

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

METABROM 99

ACTIVE INGREDIENTS:	By Wt.
Methyl bromide	99.65%
Chloropicrin	.25%
<i>INERT</i>	.10%
	100%

KEEP OUT OF REACH OF CHILDREN

DANGER

POISON

Statement of Practical Treatment

IF INHALED Remove victim to fresh air immediately. Keep victim lying down and warm. Give artificial respiration if breathing has stopped. Call a physician at once.

SKIN CONTACT Remove all contaminated clothing and shoes at once. Wash exposed areas thoroughly with soap and water. If a rash or blisters develop get medical attention.

EYE CONTACT Flush eyes with running water for at least 15 minutes. Get medical attention promptly.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 8622-  
EPA EST No. 15298-IS-01  
Net Weight

Distributed by  
Ameribrom, Inc.  
1250 Broadway  
New York, N.Y. 10001

PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS  
AND DOMESTIC ANIMALS

DANGER

Poisonous liquid and vapor. Harmful or fatal if swallowed. Do not breathe vapor. Vapors may be fatal if inhaled. Do not get in eyes, on skin, or on clothing. Skin contact with Metabrom may cause burns. In case of contact with skin thoroughly wash with soap and water for at least 15 minutes. Immediately remove contaminated clothes and shoes and thoroughly aerate before re-use. Wear goggles and protective clothing of polyethylene when handling. Do not wear rubber clothing. Do not wear gloves. A full face gas mask approved by NIOSH or MSHA with black canister suitable for organic vapors or an approved self-contained breathing apparatus should be worn. Bandages or other occlusive dressings should not be worn when handling this material.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and wildlife. Keep out of lakes, streams, and ponds.

GENERAL FUMIGATION DIRECTIONS

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

DIRECTIONS FOR USE :

This fumigant may be used as a treatment to kill all stages of insects in boxcars, warehouses, fumigation vaults, food plants, cereal mills under gas tight tarpaulins and bulk grain storages. Do not fumigate if grain moisture is high or if grain temperature is low (below 60°F.) or if there is excessive dockage. See Booklet AM-110 for specific information on dosages, uses, pests, procedures, and additional safety precautions.

NOTE: DO NOT USE METABROM TO TREAT LIVE PLANTS, FRUITS, OR VEGETABLES.

#### STORAGE AND DISPOSAL

PROHIBITIONS: DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL. OPEN DUMPING IS PROHIBITED. DO NOT REUSE EMPTY CONTAINER.

PESTICIDE STORAGE: Store upright in a cool, well ventilated place away from dwellings. Do not remove cylinder safety caps until just prior to use.

CONTAINER DISPOSAL: Close valve by turning clockwise until hand tight. Disconnect lines. Replace safety caps and bonnet. Return empty cylinders freight collect to Ameribrom, Inc. location from which shipment was made. Return partial cylinders only after consulting Ameribrom, Inc. for proper shipping instructions.

#### Space Fumigation

Dosage: The usual dosage rate for each 1000 cu. ft. will range from 1 to 3 lbs., 12 to 24 hours exposure, depending on tightness of structure and kind and amount of commodity in storage.

Insects Controlled: Granary weevil, grain beetle, rice weevil, cadelles, mites, bran bugs, grain borers, mealworms, Indian meal moth. Kills insects in all life stages.

Rats and Mice: Metabrom applied by this treatment will kill rats and mice that are exposed to the gas.

#### Bulk Grain Dosage Rates:

(General) above 65°F.

Shelled corn	2 lbs. each 1000 cu. ft.
Wheat (similar small grains)	3 lbs. each 1000 cu. ft.
Milo (grain sorghum)	4 lbs. each 1000 cu. ft.

Consult Booklet AM-110 for further use and safety information.

#### SOIL FUMIGATION DIRECTIONS

The following are general instructions on the use of Metabrom for soil fumigation to be used as a pre-plant soil treatment in seed beds or transplant beds for the production of transplants (except as described in Booklet AM-110).

Soil Fumigant Uses: Metabrom is an effective soil fumigant for the control of nematodes, weed seeds and certain soil-borne disease-causing fungi. In seed beds and potting soils it contributes to a maximum production of healthy, vigorous tobacco and vegetable transplants, nursery and forest tree seedlings. Where "slips," "cuttings," "spuds" or seeds

are used as in greenhouses, nurseries, golf greens, lawns and ornamental gardens, healthy and vigorous rooting is established quickly.

