

# TECHNICAL SECTION

## JOURNAL OF Agricultural and Food Chemistry

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

### PLANT NUTRIENTS AND REGULATORS

pages  
1170  
to  
1173

**Fertilizer Drying.** Temperature was found to be the most important factor influencing nitrogen loss, substantial under some conditions, during drying of ammoniated superphosphates and mixed fertilizers. According to Bridger and Burzlaff, careful control of product temperature and air inlet temperature can reduce the nitrogen loss to a negligible amount. The authors also conclude that quick-cured super is as satisfactory as storage-cured super for ammoniation and mixing. They warn, however, that nitrogen losses may be great if dryers are not designed for heat-sensitive materials.

### PESTICIDES

pages  
1174  
to  
1179

**Herbicide Residues.** Residues of isopropyl *N*-(3-chlorophenyl)carbamate found at harvest on crops receiving pre-emergence treatments of this herbicide ranged from slightly negative to a maximum of 0.03 p.p.m., according to results presented by Gard, Pray, and Rudd. More accurate measurements below 0.05 p.p.m., the low limit of the analytical method, will require considerable refinement of the method and perhaps an entirely different approach to analysis.

**Rodent Repellents.** Bellack and DeWitt present further results of their project aimed at finding the most effective rodent repellents for use on packaged commodities. Syntheses of cyclic imides and thiuronium compounds were undertaken, since previous studies had indicated that repellent activity was associated with functional groups containing nitrogen and sulfur and was enhanced by the presence of ionic linkages. Ten of the 40 imides and 26 of the 27 thiuronium compounds repelled the rats and these will be studied further.

### NUTRITION

pages  
1179  
to  
1181

**Cereals in Nutrition.** The high protein content of wheat and corn germs led Kik to investigate the nutritive value of protein in rice germ. Results indicate that rice germ protein could be a highly useful human and animal food. Vitamin content compares with that of wheat and corn germs, with thiamine content of the rice germ somewhat higher than values reported for corn and wheat germs.

### FOOD PROCESSING

pages  
1182  
to  
1190

**Flavor Origins.** The Borden Award Address by D. V. Josephson, made before the Division of Agricultural and Food Chemistry at ACS meeting in Kansas City last spring, is a review of present knowledge on the chemical mechanisms affecting the flavor and odor of milk and milk products. Recent research provides chemical explanations for such off-flavors of milk as "cooked," "carmelized," "sunlight," and "cowy."

**Cereal Storage Effects.** Houston, Hunter, McComb, and Kester present results of their investigation of the loss in quality of parboiled rice. Chemical changes in the oil fraction were used as the criteria. Use of parboiled rice is thought to offer unique advantages for studying the complex processes of deterioration in cereal grains.