



PM 21 34704-647 1046
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

Ms. Mary Beth Endres
Platte Chemical
P.O.Box 667
Greeley, CO 80632-0667

NOV 17 1992

Dear Ms. Endres:

Subject: Metam Soil Fumigant - Labeling
EPA Registration No. 34704-647
Your Submission Dated September 10, 1992

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended, is acceptable provided that you:

1. Make the labeling change listed below before you release the product for shipment bearing the amended labeling:

Revise the labeling as follows: In the first sentence under "Application Through Irrigation Systems-Chemigation", add drip systems since precautions and directions are included for drip irrigation. Unless this system is added, the statement would prohibit the use in drip systems.

2. Submit one copy of your final printed labeling for the product referred to above before you release the products for shipment.

If you have any questions regarding this matter, please contact Sidney Jackson at (703) 305 7610.

Sincerely yours,

Susan T. Lewis
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure



Printed on Recycled Paper

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METAM SOIL FUMIGANT

ACCEPTED with COMMENTS to EPA. Date: _____

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**Soil Fumigant Solution For All Crops
AS AN AID IN CONTROLLING WEEDS, WEED SEEDS,
NEMATODES, SOIL INSECTS &
SOILBORNE DISEASES AS LISTED.**

ACTIVE INGREDIENT:	
Sodium methylthiocarbamate (anhydrous)	32.7%
INERT INGREDIENTS	
	67.3%
TOTAL	
	100.0%

Contains 3.18 lbs. active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO**

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada en español. See Below For Additional Precautionary Statements.

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EPA EST. NO. _____

NET CONTENTS _____ GALLONS

32518

EXP05G82

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

Corrosive. Causes skin damage. May be fatal if absorbed through skin. Harmful or fatal if swallowed. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear protective clothing and rubber gloves. Avoid breathing vapors. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

PROTECTIVE CLOTHING AND EQUIPMENT REQUIREMENTS

1. The following protective clothing and equipment are required to be used by persons actually engaged in carrying out any operations that are likely to involve direct contact with METAM SOIL FUMIGANT including mixing-loading, equipment calibrations or adjustments, clean up and repair of application equipment (equipment includes, but is not restricted to; chemical equipment, shanks, filters, drop lines, and holding tanks); sampling; clean up of spills; fumigant transfer; and residue disposal, or by any other person engaging in activities likely to result in direct contact with the product. This protective equipment must also be used for any operations that are done within 6 feet of unshielded, pressurized hoses containing METAM SOIL FUMIGANT.

- a. A properly FIT TESTED NIOSH- or MSHA-approved half-face respirator with organic vapor cartridges plus non-venting chemical goggles, or a NIOSH- or MSHA-approved full-face respirator with organic vapor cartridges.
 - b. Body covering that has long sleeves and long pants. When a closed system is not used, mixers and loaders must also wear a chemical resistant apron or cloth coveralls.
 - c. Chemical resistant gloves and boots.
2. The following protective clothing must be worn at all times by persons operating or monitoring application equipment or entering treated fields within 48 hours after completion of application. See: REENTRY AND WORKER SAFETY STATEMENT on this label.
- a. Chemical resistant footwear.

- b. Body covering that has long sleeves and long pants.
3. The following protective clothing and equipment must be immediately available at all times for use by persons operating tractor drawn ground application equipment or monitoring application equipment, or entering treated fields within 48 hours after completion of application. See: REENTRY AND WORKER SAFETY STATEMENT on this label.
- a. A properly FIT TESTED NIOSH- or MSHA- approved half-face respirator with organic vapor cartridges plus non-venting chemical goggles, or a NIOSH- or MSHA-approved full-face respirator with organic vapor cartridges. This equipment must be worn when the pungent, rotten egg odor of METAM SOIL FUMIGANT is detected.
 - b. Chemical resistant gloves. These must be worn when a person is engaged in carrying out any operation that is likely to involve direct contact with the product, including those operations listed in Paragraph 1., above.

STATEMENT OF PRACTICAL TREATMENT

FIRST AID: Immediately start the procedure given below and contact a Poison Center, a physician, or the nearest hospital. Report the type and extent of exposure, describe the victim's symptoms, and follow the advice given.

If on skin: Remove contaminated clothing immediately. Wash with plenty of soap and water. Get medical attention immediately.

