Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

ARS-33-43



3 3-4-3

United States Department of Agriculture Agricultural Research Service

A LIFT-UP FUMIGATION CHAMBER

By M. McPhail, Entomology Research Division, and H. S. Hensley, Plant Pest Control Division

Fumigation chambers that can be raised and lowered to facilitate loading and unloading are shown in the accompanying picture. In the foreground is a 62 cubic foot chamber in the raised or open position (A) and behind it is a 126 cubic foot one in the closed position.



Exposed below chamber <u>A</u> is the load (<u>B</u>). A block and tackle (<u>C</u>) and a counterweight (<u>D</u>) suspended from overhead beams provide the means of lifting and lowering the chamber. Stationary guide posts (<u>E</u>) inserted in rings (<u>F</u>) rigidly attached to the back corners of the chamber hold it in position and insure its coming to rest in a water-seal trough (G).

The chamber is of the recirculatory type. The motor-blower unit (\underline{H}) forces the gas down through the load and returns it from the bottom of the chamber via an outside duct (in back of chamber).

The chamber is made of galvanized sheet metal reinforced with angle iron, and is insulated on the outside with Celotex. The load is placed on a wooden rack (I) made of $1\frac{1}{2}$ -inch boards spaced on the top to permit free movement of gas, and with an opening at the back which connects with the circulatory duct. This rack rests on a sheet of galvanized metal partitioned off at the edges to form the water-seal trough (G), which in turn rests on a wooden platform.

These chambers have been used successfully in investigations pertaining to the fumigation of fresh fruits with ethylene dibromide and ethylene chlorobromide against the Mexican fruit fly.

Photograph by Guy L. Bush, Jr., of the Entomology Research Division.

U. S. DEPT. OF AGR. LIBRARY BELTSVILLE BR. LIBRARIAN 10-24-55 FLANT INDUSTRY STA. 33 BELTSVILLE, MD.



