

INTRODUCTION

Dry cow management is important for dairy cow health and welfare, milk production, and for sustainability of dairy farms [1]. Antibiotic dry cow therapy (DCT) is an important part of most mastitis control programs, given either to all cows (blanket DCT) or to selected cows with intramammary infections (selective DCT). Traditionally, in Nordic countries, administration of selective DCT with narrow-spectrum antimicrobials has been recommended. Nevertheless, knowledge and statistics about the current use of DCT and drying-off practices in Finland is missing.

Objective: Survey drying-off practices and use of DCT in Finland through an online questionnaire.

Hypothesis: The use of DCT in Finnish dairy farms is limited by using selective DCT.

MATERIAL AND METHODS

Online questionnaire

- Accessible to all farmers (approx. 5,400 herds) in the Finnish dairy herd recording system
- Open between January and May 2017
- Dillman guidelines [2] followed to increase participation rate

Data analyses

- Excel for data exploration and cleaning
- SPSS: Pearson chi-square test to study associations
Jonckheere-Terpstra test for ordered alternatives

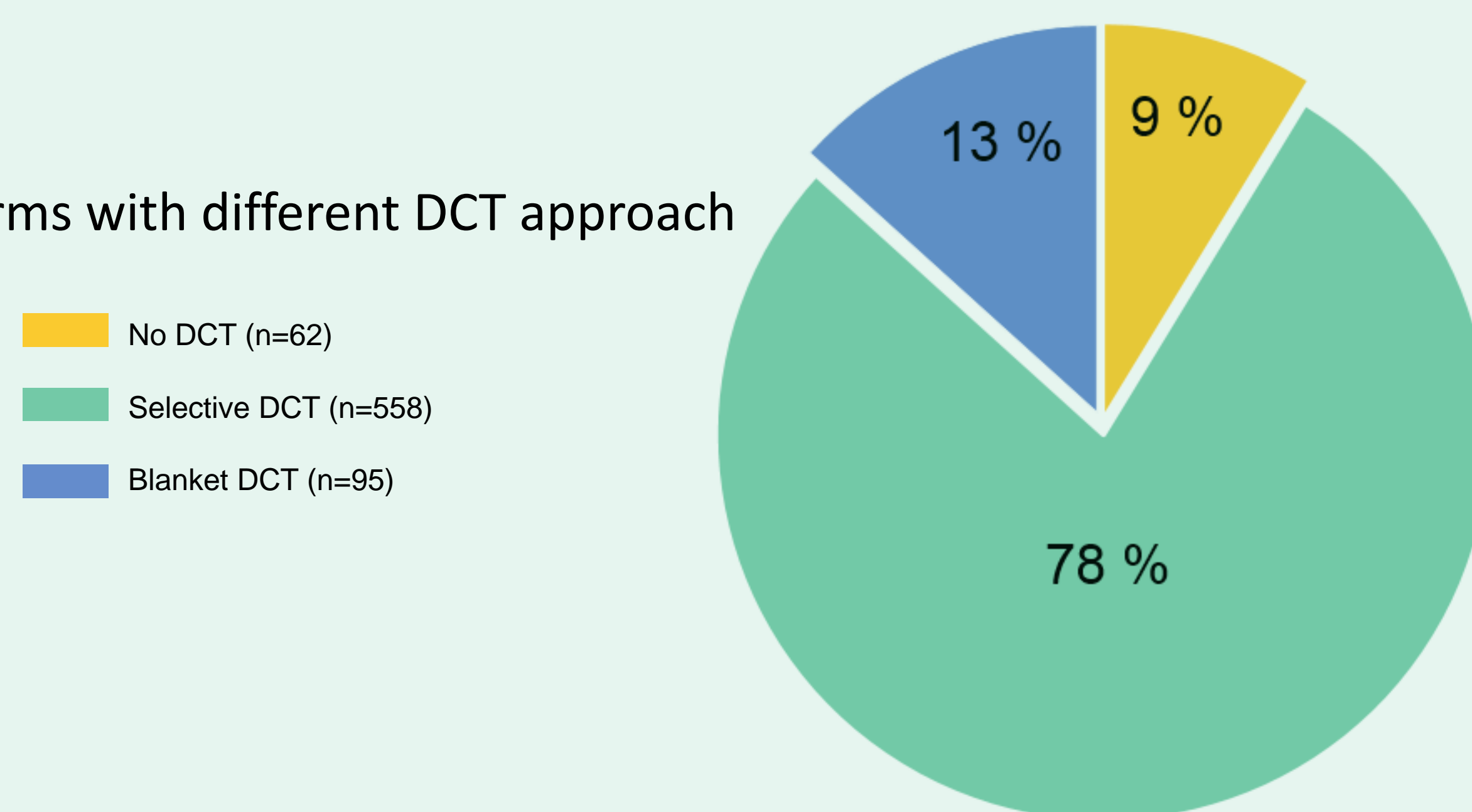
RESULTS

Farm characteristics and drying-off practices

- 715 dairy farmers participated in the survey
- Herd size: 28% with more than 60 cows
- Milking system: 55% pipeline, 23% parlor, and 22% automatic milking system
- Milk production over 8,000 kg/year and bulk tank SCC under 150,000 cells/ml in 62% of farms
- In 96% of farms cow were dried off gradually
- Cows produced ≤ 15 kg/day at dry-off in 86% of farms

RESULTS

Fig 1. Percentage of farms with different DCT approach



- ✓ High number of farms using selective DCT reported treating only up to one-fourth of their cows at dry-off.
- ✓ Microbiological testing of milk samples (Fig. 4) and information on clinical mastitis history and high SCC were common methods used to select cows for DCT (61% of farms).

