

## **SUPPLEMENTARY MATERIAL**

### **Methods**

#### *Survey Design*

We asked respondents to describe their rabbit ownership status (e.g., own rabbit as a pet, breed rabbits, volunteer/work at rabbit rescue/animal shelter, etc.) and rabbit husbandry behaviors (i.e., number of rabbits owned, where rabbits are housed, travel out of state with rabbits; Shapiro et al., 2022b). We measured respondents' prior awareness of RHDV2 as a binary variable (0=had not heard of RHDV2; 1=previously heard of RHDV2). We assessed respondents' knowledge of RHDV2 by asking respondents about which lagomorphs are susceptible to RHDV2, the likelihood of lagomorphs showing visible signs of infection before death, if RHDV2 cases had been confirmed in their state, and who and how RHDV2 can spread. After answering these questions, we provided respondents with information on RHDV2 (e.g., location of cases, impacted species, mortality rates, availability of vaccines) to ensure respondents answered subsequent questions based on accurate information. We then measured respondents' risk perceptions towards RHDV2 (Tables S1-2), perceptions of whether biosecurity measures are important (Table S3), and trust in state government (Table S4). Finally, we elicited respondents' gender, age, and education levels.

#### *Statistical Analysis*

We calculated respondents' knowledge of RHDV2 (0 = no correct responses; 15 = all correct responses) by summing their correct responses to the following knowledge-based questions: RHDV2 status of their state, what rabbit populations RHDV2 can infect, likelihood of infected rabbits showing signs of disease before death, who/what can spread RHDV2, and how RHDV2 can spread. These scores were then transformed into a proportion (0-1) by dividing the

total number of correct responses by 15 (Shapiro et al. 2022b). Respondents that indicated they were not aware of RHDV2 received a knowledge score of 0.

**Table S1.** Respondents' risk sensitivity to RHDV2-related lagomorph deaths and the economic impacts of RHDV2 (n=1,790).

	<b>Median response</b>	<b>Factor loading</b>	<b>Cronbach's alpha</b>	<b>Eigenvalue</b>
<b>Risk sensitivity to lagomorph deaths</b>			0.89	3.05
I am concerned that RHDV2 will negatively affect/cause a loss of:				
My rabbit(s)	Agree <sup>a</sup>	0.72		
Domestic rabbits	Strongly agree	0.93		
Wild lagomorphs	Strongly agree	0.90		
Biodiversity from the disease-related deaths of native lagomorphs	Strongly agree	0.75		
<b>Risk sensitivity to the economic impacts of RHDV2</b>			0.87	2.88
I am concerned about the impact of RHDV2 on the				
Pet trade	Agree	0.65		
Rabbit rescues/animal shelters <sup>b</sup>	Strongly agree	---		
Rabbit shows/exhibitions	Agree	0.76		
Rabbit meat market	Agree	0.91		
Sport of rabbit hunting	Neither agree nor disagree	0.85		

<sup>a</sup> Strongly disagree=1, disagree=2, neither agree nor disagree=3, agree=4, strongly agree=5.

<sup>b</sup> Concern about the impact of RHDV2 on rabbit rescues or animal shelters was not included in respondents' risk sensitivity to the economic impacts of RHDV2.

**Table S2.** Respondents' risk susceptibility to the economic impacts of RHDV2 (n=1,790).

	<b>Median response</b>	<b>Factor loading</b>	<b>Cronbach's alpha</b>	<b>Eigenvalue</b>
<b>Risk susceptibility to the economic impacts of RHDV2</b>			0.78	2.72
How much risk do you think RHDV2 poses to the following activities?				
Pet trade	High <sup>a</sup>	0.78		
Rabbit rescues/animal shelters	High	0.53		
Rabbit shows/exhibitions	High	0.71		
Rabbit meat market	High	0.70		
Sport of rabbit hunting	High	0.55		

<sup>a</sup> No risk=1, low risk=4, moderate risk=3, high risk=4

**Table S3.** Respondents’ perceptions of the importance of biosecurity measures. Respondents indicated their level of agreement that measures should be taken to prevent the spread of RHDV2 (n=1,790).

	<b>Median response</b>	<b>Factor loading</b>	<b>Cronbach’s alpha</b>	<b>Eigenvalue</b>
<b>Perceived importance of biosecurity</b>			0.86	3.26
Transporting rabbits between states increases the chance of RHDV2 spreading	Agree <sup>a</sup>	0.61		
Rabbit owners must practice disease prevention measures to prevent RHDV2 from spreading to areas without the disease	Strongly agree	0.86		
Engaging in disease prevention measures is important in states with no RHDV2 cases	Strongly agree	0.80		
Engaging in disease prevention measures is important in states with confirmed RHDV2 cases	Strongly agree	0.75		
Engaging in disease prevention measures is important even if my rabbit(s) have received the RHDV2 vaccine	Strongly agree	0.73		

<sup>a</sup> Strongly disagree=1, disagree=2, neither agree nor disagree=3, agree=4, strongly agree=5.

**Table S4.** Respondents’ trust in their state government to manage RHDV2 (n=1,790).

	<b>Median response</b>	<b>Factor loading</b>	<b>Cronbach’s alpha</b>	<b>Eigenvalue</b>
<b>Trust in state government to manage RHDV2</b>			0.81	2.56
Your state government has...				
The knowledge to effectively manage RHDV2	Neither agree nor disagree <sup>a</sup>	0.72		
The resources to effectively manage RHDV2	Neither agree nor disagree	0.67		
Sufficiently skilled people to effectively manage RHDV2	Neither agree nor disagree	0.85		
Has been effective in managing RHDV2	Neither agree nor disagree	0.66		

<sup>a</sup> Strongly disagree=1, disagree=2, neither agree nor disagree=3, agree=4, strongly agree=5.