If in eyes: Immediately flush eyes with plenty of running water. Hold eyelids apart to ensure flushing of the entire surface of the eye and lids with water. Get medical attention immediately.

If inhaled: Remove to fresh air. If not breathing, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen, preferably with a physician's advice. Get medical attention immediately.

If swallowed: Immediately give several glasses of water but do not induce vomiting. If vomiting does occur, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

REENTRY AND WORKER SAFETY STATEMENT:

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas for 48 hours after application unless protective clothing is worn as described in the PROTECTIVE CLOTHING STATEMENT on this label. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in treated areas or in an area to be treated with this product (include specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure.) When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

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DANGER

Area treated with metam-sodium (DATE) _____ Do not enter without appropriate protective clothing for 48 hours after application. In case of accidental exposure see STATEMENT OF PRACTICAL TREATMENT found on the METAM SOIL FUMIGANT label.

Posting also is required. Consult your State Department of Agriculture for further information.

PRODUCT INFORMATION

METAM SOIL FUMIGANT is a water soluble liquid. When applied to properly prepared soil, the liquid is converted into a gaseous fumigant. After a sufficient interval of time, the gas dissipated leaving the soil ready for planting. METAM SOIL FUMIGANT is recommended as an aid in controlling the following soil-borne pests that attack ornamental, food and fiber crops: Weeds and germinating weed seeds (Annual Bluegrass, Bermudagrass, Chickweed, Dandelion, Ragweed, Henbit, Lambquarters, Amaranthus sp. (Pigweed, Careless weed), Watergrass, Johnsongrass, Nutgrass, Wild morning-glory, and Purslane); Certain Nematodes (such as Root knot, Sting, and Lesion); Symphylans (Garden Centipedes); and soil-borne diseases (Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, Oak Root Fungus and Club Root of Crucifers).

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. Do not store under conditions which might adversely affect the container or its ability to function properly.

STORAGE: Do Not Store Below 0°F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to redissolve crystals and assure uniformity before use. Reduce stacking height where local conditions, such as humidity or pallet overhang, can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.

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

CONTAINER DISPOSAL: Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Plastic: Triple rinse (or equivalent). Puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

IMPORTANT USE PRECAUTIONS

READ ENTIRE LABEL CAREFULLY BEFORE USE! FAILURE TO FOLLOW ALL DIRECTIONS AND PRECAUTIONS CAREFULLY COULD RESULT IN CROP (PLANT) DAMAGE OR POOR PRODUCT PERFORMANCE.

1. Prepare soil as directed under "SOIL PREPARATION" section.
2. Avoid use when the soil temperature in the treated zone is extremely high (over 90°F two inches deep). Pest control will be impaired under such conditions. Treated zone is defined as the depth of treatment that METAM SOIL FUMIGANT achieves at the time of application.
3. To prevent loss from evaporation, use only at times when air temperature is moderate and there is little wind movement.
4. Do not apply to the 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 METAM SOIL FUMIGANT before it can be drenched into the soil with additional water.
5. This product is toxic to all growing plants. Do not apply within 3 to 4 feet of desirable plants or within 3 to 4 feet of drip line of desirable trees and shrubs. If slopes are treated with this product, take precautions to prevent the chemical from washing downward to growing plants.
6. Keep container tightly closed.
7. Fumigation may sometimes slow down the rate of nitrification (the conversion to nitrate from ammonia by bacterial action). Certain ammonia sensitive plants, therefore, may exhibit growth inhibition when planted in fumigated soils containing high amount of ammonia nitrogen. To lessen this hazard, at least 1/2 and preferably all of the nitrogen fertilizer added immediately before or soon after fumigation should be in the form of nitrate nitrogen. This hazard may also be reduced by delaying planting until several months after fumigation, such as fall fumigation before a spring planted crop. If a nitrate form of

nitrogen such as sodium or calcium nitrate is not readily available, ammonium nitrate used sparingly will supply the nitrogen needed without risk. Phosphorus, potassium and other plant nutrients should also be used according to soil needs.

APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; or border irrigation system(s). Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

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

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide is labeled-prescribed safety devices for public water systems are in place.

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

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) within the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. 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 is no usual points of entry, signs must be posted in the corners of the treated area and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. 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 the posting period.

