FACULTY OF VETERINARY MEDICINE
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BIOCHECK.UGENT SMALL RUMINANTS

Intensive dairy production



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GHENT UNIVERSITY

*This survey is designed for use in **intensive sheep/goat farming**. This involves confinement of the flock/herd with zero or limited free grazing, the aim of which is to attain heavier lambs/kids at slaughter, lower lambing/kidding interval and higher weaning percentage than that found in flocks/herds maintained under other grazing conditions (e.g. semi-intensive, extensive, transhumant farming). Such a system requires improved forage production and utilization, use of concentrates, a high level of veterinary care and better housing and feeding facilities which could be mechanized whenever the required managerial skills are available.*

Glossary

Barns: Barns are larger agricultural buildings used for various purposes, including housing livestock. In small ruminant farming, barns may serve as a shelter for goats or sheep, especially during extreme weather conditions or for housing larger herds. Barns can have multiple sections, such as stalls or pens, and may include areas for feeding, milking, and storage of feed or equipment.

Buck (bucks): A male goat.

Disease outbreak: A sudden rise in the number of disease cases.

Doe (does): A female goat.

Doelings: Young female goats that have not yet reached maturity. This usually refers to female goats between 6 and 12 months old.

Ewe (ewes): A female sheep.

Ewe lambs: Young female sheep that have not yet reached maturity.

Feed: Supplementary food that is given to animals to supplement grazing or to meet specific nutritional requirements.

Flock: A group of sheep.

Forage: Vegetation or plant material that is consumed by grazing animals.

Grazing: The act of feeding animals by allowing them to eat grass or other vegetation in a pasture or range.

Herd: A group of goats.

Kid (kids): A young goat under 6 months.

Kidding: The process of giving birth to kids.

Lamb (lambs): A young sheep up to one year old.

Lambing: The process of giving birth to lambs.

Milking: The act of extracting milk from female small ruminants, such as sheep or goats.

Non-professional visitors: People coming to the farm who are not necessary for the daily operations; scholars, students, family, neighbours, …

Pasture: A managed area of land where animals graze.

Ram (rams): A male sheep.

Sheds: Sheds are simpler structures, often smaller and more open than barns. They are used for storage, shelter, or housing animals. In small ruminant farming, sheds can be used as a shelter for goats or sheep during specific periods, such as lambing or kidding seasons. They provide protection from rain, wind, and sun while allowing for more ventilation compared to enclosed structures such as barns.

Vermin: Refers to pest animals including rodents, insects, and wild birds.

Weaning: Gradually separating young animals from their mother's milk and transitioning them to solid food.

The survey is written from the perspective of the farmer. However, we welcome veterinarians, advisors, and other healthcare professionals to use the survey as well.

~. Farm characteristics

I. Do you have sheep, goats or both?

Select one option.
○ Sheep
○ Goats
○ Both

II. How many rams/bucks are there on the farm?

The number of male animals present on the farm for reproduction. Please provide the average figures during a yearly productive cycle.

.....

III. How big is the lactating herd/flock size?

Please provide the average figures during a yearly productive cycle.

.....

IV. How many dry ewes/does are there on the farm?

Please provide the average figures during a yearly productive cycle.

.....

V. How many ewe lambs/doelings are there on the farm?

Please provide the average figures during a yearly productive cycle.

.....

VI. How many years of experience in keeping sheep/goats does the person in charge have?

.....

VII. Who actively performs the farm work with the sheep/goats?

Employees are part of the permanent staff, whereas the contractors are temporary staff.

Check any that apply.
□ The herd/flock owner
□ The family member(s)
□ The employee(s)
□ The contractor(s)

1. Have sheep/goats been purchased within the last 5 years? *(required)*

Check any that apply.
□ Yes, lambs, kids and non-pregnant ewes/does
□ Yes, rams/bucks for reproduction
□ Yes, pregnant ewes/does
□ Yes, lactating ewes/does
□ No

If "Yes, lambs, kids and non-pregnant ewes/does" is chosen, go to the next question.

If "Yes, rams/bucks for reproduction" is chosen, go to question 3.

If "Yes, pregnant ewes/does" is chosen, go to question 4.

If "Yes, lactating ewes/does" is chosen, go to question 5.

If "No", go to question 17.