Soil Preparation: Plow or otherwise work soil to a fine tilth. Add fertilizer, manure or compost, work in well. Soil should be moist and friable for best results. Do not fumigate when soil is dry or excessively wet.

NOTE: Do not fumigate when soil temperature is below 50°F.

Exposure Periods: Expose for 48 hours when soil temperature is between 50°F. and 60°F. and for 24 hours when above 60°F.

Dosage: For most purposes use 1 lb. of Metabrom for each 100 sq. ft. of soil to be treated. See Booklet AM-110 for specific pest/site dosages and additional precautions.

When to Plant: After the exposure, aerate soil for 3 days before seeding or 5 to 7 days before setting out vegetative growth.

#### DWELLING FUMIGATION DIRECTIONS (Pest Control Operators Only)

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. Dwelling is to be posted showing date of fumigation. Following fumigation, dwelling is to be ventilated for several hours or until testing with a halide leak detector indicates dwelling has been aerated.

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) in gas-tight fumigated dwelling. Metabrom will control all insects and trapped rodents within the treated structure.

Dosage Rate: The dosage rate for each 1000 cu. ft. will range from 1 to 3 lbs., and 12 to 24 hours exposure.

NOTE: Extinguish all flames such as pilot lights and glowing heating units to avoid corrosion.

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



NOTE: Many pesticidal chemicals are poisonous and may leave a toxic residue on the plants to which they are applied. The U.S. Food and Drug Administration has established maximum amounts of such pesticidal chemicals that may remain on raw agricultural products at harvest, and it is the user's responsibility to see that there is no residue on such crops at harvest in excess of these amounts. The "Directions for Use" are based on the best available information, and if followed carefully should not leave excessive residues at harvest. However Ameribrom, Inc., assumes no responsibility as to their accuracy nor for any loss due to excessive residues.

NOTE: Seller warrants that this product complies with the specifications expressed in this label. Seller makes no other warranties; and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose. Seller's liability for default, breach, or failure under this label shall be limited to the amount of the purchase price. Seller shall have no liability for consequential damages.

RESTRICTED USE PESTICIDE

For retail sale to and for use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

DIRECTIONS FOR USE OF THE PRODUCTS  
METABROM 100 and METABROM 99

EPA REGISTRATION NUMBERS:

8622-

8622-

Ameribrom, Inc.  
1250 Broadway  
New York, N.Y. 10001

Booklet AH-110

STATEMENT OF WARRANTY AND LIABILITY

Seller warrants that this product complies with the specifications expressed in this label. SELLER MAKES NO OTHER WARRANTIES; AND DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE INTENDED PURPOSE. Seller's liability for default, breach, or failure under this label shall be limited to the amount of the purchase price. Seller shall have no liability for consequential damages.

Many pesticidal chemicals are poisonous and may leave a toxic residue on the plants to which they are applied. The U.S. Food and Drug Administration has established maximum amounts of such pesticidal chemicals that may remain on raw agricultural products at harvest, and it is the user's responsibility to see that there is no residue on such crops at harvest in excess of these amounts. The "Directions for Use" are based on the best available information, and if followed carefully should not leave excessive residues at harvest. However, Ameribrom, Inc., assumes no responsibility as to their accuracy nor for any loss due to excessive residues.



Metabrom 100 and Metabrom 99.5 may be used to control insects infesting various grains and non-food materials. Grains which may be treated and dosage rates are given in Table I. Treatment rates for soil fumigations may be found in Table II. Dosage rates for structural fumigation and other pest sites are found in Table III.

#### I. METHODS OF SPACE FUMIGATION

##### A. Chamber Fumigation

Metabrom 100 and Metabrom 99 may be used to control stored product pests listed in the treatment tables.

Load the chamber with the material to be fumigated, close exhaust ports, turn on circulating fan and close chamber door. Determine the proper dosage of fumigant from the appropriate table. Vaporize the liquid in the chamber by spraying it into the air stream in front of a blower or fan, passing it through a vaporizer, or allowing it to evaporate from a shallow pan.

