

New Products and Equipment . . .

Fertilizer Odorants

Dodge & Olcott, Inc. has developed a line of odorants, called Fertomasks, especially designed for masking and rescenting fertilizer products.

The company invites fertilizer manufacturers to submit a sample of their product; D&O will then select the compatible Fertomask and return treated sample, at no obligation, for evaluation.

A brochure on this new Fertomask line is available on request to Dept. A&F, Dodge & Olcott, Inc., 180 Varick St., New York 14, N. Y.

Back Scratcher

A device that automatically applies insecticide and oil on the entire bodies of dairy, range, and feeder cattle as they scratch themselves is offered by Ideas, Inc.

The applicator consists of a flexible braided steel tube about 6 ft. long and 4 in. in diameter and revolves on a cable running diagonally from a post to the ground. An insecticide-oil reservoir tank, enclosed in the upper end of the tube, automatically saturates a fibrous wick in the tube. The complete unit revolves and flexes as livestock scratch themselves and a cable-pulley-weight arrangement on the supporting post provides additional expansion. Thus, the "oiler" is fully automatic and self-adjusting to all sizes of livestock and all portions of the body can be reached.

Complete information may be obtained by writing Dept. A&F, Dix Division, Ideas, Inc., 214 Ivinson Ave., Laramie, Wyo.

Fertilizer Mixer

A remote-controlled, air-cylinder-actuated fertilizer mixer, with a capacity of up to 2.5 tons per batch (50 to 65 tons per hour), specially vented to allow immediate expulsion of steamy corrosive vapors, and specially engineered to eliminate the need of spout and elevator at point of discharge—the unit feeds directly into a granulator-cooler—has been successfully designed, engineered, and fabricated by Sturtevant Mill Co.

Use of extra-heavy gage steel in the mixer eliminates need for high-cost stainless steel at all contact points, the company says. Some parts, such as the introduction-discharge hopper, are fabricated of stainless. The revolving scoops of the cylindrical mixer, which play an important part in

Sturtevant's four-way mixing action, are fabricated of Corten steel.

Newly-engineered, however, is the acid gas vent located above the extended stainless steel introduction-discharge hatch area. This special venting allows immediate expulsion of the hot corrosive fumes during mixing, affording a preliminary partial drying and cooling action as well as reducing corrosive action within the mixer itself. Thus, immediate discharge into a granulator-cooler, bypassing a spout and elevator, can be achieved successfully, eliminating initial purchase and continuing maintenance costs of such additional equipment.

The new mixer will be made available in capacities ranging from 0.25 ton per batch (4 to 7.5 tons per hour) to the 50-to-65-ton-per-hour mixer.

For further information, write to Dept. A&F, Sturtevant Mill Co., Dorchester, Boston, Mass.

Anticaking Cationics For Fertilizers

Armour Industrial Chemical has come up with several formulations of cationic chemicals which markedly cut down caking in a long list of water soluble salts, including mixed and single fertilizers. Now available commercially, the cationics include two Armeen tallow amines, two Armac tallow amine acetates, and five Armoflo cationic formulations.

The new anticaking compounds interact with mineral surfaces, thus give a hydrophobic coating. By contrast, materials commonly used—oil seed and hull meals, organic and inorganic industrial by-products, clays, diatomaceous earth, and vermiculite—are mixed with the product and preferentially adsorb water. Disadvantages to these agents, says Armour, include large amounts needed (between 40 and 100 pounds per ton of product), often erratic results, and dusting problems.

The cationic chemicals work with most single salts as well as mixtures to prevent caking. A representative group: sylvite, sodium nitrate, rock salt, ammonium chloride, ammonium sulfate, ammonium nitrate, urea, sodium metaphosphate, and zinc chloride. For testing purposes, a 15-0-15 (NPK) fertilizer represented simple mixed fertilizers, while 12-12-12 and 17-7-0 materials represented granulated and pelletized materials.

An evaluation scale devised by Armour is used to compare caking of coated materials. Scale range is from

completely free-flow (no lumps) to solidly caked. Armour cautions that complete free-flow is seldom attained in actual practice. But for initial testing purposes, the firm says it's practical to use such a critical screening standard so that only the most effective chemicals go on to further, more detailed tests.

Equipment for adding the anticaking compounds is simple, can be made from low cost materials, says Armour. One company, where production runs were made, built a steel pipe autoclave fitted with a coupling valve, pressure reducing valve, and discharge hose with a fog nozzle. The cationic agent, warmed in the autoclave, is sprayed on the product. Many variations of this system will work. Another way to do it, explains Armour, is to add the cationic by dripping, then pass the particles through a stationary pan by using a screw conveyor.

Further information is available from Dept. A&F, Armour Industrial Chemical Co., Chicago 90, Ill.

Centrifuge

An exclusive license to produce and market in North America a continuous machine which through centrifugal action processes a wide range of products, including ammonium sulfate, potash, and other minerals, has been granted to the chemical machinery division of Baker Perkins Inc. Described as a push-type, multistage centrifuge, it is a development of Escher Wyss, Ltd., of Switzerland.

The machine's ability to handle a wide range of products, including slower draining materials at high outputs, with no operator attendance and lower power consumption, it is estimated, can in some cases reduce costs for users by as much as 25% below present processing methods.

The machine provides easy accessibility to all working parts. Not only does it handle materials difficult to filter, but even those with particles down in the 50 to 100 micron range.

Materials are processed in the Swiss unit by a number of baskets which telescope in one another, with alternate ones providing a pushing action axially during centrifuging.

Production or discharge capacities of the machine may be flexible. It will be built with capacities from a few hundred pounds to 50 tons an hour.

More data are available from Dept. A&F, Chemical Machinery Division, Baker Perkins, Inc., Saginaw, Mich.