2. How many times (number of purchases) in the past 2 years were ewe lambs/doelings purchased? *(required)*

If less than once every 2 years, use decimals e.g. 0.5 for once every two years.

.....

3. How many times (number of purchases) in the past 2 years were rams/bucks for reproduction purchased? *(required)*

If less than once every 2 years, use decimals e.g. 0.5 for once every two years.

.....

4. How many times (number of purchases) in the past 2 years were pregnant ewes/does purchased? *(required)*

If less than once every 2 years, use decimals e.g. 0.5 for once every two years.

.....

5. How many times (number of purchases) in the past 2 years were lactating ewes/does purchased? *(required)*

If less than once every 2 years, use decimals e.g. 0.5 for once every two years.

.....

6. Where did you purchase your sheep and goats in the last 2 years? *(required)*

Check any that apply.
□ A single supplier who houses animals from the same origin
□ A single supplier who houses animals from different origins
□ From a salesman or through markets
□ From multiple sources

If "A single supplier who houses animals from different origins" or "From a salesman or through markets" is chosen, go to question 8.

7. Before the sheep/goats arrive on your farm, is contact between them and animals from other farms possible (e.g. during transportation or holding)? *(required)*

Select one option.
○ Yes
○ No
○ I don't know

8. When sheep/goats are bought from another farm, is the supplier's health status known before purchase? *(required)*

A herd/flock with a known health status is a herd from which it is known if it is free from specific diseases or not. If the herd/flock is free from specific diseases, it therefore also guarantees that the delivered products (animals) originating from this herd are also free of these diseases.

Select one option.
○ Always
○ Sometimes
○ Never

9. Are the sheep/goats tested for specific diseases before being added to your herd/flock (i.e. entry protocol or other tests for e.g. CAE, Salmonella,...)? *(required)*

I.e. tests before purchase or during the quarantine period.

Select one option.
○ Always
○ Sometimes
○ Never

10. Are all new sheep/goats put into quarantine when arriving on your farm? *(required)*

Quarantine is a period and place in which you isolate/separate animals in an area physically separated from other animals already part of the farm herd/flock.

Select one option.
○ Always
○ Sometimes
○ Never/No quarantine area available

If "Never/No quarantine area available" is chosen, go to question 17.

11. What is the minimum duration (in days) of the quarantine period that you applied in the last 2 years? *(required)*

.....

12. Before entering the quarantine area, are workers required to do the following? *(required)*

	Always	Sometimes	Never
Wear compartment-specific clothes	○	○	○
Wear compartment-specific footwear	○	○	○
Wash hands/use gloves	○	○	○

13. Is the quarantine area ... before the introduction of new sheep/goats? *(required)*

Cleaning: the physical removal of foreign material, including a wet cleaning step.

Disinfection: cleaning with chemical agents that inactivate organisms.

If your quarantine area is a separate pasture, select the "Never" option with Cleaned and Disinfected.

	Always	Sometimes	Never
Emptied	○	○	○
Cleaned	○	○	○
Disinfected	○	○	○

14. Are the hooves of the new animals inspected and treated against foot rot (e.g. disinfection footbaths, vaccination) prior to or during their quarantine period? *(required)*

Select one option.
○ Yes
○ No

15. Are newly introduced ewes/does milked separately during their quarantine period? *(required)*

Select one option.
○ Yes, they're milked last
○ Yes, they're milked first
○ No
○ Not applicable, the newly introduced animals are not lactating yet

16. Is a milk sample (e.g. to test for mastitis) from the newly introduced ewes/does taken and tested before they are introduced or at the start of lactation in the quarantine area? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never
○ Not applicable, the newly introduced animals are not lactating yet

17. Are there any sheep/goats that leave the farm and return afterwards? *(required)*

E.g. for shows, competitions, breeding, or stock market. This does not include going on pasture.

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 19.

18. Are these returning sheep/goats put into quarantine? *(required)*

Quarantine is a period and place in which you isolate/separate animals in an area physically separated from other animals.

Select one option.
○ Always
○ Sometimes
○ Never/No quarantine area available

19. Are any of the sheep/goats on your farm home-bred? If yes, how? *(required)*

Select one option.
○ Artificial insemination/embryo transplantation
○ Natural service
○ Both artificial insemination/embryo transplantation and natural service
○ No

If "Artificial insemination/embryo transplantation" is chosen, go to question 21.

If "No" is chosen, go to question 22.