NOTE: Before introducing the fumigant, place warning signs and a red warning light on the floor. Two people wearing full-faced gas masks with a "SMA/HIOGH" approved black canister for organic vapors should be present when introducing the fumigant and opening the floor after fumigation. All controls should be outside the chamber.

At the end of the exposure period, aerate by opening the exhaust port, turning on the exhaust fan and opening the chamber door slightly to permit fresh air to enter.

NOTE: Always check completeness of aeration with detection devices before allowing unprotected persons to enter the chamber.

B. Vacuum Chamber Fumigation

1. Place material to be fumigated in the steel chamber and draw the desired vacuum.
2. Release fumigant into the chamber (usually through a heating unit to insure complete vaporization).
3. Dosage. See Tables I and III for specific commodities and dosage rates.
4. Aeration. Release the vacuum and change the air in the chamber at least two times. A vacuum of 15 in. Hg. should be drawn for this purpose.

C. Truck, Van or Trailer Fumigation

1. Seal the off-side door, ventilators and other openings from the inside.
2. Use a closed-ended, perforated tube to distribute fumigant evenly. Secure the tube to the ceiling so the perforations direct fumigant toward the floor and prevent it from straying the ceiling. Always apply fumigant from outside the truck, van or trailer.
3. Seal the door and place warning signs on both sides of the truck, van or trailer. Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words "Area under fumigation, do not enter until completely aerated," the date of fumigation, name of the fumigant used, emergency telephone number for contact and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely aerated and safe for entry, as indicated by a suitable detector.
4. Do not fumigate while strong winds are blowing.
5. Dosage. Consult Tables I and III for specific commodity treatments and rates.
6. After 12 to 18 hours, open the unit and aerate for 1 to 1½ hours. The truck, van

or trailer may then be resealed for shipment.

7. Advise consignee to check the truck, van or trailer for proper aeration on arrival. Do not move trucks, vans or trailers during fumigation. They must be completely aerated before movement is allowed.

#### D. Railroad Car Fumigation

1. Seal the off-side door, ventilators and other openings from the inside.
2. Use a closed-ended perforated tube to distribute fumigant evenly. Secure the tube to the ceiling so the perforations direct fumigant toward the floor and prevent it from spraying the ceiling. Always apply fumigant from outside the car.
3. Seal the door and place warning signs on both sides of the car. Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words "Area under fumigation, do not enter until completely aerated" the date of fumigation, name of the fumigant used, emergency telephone number for contact and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely aerated and safe for entry, as indicated by a suitable detector.
4. Do not fumigate while strong winds are blowing.
5. Dosage, Consult Tables I and II for specific commodity treatments and rates.
6. After 12 to 18 hours, open the unit and aerate for 1 to 1½ hours. The car may then be resealed for shipment.

- 4- 12
7. Advise consignee to check the car for proper aeration on arrival. Do not move railcars during fumigation. They must be completely aerated before movement is allowed.

#### E. Grain Elevator Fumigation

The recirculation method is best for grain elevator fumigation since it allows more time for gas penetration in high resistance areas.

1. Seal structure carefully, using masking tape for small openings and polyethylene sheeting secured with masking tape for large openings.
2. Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words "Area under fumigation, do not enter until completely aerated," the date of fumigation, name of the fumigant used, emergency telephone number for contact, and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely aerated and safe for entry, as indicated by a suitable detector.
3. Dosage. Use the rate and exposure time shown in Table 1 for specific grains to be treated.
4. Fumigate by using a fan or blower to recirculate the methyl bromide through perforated pipes or ducts at the bottom of the bin, up through the return duct. Or discharge the fumigant through polyethylene tubing in the head space at intervals of 100 ft. or less.
5. Check periodically for leaks with a halide gas detector.
6. To aerate after fumigation, disconnect return air at the fan and discharge into outside air. Continue aeration until halide detector shows

The fumigant has dissipated. Use halide detector to check the elevator head area for possible pockets of methyl bromide.

**F. Tarpaulin Enclosure**

The stacked material should be placed on a concrete floor or other air-tight surface. If the floor is not air tight, it may be made so by laying Sisal Kraft paper, tar paper or additional tarpaulin or polyethylene sheeting on it. Center 4 or 5 sacks on top of the stack to provide space for gas expansion. Place an evaporating pan with an anchored applicator tube in the center of the expansion dome. Cover and seal the stack with a gas tight tarpaulin or polyethylene sheeting of 4 mil. or greater thickness. Connect the tube to the gas cylinder. Release the fumigant. Dosage. Use rate and exposure time shown in Table I or III. When fumigation is complete, partially remove the tarpaulin and leave it for 30 minutes. This allows partial aeration before the cover is completely removed.

