

passed through the centre of No. 1 dairy farm and passed the herd, so that some idea was obtained of the pastures and cattle that had resulted in a production of 350lb. of butterfat per acre from this particular unit during the current season. Details of these productions were available for inspection at the centre.

At the No. 2 unit farmers sufficiently interested in pigs to decant from the buses which stopped every 10 minutes were able to see a well-organised demonstration on three phases of Ruakura's pig work. The demonstrations covered methods of reducing pig losses, of increasing the prolificacy of sows, and of increasing efficiency in the use of feed. The newly designed Ruakura round house for farrowing was a key feature, attracting great interest.

At the Fertility Centre a wide range of activities on artificial breeding and male and female sterility was illustrated. The team of young bulls to be used in next year's artificial breeding work were lined up and their pedigrees and production backing plainly illustrated.

The fourth stop enabled an inspection to be made of well and poorly reared calves and heifers resulting from controlled and uncontrolled systems of grazing management. Here also the design of the long-term dairy cow nutrition experiment, planned to obtain data on the effect on lifetime production of four systems of feeding dairy stock, was plainly illustrated in chart form. Results to date were also shown.

At the next centre a representative of the Grasslands Division of the Department of Scientific and Industrial Research was available to demonstrate and discuss the establishment and management of the modern high-pressure pastures being developed by that Division. A special area had been sown to provide a practical demonstration of the problems involved.

At the Nutrition Centre both animals and charts were employed to explain the way in which the modern scientist is attacking the special problems of pasture nutrition of dairy stock. Other charts and cattle drew attention to some of the results obtained and emphasised the importance of size of cow as a factor in efficiency of production on grassland. Calf rearing, with special reference to Ruakura results on early weaning, was similarly illustrated by both stock and self-explanatory posters.

The last stop on the dairy unit was at the identical twin centre, where the use of identical twins in cattle research was explained and illustrated in a practical way.

Back at the parking centre the Ruakura Hall provided still further demonstrations of interest to both sheep and dairy farmers. Main topics were work on facial eczema, on fat lamb carcass quality, and on control of weeds by hormones. Inspection of this part of the proceedings was arranged to be fitted in with lunch from the mobile milk bar.

Sheep-farming Group

It was unfortunate that the same technique was not employed in handling the specialised sheep-farming group, for which such a large crowd

HOW MUCH GRASS DO COWS EAT

To find this we must first determine

1. THE DIGESTIBILITY OF THE GRASS
2. THE TOTAL DUNG OUTPUT OF THE COW PER DAY

To understand the following diagrams we must know what happens to the grass a cow eats.

RUAKURA METHOD OF MEASURING DIGESTIBILITY OF GRASS EATEN BY A FREE GRAZING COW

Determine chemically the NITROGEN in a sample of dung

METHOD OF MEASURING TOTAL DUNG OUTPUT OF A FREE GRAZING COW

*She digested 3/4 of the grass she ate
She excreted 1/4 of this grass as dung
This dung amounted to 7lbs. a day
Therefore 7lbs. dung = 1/4 grass eaten daily
Or daily intake of grass = 28lbs.*

188 lbs of fresh grass eaten.

Dairy farming posters displayed at the conference.