20. Are the rams/bucks tested for sexually transmitted diseases (e.g. Chlamydia, Brucella ovis,...)? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

If "Natural service" was chosen in question 19, go to question 22.

21. When semen is purchased from a farm/institution, is the supplier's health status known before purchase? *(required)*

A herd/flock with a known health status is a herd from which it is known if it is free from specific diseases or not. If the herd/flock is free from specific diseases, it therefore also guarantees that the delivered products (animals) originating from this herd are also free of these diseases.

Select one option.
○ Yes, the supplier's health status is higher than my own status
○ Yes, the supplier's health status is equal to my own status
○ Yes, the supplier's health status is lower than my own but I take precautious measures
○ No
○ Not applicable, semen is not purchased
○ I don't know (information not readily available)

B. Transport of animals and removal of deadstock

22. Is the farm site physically divided into a clean and dirty area? *(required)*

The clean area is the area of the production site with restricted access, i.e., where only animals from the farm, persons after they have applied the hygienic measures in the hygiene lock, and farm-specific materials and vehicles are allowed. The dirty area comprises all other parts of the farm to which visitors, external vehicles, … have access. The dirty area also includes the carcass storage facility.

Select one option.
○ Yes
○ No
○ I don't know

23. How are animals transported to and from the farm? *(required)*

Select one option.
○ Internal (farm-owned) transport vehicles
○ External transport vehicles
○ A combination of internal and external transport vehicles

If "Internal (farm-owned) transport vehicles" is chosen, go to question 27.

24. Do external vehicles have to be sanitized before entering the farm? *(required)*

Select one option.
○ Yes, the entire outside of the vehicle
○ Yes but only the tyres (e.g. passing through clean transport baths)
○ Sometimes/Only when there is a disease outbreak
○ No

25. Does the driver have access to the animal holding area and is direct contact with your animals possible when loading the animals? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 27.

26. Does the driver receive and wear farm-specific clothing and shoes? *(required)*

Select one option.
○ Always
○ Sometimes
○ The driver brings his/her own cleaned and disinfected clothing and shoes/disposable overshoes
○ The driver stays inside the transport vehicle
○ Never

27. When sheep/goats are delivered to the farm, are only the animals that are supposed to be delivered to your herd/flock in the transport vehicle? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

28. Is the transport vehicle empty on arrival at the farm? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never
○ I don't know

If an option different from "Always" is chosen, go to question 30.

29. Is the transport vehicle on the inside always cleaned and disinfected before loading animals? *(required)*

Select one option.
○ It's cleaned and disinfected
○ It's only cleaned
○ No
○ I don't know

30. Is there a dedicated deadstock storage space? *(required)*

Select one option.
○ Yes
○ No
○ Not relevant, deadstock is immediately processed

If "No" or "Not relevant, deadstock is immediately processed" is chosen, go to question 33.

31. Is the deadstock storage space enclosed and well maintained to prevent vermin, pets, or wild animals from accessing the deadstock? *(required)*

Select one option.
○ Yes
○ Sometimes/partially
○ No

32. Is the deadstock storage space cleaned and disinfected after each use? *(required)*

Select one option.
○ Cleaned and disinfected
○ Only cleaned
○ No

33. What happens with the deadstock? *(required)*

Composting is a natural decomposition process for organic wastes.

Burying might be prohibited in your country. Please be aware that these surveys are used around the world.

Select one option.
○ Deadstock is composted
○ Deadstock is buried/burned
○ Deadstock is stored and collected by a rendering company

If "Deadstock is buried/burned" is chosen, go to question 35; if "Deadstock is stored and collected by a rendering company" is chosen, go to question 36.

34. Is deadstock composted in a closed system? *(required)*

Select one option.
○ Yes, dead animals are composted inside a building that can be completely closed
○ Yes, dead animals are composted outside, enclosed with plastic
○ No

Go to question 37.

35. How are dead animals buried/burned? *(required)*

Buried in appropriate soil: deep burial in pits away from a groundwater source.

Select one option.
○ Dead animals are burned in an approved incinerator on the farm
○ Dead animals are buried in the appropriate soil on the farm
○ Other

Go to question 37.

