinach) (*Basella alaba*), and swiss chard (*Beta vulgaris* var. *clolla*); Leek; Mint; Mustard; Nursery stock (fruit seedlings and rose bushes only); Onion; Ornamentals (floriculture only); Pome fruit (orchard replant only) [includes all of EPA Crop Group 11, Pome Fruits Group—Commodities, i.e., apple (*Malus domestica*), crabapple (*Malus spp.*), loquat (*Eriobotrya japonica*), mayhaw (*Crataegus aestivalis*, *C. opaca* and *C. rufula*), pear (*Pyrus communis*), pear-oriental (*Pyrus pyrifolia*), and quince (*Cydonia oblonga*)]; Peanut; Pepper; Potato; Radish; Rye; Sugar beet; Soybean; Stone fruit (orchard replant only) [includes all of EPA Crop Group 12, Stone Fruits Group—Commodities, i.e., apricot (*Prunus armeniaca*), cherry-sweet (*Prunus avium*), cherry-tart (*Prunus cerasus*), nectarine (*Prunus persica*), peach (*Prunus persica*), plum (*Prunus domestica*, *Prunus spp.*), plum-Chickasaw (*Prunus angustifolia*), plum-Damson (*Prunus domestica* spp. *insititia*), plum-japanese (*Prunus salicina*), plumcot (*Prunus armeniaca* X *P. domestica*), prune (fresh) (*Prunus domestica*, *Prunus spp.*)]; Strawberries; Sugar beet; Sweet potato; Swiss chard; Tobacco; Tomatoes; Tree nuts (orchard replant only) [includes all of EPA Crop Group 14, Tree Nuts Group, i.e., almond (*Prunus dulcis*), beech nut (*Fagus spp.*), Brazil nut (*Bertholletia excelsa*), butternut (*Juglans cinerea*), cashew (*Anacardium occidentale*), chestnut (*Castanea spp.*), chinquapin (*Catanea pumila*), filbert (hazelnut) (*Corylus spp.*), hickory nut (*Carya spp.*), macadamia nut (bush nut) (*Macadamia spp.*), pecan (*Carya illinoensis*), and walnut-black and English (Persian) (*Juglans spp.*) as well as pistachio]; Turnip; Turf (including golf courses); and Wheat.

USE RESTRICTIONS: Use in greenhouses is prohibited. Application with handheld equipment is prohibited. Application with cement grinder and shredder equipment is prohibited. Open-air applications are prohibited.

Maximum Application Rate: DO NOT apply more than 320 lbs. a.i. (100.6 gallons of this product) per acre.

FIELD APPLICATION WHERE ENTIRE AREA IS BEING TREATED SOIL INJECTION

Apply with injector such as shanks, blades, fertilizer wheels, plows, etc. Apply this product at the rate of 50 to 100 gallons per treated acre. Follow immediately with a roller to smooth and compact the soil surface. Light watering or tarping after rolling helps prevent fumigant escape. It may be necessary to stagger the injector placement on two or more tool bars to prevent soil build up during application.

When setting up your soil injection equipment with either spray blades, injection knives or coulters, make sure they are evenly and closely placed to create an even application width and depth. To accomplish this, it may require multiple tool bars with the injection tools staggered. This will help prevent build up of trash and aid in the soil sealing. For example, apply this product through injectors placed 4 inches below the soil surface and 5 inches apart.

SOIL COVERING

This product may be applied as a broadcast application immediately in front of the soil covering equipment such as bed shapers, rotary tillers, discs, etc., to a minimum depth of 6 inches using a single pass to incorporate. Use 50 to 100 gallons of this product per treated acre followed immediately by a roller/packer to smooth and compact the soil surface.

ROTARY TILLER OR POWER MULCHER

Spray this product immediately in front of the tiller or mulcher, set to the

depth to where control is desired. Use 50 to 100 gallons per treated acre. Follow immediately with a roller, power roller or bed shaper to seal the soil surface. Light watering or a tarp after rolling may be used to help prevent fumigant escape.

SPRINKLER SYSTEM

Use only those sprinkler system which gives large water droplet to prevent excessive loss. Use 50 to 100 gallons of this product per acre. Meter continuously throughout the injection period all of the product required to come in contact with the targeted pest in the treated zone. The desired depth of treatment obtained may be contingent upon soil moisture and type. Soil conditions must facilitate even moisture penetration without runoff. Flush lines following injection of this product. For proper application rate and placement, consult your local Drexel Sales Representative or County Extension Expert. Follow instructions under "GENERAL PRECAUTIONS FOR IRRIGATION" section of this label.

