

BEST AVAILABLE COPY

**TABLE I
METABROM 99 SOIL FUMIGATION USES**

Treatment Site	Rate (lbs/A)	Exposure Time
Field Soils to be Planted in		
Tomato	80-124	24-48 hrs
Strawberry	150-240	24-48 hrs
Citrus & Deciduous Fruit & Nuts (non food)	200-400	24-48 hrs
Nursery Soils		
Turf	150-450	24-48 hrs
Ornamentals	150-450	24-48 hrs
Forest Tree Seedlings	150-450	24-48 hrs
Strawberry (non food)	150-450	24-48 hrs
Greenhouse (non food crops for Tomatoes see rate above)	150-450	24-48 hrs
Seed or Transplant Beds (non food)	150-450	24-48 hrs
Tobacco	80-124	24-48 hrs
Potting Mix	150-450	24-48 hrs
Deep Injection application (Tobacco application)	150-450	24-48 hrs

**TABLE II
METABROM 99**

APPLICATION SUMMARY FOR STRUCTURAL PEST CONTROL AND OTHER SITES

Treatment Site	Pests	Rate (lb/100 sq ft)	Exposure Time
Dwellings: Garages and Pans	termites, drywood & dampwood bedbugs, cockroaches, silverfish powder post beetle, death watch beetle, carpenter ants, rats, mice	Less than 100,000 cu ft 1.0-2.0 100,000-1,000,000 cu ft 1.5-2.0 Over 1,000,000 cu ft 2.0	2-3 hrs 24 hrs 1-2 hrs 24 hrs 1 hr 24 hrs
Warehouses (empty) Feed Rooms (empty) Grain Bins (empty) Bags, Boxes and Crates (empty)	cockroaches, rats, mice, confused flour beetle, rice weevil, granary weevil, saw-toothed grain beetle, rusty grain beetle, lesser grain borer, cadelle, khapra beetle, drugstore beetle, order beetle, carpet beetle, capra beetle, coffee bean weevil, groundnut bruchid, common bean weevil, dried fruit beetle, spider beetle, Austria and spider beetle, cigarette beetle, angoumois grain moth, Mediterranean flour moth, warehouse moth, Indian meal moth, common grain moth	4.5-10	12-18 hrs 3 hr 7 hr 2-3 hr 2 hrs
Furniture	termites, drywood & dampwood bedbugs, cockroaches, silverfish powder post beetle, death watch beetle, carpenter ants, clothes moth, cigarette beetle, drugstore beetle, carpet beetle	1-3 lbs	24 hrs 2 hrs
Lumber and Wood Products	termites, drywood & dampwood powder post beetle, round and flat headed borers, carpenter ants and bark beetles	1-3 lbs 2-3 lbs	24 hrs 2 hrs
Greenhouses (empty)	mealybugs, scale, insects and mites	10	4 hrs
Mushroom Houses (empty)	mushroom flies	10	24 hrs
Poultry Houses (empty)	poultry mites, bedbugs	10	24 hrs
Barn Tobacco	drugstore beetle, cigarette beetle, tobacco beetle, tobacco moth	1-3 lbs 10	48-72 hrs 4 hrs
Barn Crumbs	cockroach, worm, fly, mite	10	24 hrs 2 hrs
Poultry House (empty)	poultry mites, bedbugs	10	24 hrs

Field Fumigation: For overall application of Metabrom 99 inject the product with a chisel type applicator having the chisels spaced no more than 12 inches apart and injecting the fumigant to a depth of 6-8 inches below the soil surface. The soil surface must be covered immediately after treatment with simultaneous film laying equipment or by sealing with a roller or cultipacker and covered within 20 minutes with polyethylene film or other suitable cover. Consult Table I for proper dosage. For row applications use the same dosage rates per acre as suggested in Table I. The actual amount used per acre however will be proportional to the actual area treated.

Raised Tarp Fumigation Method: Support the center of the cover to provide a small gas dome. Inflated plastic bags, crumpled fertilizer bags, burlap bags stuffed lightly with hay or straw, inverted baskets, flowerpots or bottles placed in the soil may be used for support.

Evaporating pans are essential for the volatilization and uniform dispersion of fumigant. Shallow pans or basins made of plastic or tin are satisfactory for this purpose.