All words shall consist of letters at least 2 1/2 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 at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDE IN IRRIGATION WATER.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: Platte Chemical Co. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply operations before electing to make such a connection.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly services an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction.

As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the injection 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 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 material that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favor drift beyond the label intended for treatment.

SPRINKLER CHEMIGATION

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.

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The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION

Systems using a gravity flow pesticide dispensing system must meter the pesticide in 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.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- a. 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.
- b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- c. 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.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. 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.
- f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

DRIP (TRICKLE) IRRIGATION

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

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

APPLICATION IN TANK MIX WITH LIQUID FERTILIZER:

METAM SOIL FUMIGANT may be injected in a mixture with liquid fertilizers. Since the composition of liquid fertilizer vary considerably, the physical compatibility of each fertilizer/METAM SOIL FUMIGANT tank mix should be checked by using the following procedure:

Mix a small quantity of METAM SOIL FUMIGANT and liquid fertilizer in a glass container. METAM SOIL FUMIGANT and fertilizer should be mixed

in the same ratio as they will be applied to the field (i.e. if 50 gallons of METAM SOIL FUMIGANT and 50 gallons of liquid fertilizer are to be applied per acre, then METAM SOIL FUMIGANT and fertilizer should be mixed in the jar in a 50:50 or 1:1 ratio). Agitate the liquids to attain a complete mixture. If a uniform mix cannot be made, the mixture should not be used. If the mixture remains uniform 30 minutes the combination may be used. Should the mixture separate after 30 minutes, but will readily and uniformly remix with agitation, the mixture can be used if adequate agitation is maintained in the tank. DO NOT PLACE CAPS ON JAR, AS INCOMPATIBLE MIXES MAY EVOLVE HYDROGEN SULFIDE GAS.

USE PROMPTLY AFTER MIXING WITH WATER OR FERTILIZER. DO NOT ALLOW SOLUTION TO STAND. Incompatibility may be observed with highly acidic Fertilizers. Flush all equipment with water after each day's use. Disassemble valves and clean carefully.

SOIL PREPARATION

1. The area should be in seedbed condition with a fine tilth, free of clods. Do not apply to dry or improperly tilled soil. Repeated cultivation prior to treatment will improve control of perennial weeds. Cultivation should be made a week before treatment. Ditching (if practical) around site will prevent weed seeds, nematodes and fungi from washing into the treated area and contaminating it.
2. For optimal results, the soil to be fumigated must have sufficient moisture for good plant growth (at least 50% field capacity) for 5 to 14 days (depending on temperature) before the treatment. The weed seeds in such an optimally moist soil become ready to germinate and in this condition are most reliably killed. Heavy soils may need to be irrigated twice to achieve the necessary soil moistness. Weed seeds or seeds bearing nematodes must be mechanically hoed or plowed into the soil 1 to 2 weeks before fumigation so that the emerging weeds and nematodes are subject to fumigation.
3. If root-knot nematodes must be controlled, application should be delayed until the root-knot infested root residues have begun to rot. This is at least 2 to 3 weeks after the crop has been harvested and the remaining plant refuse tilled into the soil.
4. Farmyard manure, peat and other organic fertilizers, burnt lime or lime nitrogen should not be applied just before, along with, or just after this product. (See also "IMPORTANT USE PRECAUTIONS" section).
5. After treatment, the soil has to be kept uniformly moist for 5-7 days. As soon as possible after the treatment, the soil should be sealed to retain the concentration of gases in the soil. This can be achieved by:
 - a. Compacting the soil surface after treatment with a roller to smooth and compact the soil surface.
 - b. Moistening the soil surface (1/4 to 1/2" deep) after treatment so that a crust forms. Surface compaction and sealing with water can be combined if desired and conditions warrant. Additional moistening of the soil may be required on the 3rd and 4th days to prevent soil surface cracks.
 - c. In difficult situations, for example heavy soils with high peat pressures or where potential for extensive sheet or rill erosion exists, best results may be obtained by tarping the treated areas. The activity of METAM SOIL FUMIGANT is increased by the use of a tarp (plastic, paper or fabric) spread loosely over the treated area and secured to prevent removal by wind. Keep covered for a minimum of 48 hours. Seven days after treatment cultivate area to a depth of 2 inches to aerate the soil. Do not seed earlier than 21 days after application when tarping method is used.
6. USE PROMPTLY AFTER MIXING WITH WATER. DO NOT ALLOW SOLUTION TO STAND. Flush all equipment with water after each day's use. Disassemble valves and clean carefully.
7. If fumes become unpleasant during treatment, apply more water to seal fumes into the soil where they should be confined to achieve maximum fumigant benefit.