Application over cover crops: This product can be applied through sprinkler irrigation systems on cover crops such as Alfalfa, Clover, and grasses such as Rye, Oats, Wheat, and Sudan. When applied on cover crops, no soil cultivation is required before the application.

Effects of air temperature and winds on sprinkler applications: When using the sprinkler application method, apply this product only when the air temperature is below 90°F. This precaution is to guard against evaporation of the product. Low humidity or high wind velocity can also cause premature evaporation of the fumigant before drenching into the soil. Do not apply when wind conditions favor drift from treated field.

Prevention of treatment runoff: To prevent runoff of the treatment during a sprinkler application, do not apply this product at a rate greater than the absorption capacity of the field. Should runoff occur, isolate it from growing crops and water sources. Once collected, reapply to the treated field.

Check Flood (Basin), Furrow and Border: Meter this product at a steady rate into water during irrigation. Depending on the kind of pest and the treatment depth, use 50 to 100 gallons of this product per treated acre in 3 to 18 inches of water per acre. Meter this product into the irrigation water at the head of the field at a point with enough turbulence to assure adequate mixing of the product in the water. IMPORTANT: Prior to starting the application, always inspect ditches and border areas to ensure containment of the irrigation waters. Damage to bordering crops will occur if leaks develop. Apply only into field head ditch. DO NOT APPLY INTO ANY LATERAL DITCHES.

Follow instructions under "GENERAL PRECAUTIONS FOR IRRIGATION SYSTEM" section of this label.

Drip Irrigation System

This product must be applied through a drip irrigation system designed to wet the soil thoroughly in the area being treated. Meter 50 to 100 gallons of this product per treated acre into the drip system during the entire irrigation period. APPLICATION MUST BE CONTINUOUSLY SUPERVISED. Flush irrigation system with adequate water after completion of application.

Important: WEED ELEMINATION WILL NOT BE SATISFACTORY IF TOO MUCH WATER IS APPLIED. AN ADEQUATE CONCENTRATION OF THIS PRODUCT MUST BE PRESENT AT THE TIME OF WEED SEED GERMINATION IN ORDER TO BE EFFECTIVE. Further directions for use are as follows:

1. Ground must be in seedbed condition, no clods larger than 0.5 inch in diameter.
2. Beds must be lifted, shaped and ready for planting.
3. Soil moisture must be 50 to 80% of field capacity in the top 2 to 3 inches at time of application.

NOTE: If this product is applied to established plantbeds under plastic tarps to terminate growth of a previous crop and to fumigate the bed in preparation of planting a subsequent crop, the terminated crop must not be used for any food or feed purposes after this product has been applied.

Follow instructions under "GENERAL PRECAUTIONS FOR IRRIGATION SYSTEM" in previous section.

PACIFIC NORTHWEST ONLY

Field Preparation

To remove compacted areas that are in the field to be treated, rip and disc the field prior to application of this product. After this soil preparation and 7 to 10 days prior to application of this product, irrigate the field applying enough water so that at time of the application, the soil will be 50% to 85% field capacity.

This product may be applied using (1) a single shank spaced no more than 6 inches apart and a spray nozzle 6 inches deep; (2) a single shank spaced no more than 6 inches apart and spray nozzles spaced 6 to 12 inches deep; (3) a single sweep spaced no more than 12 inches apart and sweep blades 12 inches wide with a spray nozzle that will give broadcast coverage from sweep tip to sweep tip; (4) a double-winged shank spaced no more than 12 inches apart and 9 inches between the wings with spray nozzles giving uniform coverage; (5) a Noble Plow blade with spray nozzles spaced every 6 inches and set to 12 to 14 inches deep using a disc to immediately incorporate this product placed on the surface. All soil injection applications must be followed immediately with a roller/packer to smooth and compact the soil surface. Regardless of which method used, you must use 50 to 100 gallons of this product per treated acre.

When applying this product with injector blades such as Noble Plow blades in Spring, the following precautions must be followed:

- Apply all fertilizer after application of this product. Wait a minimum of 7 days before making the application.
- Thoroughly aerate the soil 5 to 7 days after application of this product by mowing, plowing, shallow ripping or discing, or the combination thereof to allow the fumes to dissipate. Do not work soil deeper than the depth of treatment.
- Planting may take place 14 to 21 days after application of this product provided no fumes are detected at the time of planting.
- If noxious fumes are noticeable at planting, do not plant and rework the soil.
- If soil temperatures are below 60°F, delay planting for a minimum of 21 days from the day this product was applied regardless of any other precautions that may have been taken.
- In conjunction with the delayed planting, set indicator plants (such as tomatoes) in various places in the treated field with a "hot cap" left undisturbed for a minimum of 24 hours to ensure all of this product has left the soil. (See "TESTING OF TREATED SOIL BEFORE PLANTING" section.)