1. Use one evaporator pan for each 300 to 400 square feet of area.
2. Anchor one end of each polyethylene tube into an evaporating pan with tape or a suitable weight. This ensures that the liquid will be directed into the evaporating pan.
3. Extend the free ends of the polyethylene tubes outside of the area to be covered.
4. After the supports and tubing are in place, cover the area to be fumigated with a gasproof cover of polyethylene or coated fabric film.
5. Position that cover with its edges in a prepared furrow or trench.
6. Seal six to ten inches of the outside edges with dirt. Tamp the dirt down so edges will not pull loose.
7. Attach a polyethylene tube to the cylinder and open the fumigant. Use a cylinder dispenser or scale to meter small amounts.

Hot Gas Method: The "hot gas method" consists of using a commercially manufactured heat exchanger, or a copper coil immersed in a vessel containing hot water to vaporize the fumigant before introduction.

This method may be useful where large amounts of fumigant are required and rapid vaporization is advantageous.

Dosage: Use one to two pounds of Metabrom 99 per 100 square feet for an exposure period of 24 hours when soil temperature is 60°F or higher. Methyl bromide penetrates the soil to the depth it has been plowed or ripped. When soil temperature is between 50°F and 60°F extend the exposure period to 48 hours. Do not treat when soil temperature is below 50°F.

A. TREE SITE FUMIGATION DIRECTIONS (FOR USE IN FLORIDA ONLY)

Preplant or replant fumigation of citrus soil for control of Phytophthora and citrus nematodes in Florida sandy soils. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Apply with chisels spaced 12 inches apart to a depth of 6 to 8 inches. Seal fumigant with a drag or cultipacker following immediately behind chisels. Apply Metabrom 99 at the rate of 1 pound per 100 square feet. Immediately cover with a 4 mil tarp and expose to fumigation for 96 hours. This treatment will control disease to a depth of 4 feet. Remove cover and aerate 2 weeks before setting transplants in treated area.

B. SPECIAL INSTRUCTIONS FOR THE CONTROL OF ARMILLARIA MELLEAE (OAK ROOT FUNGUS) ON DECIDUOUS FRUIT AND NUTS, CITRUS AND VINEYARDS

Preparation for Application: To obtain the maximum control of Armillaria melleae with Metabrom 99, soil must be dry to a depth requiring treatment. This can be accomplished by a) planting sudangrass in the spring, irrigating until the grass has established itself then withholding further irrigation, b) naturally, by allowing plants to grow without irrigation. When soil is dry, cut and remove grass, plants and debris. Rip soil to a depth of 36 inches and disc to smoothness.

Dosage and Method of Application: This is a preplant or replant treatment. Crops which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Methods and dosage of application are as follows. See Table I.

1. **Non-Tarp Chisel Application:** After the soil has been properly prepared inject 400-870 pounds of Metabrom 99 per acre by chisel applications with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications.
Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place the shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.
2. **Tarp Chisel Application:** After the soil has been properly prepared, apply 400-870 pounds of fumigant per acre by chisels spaced 48-66 inches apart and cover with adequate polyethylene film seal.
3. **Deep Injection Auger-Probe Treatment:** Use one pound of Metabrom 99 in light soils (two pounds in fine-textured soils) to a depth of 36 inches or more below the soil surface. Assume one injection site per 100 square feet (on a 10 ft x 10 ft grid pattern) with the injection in the center of the area to be treated.

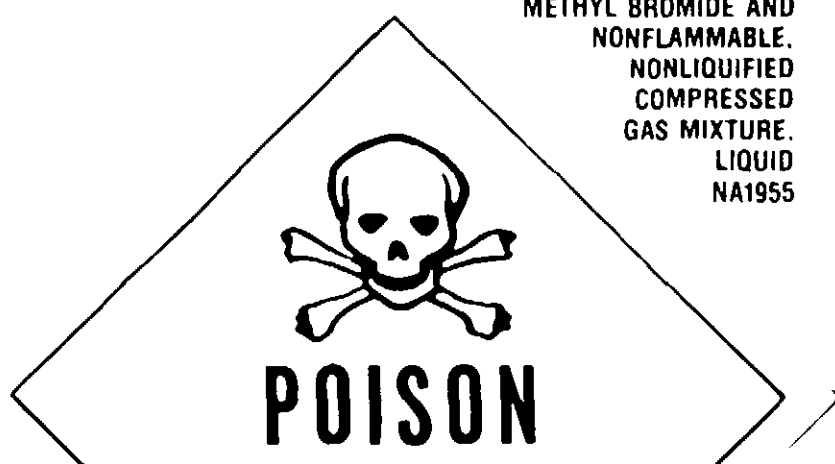
Exposure and Aeration Period:

1. To insure the proper time concentration relationship to control oak root fungus for chisel applications, we recommend a seven day exposure period before removing the polyethylene film cover and a one day interval with Deep Injection Auger-Probe Treatment after which planting or replanting of trees, vines or other deep rooted crops may begin 14 days later.
2. Metabrom 99 will not usually control weed seeds under very dry conditions. However, some control may be observed on deep-rooted perennials such as morningglory (bind weed) and rhizomes of Johnsongrass.

C. NON-TARP NEMATODE CONTROL

For control of nematodes (including Meloidogyne spp., Xiphinema spp., Chironomoides, Pratylenchus, and Paratylenchus) on almonds, apples, apricots, cherries, citrus, grape vineyards, peaches, pecans, pistachios, plums, prunes, strawberries, tomatoes and

**METHYL BROMIDE AND
NONFLAMMABLE,
NONLIQUIFIED
COMPRESSED
GAS MIXTURE,
LIQUID
NA1955**



Pre-treatment Soil Preparation: Plow or rip the soil to a depth of which effective treatment is required. The soil should be worked until free of clods or large lumps. Residue from previous crops should be worked into the soil to allow for decomposition prior to fumigation. Soil moisture should be optimum for seed germination. For best results soil should be kept moist for at least four days prior to treatment. Do not fumigate if the soil temperature is below 50°F.

For best results, fumigate when soil temperature is 60°F to 90°F at the depth of 6 inches. Use the higher labelled rates for muck and heavy clay soils.

Dosage and Method of Application: This is a preplant or replant treatment. Do not apply to soil where trees or vines will bear harvestable fruit within 24 months. A waiting period of at least 14 days should be observed between application and planting. Methods and dosage of application are as follows:

1 **Chisel Application:** After the soil has been properly prepared, inject 400-872 pounds of Metabrom 99 per acre by chisel application with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications: Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place a shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.

2 **Deep Injection Auger-Probe Treatment:** Use one pound of Metabrom 99 per injection site in lighter soils, two pounds of Metabrom 99 in fine textured soils. Use one injection site per 100 square feet (on a 10 ft. x 10 ft. grid pattern) with the injection in the center of the area to be treated. Tamp or compact the soil at the point of injection.

Metabrom 99 used with a tarp will not usually control most weed seeds. However, some control may be observed on deep-rooted perennials such as morningglory (bindweed) and rhizomes of Johnsongrass.

ACCEPTED
8622-17
JUL 25 1989
UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTERED
UNDER NO. 100-100000 SUBJECT
TO ATTACHED COMMENTS

6

INHALATION HAZARD

Warranty: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herewith.

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RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

METABROM 99

CONTAINS 0.25% CHLOROPICRIN

ACTIVE INGREDIENT:
METHYL BROMIDE

By Wt.
99.3%

INERT INGREDIENTS

0.7%

CHLOROPICRIN (warning odorant tear gas)

TOTAL 100%

ACUTELY TOXIC CHEMICAL

14.3 LBS Active Ingredient per gal LIQUID IN CYLINDER

KEEP OUT OF REACH OF CHILDREN

DANGER  **PELIGRO**
POISON

PRECAUCION AL USUARIO: Si usted no lee Ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente

STATEMENT OF PRACTICAL TREATMENT

In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.

If inhaled — Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped apply artificial respiration. Do not give anything by mouth to an unconscious person.

If on skin — Immediately remove contaminated clothing, shoes, jewelry, and any other item on skin. Wash contaminated skin area thoroughly with soap and water.

If in eyes — Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

See side panels for additional precautionary statements

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EPA EST NO 15298-IS-01
EPA EST NO 29516-FL-04
EPA EST NO 29516-NC-01

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(212) 563-4600 (N.Y.)

Net contents LBS / KGS

Aeration and Reentry: After fumigation, treated areas must be aerated until the level of methyl-bromide is below 5 ppm. Do not allow entry into the treated area by any person before this time unless protective clothing and a respiratory protection device (SCBA or combination air-supplied/SCBA) is worn.