Fig 2. Herd size and use of DCT

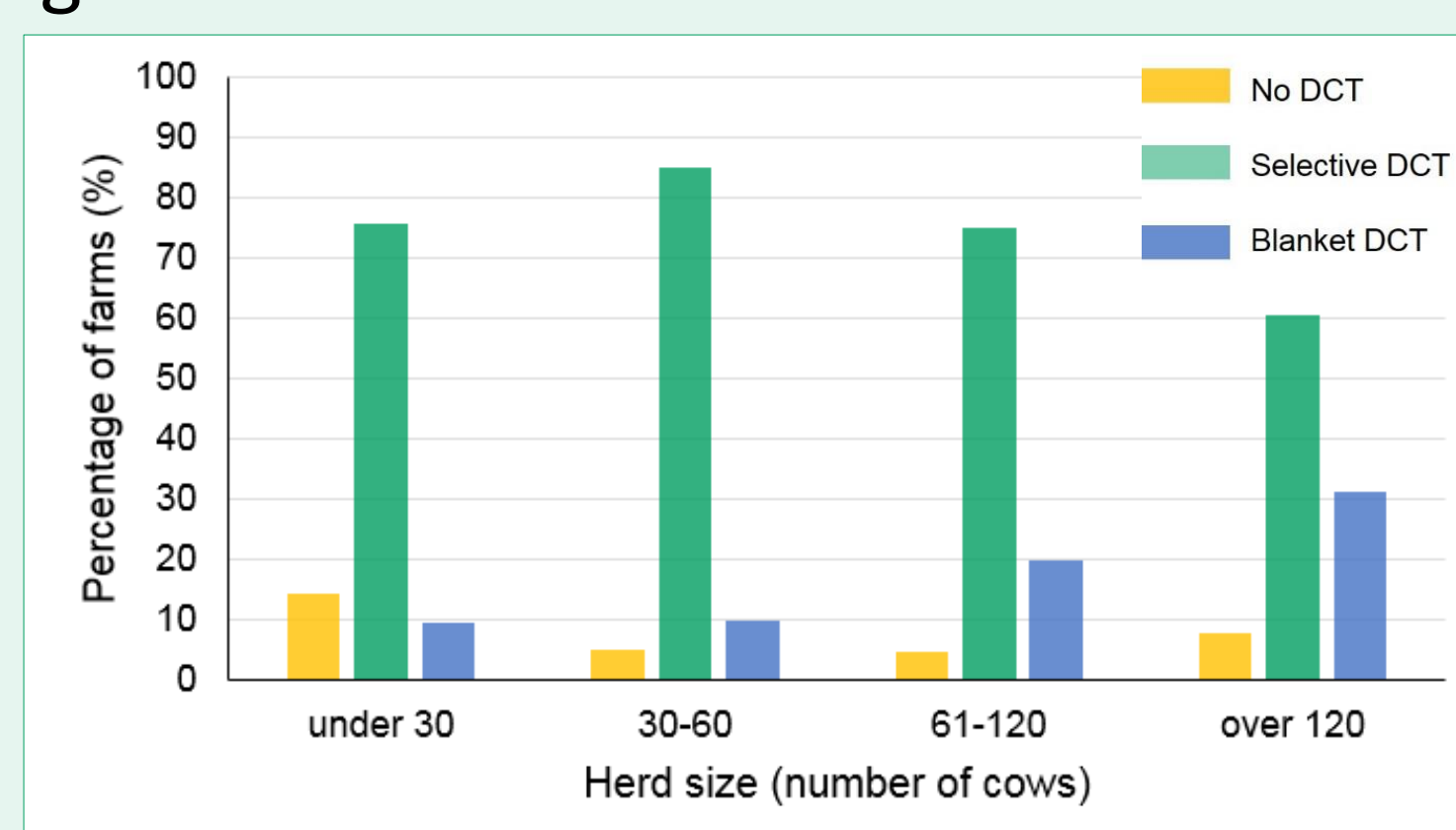


