

Appendix 3 - Final models obtained through a backwards-stepwise analysis using an negative binomial regression model and having at least one significant explanatory variable

[A] Risk aversion, biosecurity knowledge, health responsibility and perceptions of susceptibility, severity and barriers

Outcome variable		RISK AVERSION		BIOSECURITY KNOWLEDGE		HEALTH RESPONSIBILITY		SUSCEPTIBILITY		SEVERITY		BARRIERS		BENEFITS OF BSM	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Country (Ref=Belgium)	France	-0,05	0,05	0,01	0,96										
	Germany	-0,79	0,00	-0,19	0,08										
	Netherlands	-0,11	0,01	-0,20	0,35										
	Spain	0,02	0,41	0,04	0,00										
Experience (Years)	Years of experience			0,00	0,04										
Education (Ref: no superior studies)	Superior studies			0,36	0,00										
Gender (ref= Female)	GenderMale	-0,04	0,02												
Herd type (ref= Beef)	Dairy														
	Mixed														
	Veal														
Organic farm (Ref= No)	Yes/InConversion					-0,07	0,00	-0,24	0,00	-0,10	0,00			-0,09	0,00
Herd size	Animal heads							0,00	0,00	0,00	0,00			0,00	0,05
Risk aversion (psych1)	Psych1					0,00	0,00							0,00	0,00
Biosecurity knowledge (psych2)	Psych2					0,02	0,00	0,05	0,02	0,02	0,01	-0,05	0,01		

[B] Benefits of the biosecurity measures

Outcome variable		Benefits of BSM1		Benefits of BSM4		Benefits of BSM5		Benefits of BSM7		Benefits of BSM8		Benefits of BSM9	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Country (Ref=Belgium)	France											0,14	0,23
	Germany											0,20	0,00
	Netherlands											-0,22	0,23
	Spain											0,16	0,19
Experience (Years)	Years of experience									0,01	0,02		
Education (Ref: no superior studies)	Superior studies			-0,06	0,02								
Herd type (ref= Beef)	Dairy	-0,05	0,06			-0,13	0,01						
	Mixed	-0,02	0,55			-0,08	0,22						
	Other	-0,16	0,01			-0,12	0,29						
Organic farm (Ref= No)	Yes/InConversion	-0,14	0,00							-0,21	0,02		
Herd size	Animal heads							0,00	0,04				
Risk aversion (psych1)	Psych1			0,00	0,00	0,00	0,01	0,00	0,03				
Biosecurity knowledge (psych2)	Psych2							0,04	0,06				

Outcome variable		Benefits of BSM11		Benefits of BSM12		Benefits of BSM13		Benefits of BSM14		Benefits of BSM15		Benefits of BSM16	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Country (Ref=Belgium)	France	0,02	0,82										
	Germany	-0,16	0,05										
	Netherlands	0,01	0,97										
	Spain	-0,28	0,01										
Experience (Years)													
Education (Ref: no superior studies)	Superior											-0,12	0,00
Herd type (ref= Beef)	Dairy							0,01	0,92				
	Mixed							0,01	0,92				
	Other							-0,31	0,03				
Organic farm (Ref= No)	Yes/InConversion			-0,03	0,00			-0,33	0,00				
Herd size	Herd size												
Risk aversion (psych1)	Psych1					0,00	0,01			0,00	0,03	0,00	0,00
Biosecurity knowledge (psych2)	Psych2					0,04	0,02	0,05	0,04	0,05	0,04		

[C]. Intention or implementation of the biosecurity measure

		M1		M2		M3		M4		M5		M6	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Perceptions based on the Health Belief model	Susceptibility												
	Severity												
	Health responsibility	0,008	0,00			0,010	0,04	0,002	0,04	0,009	0,00		
	Barriers											-0,002	0,05
	Benefits measure	0,004	0,00	0,007	0,00	0,004	0,12	0,003	0,00	0,009	0,00	0,011	0,00

		M7		M8		M9		M10		M11		M12	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Perceptions based on the Health Belief model	Susceptibility												
	Severity												
	Health responsibility	0,005	0,00	0,007	0,01								
	Barriers							-0,003	0,00				
	Benefits measure	0,011	0,01	0,010	0,00	0,007	0,00	0,007	0,00	0,010	0,00	0,011	0,00

		M13		M14		M15		M16		M17		Overall measures	
		Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p	Estimate	p
Perceptions based on the Health Belief model	Susceptibility												
	Severity			0,003	0,03								
	Health responsibility	0,004	0,00			0,007	0,00					0,003	0,04
	Barriers					-0,003	0,01						
	Benefits measure(s)	0,004	0,00	0,011	0,00	0,012	0,00	0,002	0,00	0,025	0,00	0,007	0,00