Spill and Leak Procedures: Evacuate immediate area of spill or leak. Use SCBA or combination air-supplied SCBA respirator for entry into affected area to correct problem. Move leaking or damaged cylinders or containers outdoors or to an isolated location, observing strict safety precautions. Work upwind if possible. Allow spill to evaporate. Do not permit entry into spill area by unprotected persons until concentration of methyl bromide is determined to be less than 5 ppm.

Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if the reportable quantity of 1000 lbs is exceeded.

PRECAUTIONS FOR USAGE PRIOR TO, DURING, AND AFTER SOIL FUMIGATION

Specific instructions for application appears in the Product Manual No. AM-210

Prior to Fumigation: Comply with all local regulations and ordinances. Obtain an application permit from Agricultural Regulatory Agencies as required.

Never fumigate alone. It is imperative always to have an assistant and proper protective equipment in case of accidents.

Drivers of application equipment must advise other workers of all precautions and procedures. In addition, drivers must instruct their helpers in the mechanical operation of the tractor and how to safely work with the tractor and driver while fumigating.

Handle this fumigant in the open, with the operator upwind from the container where there is good ventilation.

Check fumigant pressure systems for leaks before beginning operation.

Two trained persons must be present during introduction of the fumigant.

When fumigating soil from a tractor 5 gallons of water must be carried on the tractor and placed where it is readily accessible. In addition to water available on the tractor, at least 5 gallons additional water must be available from the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking".

All trash should be cleared from the field before starting fumigation.

During Fumigation: This fumigant should not be applied when there is an atmospheric inversion. Since uncomfortable concentrations of chloropicrin may drift to nearby areas, immediately cover treated area with plastic tarpaulin for a minimum of 48 hours.

Do not lift injection shanks to turn at the end of a pass until fumigant has drained from system following closure of shutoff valve.

If trash is inadvertently pulled by the shanks to the ends of the field when fumigating, it must be covered by lifting the shanks, then covering the trash with polyethylene film before making the turn for the next pass.

When changing the cylinders, be certain they are turned off and fumigant system is not under pressure.

After fumigation: Post all treated areas with warning signs.

Keep all animals, children and unauthorized people away from area under fumigation for 48 hours after fumigation and during removal of tarpaulin.

Two trained persons must be present during removal of the tarpaulin.

Spill and Leak Procedures: In case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and motor. Evacuate immediate area of spill or leak. Use SCBA or combination air-supplied/SCBA respirator for entry into affected area to correct problem. Approach from upwind to make necessary repairs. Do not re-enter area without respiratory protection until a spill has evaporated or a leak has been fixed.

DWELLING FUMIGATION DIRECTIONS
(Pest Control Operators Only)

When used for fumigation of dwellings, two persons trained in the use of this product must be present during introduction of the fumigant, initiation of operation, and after operation when testing for reentry. Two persons do not need to be present for setting up and directed removal, outside the area being fumigated.

Dwelling to be fumigated is made gas tight using a tarpaulin which has been staked and/or earth mounds placed on the ends of the tarpaulin. Area to be fumigated is calculated and the Metabrom introduced. Dwellings to be posted showing date of fumigation. Following fumigation, dwellings to be left sealed for several days until the level is below 5 ppm (20mg/m³).

Subterranean termites in tunnels will not be controlled unless gas is introduced into those areas by a special procedure.

Insects Controlled: Termites, wood borers, and any other insects (cockroaches, spiders, etc.) which infest fumigated dwelling. Metabrom will control all insects and trapped rodents within the treated structure.

Dosage Rate: See Table II and Product Manual No. AM-210

Placarding Required: The applicator must placard or post all entrances to the fumigated area with signs bearing, in English and Spanish:

1. The signal word DANGER/PELIGRO and the skull and crossbones symbol
2. The statement "Area under fumigation. DO NOT ENTER/NO ENTRE"
3. The date of fumigation
4. Name of fumigant used
5. Name, address, and telephone number of the applicator

Do not remove a placard until the treated commodity is completely aerated. To determine whether aeration is complete, each fumigated site or vehicle must be monitored and shown to contain less than 5 ppm methyl bromide in the air space around and, when feasible, in the mass of the commodity. If less than 5 ppm methyl bromide is detected, the placard may be removed. However, if 5 ppm or greater methyl bromide is detected, the placard must be transferred with the commodity to the new site. Workers who transfer or handle incompletely aerated commodity must be informed and appropriate measures must be taken (i.e., ventilation or respiratory protection) to prevent exposures from exceeding 5 ppm or greater methyl bromide.