36. Can deadstock be collected by the rendering company without them entering the clean area of the farm? *(required)*

Select one option.
○ Yes
○ No

37. Is deadstock manipulated with gloves, or are hands cleaned and disinfected after the manipulation of deadstock? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

C. Feed and water

38. Are all feed storage facilities (e.g. ensilaged feed, feed mixer, concentrates, …) protected from pets and vermin? *(required)*

Select one option.
○ Yes, from pets
○ Yes, both from pets and vermin
○ No

39. Does the feed originate from a feeding company where it meets certain hygienic requirements (e.g. Salmonella-free, heat treatment)? *(required)*

Check any that apply.
□ Yes
□ No
□ I don't know
□ Not applicable, the animals get own produced feed/natural crops

40. Are feeding utensils used for animal feed purposes only (i.e. there's no double use e.g. for manure)? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

41. How often is the animal drinking water system (i.e. the closed water lines as well as the open drinking bowls for the animals) cleaned and/or disinfected? *(required)*

If this differs for the water lines and drinking bowls, please fill in the worst-case scenario.

Select one option.
○ Weekly
○ Monthly
○ Multiple times per year
○ One time per year or less
○ Never

42. How frequently is a bacteriological analysis of the animal drinking water performed? *(required)*

Select one option.
○ Yearly or more frequent
○ Every two years
○ Less frequent than every two years
○ Never
○ Never, I have a municipal water supply

If "Never" or "Never, I have a municipal water supply" is chosen, go to question 44.

43. At which location are the water samples for the bacteriological analyses taken? *(required)*

Select one option.
○ Both at the source/storage tank and the last drinker (farthest away from the source)
○ At the last drinker
○ At the source
○ Other (e.g. drinker at the beginning of the line)

D. Visitors and farmworkers

Here we focus on the main housing facility and not any temporary constructions that could be used when grazing on locations far away from the location of the barn.

44. Does the farm follow a written biosecurity plan? *(required)*

Select one option.
○ Yes
○ No

45. Did the farmer and/or farmworkers receive training on biosecurity in the last five years? *(required)*

Training can be a diploma, e-learning courses, workshops, or webinars. The training can also be given by internal personnel as long as they have received certified training on their end.

If you do not have any farmworkers, select answer option "Yes, both have received training on biosecurity" when the farmer has received training or select answer option "Neither of them has received training on biosecurity" when the farmer has not received training.

Select one option.
○ Both have received training on biosecurity
○ Only one of them has received training on biosecurity
○ Neither of them has received training on biosecurity

46. Are visitors obliged to notify their presence before entering the barn/shed (e.g. by signing a visitor's register)? *(required)*

Select one option.
○ Yes
○ No

47. Is there a separate space (e.g. hygiene lock) available for changing boots and clothes and washing hands/putting on gloves? *(required)*

Select one option.
○ Yes
○ No

48. Are there any farmworkers who also work at (or frequently visit) other ruminant farms? *(required)*

Frequently: at least once a week.

Select one option.
○ Yes
○ No
○ I don't know

49. Before being allowed to enter the farm, do farmworkers have to…? *(required)*

	Always	Sometimes	Never
Wear farm-specific clothes/bring clean clothes	○	○	○
Wear farm-specific footwear/bring clean and disinfected footwear	○	○	○
Wash and disinfect their hands/use gloves	○	○	○

50. Before being allowed to enter the farm, do work-related professionals (e.g. veterinarian, hoof trimmer, wool trimmer, milk collector) have to…? *(required)*

	Always	Sometimes	Never
Wear farm-specific clothes/bring clean clothes	○	○	○
Wear farm-specific footwear/bring clean and disinfected footwear/disposable overshoes	○	○	○
Wash and disinfect their hands/use gloves	○	○	○
Clean and disinfect their materials (select "Always" if not applicable)	○	○	○

51. Are there any other (non-professional) visitors that can enter the farm and come into contact with the sheep/goats? *(required)*

I.e. scholars, students, family, neighbours, …

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 53.

52. Before being allowed to enter the farm, do non-professional visitors have to…? *(required)*

	Always	Sometimes	Never
Wear farm-specific clothes/bring clean clothes	○	○	○
Wear farm-specific footwear/bring clean and disinfected footwear/disposable overshoes	○	○	○
Wash and disinfect their hands/use gloves	○	○	○

E. Infrastructure, location and housing

53. Is an insect control programme present on the farm? *(required)*

Control programme: a regular protocol containing the control measures.