FIELD APPLICATION TO BEDS OR ROWS

Soil Injection (Pre-formed Beds)

This product may be injected into pre-formed plant beds following the directions in the "SOIL INJECTION" section above. If a wider treated band is desired, space 2 or more shanks at intervals of 5 inches to cover the desired treating width. Use thin injection shanks and inject this product 4 inches deep into well-prepared soil. Follow immediately with a bed shaper, roller press wheel or similar device, or cover with an adequate amount of soil to seal the fumigant into the soil. Light watering or a tarp after rolling may be used to help prevent fumigant escape. Apply at the rate of 50 to 100 gallons of this product per treated acre (see "METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW" section). Place shanks 5 inches apart to cover the desired treating width.

Soil Injection (At Bed-Forming Operation)

This product may be injected during the bedding or row building process, or to pre-formed beds, using one of the following systems: (1) Single row knife blade; (2) A series of narrow knife blades set no more than 5 inches apart; (3) A spray blade; (4) Tiered shanks; (5) Spray rake; or (6) Similar equipment that places this product in contact with the pest to be controlled or suppressed. The use rate for the above operations is 50 to 100 gallons of this product per acre based on a broadcast application rate. Reduced rates will vary depending upon the actual width of the treated band desired (see "METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW" section). Apply this product at the desired depth in the soil and follow immediately with the soil capping operation, bedding process, or roller/packer to seal the fumigant into the soil.

Soil Covering Method (Bed-Over Methods)

This product may be sprayed in a bed wide band onto the soil immediately ahead of bed shaping equipment. Cover this product with soil to a depth of 3 to 6 inches. The soil should be rolled and compacted immediately. Apply at the rate of 50 to 100 gallons of this product per acre of treated soil or 15 to 30 fluid ounces per 100 linear feet of row (12-inch bed). If a narrower or wider bed is to be treated, adjust the fluid ounces per 100 linear feet of row to reflect the actual treated acres (see "METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW" section).

Drench Application On Beds or Rows

This product may be applied to finished beds for control of shallow seeded weeds. Cultivate the area to be treated and pre-irrigate in accordance with use directions. Apply 50 to 100 gallons of this product

per treated acre in a band or bands in enough water to soak at least 2 inches deep (see "METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW" section). To avoid contamination by untreated soil, do not disturb the treated area.

Rotary Tiller or Power Mulcher

Spray this product immediately in front of the tiller or mulcher, set to the depth to where control is desired. Use 50 to 100 gallons per treated acre (see "METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW" section). Follow immediately with a roller, power roller or bed shaper to seal soil surface. Light watering or a tarp after rolling may be used to help prevent fumigant escape.

METHOD OF DETERMINING FLUID OUNCES PER 100 FEET OF LINEAR ROW

1. Determine width of treated band in feet by dividing width of band in inches by 12 (e.g., 8 in. ÷ 12 in./ft. = 0.666 ft.).
2. Determine square feet in 100 linear feet of band by multiplying the width of the band by 100 (e.g., 0.666 ft. × 100 ft. = 66.66 sq. ft.).
3. Determine the treated acres per 100 linear feet of band by dividing the square feet by 43,560 [square feet in an acre] (e.g., 66.66 sq. ft. ÷ 43,560 = 0.0015).
4. To determine the fluid ounces per 100 linear feet:
 - a) 1 gal. = 128 fl. ozs.; 50 gals. = 6,400 fl. ozs.;
100 gals. = 12,800 fl. ozs.
 - b) Multiply fluid ounces by acres. Example:
50 gals. = 6,400 fl.ozs. × 0.0015 = 9.6 fl. ozs. per 100 linear feet of row.

ADDITIONAL USE DIRECTIONS

Seed Treatment

A suitable fungicide should be used to treat all crop seed being planted into the treated soil.

Peanuts

For suppression and/or control of *Cylindrocladium Black Rot (CBR)* and nematodes, apply this product at the rate of 10 gallons per acre (8.81 fluid ounces per 100 linear feet of row). Use with partially resistant cultivars (NC-10C or others as designated by you local Agricultural Extension Service) in cases of severe disease pressure. Plant other varieties only in cases of light CBR pressure.

Soil Preparations: Before applying this product, all residues from the previous crop should be decomposed (enhance by Fall discing) and plowed under in the Spring with a moldboard plow. Soil incorporated pre-plant herbicides must be applied prior to application of this product.