**G. Warehouse, Structural and Food Plant Fumigation**

Check with appropriate municipal and county authorities before fumigating to be completely familiar with local regulations. Ordinances may require watchmen, padlocks, or warning posters during and after fumigation and/or notification of the nearest fire station. Notify anyone who would normally be in the area before fumigating.

1. Remove food and feed commodities before fumigation.
2. Dosage. See Table III for dosages and pests controlled. (Use only methyl bromide products containing .25%, 5%, and 1% chloropicrin, and 100% methyl bromide.)
3. Seal the building by closing all external open-

ings, including roof ventilators, chimneys, train pipes, funnels, etc. Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words "Area under fumigation, do not enter until completely aerated," the date of fumigation, name of the fumigant used, emergency telephone number for contact, and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely aerated and safe for entry, as indicated by a suitable detector.

4. Seal all floor and roof cracks and around the eaves.
5. Take special care to seal partitions to adjacent storage or work areas in the building. When using tarps, the soil surface should be sealed by using sand or water snakes or by trenching and burying the edge of the tarp in the trench and covering with soil or sand followed by the application of water. When using sand snakes, the soil surface should be premoistened if necessary.
6. Doors and hatches on milling machinery should be opened prior to fumigation. These include elevator boots, conveyor lids, settling chamber doors, dust trunks, and any other openings that will allow fumigant into the equipment.
7. If possible, clear adjoining buildings sharing a common wall. If they cannot be cleared, check frequently with an approved detector to insure the safety of the occupants.

#### H. Shipboard, In Transit Ship

##### Or Shiphold Fumigation

IMPORTANT: Shipboard, in transit ship or shiphold fumigation is also governed by U.S. Coast Guard Regulations. Refer to and comply with these regulations prior to fumigation.

#### Prefumigation Procedures

1. Prior to fumigating a vessel for in transit cargo fumigation, the master of the vessel or his representative, and the fumigator must determine whether the vessel is suitably designed and configured so as to allow for safe occupancy by the ship's crew throughout the duration of the fumigation. If it is determined that the design and configuration of the vessel does not allow for safe occupancy by the ship's crew throughout the duration of the fumigation, then the vessel will not be fumigated unless all crew members are removed from the vessel. The crew members will not be allowed to reoccupy the vessel until the vessel has been properly aerated and a determination has been made by the master of the vessel and the fumigator that the vessel is safe for occupancy.
2. The person responsible for the fumigation must notify the master of the vessel, or his representative, of the requirements relating to personal protection equipment, detection equipment and that a person qualified in the use of this equipment must accompany the vessel with cargo under fumigation. Emergency procedures, cargo ventilation, periodic monitoring and inspections, and first aid measures must be discussed with and understood by the master of the vessel or his representative.
3. Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words "Area under fumigation, do not enter until completely aerated," the date of fumigation, name of the fumigant used, emergency telephone number for contact, and the name and address of the fumigator.

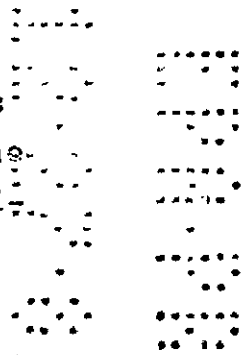
\*Personal protection equipment means a full-faced, black canister gas mask or respirator for the fumigant, jointly approved by the Mine Safety and Health Administration and the National Institute of Occupational Safety and Health.

Do not remove warning signs until the fumigated area is completely aerated and safe for entry, as indicated by a suitable detector.

4. During the fumigation or until a manned vessel leaves port or the cargo is aerated, the person in charge of the fumigation shall insure that a qualified person using gas or vapor detection equipment tests spaces adjacent to spaces containing fumigated cargo and all regularly occupied spaces for fumigation leakage. If leakage of the fumigant is detected, the person in charge of the fumigation shall take action to correct the leakage, or shall inform the master of the vessel, or his representative of the leakage so that corrective action can be taken.
5. If the fumigation is not completed and the vessel aerated before the manned vessel leaves port, the person in charge of the vessel shall insure that at least two units of personal protection equipment\* and one gas or vapor detection device, and a person qualified in their operation be on board the vessel during the voyage.
6. Dosage. See Table 1 or III for specific rates.

