

METHYL BROMIDE DISPERSER

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The use of methyl bromide (CH_3Br) as a forest nursery soil fumigant is now a recognized and standard practice. It is normally dispensed from a one pound pressurized can with the aid of a puncturing device which incorporates a 1/4-inch diameter plastic tube of variable length that passes from the can beneath an airtight plastic or rubberized seed bed cover. As the liquid leaves the hose it is under considerable pressure which tends to toss the hose end erratically causing the methyl bromide to be improperly dispersed. The several types of dispersing gadgets which have been designed to overcome this shortcoming usually have two disadvantages: the soil immediately beneath the disperser does not receive a sufficient amount of gas to be effectively fumigated and initial vaporization is either too rapid or slow.

A new type of disperser designed by the author to overcome the difficulties of the other dispersers is illustrated in Fig. 1. The model shown was made from aluminum for about \$2. 50, exclusive of labor, but probably can be made ~ of scrap iron and galvanized sheet metal just as easily and at a much lower cost. The following instructions describe how the disperser can be constructed.

1. THE PAN.

- a. With a pair, of tin shears or other type of metal cutter, cut a 12-inch square from a sheet of 1/64-inch aluminum. Score the square 2 inches from the outside edge to form a centered 8-inch square.
- b. Cut a 2-inch slot in each corner so that the slots are parallel to right and left sides of the square and are 2 inches from edges.
- c. After cutting, fold up on the scored lines and bring tabs around to form a square open box 2 inches high and 8 inches wide.
- d. Complete the pan by drilling a 1/8-inch hole in the center of each tab that also passes through the folded edge of pan.

2. THE LEGS AND TOP BRACE.

- a. Cut four 10-inch legs from 1/8 by 3/4 inch aluminum stock and point each leg by sawing with a hack saw and filing rough edges.
- b. Drill a 1/8-inch hole on center 3/8 of an inch and 4 inches from the top edge of each leg.

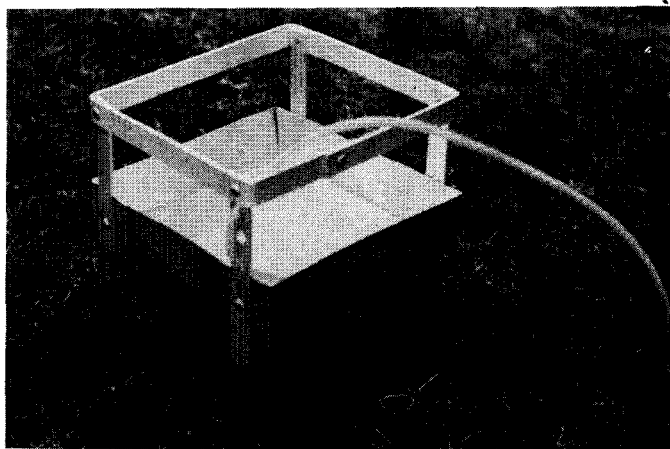
- c. In one leg also drill a 5/16-inch hole at distances of 3/4 and 2-3/4 inches below top edge. With a 1/4-inch round file bevel top hole upward and inward at 45° and lower hole downward and inward at the same angle.
- d. To make the top brace, cut a 1/8 by 3/4 inch aluminum bar to a 33 1/4-inch length and drill 1/8-inch holes on center at 3/4, 4 1/2, 11, 20 1/2, 27 and 32 3/4 inches.
- e. Bend the bar to form inside 90° angles at 4, 11 1/2, 20, and 27 1/2 inches.

3. ASSEMBLY.

- a. Rivet top brace together by placing a 1/8 by 1/2 inch aluminum rivet (this same sized rivet is to be used throughout) through end holes and peen over.
- b. Next rivet legs to pan making sure that leg with tube holes is in correct position (see Fig. 1.). A drop of molten wax placed in the inside corners of the pan will prevent any fluid from leaking through.
- c. Finally, rivet top brace to legs, placing legs on inside of brace. It will be necessary to file brace where it comes in contact with upper tube hole to assure ready access of tube through brace and leg.

To use the disperser, set it in center of bed to be fumigated and press legs into soil leaving 1 to 1 1/2 inches of space between soil and lower surface of pan. Insert plastic tube before placing disperser in bed. Be certain to pass tube through inside of top hole and outside of lower hole so that open end lies on bottom of pan. The methyl bromide will then flow into pan and diffuse so that all of the soil surface will receive an equal treatment.

Figure 1. The methyl bromide disperser assembled and ready for use. The black paint on legs indicates depth to which legs should be driven.



FOREST NURSERY PRACTICE IN THE LAKE STATES

How to raise forest tree nursery stock in the Lake States area is the subject of a new book authored by Dr. J. H. Stoeckeler and G. W. Jones of the Forest Service., U. S. Department of Agriculture.

The book describes in detail the site requirements for a forest tree nursery, the buildings needed, and the selection and installation of equipment. It includes also the latest developments on the collection and handling of seed, methods of planting, and the care and shipping of the stock. One section is devoted to protection against diseases and insects and unfavorable weather conditions.

Dr. Stoeckeler, a staff member of the Lake States Forest Experiment Station, has had many years of experience in nursery research. Mr. Jones, until his recent retirement, was in charge of the nurseries of the Forest Service's North Central Region with headquarters in Milwaukee.

"The time is especially opportune for publication of a book on this subject, " commented M. B. Dickerman, Director of the Lake States Station. "The area planted annually to forest trees in the Lake States has risen sharply in the last few years. In 1956 nearly 100, 000 acres were planted, but over 7 million acres of commercial forest land is still in need of planting. Greater planting increases are forecast for the years immediately ahead as use of forest land becomes more intensive and incentives such as the Soil Bank Program take hold."

The book "Forest Nursery Practice in the Lake States" may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The price is \$2.