Questionnaire about hygiene and disease control in livestock

Information and instructions

This questionnaire is aimed for farm owners and farm workers who handle cattle, pigs, sheep, goats or poultry. We are interested in responses from farms of different sizes.

The questionnaire takes about 15 minutes to answer and deals with perceptions, motivations and barriers to hygiene and infection control in Swedish herds. We are not searching for right or wrong answers, but we genuinely want to know how you handle things in practice and how you perceive different situations. The results will provide a basis for improving efforts to prevent and control infectious diseases in livestock.

The second half of the questionnaire deals with protective clothing and persons visiting farms as part of their profession. It is based on a behavioural science method, and many questions may seem similar. This is however how it is meant to be.

The questionnaire does not cover all the different routes of infection, such as trade with live animals, because this is examined in other studies.

In many of the questions you will be asked to give your response on a seven-point scale, e.g. from 'strongly agree' to 'strongly disagree'. Tick the option you spontaneously feel closest to your opinion or behaviour. If you do not have a clear view, select the middle option. If there is a question that you feel that you cannot answer, leave it blank and move on to the next.

Please note that your reply to this questionnaire is completely anonymous.

A. The FARM and YOUR BACKGROUND		
Enter the number of animals of different production types on the farm. An approximate number is OK. If the stables are just temporarily empty (e.g. between batches), enter how many animals that are usually present.		
1. Cattle, fill in the number of anim	nals on the line that matches the farm production type	
Dairy production	Number of dairy cows	
Beef and/or suckler cows	Number of cows	
Purchase of calves for fattening	Number of animals sent to slaughter each year	
Other type of production	Number of cattle	
e.g. if the farm has pigs for fattening,	Is on the line that matches the farm production type just fill in the number of pigs slaughtered per year, but if the farm is laughtered fattening pigs and the type of piglet production.	
Breeding or gilt production N	lumber of sows	
Multiplying	lumber of sows	
Fattening	lumber of fattening pigs slaughtered each year	
Sow pool centre	lumber of sows	
Sow pool satellite	lumber of piglets produced each year	

3. Sheep and goats		
Sheep	Numbe	er of ewes
Goats	_ Numbe	er of does
Lambs or kids	_ Annual	number
4. Poultry, fill in the nu	mber of	animals on the line that matches the farm production type
Breeding		Number
Egg production		Number of hen places
Broiler		Number of slaughtered birds per year
Hobby		Number
Other types of poultry		Number of birds
5. Exotic ruminants (e.g. bison, wisent, camel, alpaca, llama) Fill in species and total number (i.e. count females, males and young animals) 6. Is the farm's livestock production certified organic? No Don't know Yes, fill in type of certificate system below Certificate:		
7. If you have commen	ts to the	questions above, please write here

8. In what county is the farm located?	
O Dalarna O Jämtland O Norrbotten O Upps O Gotland O Jönköping O Skåne O Värr O Gävleborg O Kalmar O Stockholm O Väst	nland C Västra Götaland
9. What is you role on the farm?	
Owner Employed foreman Employed Other	
10. How many people work with the animals on the	e farm, including yourself?
Number of persons full time Number of persons part time	
11. How old are you?	12. What is your gender?
 30 or younger 31-40 41-50 51-60 61-70 over 70 	WomanManPrefer not to fill in
13. Enter your education level Compulsory school Upper secondary school University or equivalent	14. Were any of these educations programs agriculture oriented? O Yes O No

15. If you have comments to the questions above, please write here

16. How many years have you been working with the animal species present on the farm? If there are multiple species, specify the time for the species that you have work longest with
O 0-5 years
O 6-10 years
O 10-20 years
O More than 20 years
17. If you own the farm, what is the purpose of the livestock production?
Keeping livestock is a hobby \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc I keep livestock to make a living
18. I you are the owner of the farm, what is your plan for the livestock production in 5 years from now? (specify one or more options)
Production is discontinued
I am about to discontinue production
☐ The number of animals has been decreased
Production is the same as today
☐ I have increased the number of animals
☐ I have changed the type of production
A successor has taken over
19. If you are employed, do you plan to stay within this profession in 5 years from now?
Yes, I want to continue O O O O O No, I want to quit
20. If you have comments to the questions above, please write here