Select one option.
○ Yes
○ No

54. Is an effective pest control programme in place on the farm? *(required)*

Select one option.
○ A professional pest control company is hired periodically
○ The farm has established its own pest control programme
○ Pest control is performed only if an infestation is noticed (e.g. via rodent traps)
○ Cats are being used
○ There is no pest control programme currently in place on the farm

55. Is a bird control programme present on the farm (netting, air inlets covered)? *(required)*

Select one option.
○ Yes
○ Partially
○ No

56. Do the sheep/goats, including the youngstock, have access to an outside area (incl. a restricted outside area) during their lifetime? *(required)*

Select one option.
○ Yes
○ Sometimes
○ No

If "No" is chosen, go to question 59.

57. Is grazing performed? *(required)*

Select one option.
○ Yes
○ No

58. When your sheep/goats are outside, do they have access to natural water bodies (e.g. brooks and ponds)? *(required)*

Select one option.
○ Yes
○ No

59. Is the farm enclosed (fenced) to prevent contact between the farm's animals and other animals, wildlife, or people? *(required)*

Select one option.
○ Yes
○ Partially
○ No

60. Are there, besides sheep/goats, any other farm animals (cattle, poultry, pigs, llamas,…) kept on your farm for farming purposes? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 62.

61. Do the sheep/goats share the same outdoor area with other farm animals? *(required)*

Select one option.
○ Yes
○ No

62. Do pets have access to the barns/sheds? *(required)*

Select one option.
○ Dogs (and cats)
○ Only cats
○ None

63. Do the farmer or any of the farmworkers keep sheep/goats for personal (i.e. non-commercial) purposes? *(required)*

Select one option.
○ Yes
○ No

64. Are the indoor housing areas (incl. storage of feed and bedding material) enclosed? *(required)*

Select one option.
○ Yes
○ No

65. Is there manure (from goats, sheep, cattle, pigs, …) from your own farm or manure that originated from other farms being spread on the surrounding farmlands that are within 500 metres of your farm or pastures? *(required)*

Select one option.
○ Yes
○ No
○ I don't know

F. Disease management

66. Is there a plan for strategic treatments (e.g. vaccines, deworming, additives, pre- or probiotics) and is this evaluated on an annual basis by a veterinarian/health advisor? *(required)*

Select one option.
○ Yes
○ No

67. Is a regular (i.e. at least once a year) evaluation made of the disease status of the farm (e.g. serology, trends in slaughterhouse findings, bulk milk, etc.) in consultation with a veterinarian/health advisor? *(required)*

Select one option.
○ Yes, for regulated and non-regulated diseases
○ Yes, for regulated diseases
○ No

68. Are sick sheep/goats isolated in a hospital pen, physically separated from the healthy animals? *(required)*

Isolated: physically separated with no possible contact with healthy animals.

Select one option.
○ Yes
○ Partially
○ No

If "No" is chosen, go to question 75.

69. Is equipment and material (e.g. buckets, thermometer, cleaning and feeding utensils, gastric tubes, ...) available specifically for the sick sheep/goats in the hospital pen? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 71.

70. Is this specific equipment always cleaned and disinfected before a new animal enters the hospital pen? *(required)*

Select one option.
○ It's cleaned and disinfected
○ It's only cleaned
○ No

71. Before entering the hospital pen, do workers have to take the following measures? *(required)*

	Always	Sometimes	Never
Change into compartment-specific clothes	○	○	○
Change into compartment-specific footwear	○	○	○
Wash hands/use gloves	○	○	○

72. Is the hospital pen empty of bedding material after each use? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 74.

73. Is the hospital pen … before each new introduction of sick sheep/goats? *(required)*

	Always	Sometimes	Never
Cleaned	○	○	○
Disinfected	○	○	○
Dried	○	○	○

74. Are the sick sheep/goats consistently handled/visited after the healthy sheep/goats? *(required)*

Select one option.
○ Yes
○ No

75. Can a group of sick sheep/goats be completely separated from the other sheep/goats in case of a disease outbreak? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

76. Concerning the use of injection needles for treatments by the farmer/farmworkers, what is the strategy followed? *(required)*

Select one option.
○ Single-use needles
○ Reusable needles (separate per age group)
○ Reusable needles (no separation per age group)
○ Reusable needles that are disinfected in between groups

If " Single-use needles" is chosen, go to question 78.

