(3) The occasional coming to poor expression of the Dominant-N factor, one result of which is that a homozygous ram might be taken to be heterozygous.
(4) The inheritance of the abundance of secondary, or later, kemp—*i.e.*, that grown in the follicles from which birthcoat kemps have shed.

The N-type work has been conducted as fundamental research in genetics and on the architecture of the fleece. Recently it has become apparent that the N-type coat may in one way or another possess commercial possibilities. Enough is known about the genetics to multiply N-type sheep quickly, and an understanding of the more complicated aspects of its inheritance is being acquired. In addition, from the records and stored specimens of the last twelve years, much has been learnt about what may be called refinements of characterization that would be of significance if there should be a call for the products of N-type sheep.

Research on the Roundworms of Sheep

J. H. Tetley

During the past twelve months experiments have been continued on the problem of the nature of the resistance of sheep to the large roundworm, *Haemonchus*.

The investigation is designed to contribute towards an understanding of the factors which determine the epidemic appearance of this parasite in sheep, and so, ultimately, to provide information of value in its control.

The present experiments are some of several that have been carried out to explain this seasonal infection. In these investigations sheep which have been reared from birth indoors and so are free from infection have been used, together with normal flock animals.

Previous observations have shown that *Haemonchus* is abundant in sheep in the autumn, but that at other times of the year smaller numbers are found. Earlier experiments revealed that sheep raised free of infection, when placed in the field in winter after normally acquired infection in other animals had disappeared, remained uninfected. The problem then resolved itself into the questions: (1) Were infective larvæ absent from pasture during the winter or did sheep become resistant because of growth to maturity? (2) Did the presence of parasites stimulate an acquired resistance which eventually brought about their elimination?

The experiments of the past twelve months had been planned to demonstrate the relative roles of age resistance and acquired immunity. So far it has been shown that the problem is a complicated one and that factors such as nutritional state play a part.

Animal Nutrition

C. R. Barnicoat

Milk-supply of the Ewe.—The effect of plane of nutrition on milk yield was studied. For this purpose sixty Romney ewes were fed entirely on hay and concentrates during six weeks before lambing, thirty being on a high plane, the remainder at about maintenance level.

At parturition, half the high-plane sheep were changed to low plane, and *vice versa*, thereby giving four experimental groups. The milk-production was measured at weekly intervals for a period of twelve weeks after lambing and showed considerable differences between the groups. These differences were in favour of those receiving the more food. Analyses of the milks also showed consistent variations between the high- and low-plane groups.

The growth rate of the lambs showed a close correlation with the milk-production.

Wear in Sheep's Teeth.—It is clear that both feeding and breeding influence the wearing-qualities of ewes' teeth. It is usually found that the better farms carry the poorer mouths, though within any one flock there are wide differences in teeth between animals kept under identical conditions.

Information on these and other practical points will probably be obtained from the systematic examination now under way of over seven hundred ewes' mouths on twenty-three types of property.