Fig 3. Reasons for choosing a DCT approach

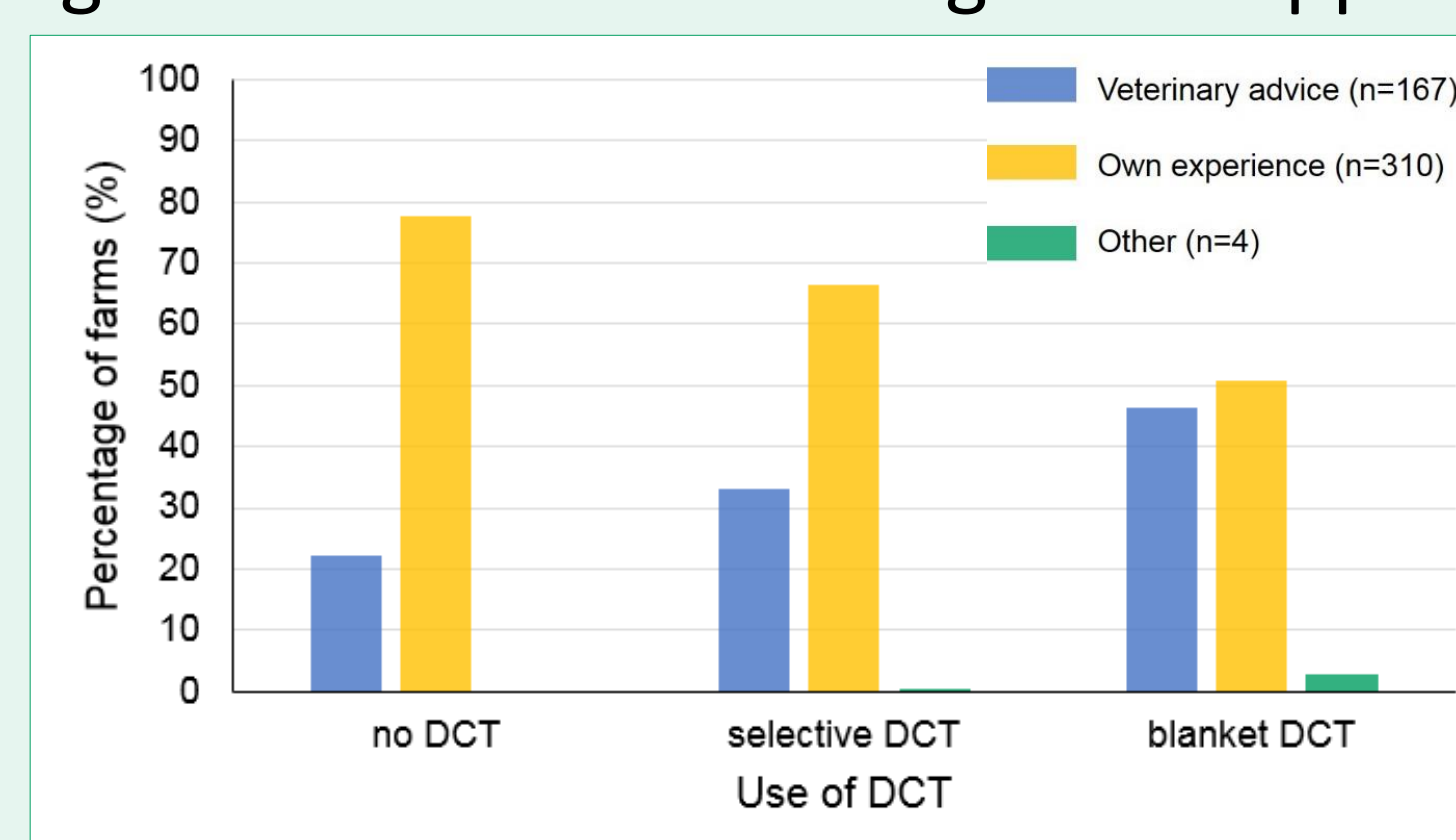
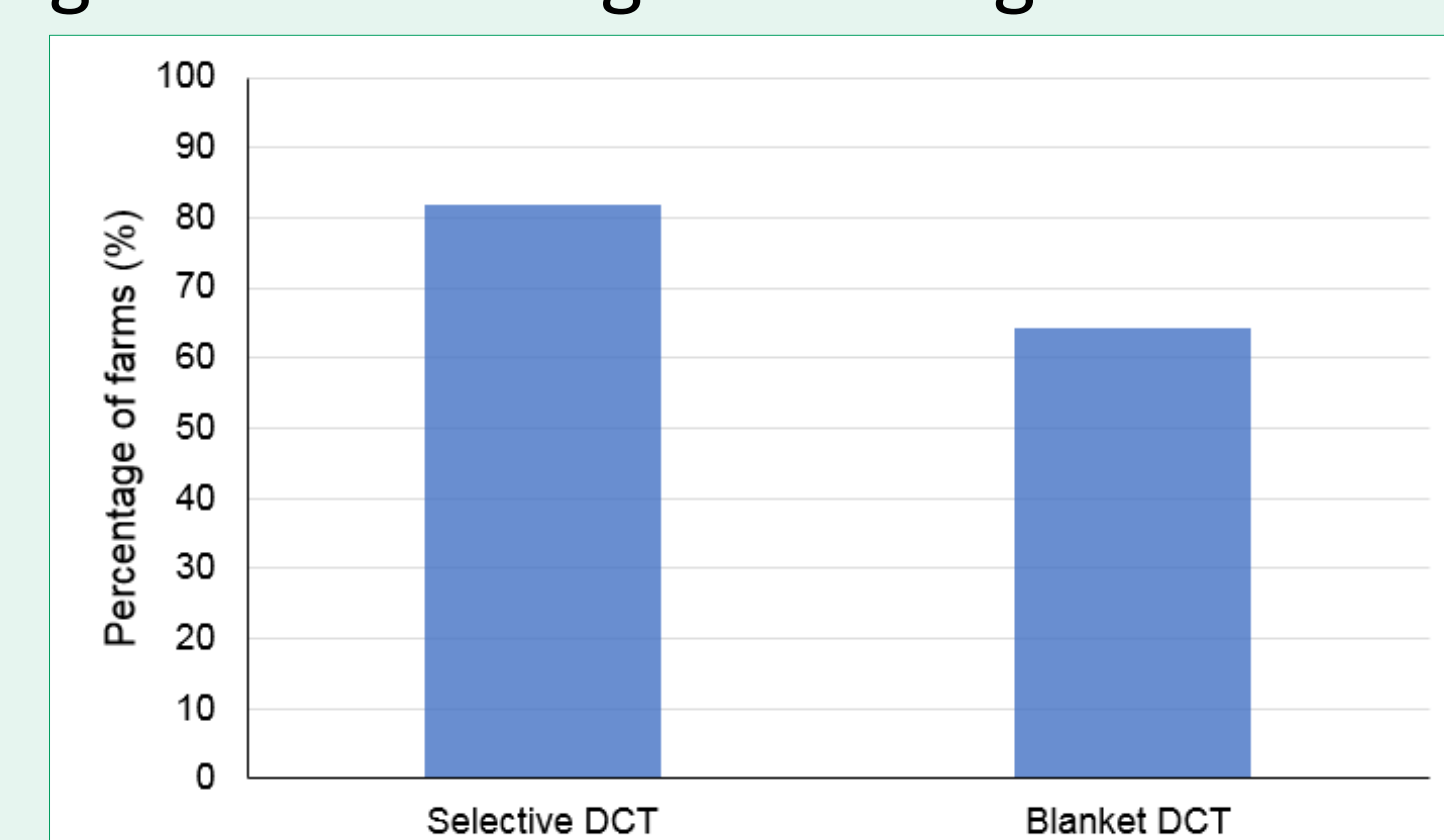