Application: Apply 8 to 10 inches below seed placement with injector shank or coulter-type applicator placed in front of a bed shaper to mark rows. Soil temperatures must be in the range of 60° to 90°F at a 3-inch depth at time of treatment.

Tillage and Planting After Application: Do not mix untreated soil with treated soil by tillage or other cultural practices. Plant the peanuts in the center of the treated beds no earlier than 14 days following application of this product. An at-plant nematicide treatment will be necessary in fields with heavy infestations of Root knot, Ring and/or Sting nematodes.

Mint (Suppression of Verticillium Wilt)

When infestation is limited to small spots in a field, the spread of *Verticillium* can be reduced by treating the infected spot. Apply at the rate of up to 100 gallons of this product per treated acre using injector blade or thin shank injector rig. Follow directions for "FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED".

Potatoes

For suppression of potato pests such as nematodes, weed seeds and *Verticillium dahliae* (Early Maturity Disease):

For soil injection, apply in a minimum of 50 gallons of this product per treated acre following the directions for "FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED".

This product may also be applied at the rate of 67 to 100 gallons per acre using a Noble Plow blade set to 12 to 14 inches deep with spray nozzles spaced every 6 inches apart to give uniform coverage plus a surface application using a disc to immediately incorporate this product placed on the surface.

Early Maturity Diseases of Potatoes in the Pacific Northwest:

Apply 50 gallons of this product per treated acre using the soil injection method as described in the "FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED" section.

Sprinkler System Pre-Plant Applications

Apply 50 to 100 gallons of this product per acre in sufficient water to penetrate to the desired treatment depth. Meter continuously into the

penetrate to the desired treatment depth. Meter continuously into the irrigation system throughout the entire application period. Soil temperature should be in the range of 40° to 90°F in the treatment zone. Soil moisture immediately prior to treatment must be 50 to 80% of field capacity down to the 24-inch level. Soil condition must facilitate even water penetration without runoff.

NOTES:

1. This product may be applied where a crop stubble or vegetation exists without prior tillage, provided there is adequate penetration of the product.
2. This product will suppress Root knot nematodes in the treatment zone at the time of treatment. The treatment zone is defined as the depth of penetration that this product achieves at the time of application. If high numbers or deep nematodes are identified, anticipate nematodes to build up throughout the growing season. Some damage may occur unless additional action is taken. This product has no residual activity and re-infestation of a treated field can occur from numerous sources such as deep nematode populations, seed pieces, irrigation water, equipment contamination and blowing wind.

Treatment of Tree Replant Sites in Commercial Orchards

After removing dead or diseased trees and as much of the root system as possible, make a shallow basin over the planting site. Add this product to the stream of water while filling the basin. Use 1 quart of this product per 100 sq. ft. in sufficient water (depending on the soil type) to penetrate at least 6 feet. For control of Oak Root Fungus, use a basin of at least 20 ft. by 20 ft., increase dosage to 2 quarts per 100 sq. ft. in sufficient water to penetrate to the depth of the root system. If water is tanked to the planting site, add this product to the water and mix before filling the basin.

Establishment of Transplant Orchards and Vineyards

Apply 67 to 100 gallons of this product per broadcast acre to properly prepared fields by chemigation in sufficient water (e.g., 3 to 18 acre inches) to plant this product in contact with the target pest in the treated zone and to penetrate the desired root zone (to 6 feet) of the crop to be transplanted. The percent field capacity of the soil prior to irrigation will help determine the amount of water to use to penetrate the desired zone. A lethal concentration of this product must be present while the target species is actively respiring. This product should be placed at or slightly below the soil level of the target pest. Deep-soil ripping is recommended prior to treatment.

Symphylid Suppression

Soil should be in good seedbed condition to a depth of 8 to 10 inches. Maintain adequate moisture during the Spring season to bring symphylids to the upper soil surface. Treat during July through August when symphylids are in the upper soil surface. Apply a minimum of 20 gallons of this product per treated acre (0.4 pint per 100 sq. ft. of treated soil) using blade or thin blade chisel injectors spaced 5 inches apart. Inject below the level of symphylid concentration, usually 6 to 8 inches. Pack soil immediately after the application.

Tobacco Plant Beds

Apply in the Fall whenever possible. Read and follow use directions carefully.

Tarp Method

Prepare the bed 5 to 7 days before application to ensure best conditions for weed seed germination and fumigant action of this product. The bed should be free of clods, level and in good tilth. Apply 1 to 1.5 gallons of this product in a minimum of 40 gallons of water per 100 square yards. Apply uniformly over the entire bed. Cover the bed immediately with a plastic cover. Keep covered no less than one day, but no more than two days. The cover need not be tented, but should be secured to prevent wind from uncovering the treated area. Seven days after the application, loosed the treated soil to a depth of 2 inches. Do not seed tobacco earlier than 21 days after application of this product.

