

TECHNICAL SECTION

JOURNAL OF
**Agricultural
and Food
Chemistry**

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

PESTICIDES—FOOD PROCESSING

Pesticides and Flavor. No off-flavor was found by Hornstein, Reynolds, and Gilpin in peanut butter made from peanuts following cotton which had been dusted with the gamma isomer of BHC. The cotton grown on the same soil the previous year had been dusted with 42 to 168 pounds per acre of 3% gamma BHC. Analysis of soil samples taken before planting peanuts and after harvest showed no significant amounts of BHC present.

Pesticides and Flavor. Studies leading up to the USDA recommendation that aldrin, heptachlor, and toxaphene could be used to control the southern corn rootworm in peanuts are presented by Gilpin, Redstrom, Reynolds, and Poos. No definite off-flavors in peanut butter could be attributed to the use of these insecticides in the soil. These palatability tests, combined with field trials of the effectiveness of these insecticides, gave the basis for the USDA recommendation.

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Pesticides and Flavor. Peaches sprayed with the isomer of BHC and combinations of the isomers were tested for off-flavors by Gilpin and Dawson. Mixtures of the isomers and the delta isomer were found to give the most pronounced off-flavor. Stored samples of frozen and canned peaches showed more off-flavor than the freshly processed. Canned samples showed off-flavors in more instances; raw samples the least.

NUTRITION

Vitamin Assay. The U.S.P. microbial assay and spectrophotometric methods of determining the vitamin B₁₂ content of commercial feed supplements may be misleading, according to Chaiet, Miller, and Boley. Compounds similar to the vitamin but having no effect on animal growth may be present and mistaken for the vitamin. One commercial feed supplement was found to contain no vitamin B₁₂.

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Protein Quality Assay. The highest protein nutritive value of cottonseed meal was found by Cabell and Earle to be tied in with low processing temperatures and low bound and free gossypol content. The authors show that the cannon rat repletion method is helpful in measuring protein quality in cottonseed meals.

FERMENTATION

Fermentation Accelerator. Dried activated sewage sludge, as produced by the Milwaukee sewage plant, is shown by Wolnak and Miner to accelerate the fermentation of molasses, grain, or synthetic substrate by yeast. Time needed to complete fermentation was found to be considerably shortened by the addition of small amounts of the sludge. Preliminary efforts to isolate the factor responsible indicate that it is not vitamin B₁₂.

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