PERSPECTIVES FROM A SURVEY ON

Virtual and electrical fences in Sweden and Norway

Farmers' experiences and perceptions

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Background photo: Frida Petters

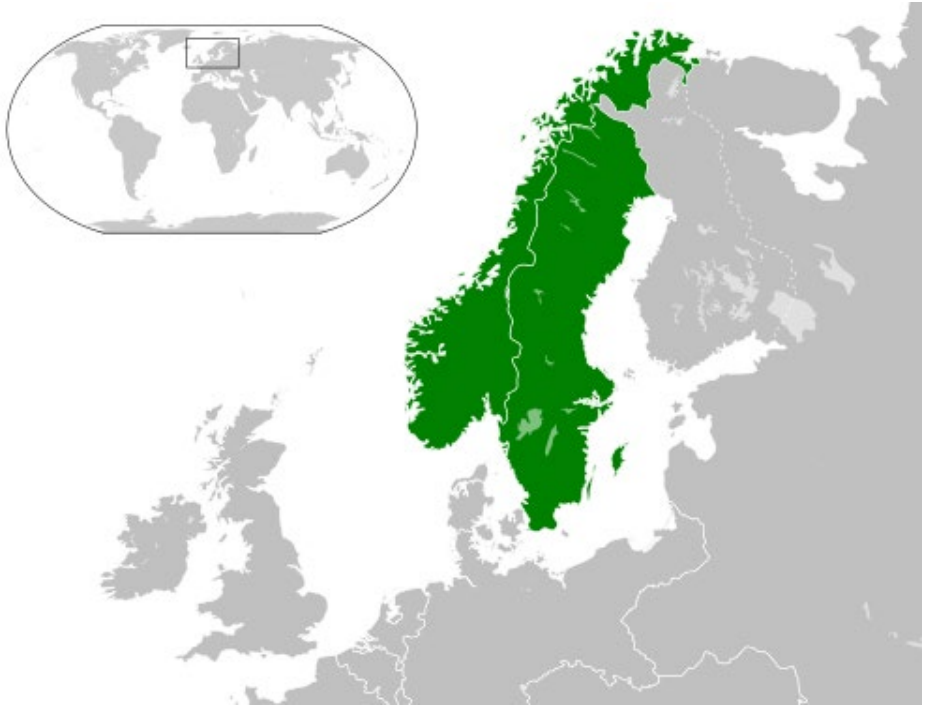
Frida Petters

- M.Sc. in Animal Science + Agronomy from Swedish University of Agriculture (SLU)
- Project Manager at RISE Research Institutes of Sweden
- Some ongoing research projects
  - Virtual fencing for enhanced biodiversity
  - Virtual fencing's effect on work environment of farmers
  - Virtual fencing in forest pastures
  - Farm animal welfare knowledge at farm-level in Sweden

Photo: Carin Pihl

Background

- VF technology has been commercially available in Norway since 2018
- VF not allowed in Sweden, last review of the matter in 2019
- Interest amongst Swedish farmers is huge and has become a political matter
- Pilot research studies are being conducted in Sweden by RISE
- News on 29th of Aug 2024 – state-appointed investigator suggests approval of VF



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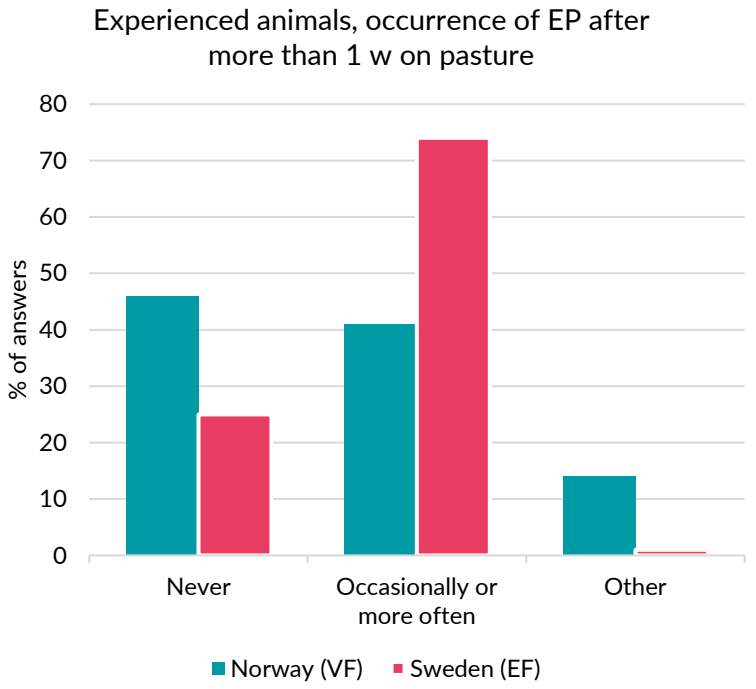
Objectives