B. INFECTIOUS LIVESTOCK DISEASES
21. To keep the herd free from infectious diseases is very important for me
Totally disagree C C C C Totally agree
22. If the animals are regularly exposed to infections, they will become more resistant and have less disease
Totally disagree C C C C Totally agree
23. If infectious disease would spread from my herd to other herds, there would be negative consequences for me
Totally disagree O O O O O Totally agree
24. An outbreak of infectious disease in my herd would have negative effects on my economy
Totally disagree O O O O O Totally agree
25. Has the farm experienced an outbreak of infectious disease that seriously affected the animals or production?
Many times C C C C Never
26. Do you know how different infectious diseases spread and what you can do to prevent introduction of infections into the herd? Do not know at all OOOOOOKnow very well
27. Do you believe that you can influence whether the herd is affected by infectious diseases or not?
Yes, to a high degree O O O O O No, not at all
28. Sometimes farms are affected by outbreaks of serious infectious diseases, where the state offers economic compensation for production losses, values of animals and cleaning. By applying certain biosecurity routines, the risk to introduce some of these infections can be decreased.
Do you think that all affected farmers should get equal compensation level, whether or not they have routines present to prevent introduction of the disease in question (e.g. through participation in a biosecurity programme)?
Don't know
No, the ones without routines should not OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO
29. If you have comments to the questions above, please write here

C. RISK COMMUNICATION AND INFORMATION

30. Consider the following scenario: Recently, your herd has experienced diffuse problems with coughing and you decide to try and find out more about potential causes. How would you prefer to access the information needed? (Specify one or more options) I prefer: Websites of Swedish authorities and universities Websites of Swedish animal health organisations and associations ■ Websites of insurance companies Other producers web pages Foreign websites ☐ Video clips online (e.g. clips of animals with symptoms, lectures etc.) Discussions with friends, acquaintances, colleagues ☐ Industry branch journals and magazines Books and compendia Lectures and courses conferences and fairs Discussions with the farm vet Short summaries and pamphlets National phone line for medical information Smart phone applications Other If other, please specify:

31. Consider the following scenario: A serious animal disease, never before seen in Sweden, is demonstrate (SVA). In order to provide information about the outbreak and prevenauthorities' disease control experts want to reach Swedish farmers as	nt further spread of infection, the
What is the best and most effective way for them to reach you Select the options that you think are good or bad.	with this information?
	good bad
Letters by post from the authorities to animal owners	0 0
Updated information on the website of SVA	0 0
Updated information on the website of the Board of Agriculture	0 0
Social media (e.g. Twitter, Facebook)	0 0
E-mail list for spread of information from authorities to animal owners	s O O
Phone text messages from authorities to animal owners	0 0
Smartphone application	0 0
Local radio	0 0
Local information meeting	0 0
Better reached by other means (please describe how):	
33. Would you consider buying animals from herds with an unline. you do not know their disease morbidity level and if they are affiliating programs	
No, I would never do that O O O O O Yes, that o	does not restrict purchase of animals
34. Assume that the affiliation and status of individual herds in different made freely available online.	rent control programs is summarised and
I would like the health status of my herd to be freely available	to all.
Totally disagree C C C C C Totally agree	
35. To be able to find out the health status of other herds is	
Very valuable C C C C C C C Completely unnecessa	
	ry
36. If you have comments to the questions above, please write	

D. COMPARTMENTATION, FLOW, CLEANING

About compartmentation

On farms with animals for food production, there are different degrees of compartmentation of the animals (i.e., grouping and separation of different groups in different compartments). Parts of poultry production, for example, strict compartmentation with separate rooms, separate protective clothing and equipment for each department and animal groups kept together throughout the production cycle. Farms that keep all their animals in one and the same stable and does not have any kind of batch rearing lacks compartmentation.

37. To what degree is the are livestock on the farm compartilised	
	Different degree for different species of animals on the farm
no CCCCC strict compartmentation	O
38. If the farm does not have compartmentation, what do you think this? (Specify one of more alternatives)	is the reason that prevents
I see no profit in this	
The structural design of stable buildings	
The type of production	
It would take too much time	
Herd size is too big	
Herd size is too small	
Not enough space	
Other reason, fill in below	
Yes, it could easily OOOOOONo, it's be arranged impossible	o avoid direct or indirect a two-week period? The farm has complete empartmentations of all animals
40. Are there procedures for regular cleaning of the feed table / tro cups / nipples?	ugh / feed chute and water
O Yes	
○ No	
41. Does movement of feed, animal and manure, or the work routing drinking water being accidently contaminated with manure? No, never OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO	es of the staff, lead to feed and

