



Field validation of Desintec® Hoofcare Special D for use during the planned nationwide Swiss footrot control program

¹Robin Schmid, ¹Adrian Steiner, ²Salome Dürr, ¹Maher Alsaad

¹Clinic for Ruminants, Vetsuisse-Faculty, University of Bern, 3001 Bern, ²Veterinary Public Health Institute, University of Bern, CH-3097, Liebefeld

Key words

Dichelobacter nodosus, foot bath, footrot, sheep

Aim of the study

The aim of this study was to evaluate the feasibility of elimination of virulent strains (*aprV2*) of *Dichelobacter nodosus* strains from feet of Swiss sheep flocks using the alternative disinfectant Desintec® Hoofcare Special D under field conditions. Additionally, the workload and the number of disinfectant used were estimated.

Material and methods

12 farms were randomly included in this study. The sheep were treated with two footbaths (6% Desintec® Hoofcare Special D, 6%-solution for 10 minutes) per week. The foot of each sheep was examined for clinical signs of footrot and scored according to the BGK scoring system. The successful eradication of virulent strains (*aprV2*) of *Dichelobacter nodosus* strains was confirmed by rt-PCR analysis according to the complete elimination of *D. nodosus* strain with 10% zinc sulphate by Greber et al. (2016). Briefly, the protocol based on careful trimming, applying stand-in foot baths, and identification of infection using a rt-PCR and isolation or culling of non-responders. The total workload included the times (h) of claw trimmers, doctoral student, footbathing and the management load.

Results and significance

The COVID-19 situation (lockdown) did not allow to include more farms and the interruption of research activities at the University of Bern in March 2019 postponed farm visits and therefore data collection for at least 6 months. The successful elimination of virulent strains (*aprV2*) of *Dichelobacter nodosus* strains from the feet of the sheep (100%) were within of 3 to 9.4 weeks (mean=5.8). The table 1 shows the workload and the number of disinfectant used in this study.

Claw trimmer	Doctoral student	Footbathing	Management load	Disinfectant used
2 to 6 h (mean=3.25)	8 to 21.5 h (mean=12.7)	16.25 to 39.5h (mean=28.35)	7.5 to 59.81h (mean=34.5)	2 to 8 containers* (median=4.5)

Table 1: Total workload of n=12 farms.

* A container weights 25kg

Results of this study represent the successful implementation of alternative and environmental friendly disinfectant for the planned nationwide Swiss footrot control program under field conditions.

Publications, posters and presentations

Interviews for journals (Schweizer Bauer, 31.10.2020 and Bauernzeitung, 8.1.2021)

Presentations:

BGK claw trimming course. 4.12.2019, Visp
Alpversammlung Alpe "Erii". 6.3.2020, Lalden
Vorstandssitzung des Schweizerischen Schafzuchtverbandes, 2.6.2020, Niederönz
Kleinwiederkäuertreffen. 13.10.2020, Niederönz

Project 1.19.06

Project duration 01.09.2019 - 31.03.2021 (start of project 01.12.2019)