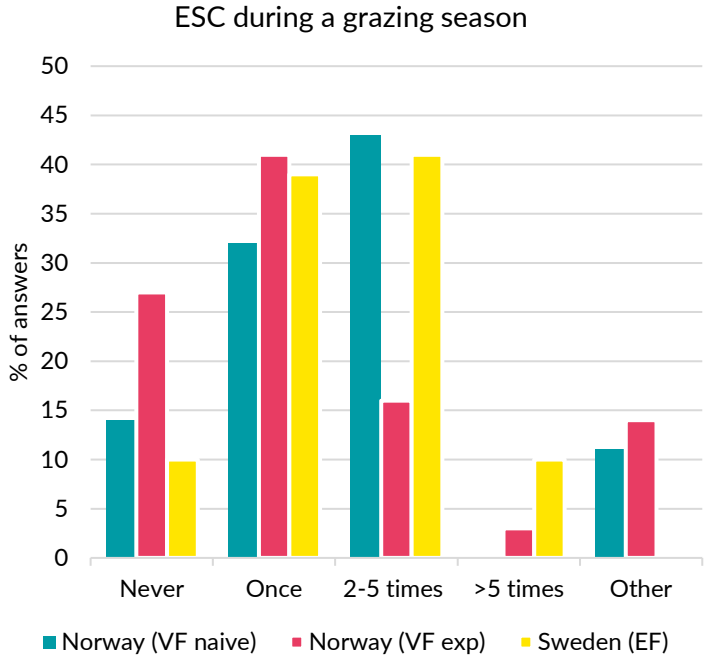
- Gathering practical experiences and perceptions from active VF using cattle farmers in Norway
- Investigating Swedish farmers' interest in VF adoption and experiences with traditional EF

Methods

	Norway	Sweden
Type	Online questionnaire	Online questionnaire
No. questions	45	43
Open	21st Feb - 20th March 2024 (4w)	21st Aug -5th Sept 2023 (2w)
Distribution channels	Facebook group for VF, researcher network	Facebook groups for extensive cattle farmers
Target group	VF using cattle farmers	Cattle farmers
No. respondents	42	80
Average response time	10min 17 sec	20 min 43 sec

Electrical pulses (EP) and escapes (ESC)