CULTIVATION AND PLANTING AFTER APPLICATION--ALL USES

Replanting of treated areas is possible only after a certain period of time. This span between treatment and replanting depends on the temperature, moisture, and structure of the soil. On well drained soils of light to medium texture which are not excessively rich 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°F) following application of METAM SOIL FUMIGANT, a minimum interval of 30 days should be observed. Where drainage is greater than 100 gals. per acre, wait at least 60 days. On heavy, wet soils, light surface cultivation to break up crusting and promote drying of the soil should be done 6 to 7 days after application; this cultivation may be repeated as necessary. Do not plant any crop until all fumigant odors have dissipated from the soil and can no longer be detected. Fall soil treatment is recommended if early spring planting is necessary. As an added precaution, plant in the treated area a few radish seeds which should germinate in about 8 days. Also plant a few seeds in an untreated area for comparison. If plants from treated area are normal, it is safe to plant.

SPECIAL INSTRUCTION: When treating heavier field soils, including soils heavy in clay or organic matter, it is essentially important that the soils be allowed to aerate and dry thoroughly after using METAM SOIL

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FUMIGANT. During cold and/or wet weather, shallow cultivations may aid the escape of METAM SOIL FUMIGANT.

USES, APPLICATION METHODS & RATES
WHERE MULTIPLE APPLICATION RATES ARE GIVEN, USE THE HIGHER APPLICATION RATE FOR HEAVY SOILS, OR ON LIGHTER SOILS THAT ARE HEAVILY INFESTED WITH NEMATODES AND OTHER LISTED PESTS.

FIELD APPLICATION—

WHERE ENTIRE AREA IS BEING TREATED

SOIL INJECTION: Space injection shanks 5 in. apart and inject METAM SOIL FUMIGANT 4 inches deep into well-prepared soil. Follow immediately with a roller to smooth and compact soil surface. Light watering or a tarp after rolling helps prevent gas escape. For field use, 50 to 100 gals. METAM SOIL FUMIGANT per acre is recommended.

SPRINKLER SYSTEM: Use only those sprinkler systems which give large water droplets to prevent excessive loss. Use 75 to 100 gals. METAM SOIL FUMIGANT per acre. For control of shallow pests (top 1 ft. or less of soil), run sprinklers 5 to 10 minutes. In next 10 to 20 minutes, inject into the sprinkler system all METAM SOIL FUMIGANT needed for the area covered. On very light soils keep surface moist by sprinkling for 2 or 3 days. For control of pests deeper than 18 inches in the soil, divide METAM SOIL FUMIGANT into 3 or more equal parts and apply at intervals during the sprinkling period.

FOR CALIFORNIA ONLY: Application must be in compliance with Technical Information Bulletin — California: "Application Guidelines for California When Applying METAM SODIUM Through Sprinkler Irrigation Systems". This information bulletin may be obtained from your local pesticide dealer or a METAM SODIUM registrant.

CHECK OR FLOOD IRRIGATION: Meter METAM SOIL FUMIGANT at a steady rate into water during application. Use 50 to 100 gals. METAM SOIL FUMIGANT per acre, depending upon the kind of pest and depth desired, in 3 to 18 inches of water per acre.

FIELD APPLICATION TO BEDS OR ROWS

SOIL INJECTION: METAM SOIL FUMIGANT may be injected into pre-formed plant beds following the directions given above under soil injection. If a wider treatment band is desired, space 2 or more injectors at intervals of 5 inches to cover the desired treating width. Roll immediately.

If METAM SOIL FUMIGANT is injected into established plant beds through plastic tarps to terminate growth of a previous crop, and to fumigate the bed in preparation for planting a subsequent crop, the terminated crop should not be used for food or feed purposes after METAM SOIL FUMIGANT has been applied.

