Swedish Sire Evaluation of Hoof Diseases Based on Hoof Trimming Records

- Leg and hoof disorders cause lameness
- % of culled cows
  Swedish Red 5.5
  Holstein 6.8
- Recruitment costs increase
- Animal welfare – Increased suffering of the cow

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Means of improvement

SHORT TERM

- hoof trimming
- metabolic balance
- environmental improvements

LONG TERM

- Genetics
  conformation
  hoof diseases

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Hoof Trimming Recording Scheme

- 2003 an enhanced system
- Training of hoof trimmers
- Recording of findings by hoof trimmers in field
- A clean copy scanned
- Stored in the cow database

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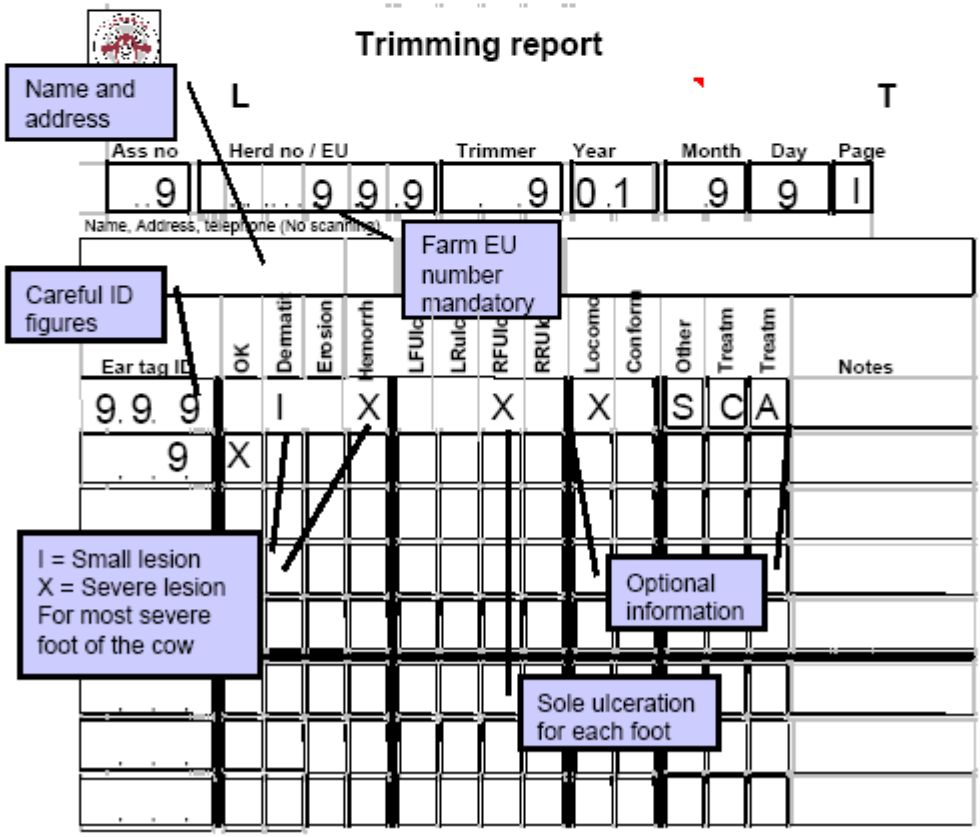
Instructions for trimming report aimed to be scanned

- A clean copy (first page under the original) of the report is used for scanning.
- Figures and number must be written carefully within the box.
- Numbers could be either right or left oriented
- Dirt or notes out of the scanning area (boxes) will not disturb scanning.
- When mistakes are made just correct the faulty box or cross over the cow ID
- Name and address is voluntarily as long as the EU number is correct. Name and address could however be practical to have on at least the first form in a series.
- It is of most interest to record the most common lesions on a herde basis. For ulceration which is a more severe disease it is of more interest for the farmer and foot trimmer to know which foot that is affected.
- Grading is just / for a slight lesion or X for a severe lesion. That means that a / can be incresed to a **X** during the trimming if the lesion becomes worse
- Other less common lesions and diseases as well as treatments can be noted by more experienced foot trimmers. Codes are printed according to special list.



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Dermatitis (digital or interdigital)

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Heel horn erosion

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Sole haemorrhage (sole or white line haemorrhage)

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Sole ulcer (ulceration of sole or white line area)

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Percent of hoof lesions recorded by Swedish hoof trimmers

Number of records	307,543
Dermatitis	7.3
Heel horn erosion	21.1
Sole haemorrhage	26,0
Sole ulcer	4,5

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The goal of present study

to see if the **hoof trimming records** were **suitable** for the **genetic evaluation** of sires for **hoof diseases**

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Number of 1st lactation cows and sires included in the analysis

	SRB	Hol
Sires	1,103	1,852
>49 dau.	52	92
Cows	33,004	37,541

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Standard deviation of EBVs for sires with > 49 daughters

	SRB	Hol
Dermatitis	5.4	5.0
Heel horn	6.8	5.8
Sole haem	7.0	6.0
Sole ulcer	4.0	3.9

Correlation between EBVs between divided daughter groups

	SRB	Hol
# of sires	45	75
Dermatitis	0.66	0.48
Heel horn	0.75	0.46
Sole haem	0.43	0.39
Sole ulcer	0.76	0.51

SUMMARY

- The quality of hoof trimming records is very god
- Genetic evaluation of sires for hoof diseases is possible
- Correlation with leg and feet conformation seems to be low
- Economic value need to be assessed

SUMMARY

- Genetic analysis is recommended in order to utilize data more efficient
- The value as early predictors need to analyzed

Finally

Many thanks to all hoof trimmers and hoof specialists involved in the project

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