77. After how many animals are injection needles changed (for treatments)? *(required)*

If this differs per age category, please fill in the worst-case scenario.

.....

G. Lambing/Kidding management

The management during the process of giving birth to lambs/kids.

78. Are lambing/kidding pens available on the farm? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 81.

79. Are workers entering the area where lambing/kidding takes place required to take the following measures? *(required)*

	Always	Sometimes	Never
Wear compartment-specific clothes	○	○	○
Wear compartment-specific footwear	○	○	○
Wash hands/use gloves	○	○	○

80. Is the area where lambing/kidding takes place ... before the introduction of sheep/goats? *(required)*

	Always	Sometimes	Never
Cleaned	○	○	○
Disinfected	○	○	○
Dried	○	○	○

81. When helping with the lambing/kidding, are the hands and the obstetric materials always washed/cleaned and disinfected before and after each lambing? *(required)*

E.g. buckets, lambing/kidding ropes, prolapse harness, ...

Select one option.
○ Cleaned and disinfected
○ Only cleaned
○ No

82. In the case of abortions, are the hands and the materials always washed/cleaned and disinfected (before and after)? *(required)*

E.g. buckets, lambing/kidding ropes, prolapse harness, …

Select one option.
○ Cleaned and disinfected
○ Only cleaned
○ No

83. In the case of abortions, are specific measures taken (e.g. disinfecting the area, keeping the herd/flock away from that area)? *(required)*

Select one option.
○ Yes
○ No

84. When does separation of the lamb/kid from the mother take place? *(required)*

Select one option.
○ Immediately after birth
○ Within 1-2 days of the lamb/kid's birth
○ Within 1-2 weeks of the lamb/kid's birth
○ No separation, the lamb/kid remains with the mother as a suckling lamb/kid
○ Other

85. If several abortions take place, is the ewe/doe tested afterwards (i.e. abortion protocol)? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

86. Where are the foetal membranes and fluids disposed of after a lambing/kidding/abortion? *(required)*

If multiple disposal ways occur, choose the most used one.

Select one option.

○ They're left in the lambing/kidding area or where the abortion took place
○ They're eaten by sheep/goats/dogs/wild animals/other
○ They're put on the manure pile/slurry pit
○ They're put in the deadstock storage place/waste container
○ Buried
○ Other

H. Lamb/Kid management

In the event that something happens with the mother, or if there is a combination of artificial rearing and lambs/kids that stay with the mother, answer the questions below according to the predominant practice.

87. How many millilitres of colostrum are administered to the lamb/kid within the first six hours of birth? *(required)*

If you don't know how much colostrum is given, fill in 0. If the lamb/kid stays with the mother, fill in 250ml.

.....ml

88. Is the colostrum given either from the mother or other sheep/goat of the farm or is external colostrum provided? *(required)*

Select one option.
○ Sheep/goat colostrum from the farm
○ Cow colostrum from the farm
○ Sheep/goat/cow colostrum from an external source

89. Is the equipment used for colostrum administration (e.g. tubes, bottles, etc.) cleaned and disinfected after each use? *(required)*

Select one option.
○ Cleaned and disinfected
○ Only cleaned
○ I make use of single-use materials
○ No
○ Not applicable, the lambs/kids stay with their dam

90. Are milk feeding buckets with multiple teats reused between lambs/kids during the same feeding session? *(required)*

Select one option.
○ Yes
○ No
○ Not applicable, the lambs/kids stay with their dam

91. Are the lambs/kids ever fed with waste milk (i.e. milk that is not suitable for the milk tank, e.g. with antibiotic residues)? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

92. Are the feeding buckets (incl. teats) cleaned after each feeding? *(required)*

Select one option.
○ Yes
○ No
○ Not applicable, the lambs/kids stay with their dam

93. Are the kids/lambs mixed between different age groups? *(required)*

Select one option.
○ Never
○ Within the first hours
○ Within the first two days
○ After the first two days

94. Is the lamb/kid housing empty after each use? *(required)*

Select one option.
○ Yes
○ No
○ Not applicable

If "No" or "Not applicable" is chosen, go to question 96.

95. Is the lamb/kid housing … before each new introduction of lambs/kids? *(required)*

	Always	Sometimes	Never
Cleaned	○	○	○
Disinfected	○	○	○
Dried	○	○	○

I. Dairy management

96. Which milking method do you follow? *(required)*

If both systems are used, choose the principal one.

