

1 Questions and choices included in the English version of the questionnaire on waste milk disposal practices sent to Swiss dairy producers.

Questions	Answer choices (when applicable)
1. In which canton is your farm located?	(cantons listed)
2. In which agricultural zone is your farm located?	<ul style="list-style-type: none"> <li>a. Midland</li> <li>b. Hills</li> <li>c. Mountain I</li> <li>d. Mountain II</li> <li>e. Mountain III</li> <li>f. Mountain IV</li> </ul>
3. What is your milk production type? <sup>1,2</sup>	<ul style="list-style-type: none"> <li>a. Conventional</li> <li>b. Organic</li> <li>c. IP Suisse</li> <li>d. Other (please specify): _____</li> </ul>
4. Which is the predominant breed in the milking herd?	<ul style="list-style-type: none"> <li>a. Holstein</li> <li>b. Brown Swiss</li> <li>c. Fleckvieh</li> <li>d. Simmental</li> <li>e. Montbéliarde</li> <li>f. Jersey</li> <li>g. Other: _____</li> </ul>
5. Which of the following best describes your lactating cows housing? <sup>1</sup>	<ul style="list-style-type: none"> <li>a. Tie-stall barn</li> <li>b. Free-stall barn</li> <li>c. Other: _____</li> </ul>
6. Which of the following best describes your milking system? <sup>1</sup>	<ul style="list-style-type: none"> <li>a. Bucket milking</li> <li>b. Pipeline milking</li> <li>c. Milking parlor</li> <li>d. Milking robot</li> <li>e. Other: _____</li> </ul>
7. How many years has this been your main milking system?	
8. How many years has your farm been on operation under your management?	
9. What is the herd annual milk production?	
10. What is the average milk yield per cow per year?	

11. What is the approximate annual mean bulk tank milk somatic cell count? (x1000 cells/ml)	
12. On average, how many adult (lactating and dry) cows do you have on the farm?	
13. Do you raise veal calves? <sup>1</sup>	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
14. At the end of a withdrawal period, how often do you test a cow's milk for antimicrobial residues before putting her milk in the bulk tank?	<ul style="list-style-type: none"> <li>a. Never</li> <li>b. Roughly 25% of the time</li> <li>c. Roughly 50% of the time</li> <li>d. Roughly 75% of the time</li> <li>e. Always</li> </ul>
15. <u>On average over the past three months</u> , on how many days per month did you have at least one cow producing waste milk with antimicrobial residues?	
16. <u>On average over the past three months</u> , how many cows per month produce waste milk with antimicrobial residues?	
17. <u>On average over the past three months</u> , how many cows per month produce other types of nonsaleable milk (from fresh cows, due to treatment other than antimicrobial, mastitic milk from untreated cows)?	
18. <u>On average over the past three months</u> , how many liters of waste milk with antimicrobial residues do you estimate are produced per month?	<ul style="list-style-type: none"> <li>a. I don't know</li> <li>b. I estimate: _____ L</li> </ul>
19. At the time of milking, do you dispose of waste milk with antimicrobial residues differently than other types of nonsaleable milk (from fresh cows, due to non-antimicrobial treatment, mastitic milk from untreated cows)?	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
20. At the time of milking, how do you dispose of waste milk with antimicrobial residues? Please rank the options from the most common to the least common. Do not rank the methods that you never use.	<ul style="list-style-type: none"> <li>a. The milk is dumped with wastewater.</li> <li>b. The milk is dumped in the manure pit or the gutter.</li> <li>c. The milk is dumped on the ground outside (e.g. on a meadow)</li> <li>d. The milk is offered to calves.</li> <li>e. The milk is offered to other production animal species on the farm (e.g. pigs).</li> <li>f. The milk is offered to other non-production animal species on the farm.</li> </ul>

	g. Other (please specify): _____
21. Which types of waste milk do you use to feed the calves? <sup>1,2</sup>	<ul style="list-style-type: none"> <li>a. Fresh cow milk</li> <li>b. Colostrum (only if fed to calves older than 1 day of age)</li> <li>c. Milk discarded due to high somatic cell count from cows that have not received any treatment</li> <li>d. Milk of abnormal appearance (e.g. clots, blood) from cows that have not received any treatment</li> <li>e. Milk from cows treated with a drug other than antimicrobial (e.g. anti-inflammatory drug), during treatment or withdrawal period</li> <li>f. Milk from cows during treatment including the first milking following intramammary antimicrobial therapy</li> <li>g. Milk from cows during the withdrawal period following intramammary antimicrobial therapy</li> <li>h. Milk from cows during treatment and the first milking following treatment with an injectable antimicrobial drug (for any disease)</li> <li>i. Milk from cows during the withdrawal period following treatment with an injectable antimicrobial drug (for any disease)</li> <li>j. Other (please specify): _____</li> </ul>
22. On average per month, on how many days do you feed waste milk with antimicrobial residues to calves? <sup>3</sup>	
23. Can it happen that calves are fed pooled waste milk with antimicrobial residues from multiple cows? <sup>1,3</sup>	<ul style="list-style-type: none"> <li>a. Never, each calf is fed milk from only one treated cow</li> <li>b. Yes, milk may be pooled from 2 treated cows</li> <li>c. Yes, milk may be pooled from 3 or more treated cows</li> </ul>
24. On average, on a day when waste milk with antimicrobial residues is produced, what proportion of it is used to feed the calves? <sup>3</sup>	<ul style="list-style-type: none"> <li>a. Less than 25%</li> <li>b. Between 25% and 50%</li> <li>c. Between 50% and 75%</li> <li>d. More than 75%</li> </ul>
25. Which category of calves are offered waste milk with antimicrobial residues? <sup>1,3</sup>	<ul style="list-style-type: none"> <li>a. All calves</li> <li>b. Replacement heifers only</li> <li>c. Calves intended for veal production only</li> </ul>
26. At what age are calves offered waste milk with antimicrobial residues? <sup>1,2,3</sup>	<ul style="list-style-type: none"> <li>a. Anytime from birth until weaning</li> <li>b. Only calves less than ___ days of age (please specify)</li> <li>c. Only calves more than ___ days of age (please specify)</li> </ul>