Respiratory Protection: If the concentration of methyl bromide in the working area, as measured by a direct-reading detector device (e.g., Draeger Tube as described in the Product Manual), does not exceed 5 ppm (20 mg/m³), no respiratory protection is required.

If this concentration is exceeded at any time, all persons in the working area must wear protective clothing and a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator (see the Product Manual No. AM-210).

NOTE: Extinguish all flames such as pilot lights and glowing heating units to avoid corrosion STRUCTURAL Pest control and other sites including dwellings.

Remove the following materials from building before fumigation as they may develop undesirable odors: furs, high protein flour and cereals, fur seals, furs, leathers, patent leather articles, rubber goods, sulfur containing compounds or synthetic detergents.

See Product Manual No. AM-210 and Table II for specific dosage per 1000 cu. ft., pest controlled and exposure time.

SOIL FUMIGATION (See Table I)

Pests controlled are: Nematodes including root-knot spp., *Ditylenchus*, *Pratylenchus*, *Xiphinema*, *Crictonemodes*, and *Paratylenchus* on almonds, apples, apricots, cherries, citrus, grape vineyards, peaches, pecans, pistachios, plums, prunes, strawberries, tomatoes and walnuts.

Soil-borne fungi, including *Pythium*, *Rhizoctonia*, *Phytophthora*, *Pyrenochaeta*, *Sclerotinia*, *Sclerotium*, *Armillaria*, and the clubroot organism, *Plasmodiophora*.

Weeds and weed seed: seeds, roots, stolons, and bulbs of broadleaf weeds and grasses including quackgrass, annual bluegrass, broomrape, common lambsquarters, torpedograss, and bermudagrass. Not effective against mallow, dodder, and some species of clover.

Insects in the soil at the time of treatment including wireworms, June beetle larvae, white grubs, and garden symphylan.

Pretreatment Soil Preparation: Plow or rip the soil to the depth of which effective treatment is required. The soil should be worked until free of clods or large lumps. Residue from previous crops should be worked into the soil to allow for decomposition prior to fumigation. Soil moisture should be optimum for seed germination. For best results soil should be kept moist for at least four days prior to treatment. Do not fumigate if the soil temperature is below 50°F. For best results, fumigate when soil temperature is 60°F to 90°F at the depth of 6 inches. Use the higher labeled rates for muck and heavy clay soils.

Liquid Fumigation: For overall application of Metabrom 99 inject the product with a chisel type applicator having the chisels spaced no more than 12 inches apart and injecting the fumigant to a depth of 6-8 inches below the soil surface. The soil surface must be covered immediately after treatment with simultaneous film laying equipment or by sealing with a roller or cultipacker and covered within 20 minutes with polyethylene film or other suitable cover. Consult Table I for proper dosage. For row applications use the same dosage rates per acre as suggested in Table I. The actual amount used per acre, however, will be proportional to the actual area treated.

Raised Tarp Fumigation Method: Support the center of the cover to provide a small gas dome. Inflated plastic bags, crumpled fertilizer bags, burlap bags stuffed lightly with hay or straw, inverted baskets, flowerpots or bottles placed in the soil may be used for support.

Evaporating pans are essential for the volatilization and uniform dispersion of fumigant. Shallow pans or basins made of plastic or tin are satisfactory for this purpose.

- 1 Use one evaporator pan for each 300 to 400 square feet of area.
- 2 Anchor one end of each polyethylene tube into an evaporating pan with tape or a suitable weight. This ensures that the liquid will be directed into the evaporating pan.
- 3 Extend the free ends of the polyethylene tubes outside of the area to be covered.
- 4 After the supports and tubing are in place, cover the area to be fumigated with a gasproof cover of polyethylene or coated fabric film.
- 5 Position that cover with its edges in a prepared furrow or trench.
- 6 Seal six to ten inches of the outside edges with dirt. Tamp the dirt down so edges will not pull loose.
- 7 Attach a polyethylene tube to the cylinder and open the fumigant. Use a cylinder dispenser or scale to meter small amounts.

Hot Gas Method: The hot gas method consists of using a commercially manufactured heat exchanger or a copper coil immersed in a vessel containing hot water to vaporize the fumigant before introduction.

This method may be useful where large amounts of fumigant are required and rapid vaporization is advantageous.