Drench Method

Apply 2.5 gallons of this product in 150 to 200 gallons of water per 100 square yards. Application may be made with sprinklers, sprayers with nozzles or any suitable equipment. Following directions given above for "FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED".

Tank Mix With Tillam® 6E Herbicide (Tomatoes Only)

A tank mix of this product plus Tillam 6E herbicide may be used to provide the additional benefit of weed control. The mixture must be applied pre-plant to Tomatoes if all directions and precautions pertaining to both this product and Tillam 6E are followed. Apply through a spray blade, by shank injection, low pressure boom spray or through solid

set sprinkler systems (Western Region only). Maintain constant agitation of the mixture throughout the filling and application. Use in accordance with the more restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any other product containing a label prohibition against such mixing. Do not tank mix with other chemicals unless prior use has proven compatibility.

PACIFIC NORTHWEST (IDAHO, NEVADA, OREGON AND WASHINGTON)

Carrots

Apply a broadcast application of 50 to 100 gallons of this product per acre for the suppression of Root knot nematodes and 40 or 100 gallons for pre-plant suppression of soil-borne diseases.

Mint (Including Peppermint and Spearmint)

Apply a pre-plant broadcast application of 50 to 100 gallons of this product per acre for the suppression of Root knot nematodes and *Verticillium dahliae*.

Onions

Apply a broadcast or banded application of 50 to 100 gallons acre of this product per treated for the suppression of Root knot nematodes or 40 to 100 gallons for suppression of soil-borne diseases.

Potatoes

Apply a broadcast sprinkler application of 50 to 100 gallons of this product per acre for the suppression of Root knot nematodes and *Verticillium dahliae*. Apply a broadcast soil application of 50 to 100 gallons of this product per acre for *Verticillium dahliae*.

Sugar Beets

Apply a broadcast or a banded application of 50 to 100 gallons of this product per acre for the suppression of soil-borne disease. A Fall application of Ro-Neet® herbicide followed by or tank mixed with this product in a broadcast application or band application will enhance the overall weed control.

Orchard Replant

Apply a broadcast application of 75 to 100 gallons of this product per acre in a minimum of 1-acre inch of water through a sprinkler system, or a row treatment of 75 to 100 gallons broadcast equivalent to the future tree row using a weed sprayer by applying multiple passes of this product which the sprinklers are running until the desired rate has been applied for the treatment of specific orchard replant disease. Trees should not be replanted into the replant site for at least 21 days after treatment. Check for noxious fumes in the soil before planting. This product may also be applied at the rate of 75 to 100 gallons per acre using a Noble Plow blade set 12 to 14 inches deep with spray nozzles spaced every 6 inches apart to give uniform coverage with a surface application using a disc to immediately incorporate the product placed on the surface.

Wheat and Barley

Apply this product at a rate of 2.5 to 10 gallons per acre 14 to 21 days prior to planting for the suppression of certain early season soil-borne fungi which cause root diseases of small grains This product may be diluted with water or, if compatible, non-acidic liquid fertilizers (see "APPLICATION IN TANK MIX WITH LIQUID FERTILIZER" section) and injected into moist soil 5 to 8 inches before planting.

IN THE PACIFIC NORTHWEST, IF THE FIELD HISTORY OR SOIL SAMPLING SHOW HIGH POPULATIONS OF NEMATODES, FUMIGATION USING BOTH THIS PRODUCT AND TELONE® II SHOULD BE USED. CONSULT YOUR DREXEL SALES REPRESENTATIVE FOR ADDITIONAL INFORMATION.

NOTE: Read the label affixed to the container of Telone II before applying. Carefully follow all precautionary statements and applicable use directions. Except as specified in this section, the labels affixed to the containers for Telone II and this product subject to all user precautions and limitations impose.

USE DIRECTIONS FOR SEQUENTIAL GROUND APPLICATION OF TELONE II AND THIS PRODUCT

Sequential application of Telone II and this product for suppression of *Verticillium dahliae* and control of Root knot and Lesion nematodes in soil to be planted to Potatoes in the Pacific Northwest:

The following use directions provide information for a sequential treatment program of applications of Telone II and this product. For best results, apply both Telone II and this product in the Fall. Alternative treatment schedules include a Fall application of Telone II followed by a Spring application of this product, a Fall application of this product followed by a Spring application of Telone II, or a Spring application of both products. Due to time constraints resulting from varying weather

20
23

Application Directions For Telone II

Soil conditions at the time of application of Telone II that allow rapid diffusion of the fumigant as a gas through the soil normally give best results. Compacted soil layers within the desired treatment zone must be fractured before or during application of the fumigant. Soil temperature must be between 40°F and 80°F at the depth of injection, moist from 2 inches below the soil surface to at least 12 inches deep as determined by the Feel Method, free of clods, and with crop residue thoroughly incorporated into the soil at least at the time of application and sealing.