Drip irrigation: METAM SOIL FUMIGANT must be applied through a drip irrigation system to wet the soil thoroughly in the area being treated. Meter 25 to 75 gallons METAM SOIL FUMIGANT per treated acre into the drip system during the entire irrigation period. APPLICATION MUST BE CONTINUOUSLY SUPERVISED. THIS IS VERY IMPORTANT: WEED ELIMINATION WILL NOT BE SATISFACTORY IF TOO MUCH WATER IS APPLIED. An adequate concentration of METAM SOIL FUMIGANT 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 seed-bed condition, no clods larger than 1/2" in diameter.
2. Beds must be listed, shaped and ready for planting.
3. Soil moisture must be at 50% of field capacity in the top 2 to 3 inches at the time of METAM SOIL FUMIGANT application.

SOIL COVERING METHODS: (Bed-over methods). METAM SOIL FUMIGANT may be sprayed or dripped onto the soil immediately ahead of bedshaping equipment. Cover the METAM SOIL FUMIGANT with soil to a depth of 3 to 6 inches. The soil should be rolled and compacted immediately. The recommended rate of METAM SOIL FUMIGANT is 50 to 100 gals. per acre.

SPECIAL USES

TOBACCO PLANT BEDS: Fall applications are recommended wherever possible. Read and follow DIRECTIONS FOR USE carefully. Treatment in the South should generally be made before November 30.

- A. **TARP METHOD:** Prepare the bed 5 to 7 days before application to insure best conditions for weed seed germination and fumigant action of METAM SOIL FUMIGANT. The bed should be free of clods, level and in good till. Apply 1 to 1 1/2 gals. of METAM SOIL FUMIGANT in a minimum of 40 gals. of water per 100 sq. yd. 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 date of METAM SOIL FUMIGANT application, loosen the treated soil to a depth of 2 inches. Do not seed tobacco earlier than 21 days after METAM SOIL FUMIGANT application.

B. **DRENCH METHOD:** Apply 2 1/2 gals. METAM SOIL FUMIGANT in 150 to 200 gals. of water per 100 sq. yd. Application may be made with sprinklers, sprayers with nozzles or any suitable equipment.

Follow directions given above for seed bed treatment.

SYMPHYLAN CONTROL: Soil should be in good seedbed condition to a depth of 8 to 10 inches. Maintain adequate moisture during Spring season. Treat during July-August when symphytans are in the upper soil surface. Apply 20 gals. METAM SOIL FUMIGANT per acre using blade or chisel injector. Inject below level of symphytan concentration, usually 6 to 8 inches. Pack soil immediately after application.

CONTROL OF CYLINDROCLADUM BLACK ROT (CBR) OF PEANUTS (North Carolina and Virginia): Before applying METAM SOIL FUMIGANT, residue from the previous crop should be decomposed (enhanced by fall disking) and plowed under in the spring with a mold-board plow. Soil incorporated preplant herbicides must be applied before application of METAM SOIL FUMIGANT.

CBR - resistant cultivars - NC 8C: Apply 5.5 pints per 1,000 feet of row.
CBR - susceptible peanut cultivars - Florigiant, GK-3, NC 6, KEEL-28: Apply 11 pints per 1,000 feet of row.

* Not recommended on VA 81B or NC7 because of their high level of susceptibility to CBR.

Apply METAM SOIL FUMIGANT with a gravity flow regulator through chisel-type or coultter-type applicators. Center each applicator, one per row, in front of a bed shaper to mark the location of chemical deposition. METAM SOIL FUMIGANT should be deposited 6 to 8 inches below the soil surface of beds. Bed applicator spacing should coincide with row spacing at planting.

Soil temperature must be in the range of 60°-90°F at 3-inch depth application. Plant peanuts in the center of the treated beds no earlier than 14 days following application of METAM SOIL FUMIGANT. An alternative planting nematocide treatment will be necessary in fields with heavy infestations of root-knot, ring, and/or sting nematode.

SUPPRESSION OF CERTAIN EARLY SEASON SOIL FUNGI WHICH CAUSE ROOT DISEASES IN PEAS & LENTILS - Washington, Oregon & Idaho: Apply in areas receiving 15 or more inches of rainfall per year. Apply 4 to 10 gals. per acre 14 to 21 days prior to planting. METAM SOIL FUMIGANT may be diluted with water or a non-acidic liquid fertilizer. Under no conditions mix METAM SOIL FUMIGANT with an acidic solution.