Precautions and Procedures During Voyage

Using appropriate gas detection equipment, monitor spaces adjacent to areas containing fumigated cargo and all regularly occupied areas for fumigant leakage. If leakage is detected, the area should be evacuated of all personnel, ventilated, and action taken to correct the leakage, before allowing the area to be occupied. Do not enter fumigated areas except under emergency conditions. If necessary to enter a fumigated area, appropriate personal protection equipment\* must





be used. Never enter fumigated areas alone. At least one other person, wearing personal protection equipment\*, should be available to assist in case of an emergency.

Precautions and Procedures

During Discharge

If necessary to enter holds prior to discharge, test spaces directly above grain surface for fumigant concentration, using appropriate gas detection and personal safety equipment\*. Do not allow entry to fumigated areas without personal safety equipment\*, unless fumigant concentrations are at safe levels, as indicated by a suitable detector.

11. SOIL FUMIGATION

Pests controlled are: Nematodes, including root-knot spp., Tylenchulus, Pratylenchus, Xiphinema, Criconemoides, 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 yellow, 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 to 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 3-4 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 such and heavy clay soils.

#### Field Fumigation

For overall application of Metabron 100 and Metabron 33 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 11 for proper dosage. For row applications use the same dosage rates per acre as suggested in Table 11. The actual amount used per acre, however, will be proportional to the actual area treated.

#### Raised Toro 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

3. Turn the cylinder to the position indicated on the top outside of the cylinder to be covered.
4. Lift the tarpaulin and tub in one place, move the area to be fumigated with a gasproof cover of polyethylene or coated fabric film.
5. Position the 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, 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 100 and 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 100 or 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 MELLEA (OAK  
ROOT FUNGUS) ON DECIDUOUS FRUITS  
AND NUTS, CITRUS AND VINEYARDS

Preparation for Application

To obtain the maximum control of *Armillaria mellea* with Metabrom 100 and 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 11.

1. Non-Tarp Chisel Application (Not for Use in California). After the soil has been properly prepared, inject 400-870 pounds of Metabrom 100 or 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. 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 100 or 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 100 or 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 rhizomes of Johnsongrass.

#### 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.

#### Pretreatment Soil Preparation

Plow or rip the soil to a depth to 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 100 or 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 100 or Metabrom 99 per injection

site in lighter soils; two pounds of Metabrom 100 or 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 100 or Metabrom 99 used with a tarp will not usually control most weed seeds. However, some control may be observed on deep-rotted perennials such as morningglory (bindweed) and rhizomes of Johnsongrass.

TABLE 1  
APPLICATION SUMMARY FOR  
METABROM 100/METABROM 99  
GRAIN FUMIGATION  
FOR THE CONTROL OF PESTS<sup>(a)</sup> INFESTING LISTED GRAINS

	Tolerance (ppm)	Dosage (lbs/1000 ft <sup>3</sup> )	Exposure Time (hrs.)
Barley	50	4	12
Corn (including popcorn)	50	2	24
Oats	50	3	24
Popcorn <sup>(b)</sup>	240	1.5	2
Rice	50	3	24
Rye	50	3	24
Sorghum (grain)	50	4	24
Wheat	50	3	24

(a) granary weevil, lesser grain borer, rusty grain beetle, angoumois grain moth, Indian meal moth, confused flour beetle, rice weevil, saw toothed grain beetle, cadelle, Khapra beetle, drugstore beetle, Australian spider beetle, cigarette beetle, warehouse moth, common grain mite, flat grain beetle, Mediterranean flour moth, red flour beetle, common bean weevil, copra beetle.

(b) chamber fumigation



TABLE 11  
METABROM 100/METABROM 99 SOIL FUMIGATION USES

Treatment Site	Rate (lbs/A)	Exposure Time
Field Soils to be Planted to:		
Tomato	180-240	24-48 hrs.
Strawberry	180-240	24-48 hrs.
Citrus & Deciduous fruits	400-870 <sup>1</sup>	24-48 hrs.
& Nuts (non-food)	435-870 <sup>2</sup>	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 Soil (non-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.
Potting Mix	1#/Cu. Yd.	24-48 hrs.

