

7. Tick control strategies for the management of louping ill virus in red grouse

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The management of moorland for red grouse shoots is important both to the economy and biodiversity of upland Britain. However successful shoots are under threat from Louping ill virus; a tick borne disease primarily affecting sheep and red grouse, with up to 80% mortality in infected red grouse.

This talk considers a mathematical model of two tick control strategies; sheep tick mops, currently being trialled on some Scottish estates and deer tick mops, not currently viable under British Law but trialled in the US. In these experiments the sheep, or deer, are treated with acaricide to kill the ticks that try to attach thus reducing the tick population and the opportunity for infected tick bites to transmit the pathogen. The model is used to make predictions of the potential effectiveness of these strategies in different scenarios for the case of louping ill virus.