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SOURCES OF PROTEIN FOR MILK PRODUCTION

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RESULTS OBTAINED in nitrogen balance experiments with lactating goats by Dr Margaret I. Chalmers, Dr J. B. Jayasinghe and colleagues at the Rowett Institute were summarized. Experiments on feeding protein-rich concentrates such as herring meal and oil-seed meals in typical winter dairy rations showed that the value of a given supplement of digestible protein could be correlated inversely with the extent of ammonia production therefrom in the rumen. Heat treatment of groundnut meal, in particular, can decrease ammonia output and improve utilization of the groundnut protein. Some of these results have already been confirmed in practical milk yield experiments with dairy cows. In the course of this work some interesting effects of added lipids on ammonia production in the rumen were observed.

Preliminary experiments on similar lines feeding dried grass indicate that even in Britain the content of crude protein in grass can exceed the optimum for its efficient utilization by the dairy animal. Supplementation of animals at pasture with cereals seems to be uneconomic, but much more attention than hitherto needs to be paid to the efficiency with which crude protein from the various forms of conserved pasture is used by the dairy animal under winter feeding conditions in Britain.

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