

New Products and Equipment . . .

Applicator for Vapam

A blade injector that can be hooked behind a wheel tractor to inject liquid fumigants into the soil is being manufactured by Rear Farm Supply. The injector was developed in cooperation with Stauffer Chemical primarily to apply Stauffer's Vapam. (Rear will build nine injectors for Stauffer distributors in the Pacific Northwest.)

The implement consists of a horizontal frame which carries two rows of vertical blades. Along the back of each blade is welded a tube with an opening at the bottom. The tubes are connected by rubber tubing to a pipe which carries the Vapam solution, pumped under pressure from a drum mounted on the injector frame. Tiny orifices at the exits from the pipe reduce the pressure, and determine the rate at which the liquid enters the tube.

Dragged behind the tractor, the blades sink into the soil to a depth of three to six inches, as regulated by a hydraulic lift device on the tractor. A water-filled roller behind the injector compacts the soil, providing a seal so that the gas liberated by the Vapam in the soil can do its work most effectively. The hookup of the injector is simple, requiring only about 15 minutes to assemble.

Further information is available from Dept. A&F, Stauffer Chemical Co., 380 Madison Ave., New York 17, N. Y.

Labeled Phenoxyacetic Acid

Two carbon-14 labeled phenoxyacetic acids are available from Research Specialties Co. They are: phenoxyacetic-1-C¹⁴ acid and phenoxyacetic-2-C¹⁴ acid.

Further information is available from Dept. A&F, Research Specialties, Inc., Berkeley, Calif.

Plant-Growth Rooms

Plant-growth walk-in rooms, with variable temperature, variable humidity, and variable lighting, are announced by Labline, Inc.

Rooms are made in various sizes but three standard models are available: 4 ft. wide by 4 ft. deep; 4 ft. wide by 6 ft. deep; and 4 ft. wide by 8 ft. deep. All rooms are 7 ft. high.

The interiors are solid aluminum sheet finished in baked-on white enamel. Rooms can be supplied with or without shelving. Ceilings of rooms are equipped with special fluorescent lights, simulating sunshine. Auto-

matic refrigeration control permits operation of room above and below room temperatures on any predetermined cycle.

Rooms include built-in automatic humidity system with hermetically sealed Freon compressor, automatic humidifier, dehumidifying coils, and other accessories to permit variations in humidity over a wide range.

Write for Bulletin No. 702 to Dept. A&F, Labline, Inc., 3070-82 W. Grand Ave., Chicago 22, Ill.

Automatic, Recording, Analytical Balance

Wm. Ainsworth & Sons, Inc., announces an automatic, recording, analytical balance which shows instantaneous weight and rate-of-weight change. Probable applications are in thermogravimetric analysis, and in investigation of evaporation, absorption, corrosion, oxidation, decomposition, and other reactions in which weight-vs.-time or weight-vs.-temperature (or other factor) is significant. Samples can be placed on the balance pan or suspended in a controlled environment, above or below the balance.

Its capacity is 200 g. Weight changes for long or short periods are recorded on a chart 11 in. wide representing 110 mg. Accuracy and readability are within ± 0.1 mg. Balance automatically adds or subtracts weights as required to rescale the recorder pen. The range of automatically controlled weights is 4 g. This is 40 chart widths, and the recording is linear all the way.

Complete details are available from Dept. A&F, Wm. Ainsworth & Sons, Inc., 2151 Lawrence, Denver 5, Colo.

Chlorinated *p*-Xylenes

Diamond Alkali has announced development of six chlorinated compounds utilizing *p*-xylene as the basic raw material. They are now available in semicommercial quantities.

Three of these new products are ring chlorinated and the remaining three are chain chlorinated. The ring chlorinated compounds are 2-chloro-*p*-xylene, 2,5-dichloro-*p*-xylene, and 2,3,5,6-tetrachloro-*p*-xylene; the chain chlorinated products, which exhibit greater chemical activity, are α -chloro-*p*-xylene, α,α' -dichloro-*p*-xylene, and α,α' -hexachloro-*p*-xylene.

All of these compounds can react further in such unit processes as chlorination, chloromethylation, nitration, sulfonation, and oxidation. The chlorine in the chain reacts with hy-

droxyl, alkoxy, aryloxy, nitrile, isocyanate, amino, thio, and other groups.

Because of this reactivity, the chain-chlorinated materials can be used as chemical intermediates in the production of food-flavoring materials, perfumes, insecticides, fungicides, dibasic acids, and aromatic diols or glycols.

Further information is available from Dept. A&F, Diamond Alkali Co., Product Development Department, Research Center, Painesville, Ohio.

Box Car Unloader

A hydraulically-operated box car unloader is announced by Stephens-Adamson Mfg. Co. The S-A box car unloader can unload granular, pulverized, or any free-flowing material from the largest box cars in less than 30 minutes per car, the company says. In comparison with rotary or tilting car dumps, costs for an S-A box car unloader are far less, says the company.

The unloader can be operated by one man. Design allows for unloading operations in a single- or double-parallel track system.

For further information, write for Bulletin No. 158, Dept. A&F, Stephens-Adamson Mfg. Co., Ridgeway Ave., Aurora, Ill.

Twin Mixer

Rapids Machinery Co. introduced its Marion twin mixer for heavy duty mixing of up to 3 tons of either dry or semiwet materials. A 4-ton capacity model is also available for dry mixing. The mixer, with twin arms and blades, tumbles the mix from ends to center and also from side to side.

Over-all length is 140 in., and width is 94 in., with inside dimensions of 120 by 82 in. Shell is 51 in. high.

Further description of the mixer may be obtained from Dept. A&F, Rapids Machinery Co., Marion, Iowa.

Field Tester for Soil Moisture, Irrigation Salinity

By incorporating an additional scale on its BN-2 transistorized Bouyoucos soil moisture meter and using a simple sturdy probe, Industrial Instruments, Inc., has provided an instrument for measuring irrigation water conductivity. Since electrical conductivity of water is a result of dissolved salts, the instrument measures the salinity of irrigation water. For additional details, write to Dept. A&F, Industrial Instruments, Inc., 89 Commerce Road, Cedar Grove, Essex County, N. J.