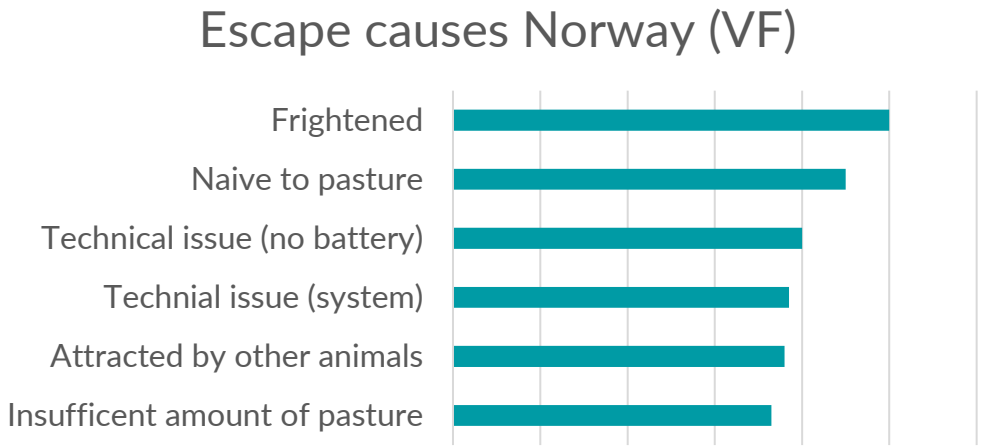


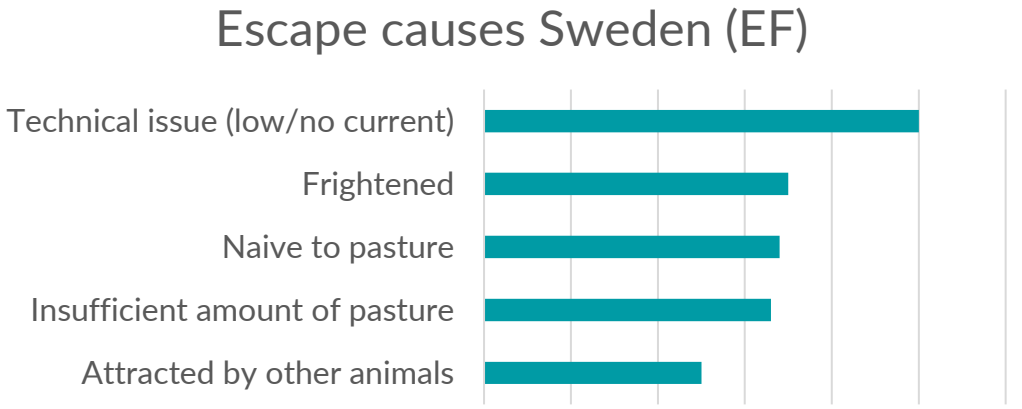


- Other – ”Less than 1 but more than 0 on average” (NO)

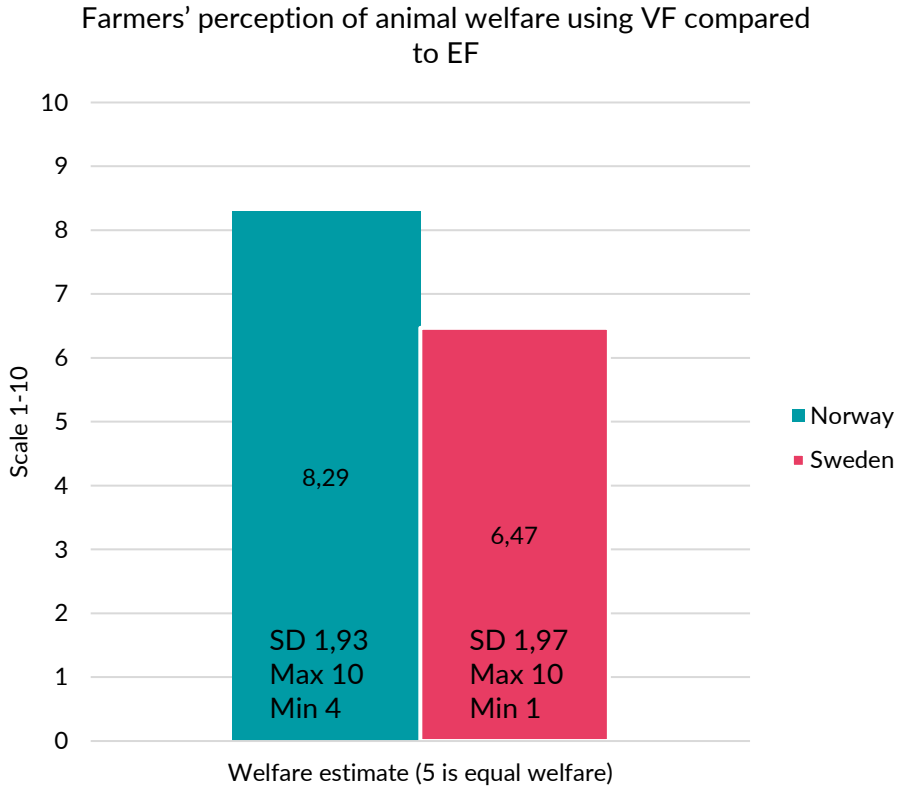
Causes of escape (ranked)

- Respondents ranked causes of pasture escapes in cattle
- Low voltage or electrical malfunction is the most common cause of escapes in EF fences
- Low access to fresh grass is the lowest ranked in VF systems