Inject into moist soil 5 to 8 inches deep with shanks spaced 4 to 8 inches apart. Soil moisture is needed at 5 to 8 inch depth at time of application.

AS AN AID IN THE CONTROL OF NEMATODES AND VERTICILLIUM (EARLY MATURITY DISEASE) IN POTATOES: Pacific Northwest and North Central States* - Sprinkler system (pre-plant). Use 50 - 100 gallons of METAM SOIL FUMIGANT per acre. Inject into the sprinkler system all the METAM SOIL FUMIGANT needed for the area covered and apply in a minimum of 1/2 acre inch of water or an amount necessary to place METAM SOIL FUMIGANT at the desired depth of treatment. Soil temperature should be 40°-90° in the treatment zone. Soil moisture at treatment must be at least 75% of field capacity down to the 24 inch level. Soil condition must facilitate even moisture penetration without runoff. METAM SOIL FUMIGANT may be applied where crop stubble or vegetation exist without prior tillage, provided there is adequate soil penetration of METAM SOIL FUMIGANT.

* Not for use in California.

NOTE: METAM SOIL FUMIGANT will only control nematodes which are in the treated zone at the time of treatment. METAM SOIL FUMIGANT has no soil residual and reinfestation of a field can occur from numerous sources such as deep nematode populations, potato seed pieces, equipment contamination and blowing soil.

POTATOES - FOR SUPPRESSION OF EARLY MATURITY DISEASE BY VERTICILLIUM DAHLIAE ON SOILS TREATED WITH A NEMATOCIDE: Washington and Oregon - Sprinkler system. Fall postharvest (all crops) or Spring preplant. Use 30-50 gals. of METAM SOIL FUMIGANT per acre. Inject into the sprinkler system all the METAM SOIL FUMIGANT needed to cover the prescribed pre-wetted area. Apply a minimum of 1/2 acre inch of water sufficient to place METAM SOIL FUMIGANT at the desired depth for disease suppression.

For adequate pest control, this application must precede or follow an EPA registered nematocide application. Unless the registered nematocide label is more restrictive, allow a minimum of 7 days between application of the nematocide and this product.

AS AN AID IN CONTROLLING EARLY MATURITY DISEASES ONLY OF POTATOES IN OREGON AND WASHINGTON: Apply 40 gals. METAM SOIL FUMIGANT per acre using the chisel injector rig.

PEPPERMINT: Verticillium wilt control. When insecticide is limited to small spots in a field, spread can be reduced by preplanting 100 gals. METAM SOIL FUMIGANT per acre using injector-blade or thin shank injector rig with injectors spaced 5 inches apart.

SUPPRESSION OF CERTAIN EARLY SEASON SOIL FUNGI WHICH CAUSE ROOT DISEASE IN SMALL GRAINS (Wheat & Barley): Washington, Oregon & Idaho: Apply in areas receiving 15 or more inches rainfall per year. Apply 4 to 10 gals. per acre 14 to 21 days prior to planting. METAM SOIL FUMIGANT may be diluted with water or a non-acidic liquid fertilizer. Under no conditions mix METAM SOIL FUMIGANT with an acidic solution. Inject into moist soil 5 to 8 inches deep with shanks spaced 4 to 8 inches apart. Soil moisture is needed at 5 to 8 inch depth at time of application.

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TREATMENT OF TREE REPLANT SITES IN ORCHARDS: After removing dead or diseased tree and as much of the root system as possible, make a shallow basin over the planting site. Pre-wet the site as described under SOIL PREPARATION prior to making treatment. Add METAM SOIL FUMIGANT to the stream of water while filling the basin. Use 32 fl. oz. METAM SOIL FUMIGANT per 100 sq. ft. in sufficient water (depending on soil type) to penetrate at least 6 ft. For control of Oak root fungus, use a basin at least 20 x 20 ft. square. Increase dosage to 64 fl. oz. per 100 sq. ft. in sufficient water to penetrate the depth of the root system. If water is tanked to the planting site, add METAM SOIL FUMIGANT to the water and mix before filling basin. Trees immediately adjacent to the treatment site may be injured.

NOTICE

Platte warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated on such label only when used in accordance with the directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of the product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Platte. In no case shall Platte be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. Platte makes no warranties of merchantability or fitness for a particular purpose nor any other express or implied warranty except as stated above.

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