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# Observations On Effects Of Rabbit Grazing On Pasture

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## SUMMARY.

The objects of this pilot experiment were to provide information on the effect of grazing by rabbits at different densities on a uniform pasture, and of estimating the number of rabbits that can be considered equivalent in grazing requirements to one sheep. This experiment has demonstrated the technical difficulties of investigating the effect of rabbit grazing on pasture. The greatest difficulty is the amount of time and work required to record precisely the vegetation changes which take place under grazing of this kind. The figure of 10 rabbits to one sheep has been demonstrated to be approximately correct. The experiment indicates, but does not clearly prove, that grazing by rabbits has a deleterious effect on pasture composition. It is suggested that the pasture management has an important effect on rabbit populations. However, further experiments, designed in the light of the experience gained, are required to determine the extent pasture management may be a factor in successful rabbit control.

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## Discussion

**DR. CUNNINGHAM:** Do sheep and rabbits grazing together modify the pasture. What method of pasture management may control the rabbit?

**DR. WODZICKI:** The pilot experiment described in our paper does not give a direct answer to Dr. Cunningham's questions. However, it is known that the grazing preferences of sheep and rabbits are much alike, and that most of the areas heavily infested by rabbits are to be found in hilly sheep country. Also, it is known that over-stocking with sheep provides suitable conditions for an increase in the number of rabbits. From the existing observations it would appear that sheep and rabbits living together would have a deteriorative effect on pasture.

With regard to the second question of Dr. Cunningham's, our experiment has shown that long, rough grass is not palatable to the rabbit, and that there were periods in which the rabbit condition considerably deteriorated despite the fact that such feed was still available in quantity. The work of P. C. Bull on parasites of the New Zealand wild rabbit has demonstrated the importance of a protozoan parasite *Eimeria stiedae* as a factor controlling numbers of young rabbits. Experiments to show whether the incidence of *Eimeria* could be increased under different pasture management are now being planned by the Animal Ecology Section.

**MR. McFARLANE:** Did you try out poison baits under different levels of nutrition?

**DR. WODZICKI:** The work of the Animal Ecology Section has been hitherto confined to fundamental research on rabbit bionomics such as the reproduction potential, parasites, dynamics of the population, etc. It is hoped that at a later stage, when the results of our findings may be applied to rabbit control, it may be possible to find out more about the bait taken by rabbits at different levels of nutrition. Incidental observations made during our experiment seem to suggest that varying conditions of pasture have an effect on the intake of poison baits.