

The oil contents of some South Indian oil seed cakes
by J. J. Sudborough.

The results of a few determinations of oil in oil cakes from ground nut and hongai seeds prepared in Bangalore by means of an Anderson Expeller showed that the percentage of oil present in the cake was relatively high. A larger number of experiments was therefore undertaken in order to ascertain the percentages of oil present in samples of oil cakes met with in different parts of South India. Most of the cakes were obtained by means of the ordinary ghani mill or of an Anderson Expeller

The sample of oil cake meal from Calcutta was obtained by extracting the seed with a volatile solvent.

The method of estimation in most cases was by extracting the finely divided cake in a Soxhlet's apparatus with light petroleum (b. p. 55—65°C). As a rule 50 grams of cake were taken and extracted for several hours and the residue re-extracted in order to ascertain that no oil was left in the cake. The castor seed cakes were extracted with carbon tetrachloride. In each case duplicate determinations were made. The results of the analysis are given in the accompanying Table I.

In all cases a sample of the seed from which the cake was obtained was not available and in such cases, for purposes of calculating the percentage of the total oil present in the seed not removed by pressing, the average per cent of oil found in that type of seed was taken. Some of these numbers were taken from Lewkowitsch's "Technology and Analysis of Oils, Fats and Waxes," 5th edition, Vol. II and others from "Oil Seeds and Feeding Cakes". (John Murray 1915).

The results obtained show clearly that on the whole the amount of oil left in the South Indian cakes is high, and in most cases, with the exception of castor seed cake, much higher than the average met with in Europe.

Copra cakes, in many cases, contain an unusually high percentage of oil. As the oil is more valuable than the cake and as a very high percentage of oil is not an advantage when the

cake is to be used for either feeding or mammal purposes, it is clear that it would be advisable to remove more oil from copra and oil seed cakes than is usually done in India.

If in India it is found inadvisable to crush the copra and seeds by up-to-date hydraulic presses or by extraction with a volatile solvent, then it would probably pay to press the seeds or copra by the present methods and to treat the cakes thus obtained with a volatile solvent in order to remove the relatively large amounts of oil usually left in the cakes.

Experiments are now being undertaken in order to arrive at the cost of this extraction and to determine the market prices of the recovered oil and of the residual cake meal.

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