Dosage: Use one to two pounds of Metabrom 99 per 100 square feet for an exposure period of 24 hours when soil temperature is 60°F or higher. Methyl bromide penetrates the soil to the depth it has been plowed or tilled. When soil temperature is between 50°F and 60°F extend the exposure period to 48 hours. Do not treat when soil temperature is below 50°F.

A. TREE SITE FUMIGATION DIRECTIONS (FOR USE IN FLORIDA ONLY)

Preplant or replant fumigation of citrus soil for control of Phytophthora and citrus nematodes in Florida sandy soils. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Apply with chisels spaced 12 inches apart to a depth of 6 to 8 inches. Seal fumigant with a drag or cultipacker following immediately behind chisels. Apply Metabrom 99 at the rate of 1 pound per 100 square feet. Immediately cover with a 4 mil tarp and expose to fumigation for 96 hours. This treatment will control disease to a depth of 4 feet. Remove cover and aerate 2 weeks before setting transplants in treated area.

B. SPECIAL INSTRUCTIONS FOR THE CONTROL OF ARMILLARIA MELLEAE (OAK ROOT FUNGUS) ON DECIDUOUS FRUIT AND NUTS, CITRUS AND VINEYARDS

Preparation for Application: To obtain the maximum control of Armillaria melleae with Metabrom 99 soil must be dry to a depth requiring treatment. This can be accomplished by a) planting sudangrass in the spring, irrigating until the grass has established itself then withholding further irrigation; b) naturally, by allowing plants to grow without irrigation. When soil is dry, cut and remove grass, plants and debris. Rip soil to a depth of 36 inches and disc to smoothness.

Dosage and Method of Application: This is a preplant or replant treatment. Crops which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Methods and dosage of application are as follows: See Table I.

- 1 **Non-Tarp Chisel Application:** After the soil has been properly prepared inject 400-670 pounds of Metabrom 99 per acre by chisel applications with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications:

Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place the shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.

- 2 **Tarp Chisel Application:** After the soil has been properly prepared, apply 400-670 pounds of fumigant per acre by chisels spaced 48-66 inches apart and cover with appropriate ethylene film seal.

- 3 **Deep Injection Auger Probe Treatment:** Use one pound of Metabrom 99 in eight 3 1/2 inch two pound injection tubes to a depth of 36 inches or more below the soil surface. Assume one injection site per 100 square feet on a 10 ft. x 10 ft. grid pattern with the injection in the center of the area to be treated.

Exposure and Aeration Period

- 1 To insure the proper time to re-plant in soil with phytocontrol oak root fungus for chisel applications, we recommend a seven day exposure period before removing the polyethylene film cover, and a one day interval with Deep Injection Auger Probe treatment after which planting or replanting of trees, vines or other deep rooted crops may begin 14 days later.
- 2 Metabrom 99 will not usually control weed seeds under very dry conditions. However, some control may be observed on deep rooted perennials such as morningglory (bindweed) and thistles. (Johnson grass).

C. NON-TARP NEMATODE CONTROL

For control of nematodes including Meloidogyne spp., Xiphinema spp., Criconemoides, Pratylenchus and Paratylenchus on almonds, apples, apricots, cherries, citrus, grape vineyards, peaches, pecans, pistachios, plums, prunes, strawberries, tomatoes and walnuts.

**TABLE I
METABROM 99 SOIL FUMIGATION USES**

Treatment Site	Rate (lb/A)	Exposure Time
Field Soils to be Planted in		
Tomato	180-240	24-48 hrs
Strawberry	180-240	24-48 hrs
Citrus & Deciduous Fruits & Nuts (non food)	400-670*	24-48 hrs
Nursery Soils		
Turf	180-435	24-48 hrs
Ornamentals	180-435	24-48 hrs
Forest Tree Seedlings	180-435	24-48 hrs
Strawberry (non food)	180-435	24-48 hrs
Greenhouse Sunken food crops for Tomatoes (see rate above)	180-435	24-48 hrs
Seed or Transplant Beds (non food)	180-435	24-48 hrs
Tobacco	872	24-48 hrs
Hotting Mix	180 Cu Yd	24-48 hrs
Deep Injection Application		

