

## **Apple Scald Control Advanced; Desugared Egg Solids Analysis Developed**

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• Apple scald, a physiological storage disorder that causes unsightly appearance and increases susceptibility to fungi invasion, annually results in a major economic loss to growers. Kuc, Henze, and Quackenbush report on investigations to determine the nature of the volatiles responsible. Crude ether extracts of activated carbon used for a season in an apple warehouse were made and differences in the injury-producing ability of the various fractions were noted. Esters were found to be most active in producing the scald, while acids and alcohols were found to be less active. An apparatus is described for testing chemical solutions as scrubbing agents. • Kuc, Henze, and Quackenbush describe an experimental scrubbing apparatus using an alkaline permanganate to remove volatile scald-producing compounds from apple storage warehouses. After 95 days, 68% of apples in a warehouse equipped with the alkaline permanganate air scrubber were marketable, compared with 29% in a warehouse with an activated carbon unit and 29% in a room without air treatment. • Scott presents a method for identifying egg solids prepared through the use of glucose oxidase and catalase to remove glucose from the albumen and whole egg before drying. The gluconic acid, present in significant quantities in egg solids so prepared, is extracted by aqueous methanol and identified by spot test and confirmed by paper chromatography.

## **Sucrose Feeding Improves Animal Carcass; Gossypol Influenced by Environment and Cotton Variety**

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• Greenwood, Wilcox, Steffen, Harris, and Shupe report that sucrose feeding of cattle and swine prior to slaughter increased the daily gain in weight per animal and liver weights. Dressing percentages were increased in steers fed sucrose for three days before slaughter and for pigs fed sucrose for six days before slaughter. Carbohydrate values of the muscle, quality appraisal scores, and shear force values were similar for all lots of beef and pork. In general, the livers of high total carbohydrate content were preferred for flavor and texture. Percentage of carbohydrate was not consistently increased by sucrose feeding. Response of individual animals varied considerably. • Gossypol content of cottonseed kernels was found to be negatively correlated with temperature and positively correlated with rainfall by Pons, Hoffpauir, and Hopper. Growing use of screw pressing and solvent extraction for processing cottonseed and interest in improving nutritive value of cottonseed meal have focused attention on role of gossypol in contributing to oil color and reducing protein value of meal. Considerable variation in gossypol content was found in kernels from seed of eight varieties of cotton grown at 13 locations during three years. Both variety and environment influenced gossypol content and individual varieties differed in response to environmental factors.

## **Shake-Flask Fermentor Design Improves Oxygen Studies**

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• A shake-flask fermentor was designed by Shu for automatically recording oxygen uptake during fermentation in order to establish optimal fermentation conditions. The apparatus consists of four major systems: a fermentor attached to a carbon dioxide absorber, an oxygen reservoir and water supply, a surface follower and slide-wire potentiometer, and a manostat, all assembled in an incubator. The oxygen requirements of three fermentations were studied with the apparatus.