

HOW TO USE METHYL BROMIDE

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Methyl bromide is a soil fumigant that is used by many greenhouse operators. It controls grass, weed seeds, nematodes, soil fungi and soil insects. It is easy to use but is very poisonous. It cannot be used in a greenhouse with growing plants.

Methyl bromide is a colorless, odorless gas. Most formulations contain 2% chloropicrin (tear gas) as a warning agent. It is a pressurized liquid which quickly changes to a gas when released at temperatures above 60°F.

The soil should be mixed and made ready for planting before fumigating. It should be shredded to break up any clods or clumps of soil. Peat and other additives should be mixed in. The soil is then usually brought into a greenhouse for treating.

A large trough is made by building a wall about 2' high out of heavy boards. The trough is then lined with plastic, usually 4 to 6 mil. The soil is then placed on the plastic in the trough. Some soil piles may be up to 3' high. Holes are then punched on 12-15" centers to allow the gas to penetrate (Figure 1). The soil should be moist but not wet in order for the methyl bromide to be effective.

After the holes are punched, place pots, trays, or flats over the soil pile to elevate the plastic cover (Figure 2). Seal the edge of the plastic cover with more soil. However, when removing the cover, be sure not to contaminate the treated soil. Log

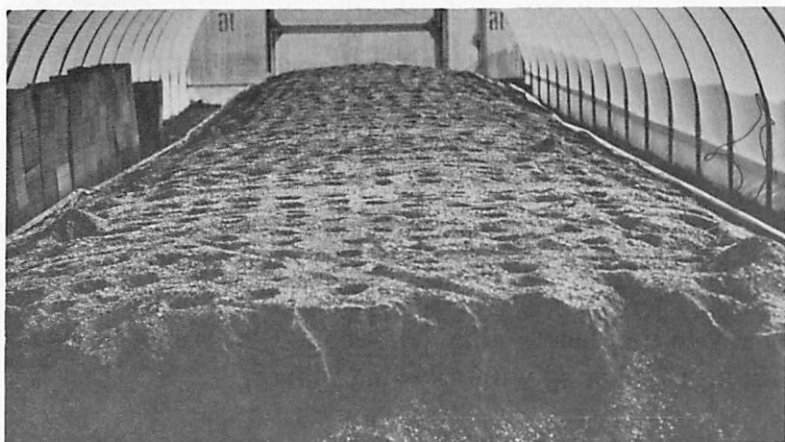


Figure 1. Soil pile perforated for methyl bromide treatment.

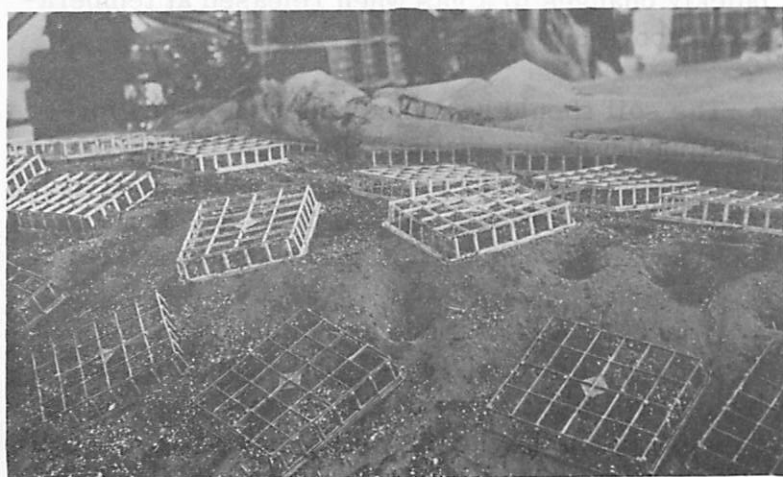


Figure 2. Soil covered with trays to elevate the cover.

chains, sand filled fire hoses and pipes can be used to form a seal with less danger of contamination. A paved area is desirable if treating soil outdoors.

If possible, after covering the soil with plastic, wait a few days for the soil to warm up and allow the weed seeds to germinate. Although treatment

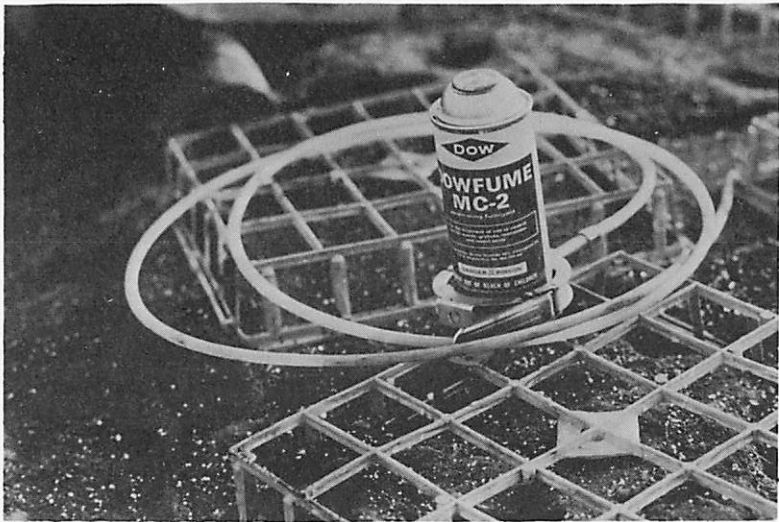


Figure 3. Methyl bromide canister and applicator.

may be done at 60°F, it is more effective at 70°F or above. Then inject the methyl bromide under the cover with a special applicator with a tubing (Figure 3). The applicator punches a hole in the can which allows the material to travel through the tube under the plastic cover. A pan should be at the end of the tube for the material to evaporate. Leave the soil covered for 2-4 days for maximum effectiveness. Allow the soil to aerate for 2-3 days before using. Do not use on soil to be used for carnations or other *Dianthus* species (Figure 4).

Methyl bromide destroys beneficial bacteria such as those that transform organic, ammonium and nitrite forms of nitrogen to the more usable nitrate form. Therefore, the first application of fertilizer should be potassium or calcium nitrate.

CAUTION: Methyl bromide is a highly toxic material. A few injuries have been reported from those using it. One grower burned his eye when the



Figure 4. Methyl bromide phytotoxicity on dianthus. Coleus, dusty miller, impatiens, lettuce, lobelia, tomato and verbena were not affected.



Figure 5. Methyl bromide burn.

tube flipped toward him when he removed it from under the plastic cover. Fortunately no permanent damage was done. Another burned his leg when the applicator broke while applying the material (Figure 5).