**TABLE II
METABROM 99**

APPLICATION SUMMARY FOR STRUCTURAL PEST CONTROL AND OTHER SITES

Treatment Site	Pests	Rate (#/1000 cu ft volume)	Dosage	Exposure
Warehouses, Garages, Barns	termites, drywood & dampwood, bedbugs, cockroaches, silverfish powder post beetle, death watch beetle, carpenter ants, rats, mice	less than 100,000 cu ft 100,000-500,000 cu ft 500,000-1,000,000 cu ft Over 1,000,000 cu ft	1.3# 1.3# 1.3# 1.3#	24 hrs 24 hrs 24 hrs 24 hrs
Warehouses empty, Feed Rooms empty, Grain Bins empty, Bags, Boxes and Crates empty	cockroaches, rats, mice, confused flour beetle, tick weevil, granary weevil, sawtoothed grain beetle, rust grain beetle, lesser grain borer, lacee, khapra beetle, drugstore beetle, larger beetle, carpet beetle, sapra beetle, coffee bean weevil, groundnut burnd, common bean weevil, dried fruit beetle, golden spider beetle, Australian spider beetle, cigarette beetle, angoumois grain moth, Mediterranean flour moth, warehouse moth, Indian meal moth, common grain mite		4.5# 3# 3# 2.3#	12-18 hrs 24 hrs 24 hrs 24 hrs
Furniture	termites, drywood & dampwood, bedbugs, cockroaches, silverfish powder post beetle, death watch beetle, carpenter ants, common moth, cigarette beetle, drugstore beetle, carpet beetle		1.3# 2.3#	24 hrs 2 hrs
Lumber and Wood Products	termites, drywood & dampwood, powder post beetle, round and flat headed borers, carpenter ants and bark beetles		1.3# 2.3#	24 hrs 2 hrs
Greenhouses empty, Mushrooms, Greenhouses, Fruit Houses empty, Root Trials	mealybugs, scale insects and flies, aphids, spider mites, leaf beetles, scale insects, mealybugs		2# 2# 2#	4 hrs 24 hrs 24 hrs
Baled Cotton	drugstore beetle, cigarette beetle, tobacco moth		2.3# 4#	48-12 hrs 4 hrs
Books, Papers, Maps	bookworm, booklice, weevils		3# 4#	24 hrs 2 hrs
Quarantine uses empty	quarantine pests, fleas, ticks		2#	24 hrs

*At temperatures below 60°F, increase the dosage by 1 pound per 1000 cu ft for every 10°F drop in temperature. Do not use an application rate to treat fumigant. Do not fumigate when temperatures below 50°F. For seedlings do not use methyl bromide formulations containing 2% or more chloropicrin.

*Atmosphere
*Vacuum Chamber 25-27
NOTE: Remember to apply the correct rate for the fumigating tank size.

**METHYL BROMIDE AND
NONFLAMMABLE,
NONLIQUIFIED
COMPRESSED
GAS MIXTURE,
LIQUID
NA19*5**



POISON

Pretreatment Soil Preparation: Plow or rip the soil to a depth of which effective treatment is required. The soil should be worked until free of clods or large lumps. Residue from previous crops should be worked into the soil to allow for decomposition prior to fumigation. Soil moisture should be optimum for seed germination. For best results soil should be kept moist for at least four days prior to treatment. Do not fumigate if the soil temperature is below 50°F.

For best results, fumigate when soil temperature is 60°F to 90°F at the depth of 6 inches. Use the higher labelled rates for muck and heavy clay soils.

Dosage and Method of Application: This is a preplant or replant treatment. Do not apply to soil where trees or vines will bear harvestable fruit within 24 months. A waiting period of at least 14 days should be observed between application and planting. Methods and dosage of application are as follows:

- 1 Chisel Application:** After the soil has been properly prepared, inject 400-872 pounds of Metabrom 99 per acre by chisel application with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications: Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place a shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.
- 2 Deep Injection Auger-Probe Treatment:** Use one pound of Metabrom 99 per injection site in lighter soils, two pounds of Metabrom 99 in fine textured soils. Use one injection site per 100 square feet (on a 10 ft. x 10 ft. grid pattern) with the injection in the center of the area to be treated. Tamp or compact the soil at the point of injection.

Metabrom 99 used with a tarp will not usually control most weed seeds. However, some control may be observed on deep rooted perennials such as morningglory (bindweed) and rhizomes of johnsongrass.

ACCEPTED

8622-17

JUL 25 1989

UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTERED
ED UNDER NO. SUBJECT
TO ATTACHED COMMENTS

Warranty: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herewith.

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INHALATION HAZARD