Apply Telone II as a broadcast treatment at the minimum rate of 15 gallons per acre (44.3 fl. ozs. per 1,000 feet of row per outlet based on 12-inch centers) using either chisel (shank), Noble Plow (sweep) or modified Para Till application equipment. Chisel equipment must have ripper-type shanks. Para Till equipment must be modified so that outlet spacing is evenly distributed under the tool bar. With chisel and Para Till equipment, a shank spacing of 12 to 24 inches is recommended. Do not exceed a shank spacing of 24 inches. Outlet depth should be at least 18 inches below the final soil surface. Noble Plow equipment may be used only when either shallow soils (those less than 18 inches deep) or soils containing excessive live root material such as Alfalfa or Corn stubble prevents the use of shank application. Noble Plow outlet spacing should not exceed 12 inches and application should be made to a depth of at least 15 inches. Fumigant penetration may be limited if a plow pan exists below the depth of the Noble blade. Do not use plow-sole application. Immediately after application of Telone II, use a disc, paddle wheel or similar device to uniformly mix the top 4 to 6 inches of soil to effectively eliminate chisel traces. Then follow immediately with a ring roller or multi-packer to seal the soil surface. Little or no crop residue should be exposed at the surface following the sealing operation. Any remaining crop residue should lie flat following sealing. Following application and sealing, leave soil undisturbed for 7 to 14 days. The longer undisturbed interval may be necessary if the soil is or becomes cold or wet during this period.

APPLICATION DIRECTIONS FOR THIS PRODUCT

Soil conditions at the time of application of this product must be between 40°F and 90°F in the treated zone and at 50% to 85% field capacity. If necessary, pre-irrigate about a week prior to treatment to adjust soil moisture to desired levels. Immediately before application, cultivate lightly if the soil has crusted.

Apply this product either by chemigation or by soil injection or surface incorporation as a sequential application with Telone II. When this product is used prior to Telone II, allow a minimum of 7 days between treatments. When Telone II is applied prior to this product, allow a minimum of 7 days before disturbing soil or beginning any pre-irrigation for the application of this product.

For chemigation, apply this product at the minimum rate of 40 gallons per acre in a minimum of 0.5 acre-inch of water to the desired depth of treatment. Heavier soils may require a higher amount of water. Use only those sprinkler systems that give large water droplets to prevent excessive fumigant loss. Do not apply when wind speed favors drift beyond the area intended for treatment or when conditions of thermal inversion exist. If for any reason chemigation is interrupted prior to completion (e.g., excessive wind, equipment malfunction, etc.), back the system up prior to restarting to ensure full application to the area affected prior to shutting down the system and to allow full distribution of this product's solution throughout the irrigation system prior to moving over untreated soil. After application is completed, flush equipment until all of this product is eliminated from the system. Follow all application directions described in the "GENERAL PRECAUTIONS FOR IRRIGATION SYSTEM" and "SPRINKLER CHEMIGATION SYSTEMS" sections of this label.

For soil injection, apply this product at the minimum rate of 40 gallons per acre using either shanks, sweep blades, double-winged shanks, or a Noble Plow blade combined with a surface application. Single shanks should be spaced no more than 6 inches apart with either single injection outlets no more than 6 inches deep or dual injection outlets spaced at 6 and 12 inches deep. Single sweep blades should be spaced no more than 12 inches with sweeps 12 inches wide and a spray nozzle that will provide broadcast coverage from sweep tip to sweep tip. Double-winged shanks should be spaced no more than 12 inches apart with no more than 9 inches between adjacent wings and with spray nozzles that provide uniform coverage. The Noble Plow blade should have spray nozzles spaced 6 inches apart to give uniform coverage, an injection depth set at 12 to 14 inches deep, and be combined with a surface application using a disc to immedi-

ately incorporate this product placed on the surface. Follow all the above applications immediately with a roller/packer to smooth and compact the soil surface.

For surface incorporation, apply this product at the minimum rate of 40 gallons per acre as a broadcast application to the soil surface immediately in front of soil covering equipment such as rotary tillers, discs, etc., to a minimum depth of 6 inches using a single-pass incorporation followed immediately by a roller/packer to smooth and compact the soil surface.