42. If the farm has compartmentation, is it your routine to empty arbatches?	nd clean buildings between
O Yes	
O No	
No compartmentation	
43. Is it your routine to empty and clean all animal stables at least of	once a year?
Ō Yes	
O No	
44. If you are the owner of the farm:	
Who are your key advisers and information channels for new construction of stable buildings?	uction, renovation, or
Did you consider hygiene and disease control? e.g. sanitation facilities, hygiene barriers, that feed do not come into contact quarantine housing, sanitary systems in feed or feed table, sick box, entrandal Have	
No consideration C C C C C Much consideration	0
46. Did anything prevent you from taking this into account?	
O Yes O No	
If yes, describe: What prevented you?	
47. Have the advisers that you have engaged in construction or rend and discussed disease control and hygiene issues with you?	ovation paid careful attention
Not at all O O O O O O To a large extent	
48. Place for comments to the questions above	

E. PROTECTIVE CLOTHING FOR PROFESSIONALS VISITING ANIMAL STABLES

The following part of the questionnaire includes in depth questions dealing with stable visitors and use of protective clothing when visitors enter stables, or have contact with the animals on the farm.

The question layout follows a behavioural science method which involves many seemingly similar questions. This is needed in order to capture all influencing factors. Protective clothing is ONE example of different biosecurity measures possible. Another example is control of animal trade, but this and other issues, is something that we investigate in other studies.

By **professionals visiting farms**, we mean people who enter livestock stables or come into contact with livestock as part of their profession, but do not work or are employed at the farm. Examples of professionals visiting farms are **craftsmen**, **veterinarians**, **transporters**, **advisers**, **inseminators** or **inspectors**.

By protective clothing, we mean **boots or shoe covers**, <u>and</u> **coats or coveralls** that are designed to prevent spread of infections - i.e. not clothes used to protect persons working in the stables. It may be the visitor's own clean (washed or disposable) protective clothing or protective clothing offered by the farm.

49. Do you have protective clothing for professionals visiting the farm, indicate what is available on the farm	
Coveralls	
☐ Coat	
Boots	
☐ Shoe covers	
☐ Do not have protective clothing for visitors	
IMAGINE THE FOLLOWING SITUATIONS AND RESPOND TO HOW YOU WOULD HAVE ACTED:	
50. Your usual animal transporter did not have time so a transporter that you don't know will pick up animals from the farm. Apparently, the transporter has been to another farm earlier in the day and is now about to step into the stable to help with the loading, without putting on protective clothing.	
Do you ask the transporter to put on protective clothing?	
Never let transporters enter the stable	
No, not likely O O O O O Yes, very likely	
51. An acquaintance has asked you to welcome a workplace group who wants to do a field trip to a farm. You don't know the background of individual visitors or if they have animals at home. When they arrive, it turns out that they have forgotten their shoe covers and disposable coveralls that they have obtained in order to "not become dirty", and it would take them fifteen minutes to go back and fetch these	
Would you let them enter the stables without protective clothing?	
Never allow field trips to my farm	
No, not likely O O O O O Yes, very likely	
52. A repairman who travels between farms is about to enter the animal stables without changing clothes or shoes.	
Do you let the repairman enter without putting on protective clothing?	
No, not likely C C C C Yes, very likely	

53. It is a Sunday morning and you have been forced to call for a vet. It's not your ordinary vet but someone new who you have not met before and who seems stressed from other emergency calls waiting. You can see that the vet puts on a clean coat but the vet's shoes are not properly cleaned – there are traces of manure on them.
Do you ask the vet to change or clean the boots before the vet enters the stables?
No, not likely C C C C Yes, very likely
54. A new neighbour who has started recently started a hobby farm with animals of the same species as yours comes by your farm in her stable clothes to ask you something. You are busy inside the stable and cannot come out to the yard.
Do you ask your neighbour to put on protective clothing before entering the animal stables?
No, not likely C C C C C Yes, very likely
55. A salesman who wants to offer a product that you are interested in is visiting your farm. The salesman looks clean but wears leather shoes that seem difficult to wash.
Do you ask the salesman to put on protective clothing before he enters the animal stable?
I never let salesmen enter the stables
No, not likely O O O O O Yes, very likely
56. A neighbours' children (who does not have production animals at home) want to come in and have look in the stables. They bring a couple of friends from school that you haven't seen before and you don't know if they have animals at home.
Do you ask the children to put on protective clothing before they enter the animal stables?
I don't let the children enter the stables
No, not likely O O O O O Yes, very likely
57. You have heard that there is an ongoing outbreak with serious coughing and sickness among animals at some farms within your business branch. One of your acquaintances, who has animals of the same species as you, wants to come in for a chat and have a look at your animals.
Do you ask your acquaintance to put on protective clothing before he enters the stables?
I don't let the visitor enter the stables
No, not likely C C C C C Yes, very likely C
58. Place for comments to the questions above