<p>27. Other than category and age, do the following factors influence your decision to feed waste milk with antimicrobial residues to calves?<sup>2,3</sup></p>	<ul style="list-style-type: none"> <li>a. Milk price</li> <li>b. Availability of other types of nonsaleable milk without antimicrobial residues</li> <li>c. Volume of waste milk with antimicrobial residues</li> <li>d. Specific antimicrobial drug received by a cow (please specify: _____)</li> <li>e. Suspicion of a specific bacterial agent for which a cow was treated (please specify: _____)</li> <li>f. Other (please specify: _____)</li> </ul>
<p>28. How long after milking is waste milk fed to calves?<sup>3</sup></p>	<ul style="list-style-type: none"> <li>a. Within 15 minutes</li> <li>b. More than 15 minutes but within 6 hours</li> <li>c. More than 6 hours but within 12 hours</li> <li>d. More than 12 hours</li> </ul>
<p>29. If fed more than 15 minutes after milking, how is kept waste milk with antimicrobial residues?<sup>2,3</sup></p>	<ul style="list-style-type: none"> <li>a. Stored at room temperature</li> <li>b. Refrigerated</li> <li>c. Pasteurized</li> <li>d. Acidified/fermented</li> <li>e. Other (please specify): _____</li> </ul>
<p>30. Approximately what proportion of cows receive intramammary dry cow antimicrobial therapy at dry-off?<sup>1</sup></p>	<ul style="list-style-type: none"> <li>a. Less than 25%</li> <li>b. Between 25% and 50%</li> <li>c. Between 50% and 75%</li> <li>d. More than 75%</li> <li>e. All cows are treated</li> </ul>
<p>31. Which of the following tools do you use to guide your decision to treat a cow with intramammary antimicrobials at dry-off?<sup>2</sup></p>	<ul style="list-style-type: none"> <li>a. Bacteriological culture of milk (by your veterinarian)</li> <li>b. Test MID (PCR) Suisselab</li> <li>c. Schalm's test</li> <li>d. Milk somatic cell count</li> <li>e. History of mastitis</li> <li>f. Other (please specify): _____</li> </ul>
<p>32. At the time of calving, are the cows that had received dry-off antimicrobial treatment identified differently than cows that did not?</p>	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
<p>33. Do you store frozen colostrum?<sup>1</sup></p>	<ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>

34. If yes, do you also store frozen colostrum from cows that had received dry-off antimicrobial treatment? <sup>1</sup>	a. Yes b. No
<b><u>For the calves' first feedings (first 24h of life)</u></b>	
35. When a cow had received dry-off antimicrobial treatment, is her colostrum fed to her calf?	a. Always b. Never, except if calving was unattended and the calf has time to suckle on its dam c. Sometimes
36. [If always or sometimes] Can it happen that calves are fed pooled colostrum from multiple cows that had received dry-off antimicrobial treatment?	a. Yes b. No
<b><u>For the feeding of calves older than 24 hours</u></b>	
37. When a cow had received dry-off antimicrobial treatment and produces more colostrum than required for her calf, is her <u>colostrum</u> fed to one or more other calves?	a. Always b. Never c. Sometimes, it depends
38. When a cow had received dry-off antimicrobial treatment, is her <u>fresh cow milk</u> fed to one or more calves?	a. Always b. Never c. Sometimes, it depends
39. [If always or sometimes to questions 37 or 38] Can it happen that calves are fed pooled colostrum or fresh cow milk from multiple cows that had received dry-off antimicrobial treatment? <sup>1</sup>	a. Never, each calf is fed colostrum or milk from only one treated cow b. Yes, milk may be pooled from 2 treated cows c. Yes, milk may be pooled from 3 or more treated cows

2 <sup>1</sup> Mandatory question.

3 <sup>2</sup> More than one response was possible.

4 <sup>3</sup> These questions were only asked if the producers had answered f), g), h), or i) in question 21.

5 Note: Some questions "please specify" only appeared when certain answer options were selected, but were included in this table for improved  
6 clarity; this explains the difference with the reported number of questions of 42.