<sup>1</sup>Deep injection application.

<sup>2</sup>Topical application.

TABLE 111  
APPLICATION SUMMARY FOR STRUCTURAL PEST CONTROL AND OTHER SITES'

Treatment Site	Pests	Volume	Rate (#/1000 cu.ft.)	Dosage	Exposure
Dwellings <sup>2</sup> , Garages and Barns	termites (drywood & dampwood),	Less than 100,000 cu.ft.		1/2-3#	24 hrs.
	bedbugs, cockroaches, silverfish,	100,000-500,000 cu.ft.		1 1/2-1 3/4#	24 hrs.
	powder post beetle, death watch beetle, carpenter ants, rats, mice	500,000-1,000,000 cu.ft.		1-1 1/2#	24 hrs.
		Over 1,000,000 cu.ft.		1#	24 hrs.
Warehouses (empty)	cockroaches, rats, mice, confused			4-5 oz	12-18 hrs.
Feed Rooms (empty)	flour beetle, rice weevil, granary			3#	24 hrs.
Grain Bins	weevil, saw toothed grain beetle, rusty			3#	24 hrs.
Bags, Boxes and Crates (empty)	grain beetle, lesser grain borer, caddis, Khapra beetle, drugstore beetle, larder beetle, carpet beetle, copra beetle, coffee bean weevil, groundnut bruchid, 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			1 1/2-3# (ed) 2-3# (f)	2 hrs.
Furniture	termites (drywood & dampwood),			1-3#	24 hrs.
	bedbugs, cockroaches, silverfish,			2-3#	2 hrs.
	powder post beetle, death watch beetle, carpenter ants, clothes moth,				
	cigarette beetle, drugstore beetle, carpet beetle				

TABLE 111 (Continued)

Treatment Site	Pests	Rate	Dosage	Exposure
		(#/1000 cu.ft.) Volume		
Lumber and Wood	termites (drywood & dampwood),		1-3# <sup>a, c</sup>	24 hrs.
Products	powder post beetle, round and flat headed borers, carpenter ants and bark beetles		2-3# <sup>a, c</sup>	2 hrs.
Greenhouses (empty)	mealybugs, scale insects and mites		3#	4 hrs.
Mushroom houses (empty)	mus. on flies		2#	24 hrs.
Poultry houses (empty)	poultry mites, bedbugs		2#	24 hrs.
Baled Tobacco	drugstore beetle, cigarette beetle, tobacco beetle, tobacco moth		2-3# <sup>w</sup>	48-72 hrs.
			4# <sup>d</sup>	4 hrs.
Baled Cotton	pink bollworm, boll weevil		3# <sup>w</sup>	24 hrs.
			4# <sup>e</sup>	2 hrs.

/ At temperatures below 60°F., increase the dosage by 1/2 pound per 1,000 cu.ft. for every 10°F., drop in temperature or use <sup>on</sup> approved procedure to heat the fumigant. Do not fumigate when temperature is below 50°F.

2 For dwellings do not use methyl bromide formulations containing 2% or more chloropicrin.

a Atmospheric

b Vacuum Chamber (25-27)

NOTE: Remove food and feed commodities before fumigating dwellings.

<b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b> OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION, 411 5th St. WASHINGTON, D.C. 20460	EPA REGISTRATION NO.	DATE OF ISSUANCE
	TERM OF ISSUANCE	
<b>NOTICE OF PESTICIDE:</b> REGISTRATION HEREWITH. <i>Under the Federal Insecticide, Fungicide,          and Rodenticide Act, as amended.</i>	NAME OF PESTICIDE PRODUCT	
	NAME AND ADDRESS OF REGISTRANT (Include ZIP Code)	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"> <input type="checkbox"/> </div> <div style="border: 1px solid black; padding: 5px;"> <math>\frac{160}{18}</math> </div> <div style="border: 1px solid black; padding: 5px;"> <math>\frac{86490}{1}</math> </div> </div>		
<p><b>NOTE:</b> Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.</p> <p>On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.</p> <p>A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.</p> <p>Registration is in no way to be construed as an endorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p>		
<input type="checkbox"/> ATTACHMENT IS APPLICABLE		
SIGNATURE OF APPROVING OFFICIAL		DATE