

# TECHNICAL SECTION

JOURNAL OF  
**Agricultural  
and Food  
Chemistry**

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

## NUTRITION

**Nutritional Variation in Cottonseed.** The use of cottonseed meal in poultry and swine feeds has been limited by the presence of gossypol. Reductions of this growth-inhibiting substance often result in lowered protein levels of the meal. Condon, Jensen, Watts, and Pope report on a study under way to develop processing methods for the removal of gossypol and yet maintain the protein levels. Results seem to indicate that the amount of heat applied in processing account for variations in nutritional qualities.

pages  
822  
to  
832

**Forage Constituents.** A method for the separation of the holocellulose polysaccharide fraction from forage is reported by Ely and Moore. The holocellulose fraction, composed of cellulose and hemicellulose was almost completely recovered following two treatments with acid chlorite.

**Antibiotics and Nutrition.** A study of the chemistry of tissues of animals fed dietary supplements of an antibiotic and different levels of protein is reported by Shirley, Wallace, and Davis. Phosphorus derived from acid-soluble lipid nucleic acid and phosphoprotein fractions and nitrogen from the ammonia, protein, nucleic acid, and phosphoprotein fractions were determined analytically. In general, level of dietary protein seems to have a greater effect than chlorotetracycline (Aureomycin) on the level of nitrogen compounds in the animal tissue.

## PLANT NUTRIENTS AND REGULATORS

pages  
832  
to  
835

**Atmospheric Fluorine.** Abnormal concentrations of fluorine may occur in the atmosphere near certain industrial activities. The acquisition of this atmospheric fluorine by forage crops is discussed by MacIntire, Hardin, and Hardison. They determined the fluorine content in forage plants grown in an atmosphere contaminated with fluorine and compared it with plants grown in a fluorine-free atmosphere.

## PESTICIDES

pages  
836  
to  
839

**Residue Analysis.** A technique for the direct potentiometric assay of chloride residues from chlorinated insecticides is reported by Helmkamp, Gunther, Wolf, and Leonard. Many present analytical methods are not sufficiently sensitive to meet anticipated federal food law requirements. The method outlined appears to be sensitive down to the level of 0.02 p.p.m.