

# Research Summaries 4

## Hoof trimmer performance on California dairies based on observed practices during therapeutic trimming

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### Introduction

Lameness on dairies is an important issue, with implications on animal welfare and the herd production level. Functional and therapeutic hoof trimming can serve to prevent and treat lameness and hoof lesions. On large California dairies, hoof trimming tasks are performed by in-house employees, outside service providers or both. However, most hoof trimmers (HT) lack formal education on trimming techniques and their performance is often unsupervised. Thus, the objective of this study was to describe HT performance based on observed practices during lame cow treatment on California dairies.

### Materials and Methods

Enrolled dairies (n=23) ranged in size from 800 to 10,000 cows. Dairy workers (n=17) or outside service providers (n=9) performed trimming tasks. Researchers collected information from rear hooves before and after HT intervention from 10 (n=21), 9 (n=4), 8 (n=1), or 5 (n=1) lame cows/dairy. The following practices were observed: a) anatomical location where trimming starts, b) non-therapeutic removal of abaxial, axial or dorsal wall, c) proper axial sole slope (Shearer and van Amstel, 2013), d) undertrimming toe sole (toe white line connection not visible), e) block placement (based on its slope and placement relative to the weight-bearing surface), and f) wrapping open wounds. Also, the flatness of weight-bearing surface (including hoof wall, 2 cm of adjacent sole, and heel pad) and sole surface (from heel to toe) were evaluated using a knife handle. Descriptive statistics were conducted with PROC MEANS and PROC UNIVARIATE of SAS 9.4. (SAS Institute Inc., Cary, NC).

### Results

Eight HT washed hoofs before starting their work, mostly to prevent excessive disk wearing. Hoof trimmers never measured dorsal wall length, hoof angle and sole thickness before or after their intervention. Trimming never started by the apex of the claw (13 HT). Hoof wall was removed without therapeutic intention on at least 70% of the hooves (16 HT). Twenty-two HT improperly performed axial sole slope on most (> 70%) hooves. Toe hoof sole was under-trimmed at least on 20% of the hooves (6 HT). Blocks were used on 20% to 100% of the cows treated, but almost 44% of the time they were placed improperly, especially relative to the weight bearing surface. All HT except 1 used flexible wraps for open wounds on 10% to 56% of the treated cows. After HT intervention, weight-bearing surface of non-lesion hooves was uneven on at least 70% of the hooves (18 HT). At least 70% of the time, after HT intervention, sole surface (from heel to toe) was left either uneven (15 HT) or flat (6 HT). One HT opened 20% of the wounds solely using the disk.

### Significance

Improper performance of hoof trimming techniques such as unnecessary wall removal, improper block placement, and inadequate axial sole slope could potentially deceive the purpose of therapeutic trimming and increase lameness. There is an opportunity to improve HT performance on California dairies through education.