

TECHNICAL SECTION

JOURNAL OF
**Agricultural
and Food
Chemistry**

- Biochemical Engineering
- Fermentation
- Food Processing
- Nutrition
- Pesticides
- Plant Nutrients and Regulators

PLANT NUTRIENTS AND REGULATORS

Agricultural Limestones. A study undertaken by Love and Whittaker of the total surface areas of some typical agricultural limestones, as related to kind, particle size, and other features, provides a better understanding of the factors that influence limestone quality. Finer grinding was found to increase reactive surface area much less rapidly than geometric surface.

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Phosphate Evaluation. Observations of Hill, Caro, and Wieczorek suggest that elementary grain size is one of the intrinsic factors influencing agronomic merits of a phosphate rock. Elementary grain size probably explains the recognized agronomic superiority of North African rock over Florida land pebble for direct application to soil. Thus, a coarse-grained rock probably cannot, by a practical reduction in fineness, be made the agronomic equivalent of a moderately fine grind of fine-grained rock.

PESTICIDES

Pesticide Residues Determination. No residue of chlorthion was found in the milk from cows occupying barns treated with the fly-control pesticide, according to results of a study by Kolbezen and Barkley. A visual comparative method using Nessler tubes and sensitive to 0.02 p.p.m. was employed.

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Insecticide Determination. A method for quantitatively estimating L 13/59 is presented by Giang, Barthel, and Hall. It involves heating to split our chloroform and treatment with alkali to develop a red color. The technique is sensitive to 20 γ .

FOOD PROCESSING

Potato Composition. Quantitative analytical and qualitative chromatographic studies of potatoes of several varieties at different storage temperatures are reported on by Schwimmer, Bevenue, Weston, and Potter. This is part of an investigation of the factors influencing the Browning processed potato products. These studies confirm previous observations that sucrose, fructose, and glucose are the major sugars in the white potato and that, of the three, fructose is most responsive to temperature.

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Cereal Carbohydrate Determination. Devor offers a method for determining the carbohydrate content of cereal grains. A modified Molisch test gives consistent results for the hexoses and, with the help of the anthrone reaction as a check, provides a method for estimating the pentoses.