Welfare

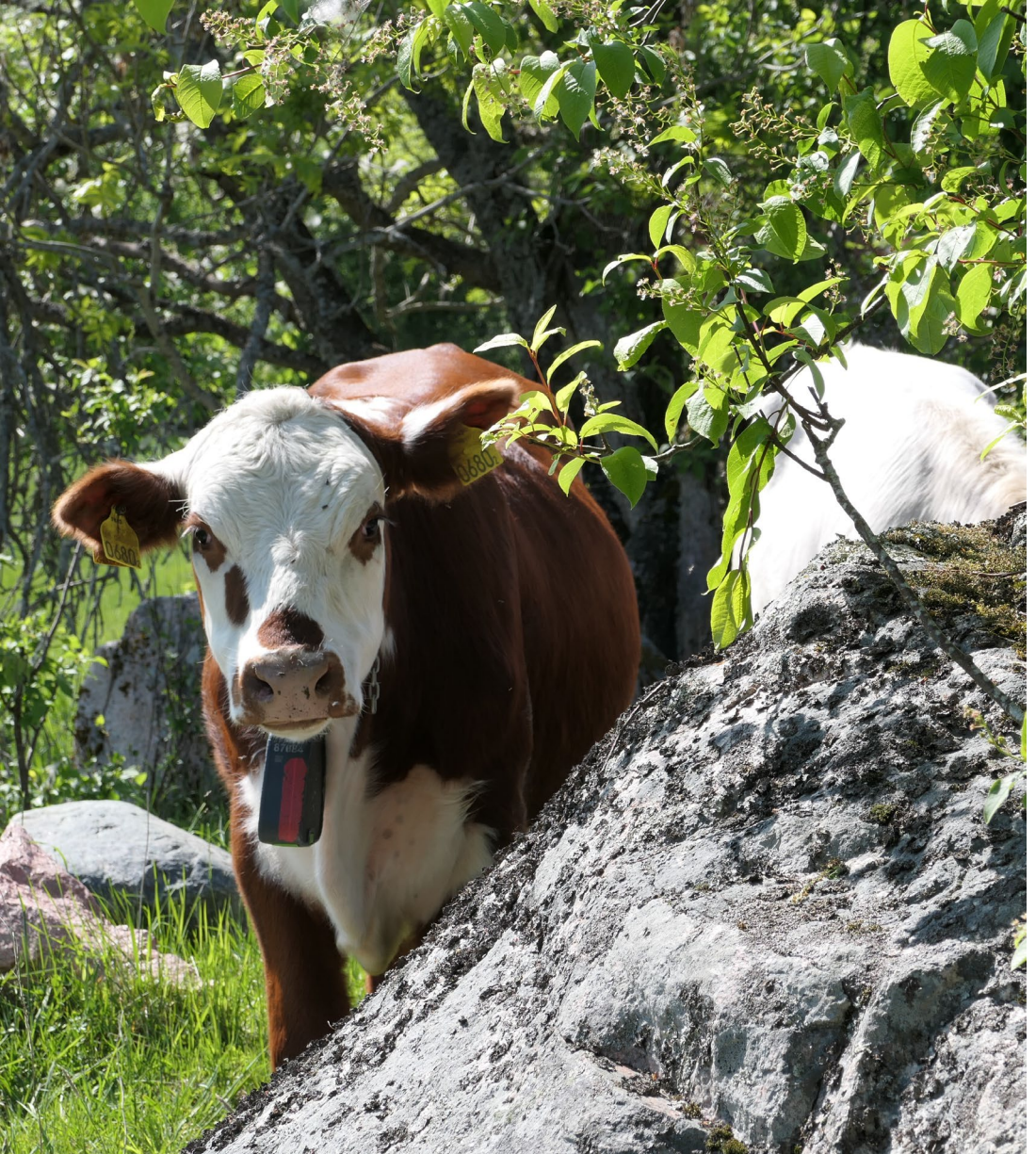


- Time to learn VF (NO) – 3,5 days (SD 1,59, min 2 max 8)
  - Over 62 % had experience of "slow learning individuals"

Discussion

- Swedish respondents – biased?
- Norwegian VF users rated percieved animal welfare of VF vs EF higher than Swedish non-users
- 76 % of Swedish farmers reported seeing EP after more than one week on pasture to some extent – what does this mean?

Photo: Frida Petters



Conclusions

- VF users report less escapes and number of electrical pulses received after more than 1 week on pasture
- Actual users of VF rated animal welfare compared to EF higher than non-users
- Research on cattle's learning and adaption to electrical fencing is scarce and needs further investigation

Photo: Frida Petters

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Thank you!

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