Soil Fumigation Interval

Planting may take place only after odors of either Telone II or this product are no longer present within the zone of fumigation. If this product follows Telone II and is applied in the Spring with the Noble Plow blade, apply all fertilizers at least 7 days after the application of this product. Thoroughly aerate soil 5 to 7 days after application of this product by shallow plowing and/or discing to allow the fumigant odors to dissipate. Wait 14 to 21 days after application of this product before planting the crop. Use the 21-day interval if soil temperature are below 60°F regardless of any other precautions that may have been taken. In addition to waiting 21 days, set indicator plants (e.g., Tomato seedlings) in various places in the treated field and cover the plants with a "hot cap", plastic sheeting, bucket, etc., to trap and confine any fumes present. Leave the plants undisturbed for a minimum of 24 hours, then stop planting and rework the soil. If Telone II follows this product and is applied in the Spring, wait at least one week for each 10 gallons of Telone II applied beyond the initial undisturbed period before planting the crop. If fumigant odors are present at planting, thoroughly aerate the soil following shallow ripping and/or discing to allow fumigant odors to dissipate. Do not till the soil so deep as to move untreated soil from below the treated zone into the treated soil.

Special Considerations and Precautions

- Use of this sequential application program of reduced rates of Telone II and this product does not guarantee pest-free Potatoes at harvest.
- Use of Telone II and this product according to these use directions will control Root knot and Lesion nematode populations present within the fumigated zone at the time of fumigation. The fumigated zone can vary depending upon a number of factors such as fumigant rate, application methods used, depth of fumigant application, soil moisture, soil type, soil temperature and soil tillth (including soil compaction and soil porosity). The sequential combination of reduced rates of Telone II and this product will not control or prevent re-infestation subsequent to the treatments. Subsequent pest populations may infest the fumigated zone from irrigation water, equipment, potato seed or other sources of contamination or may invade the fumigated zone from surrounding untreated soil such as from beneath the fumigated zone or from non-fumigated pockets within the fumigated zone.
- In fields with a history of severe Columbia root knot nematode problems, apply the maximum federal label rate of 20 gallons of Telone II per acre in sequential combination with a minimum of 50 gallons of this product per acre per these label directions.
- If application of Telone II occurs in the Fall and the application of this product is not planned until Spring, a cover crop such as Wheat or grass can be planted following the undisturbed soil interval associated with the application of Telone II to reduce the potential for over-winter soil erosion.
- Refer to the product labels affixed to the containers for both Telone II and this product for soil conditions. Product performance can be expected to improve as the soil conditions move toward optimum. Use of this sequential application program of Telone II and this product under soil conditions outside the stated range of soil conditions can be expected to yield less than satisfactory performance.

NOTE: Read the label affixed to the container of Telone II before applying. Carefully follow all precautionary statements and applicable use directions. Except as specified in this section, use of Telone II or this product is subject to all use precautions and limitations imposed by the labels affixed to the containers for Telone II and this product, respectively.

USE DIRECTIONS FOR SIMULTANEOUS GROUND APPLICATION OF TELONE II AND THIS PRODUCT

Simultaneous application of Telone II and this product for suppression of *Verticillium dahliae* and control of Root knot and Lesion nematodes in soil to be planted to Potatoes in the Pacific Northwest:

The following use directions provide information for simultaneous ground application of Telone II and this product. For best results, apply

in the Fall. Due to time constraints resulting from varying weather conditions, a Spring application may result in delayed planting.

Note: When Telone II and this product are applied simultaneously, the most restrictive personal protective equipment, worker notification and re-entry restrictions specified on labels for each product must be followed.

Soil Conditions

Soil temperature must be between 40°F and 80°F in the treated zone. Soil moisture in the top 12 inches should be at least 50% to 85% field capacity. Soil moisture below 12 inches should be moist as determined by the Feel Method. If necessary, pre-irrigate about a week prior to treatment to adjust soil moisture to the desired levels.

Application Methods and Equipment

Use dual equipment setup to apply Telone II and this product during a single pass. Calibrate equipment for simultaneous application of each product. Because of more shallow product placement and the need to disrupt chisel traces from application of Telone II, mount equipment for application of this product behind that of Telone II.

Apply Telone II as a broadcast treatment at a minimum rate of 15 gallons per acre (44.3 fl. ozs. per 1,000 feet of row/outlet based on 12-inch centers) using either chisel (shank), Noble (sweep) or modified Para Till application equipment. Chisel equipment must have ripper-type shanks. Para Till equipment must be modified so that outlet spacing is evenly distributed under the tool bar. With chisel and Para till equipment, a shank spacing of 12 to 24 inches is recommended. Do not exceed a shank spacing of 24 inches. Outlet depth should be at least 18 inches below the final soil surface. Noble Plow outlet spacing should not exceed 12 inches and application should be made to a depth of at least 15 inches. Fumigant penetration may be limited if a plow pan exists below the depth of the Noble blade. Do not use plow sole application.