Select one option.
○ Manually
○ Milking machine

If "Milking machine" is chosen, go to question 98.

97. Are hand hygiene measures (i.e. regular cleaning of the hands or wearing gloves) taken during milking? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

Go to question 103.

98. How many times per year is maintenance (check-up) of the milking equipment performed by technicians? *(required)*

If this is done on a continuous/daily basis, enter 365.

.....

99. Which type of test of the milking parlour is performed? *(required)*

Dynamic tests occur during milking.

Select one option.
○ Static
○ Dynamic
○ Both

100. Do you use rubber or silicone teat cup liners? *(required)*

Select one option.
○ Rubber teat cup liner
○ Silicone teat cup liner

101. How many milkings are done with a set of cup liners? *(required)*

.....

102. How many times per year is the milking parlour holding area cleaned? *(required)*

This implies a dry (removal of all dirt and bedding material) and wet cleaning step.

.....

103. Are the teats cleaned before milking? If yes, how? *(required)*

If you use multiple cleaning ways, choose the most applied/first one.

Select one option.
○ Yes, prefoaming
○ Yes, dry cleaning with separate towels
○ Yes, wet cleaning and dried afterward with separate towels
○ Yes, wet cleaning, but not dried afterward
○ Yes, another way of cleaning
○ Only if visually dirty
○ No

104. Is the foremilk examined (visual inspection) during fore-stripping? *(required)*

Select one option.
○ Always
○ Sometimes
○ Never

If "Never" is chosen, go to question 106.

105. Are follow-up tests (e.g. bacteriological) performed if the visual inspection shows abnormal signs? *(required)*

Select one option.
○ Yes
○ No

106. Are the teats disinfected after the teat cups are removed? *(required)*

Select one option.
○ Yes, with a dip
○ Yes, with a spray
○ No
○ Not applicable, I do not use teat cups (i.e. manual milking)

107. Are the ewes/does milked in a specific order? *(required)*

Select one option.

○ Yes, ewes/does with mastitis and/or a high SCC are milked last
○ Yes, ewes/does with mastitis and/or a high SCC are milked first
○ Yes, another order
○ No

J. Adult sheep/goat management

108. In which of the following groups are the ewes/does on your farm divided? *(required)*

Check any that apply.
□ Dry ewes/does
□ First lactation ewes/does
□ High and low lactation ewes/does (or more groups)
□ Not applicable, I have only one group

109. Do the ewes/does have to regularly pass through a hoof disinfection footbath? *(required)*

Select one option.
○ Yes
○ No
○ Only when problems appear (e.g. foot rot)

110. How many times per year is the adult barn/shed cleaned? *(required)*

This implies a dry (removal of all dirt and bedding material) and wet cleaning step.

.....

111. How many times per year is the adult barn/shed disinfected? *(required)*

.....

K. Working organisation and equipment

112. Are the sheep/goats grouped per age in the barn/shed? *(required)*

To answer "Yes", sheep/goats should be separated into at least the following groups; lambs/kids on milk, weaned lambs/kids, and lactating/dry sheep/goats.

Select one option.
○ Yes
○ No

If "No" is chosen, go to question 116.

113. Are … between age groups? *(required)*

	Always	Sometimes	Never
Compartment-specific clothes worn	○	○	○
Compartment-specific footwear worn	○	○	○
Hands washed/gloves worn	○	○	○

114. Which working sequence is used by the farmworkers in normal circumstances? *(required)*

Select one option.
○ From youngest to oldest animals
○ From oldest to youngest
○ Another working sequence
○ There is no working sequence

115. Is there clearly marked/identified and separate equipment (e.g. drinkers, feeders) available for each age group? *(required)*

Select one option.
○ Yes
○ Yes, but not marked/identified
○ No

116. Is there any equipment (e.g. hoof trimming equipment, dehorning devices, hayracks) being shared with other farms that enter the barns/sheds and/or has contact with your sheep/goats? *(required)*

Select one option.
○ Yes
○ No

If "No" is chosen, go to the end of this survey.

117. What measures do you take before this shared equipment enters your barn/shed and/or comes into contact with your sheep/goats? *(required)*

Select one option.

○ Cleaning and disinfection of the equipment
○ Only cleaning of the equipment
○ None