

ABSTRACTS

Cattle eat raw and crushed lime pulp with avidity, and so do pigs. Both appear to thrive on these products, and the local milk from cattle in Dominica, which are systematically fed with them, is usually very rich, and much above the minimal limits adopted under the Food and Drugs Ordinance (*viz.* Fat, 3.0; solids-not-fat, 8.5 p.c.).

An admixture with molasses should overcome any repugnance of cattle to the slightly bitter taste of the seed meal. In feeding experiments, made for this department on a small scale, it was found that horses, mules and cattle either readily consumed the mixture or could easily be educated to do so. Pigs, however, contrary to expectation, appeared indifferent to, or were repelled by the material.

The importance of disposing profitably of this waste product of the citrus industry is obvious from the fact that in the island of Dominica alone the average lime crop is about 400,000 barrels, each barrel containing the equivalent of 32 lbs. of wet, or 3 lbs. of dry seeds. In other words, about 535 tons of dry lime seeds are produced annually as a waste product in that presidency alone.

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*The pips are termed seeds in the British West Indies.

Keeping Quality of Peanut Oil

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fore if the crude peanut oil is to be stored at the oil mill while waiting for favorable market conditions or for shipment to the refinery the foots should be removed. This the authors also have shown to be the case with cottonseed oil.*

* J. Oil and Fat Ind., 3, 75 (1926).

Inhibiting Agents in the Oxidation of Unsaturated Organic Compounds.

O. M. Smith and R. E. Wood (Ind. Eng. Chem., 1926, 18, 691-694).—By measurement of the volume of oxygen absorbed the authors have examined the effect of numerous substances on the atmospheric oxidation of oils and fats, fatty acids, soaps, and rubber. Active inhibitants may be divided into two main groups, powerful reducing agents such as stannous compounds, sodium thiosulphate, etc., and strong bases, particularly amines. The action of sodium hydroxide, carbonate, silicate, and phosphate is possibly due to their combination with substances produced by oxidation which themselves act as catalysts. Aromatic alcohols and phenols are also effective as inhibitants. The inhibiting substance will prevent oxidation at any period during the oxidation and in general stability and resistance towards oxidation increases with the concentration of the inhibitant. In some cases, e. g., phenols, such as eugenol, there is a concentration at which the inhibitant is most effective and above which it acts as a positive oxygen catalyst. The influence of the inhibitant is only temporary, the period depending on the temperature, concentration, and products of oxidation. After the effect of the antioxidant is lost the rate of oxidation is the same as before. It is suggested that the basic inhibitors combine with acidic oxidation products and prevent them acting as autocatalysts in the oxidation, or that the partial valencies of the tervalent nitrogen atom (or other elements with free valencies) form intermediate compounds with the easily oxidized ethylenic carbon atoms. This temporary compound controls the rate of oxidation for a definite but limited time.—R. Brightman.

The Phytosterols of Rice Bran Fat, Fred P. Nabenhauer and R. J. Anderson. *The Phytosterols of Corn Oil*, R. J. Anderson and R. L. Shriver. *The Phytosterols of Wheat Germ Oil*, R. J. Anderson, R. L. Shriver and G. O. Burr.

The above three articles in the *Journal of the American Chemical Society*, November, 1926, are a valuable addition to the literature of the unsaponifiable constituents of vegetable oils.