

Titration of the virus in tissue cultures and direct isolation of the virus from experimentally infected sheep both suggest that human amnion cells may be the most suitable available method for isolating contagious pustular dermatitis virus from human lesions. In preliminary tissue culture experiments we have not been successful in demonstrating unequivocally the development of neutralizing antibody after infection in either sheep or humans. Using an antigen derived from infected lamb embryo kidney cultures we have shown that experimentally infected sheep develop significant rising titres, up to 1 : 64, of complement fixing antibody three weeks after infection. 'Orf' is locally common in certain parts of England and Scotland, but in our area it is rare and we have not yet had the opportunity to examine adequate specimens from the infection in man.

A. MACDONALD
T. M. BELL

Department of Bacteriology,
The University,
Aberdeen.

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AGRICULTURE

A New Method of Estimating the Dry-Matter Intake of Grazing Sheep from their Faecal Output

In a series of investigations on dry-matter intake and faeces output of ewes, at different feed-levels, it was observed that a particular fraction of the faeces, readily dissolved by treatment with dilute acid, was closely related to the intake of dry matter. It was considered that this dissolved faecal fraction would be unlikely to contain any high proportion of food residues already subjected to fermentation and digestion in the alimentary tract but was likely to consist largely of the more soluble parts of the metabolic fraction of the faeces. It has already been shown that this fraction bears a close relationship to dry matter intake^{1,2}.

Total collection of the faeces was employed³ and 1 gm. of the milled dried faeces was allowed to stand in 150 ml. of 0.2 N hydrochloric acid (containing a small quantity of wetting agent) at room temperature for 18 hr. After filtering through a paper disk in a Gooch crucible the amount of this dissolved faecal fraction was determined and the total daily production calculated.

Further work during 1959 and 1960 involved a range of feeds, including fresh and dried herbage, fed at different levels of intake to ewes and wethers. For eleven feeds, including grass-clover mixtures, each fed to several animals, the relationship between daily dry-matter intake and the daily dissolved faecal fraction output in gm. for 64 observations was $y = 250 + 17.8x$, y being the predicted dry-matter intake and x the dissolved faecal fraction output.

In the cases of two other legume feeds, lucerne and a clover mixture, dissolved faecal fraction outputs were higher than those for grass and grass-legume mixtures at comparable levels of dry-matter intake.

The errors associated with the prediction of other y values for two values of dissolved faecal fraction output for means of various numbers of animals are shown in Table 1.

Table 1

No. of animals in the group for which the prediction is made	Dissolved faecal fraction daily output (gm.)			
	50		100	
	S.E. of estimate	Percentage error	S.E. of estimate	Percentage error
1	73.5	6.4	78.1	3.9
5	33.9	3.0	43.0	2.1
10	25.0	2.2	36.4	1.8
20	18.9	1.7	32.5	1.6

These levels of precision suggest that this method should be suitable for estimating the free grazing intake of ewes, without the need to develop separate 'local' regressions for each type of sward grazed.

This method overcomes some of the difficulties associated with some 'faecal index' regressions used in the past since it is based on the relationship of dry-matter intake and dissolved faecal fraction output, thus avoiding the error involved in applying regressions of faeces composition on dry-matter digestibility, developed at one level of intake indoors, to studies of grazing animals at different levels of intake.

Where the basic relationship is between the total output of a faeces component and feed intake, and the regression does not pass through the origin, faeces composition at any one level of feed digestibility will vary with intake.

These investigations are being extended and this method applied, in observations on grazing ewes, with the aid of a grant from the Agricultural Research Council.

J. B. OWEN

Department of Agriculture
(Animal Husbandry),
University College of Wales,
Penglais,
Aberystwyth.

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Groundnut Variety, Mani pintar

SMARTT, in a recent communication¹, mentions the very satisfactory performance of the groundnut variety, Mani pintar, in trials in Northern Rhodesia. In a series of trials on agricultural stations and on local farms in the Northern Region, Ghana, in 1960 the variety was outstanding, giving a mean yield 35 per cent higher than the local varieties, 24 per cent higher than previously released improved varieties and out-yielding all other recent introductions.

The variegated red and white testa characterizing the variety was found to be quite acceptable to the local farmer, who uses most of the crop for expression of the oil.

It is suggested that a variety with many excellent qualities and which has performed well in two widely separated African territories is worthy of widespread trial in other groundnut-growing areas.

I am grateful to Mr. Smartt for providing the original seed for my work.

J. McEWEN

Central Agricultural Station,
Nyankpala,
P.O. Box 52,
Tamale,
Northern Region,
Ghana.

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