For soil injection, apply this product as a broadcast treatment at a minimum rate of 40 gallons per acre using either shanks, sweep blades or double-winged shanks. Single shanks should be spaced no more than 6 inches apart with either single injection outlets more than 6 inches deep or dual injection outlets spaced at 6 and 12 inches deep. Single sweep blades should be spaced no more than 12 inches apart with sweeps 12 inches wide and a spray nozzle that will provide broadcast coverage from sweep tip to sweep tip. Double-winged shanks should be spaced no more than 12 inches apart with no more than 9 inches between adjacent wings and with spray nozzles that provide uniform coverage.

For surface incorporation, apply this product at the minimum rate of 40 gallons per acre as a broadcast application to the soil surface immediately in front of soil covering equipment such as rotary tillers, discs, etc., set to a minimum depth of 6 inches.

Sealing The Soil After Application

Immediately after application the soil must be sealed to prevent fumigant loss and ensure that an effective concentration of fumigant is maintained within the soil. Chisel traces resulting from Telone II application must be disrupted to a depth of at least 4 to 6 inches. This may be accomplished with the applicator for this product or a similar device. As a final step to compact the soil and help maximize soil sealing, all above application must be followed with a ring roller or culti-packer.

Soil Fumigation Interval

Planting may take place only after the odors of both Telone II and this product are no longer present. Following application and sealing, leave the soil undisturbed for 7 to 10 days. The longer undisturbed interval may be necessary if the soil is or becomes cold or wet during this period. For Spring application, thoroughly aerate the soil after the initial undisturbed interval by shallow plowing and/or discing to allow the fumigant odors to dissipate. Allow 21 days prior to planting. In addition to waiting 21 days, place indicator plants (e.g., potted tomato seedlings) in various places in the treated field and cover the plants with a "hot cap", plastic sheeting, bucket, etc., to trap and confine any fumes present. Leave the plants undisturbed for a minimum of 24 hours, then examine for injury before planting the crop. Do not plant the crop if injury to indicator plant is observed. If noxious fumes are noticeable at time of planting, stop planting and rework the soil.

Special Considerations and Precautions

- Use of this simultaneous application program of reduced rates of Telone II and this product does not guarantee pest-free Potatoes at harvest.
- Use of Telone II and this product according to these use directions will control Root knot and Lesion nematode populations present within the fumigated zone at the time of fumigation. The fumigated zone can vary depending upon a number of factors such as fumigant

rate, application methods used, depth of fumigant application, soil moisture, soil type, soil temperature and soil tilth (including soil compaction and soil porosity). The sequential combination of reduced rates of Telone II and this product will not control or prevent re-infestation subsequent to the treatments. Subsequent pest populations may infest the fumigated zone from irrigation water, equipment, potato seed or other sources of contamination or may invade the fumigated zone from surrounding untreated soil such as from beneath the fumigated zone or from non-fumigated pockets within the fumigated zone.

- In fields with a history of severe Columbia root knot nematode problems, apply the maximum federal rate of 20 gallons of Telone II per acre in simultaneous combination with a minimum of 50 gallons of this product per acre per these label directions.
- With Fall applications, a cover crop such as Wheat or grass can be planted following the undisturbed soil interval associated with the application of Telone II to reduce the potential for over-winter soil erosion.
- Refer to the product labels affixed to the containers for both Telone II and this product for further directions and precautions for optimum fumigant performance. With the range of stated soil conditions, product performance can be expected to improve as the soil conditions move towards optimum. Use of this simultaneous application program of Telone II and this product under soil conditions outside the stated range of soil conditions can be expected to yield less than satisfactory performance.

NOTE: The "USE DIRECTIONS FOR THE PACIFIC NORTHWEST" may be used in other areas of the country, if not prohibited elsewhere on the label. Consult your Drexel Sales Representative or Extension personnel for further directions.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry locked place out of reach of children. Keep container closed when not in use. Do not store below 32°F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to re-dissolve crystals and assure uniformity before use.

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

CONTAINER DISPOSAL:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable Container (rigid material; 5 gallons or greater): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Containers: Refillable container. Refill this container with this pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

WARRANTY—CONDITIONS OF SALE

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

Brand names, product names, or trademarks belong to their respective owners.

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 30 2010

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

19913-298