

*Cameroon's ideas  
on appointment*

Research in Agricultural Parasitology.

There is little doubt that the most important source of loss to the live stock breeder is that caused by the various animal parasites. They do not so often, perhaps cause the death of the animal and they are much less spectacular in their manifestations than are the bacterial and virus diseases. They do however, cause enormous losses through their own actions on the hosts and in association with bacteria as secondary invaders. This loss is the more serious because stock owners are usually unaware of the presence of the parasites and attribute their effects to other causes.

As agricultural science improves, helminth parasites become more and more important. Animals are confined on limited areas of ground which become infected from the droppings. Helminths cannot increase inside the body and in every case, the eggs or larvae are passed to the exterior and have to be swallowed before development can be completed. The concentration of animals means the concentration of these infective forms and so parasitic disease commences.

The problems which require solution and in which research should be undertaken are, in general terms, as follows:

- (1) The first step must be a survey of the animal parasites existing in different species of economic and related wild animals in Canada.
- (2) Research into the bionomics of the non-parasitic stages should then be undertaken. Very little is known of these larvae, - type of soil required, temperature and moisture requirements, resistance to adverse influences and so on. No two species are exactly alike and until the biology of the infective stages is accurately known, control must remain theoretical.
- (3) Research into the bionomics of the parasitic larvae and adults in the host. Many larvae undergo extensive migrations in the host and these are largely unknown. We know practically nothing of the food requirements, of the excreted products, of the actual pathogenic mechanism, of immunology, of chemotherapy (in many cases) and so on.
- (4) Research into seasonal and geographical distribution. This series of problems is to some extent a corollary of (2) but it involves a study of animal husbandry in relation to helminthology in addition to a knowledge of the requirements of the parasites.
- (5) Research into methods of control. With a few well known exceptions, these are still largely theoretical and controlled field experiments embodying the findings of the laboratory must be carried out before specific recommendations to stock owners can be given.
- (6) Teaching. This is scarcely a research problem but if workers are to be obtained, it must be associated with a research institute. A few post graduate students who are anxious to study the subject should be encouraged from the beginning.