By professionals visiting farms, we mean e.g. craftsmen, veterinarians, transporters, advisers, inseminators or inspectors.		
By protective clothing, we mean boots or shoe covers , <u>and</u> coats or coveralls . It can may be protective clothing offered by the farm or the visitor's own clean protective clothing. Note that elements of the TPB		
methodology was not given in the original questionnaire.		
59. To make sure that professionals visiting the farm use protective clothing is		
Of great benefit O O O O O O Not of any benefit at all		
Cumbersome OOOOO Easy Direct measures of		
Essential OOOOOUnimportant Attitude		
60. To make sure that professionals visiting the farm use protective clothing is unnecessary because the health status of animals in Sweden is so good		
Do not agree at all OOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO		
61. Professionals visiting the farm will think that I'm being difficult if I ask them to use protective clothing		
Unlikely O O O O O Very likely		
62. If professionals visiting the farm use protective clothing or not will influence the health status of the herd		
No, not likely O O O O O O Yes, very likely Behavioral Belief		
63. To make sure that professionals visiting the farm wear protective clothing will decrease the risk that my herd will suffer from outbreaks of infectious diseases		
Unlikely O O O O O Very likely Behavioral Belief		
64. Professionals that visit the farm will think that I don't trust them if I ask them to use protective clothing		
Unlikely O O O O O Very likely Behavioral Belief		
65. Place for comments to the questions above		

By professionals visiting farms, we mean e.g. craftsmen, veterinarians, transinseminators or inspectors.	porters, advisers,
By protective clothing, we mean boots or shoe covers , <u>and</u> coats or coveralls . It clothing offered by the farm or the visitor's own clean protective clothing.	can may be protective
66. The animals' health is very important to me Do not agree at all OOOOOAgree completely	Outcome Evaluation
67. To keep the herd free from infectious diseases is very important to me	
Do not agree at all OOOOOOOAgree completely	Outcome Evaluation
68. I really don't want professionals visiting the farm to think that I'm being	g difficult
Do not agree at all OOOOOOOAgree completely	Outcome Evaluation
69. If professionals that visit the farm think that I'm being difficult this couleffect on the service that they give	ld have a negative
No, not likely C C C C C Yes, very likely	Outcome Evaluation
70. It is important to me to have a good relationship with the professionals that they don't think that I distrust them	that visit the farm and
Do not agree at all O O O O O O Agree completely	Outcome Evaluation
71. It is expected of me that I make sure that professionals that visit the fa clothing	rm wear protective
Do not agree at all O O O O O Agree completely	Direct measure of Subjective Norm
72. Place for comments to the questions above	

By professionals visiting farms, we mean e.g. craftsmen, veterinarians, transporters, advisers, inseminators or inspectors.				
By protective clothing, we mean boots or shoe covers , <u>and</u> coats or coveralls . It can may be protective clothing offered by the farm or the visitor's own clean protective clothing.				
73. I feel a pressure from people in my environment to make sure that professionals that visit the farm wear protective clothing				
Do not agree at all O O O O O Agree completely Direct measure of Subjective Norm				
74. People that are important to me want me to make sure that professionals that visit the farm wear protective clothing				
Do not agree at all O O O O O Agree completely Direct measure of Subjective Norm				
75. If you are the owner of the animals: My close family and friends think that it is important that professionals that visit the farm wear				
protective clothing Normative Belief				
I'm not the owner of the animals				
Do not agree at all O O O O O Agree completely				
76. In general, how much to you care what your close family and friends think about what you do				
Not at all C C C C C Very much Motivation to Comply				
Not at all C C C C C Very much Motivation to Comply				
Not at all OOOOOVery much Motivation to Comply 77. The farm vets think that professionals that visit the farm should wear protective clothing				
Not at all 0 0 0 0 0 Very much Motivation to Comply 77. The farm vets think that professionals that visit the farm should wear protective clothing Do not agree at all 0 0 0 0 0 Agree completely Normative Belief				
Not at all				
Not at all				
Not at all				

