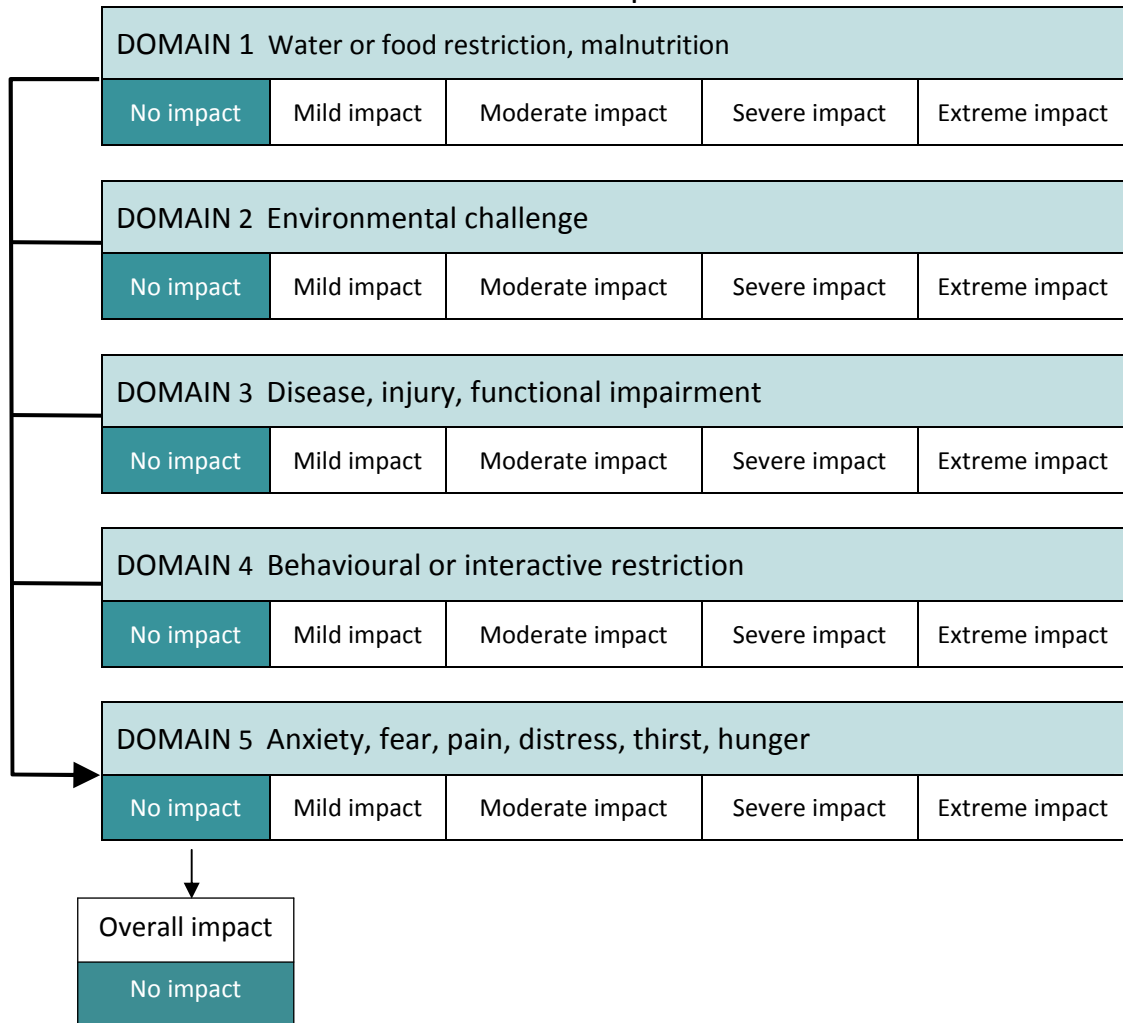


Control method: Bait delivery of Rabbit Haemorrhagic Disease Virus (RHDV)

Assumptions:

- Best practice is followed in accordance with the standard operating procedure RAB010.
- RHDV is delivered to rabbits via treated oats or carrots.

PART A: assessment of overall welfare impact



DURATION OF IMPACT				
Immediate to seconds	Minutes	Hours	Days	Weeks

SCORE FOR PART A:	1
Summary of evidence:	Note that Part A of the assessment examines the 'impact on the animal prior to the action that causes death'. Part B then looks at the 'actual mode of death' and the 'extent and duration of suffering caused'. With ingestion of baits there is usually little or no impact in Part A.
Domain 1	No impact in this domain.
Domain 2	No impact in this domain.
Domain 3	No impact in this domain.
Domain 4	No impact in this domain.
Domain 5	No impact in this domain.

PART B: assessment of mode of death

Time to insensibility (minus any lag time)				
Very rapid	Minutes	Hours	Days	Weeks
Level of suffering (after application of the method that causes death but before insensibility)				
No suffering	Mild suffering	Moderate suffering	Severe suffering	Extreme suffering

SCORE FOR PART B:	F-G
Summary of evidence:	
Duration –	<p>Post-infection, there is a rise in body temperature lasting 18-24 hours, followed, in around 70–90% of cases, by death up to 48 hours after the onset of fever¹. However, the response of individual rabbits is variable with one record of death about 150 hours after eating infected bait².</p> <p>Ambient temperature also influences the time to death, with lower temperatures associated with shorter time to death. In an ambient temperature of 13°C the average time to death was 56 hours (range 19-88 hours), while at a temperature of 27°C the average time to death was 89 hours (range 51-147 hours)^{2*}. Additionally, rabbits orally dosed with infected bait take about 20 hours longer to die than rabbits infected by intradermal or intramuscular injection².</p>

* This statement is based on a statistical re-analysis of the data presented in the article.

Suffering –

It is not clear if infected rabbits suffer discomfort from fever. However, fever can last for up to 2 days and there is the potential for suffering due to loss of appetite, lethargy and fatigue³.

The overall level of suffering is moderate but there could be severe suffering for a short period (minutes) just prior to death for some animals (although it is not clear whether they are conscious at this time). In the peracute form of the disease, rabbits die suddenly without previous clinical sign within a few hours of the incubation period. In the acute form, animals perish after a short period of disease (1-3 days), with convulsions and signs of suffocation. Shortly before death opisthotonus (a condition in which the body is held in an abnormal posture with the body rigid, the head thrown backward and the back is severely arched), sudden crying, and uncoordinated movements or paddling of the limbs may occur⁴.

The disease appears typically as a necrotizing hepatitis with associated haemorrhaging, and death occurs as a result of generalised organ dysfunction⁵.

During an outbreak, a limited number of rabbits (5–10%) may show a chronic or subclinical form of the disease. These animals often die 1 or 2 weeks later, probably due to a liver dysfunction¹.

Summary

CONTROL METHOD:	Bait delivery of Rabbit Haemorrhagic Disease Virus (RHDV)
OVERALL HUMANENESS SCORE:	1F-G
Comments	
Animals that recover from infection show transient hyperthermia, depression and anorexia ¹ .	
The disease is confined to adult rabbits, over about two months of age ⁵ .	

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