Fig 4. Microbiological testing of milk samples at dry-off



SUMMARY AND DISCUSSION

- Responding farms were representative of Finnish dairy industry.
- **Most farms use selective DCT** in Finland (Fig 1), in contrast to many other countries where the use of blanket DCT is common [3, 4].
- A **significant trend** ($p < 0.01$) was observed between **increasing herd size** and proportion of farms **using blanket DCT** (Fig 2). Percentage of farms using blanket DCT was higher in farms **with automatic milking system** (23%) than in farms with parlor (12%) or pipeline milking (10%).
- Farmers' own experience ($p < 0.05$) was the most commonly reported reason for choosing a particular approach to DCT (Fig 3). Use of blanket DCT, recommended by veterinarians, is likely due to emergence of contagious mastitis in a herd.
- **Microbiological testing of milk samples at dry-off** (Fig 4) was carried out in 82% and 64% of farms that used selective and blanket DCT, respectively. Finnish legislation stresses the importance of microbiological diagnosis before antimicrobial treatment.

CONCLUSIONS

- **Use of DCT in Finland is limited:**
 - ✓ **Majority of farms use selective DCT,**
 - ✓ **Blanket DCT was most commonly used in larger farms with AMS.**
- **A high percentage of farms tested milk samples for mastitis bacteria at dry-off.**

REFERENCES

- [1] Dingwell, et al. 2003. Vet Clin North Am Food Anim. 19: 235-265.
- [2] Dillman, et al. 2014. 4th Ed. John Wiley & Sons, Inc., New Jersey.
- [3] Bertulat, et al. 2015. Vet Record Open. 20, 2, 1.
- [4] USDA. 2016. USDA-APHIS-VS-CEAH-NAHMS. #704.0916.

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