81. Within my branch of farming it is considered important that professionals the protective clothing	at visits farms use			
Do not agree at all O O O O O Totally agree	Normative Belief			
82. Is it important to you to follow the industry guidelines?				
Very important O O O O O Not at all important Mot	ivation to Comply			
83. The farm neighbours that have production animals think that professionals the should use protective clothing	hat visit farms			
should use protective clothing	Normative Belief			
Has no neighbours with	production animals			
Do not agree at all O O O O O O Totally agree				
84. I care about what the neighbours with production animals think about what	I do			
Has no neighbours with production a	animals			
Not at all O O O O O O Very much	ivation to Comply			
85. Swedish authorities with a link to production animals (e.g. the National Veterinary Institute, the Board of Agriculture, and the County Board) think that it is important that professionals that visit farms use protective clothing				
Do not agree at all O O O O O O Totally agree	Normative Belief			
86. What Swedish authorities with a link to production animals (e.g. the National Veterinary Institute, the Board of Agriculture, and the County Board) think about what I do is important to me				
Not at all O O O O O O Very much	ivation to Comply			
87. Place for comments to the questions above				

By professionals visiting farms, we mean e.g. craftsmen, veterinarians, transporters, advisers, inseminators or inspectors.	
By protective clothing, we mean boots or shoe covers , <u>and</u> coats or coveralls . It can may be protective clothing offered by the farm or the visitor's own clean protective clothing.	
88. To make professionals that visit the farm use protective clothing is entirely up to me	
Do not agree at all O O O O O O Totally agree Direct measure of Perceived Behavioral Control	
89. To make professionals that visit the farm use protective clothing is	
Impossible C C C C C Possible Direct measure of Perceived Behavioral Control	
90. I'm convinced that I could make professionals that visit the farm use protective clothing if I wanted to	
Do not agree at all C C C C C Totally agree Direct measure of Perceived Behavioral Control	
91. In general, is it your experience that you are able to influence how professionals that visit the farm behave when they are at the farm?	
Never C C C C Always Direct measure of Perceived Behavioral Control	
92. Professionals that visit the farm are often in a hurry	
Do not agree at all C C C C C Totally agree Control Belief	
93. When professionals that visit the farm are in a hurry, the probability is Control Belief Power	•
high O O O O O lowthat I ask them to use protective clothing	
94. It happens frequently that professionals that visit the farm enter the animal stables without someone from the farm being present	
Do not agree at all O O O O O Totally agree Control Belief	f
95. By using an obvious hygiene barrier and/or instructions, I can usually make professionals that visit the farm use protective clothing, even if no one from the farm is present when they enter the stables	
Cannot answer	
Do not agree at all C C C C C Totally agree C Control Belief Power	•
96. Place for comments to the questions above	
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By professionals visiting farms, we mean e.g. craftsmen, veterinarians, transporters, advisers, inseminators or inspectors.				
By protective clothing, we mean boots or shoe covers , <u>and</u> coats or coveralls . It can may be protective clothing offered by the farm or the visitor's own clean protective clothing.				
97. Is it your experience that professionals that visit the farm don't think that they need to use protective clothing?				
Never O O O O O Always Control Belief				
98. If a professional who visits the farm don't think that it's necessary to use protective clothing, the probability is				
Control Belief Power high ○ ○ ○ ○ ○ ○ ○ lowthat I can make that visitor use protective clothing				
99. Does it happen that protective clothing offered at the farm does not fit the visitor because the size is wrong?				
The farm does not offer visitors protective clothing				
That never CCOCCCIt happens very often CControl Belief				
100. It is difficult for me to make a visitor use protective clothing if the size is wrong				
The farm does not offer visitors protective clothing				
Do not agree at OOOOOO Totally agree Control Belief Power				
101. It is difficult and takes a lot of time to keep protective clothing clean				
Do not agree at all O O O O O Totally agree				
102. Protective clothing offered at the farm is often dirty				
The farm does not offer visitors protective clothing				
Do not agree at OOOOOOTOTOTALLY agree Control Belief				
103. It would be difficult for me to make a visitor use protective clothing if it was dirty				
Do not agree at all O O O O O Totally agree Control Belief Power				
104. It is expensive to offer protective clothing to all professionals that visit the farm				
Do not agree at all O O O O O Totally agree Control Belief				
105. Do costs influence the choice to offer (or not to offer) visitors protective clothing?				
To a high degree C C C C C Not at all Control Belief Power				

How did you first co	me into contact with this question	naire?	
O It was posted by r			
O It was sent by e-n O I found it on Inter			
If you have any othe	comments, please write here		
If you have any othe	comments, please write here		

THANK YOU for participating in this study!