



# Stress during manipulation of cattle on farms

## Aims

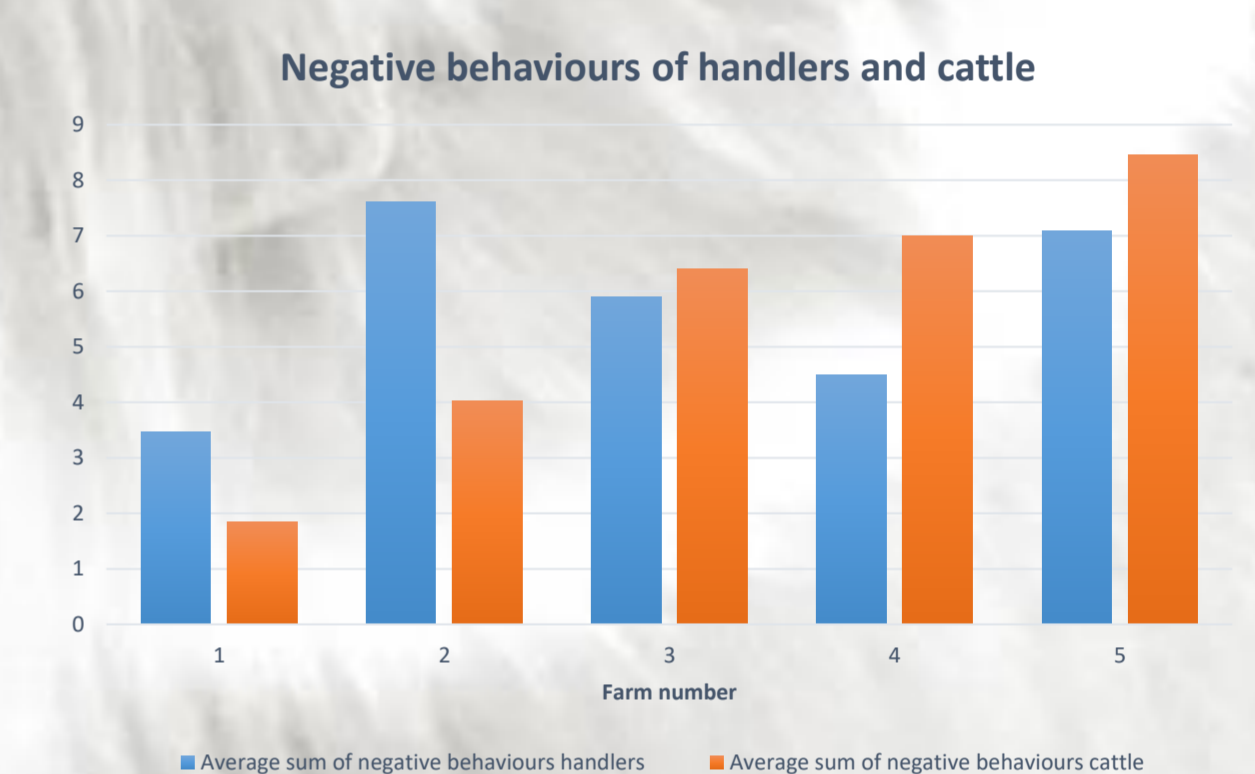
- 1) Can observed stress behaviour of beef cattle (*Bos taurus*) during on-farm handling be related to the behaviours of the caretaker?
- 2) How do farmers evaluate the degree of stress during handling?

## Methods

- 1) Films: on 5 farms, the farmers and the animals (average: 18.6, range: 2-46) were filmed during on-farm handling to examine the relationship between human and cattle behaviours and traits. A mixed linear model was performed to study the effect of breed, age, number of people, number of negative behaviours of the handler (running, hitting, yelling, standing in pressure zone) on the observed negative behaviours of the animals (balking, running, tail switching, vocalising, defecation, open mouth breathing, low head threat, butting, slipping).
- 2) Interviews: farmers (n=25) were interviewed to study their attitude towards their animals and their behaviours during handling in cattle.

## Results of the films

- There was a significant positive relationship between the observed negative behaviours of the handlers and the observed negative behaviour of the animals ( $p < 0.001$ ).
- The higher number of people present during the manipulation, the higher number of negative behaviours were observed ( $p < 0.0007$ ).
- The group of younger cattle (0.5 – 1 year old) showed significantly more negative behaviours than the older animals ( $p < 0.01$ ).



## Results of the interviews

Following average numbers were scored:

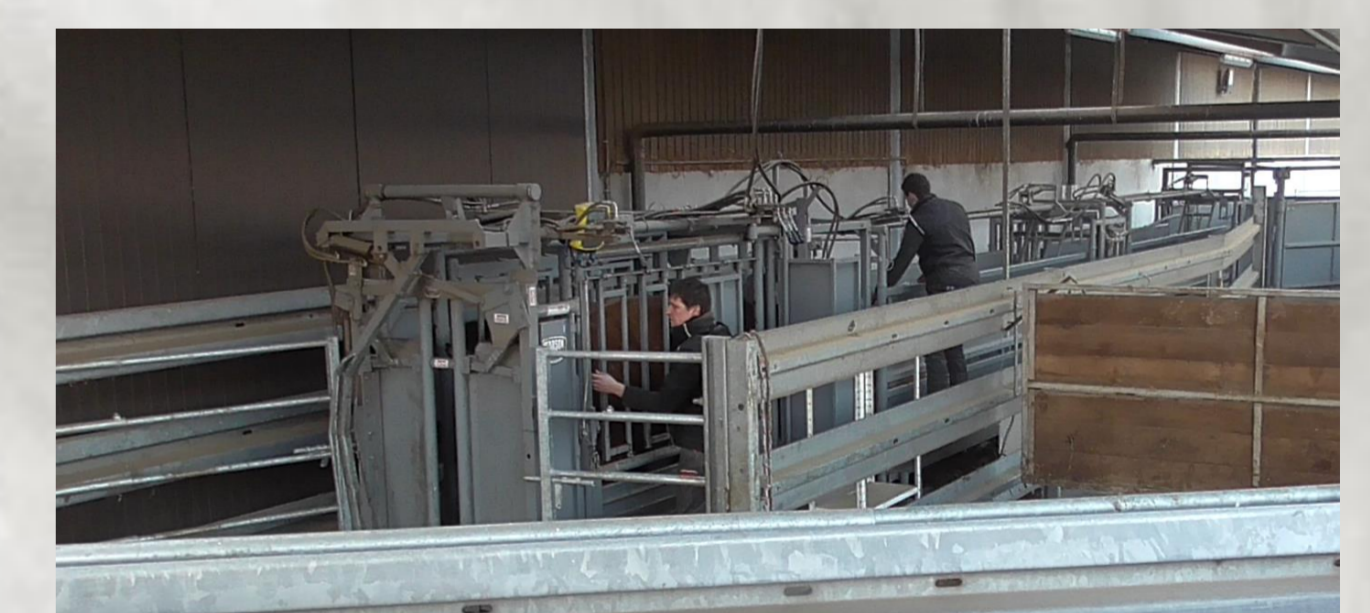
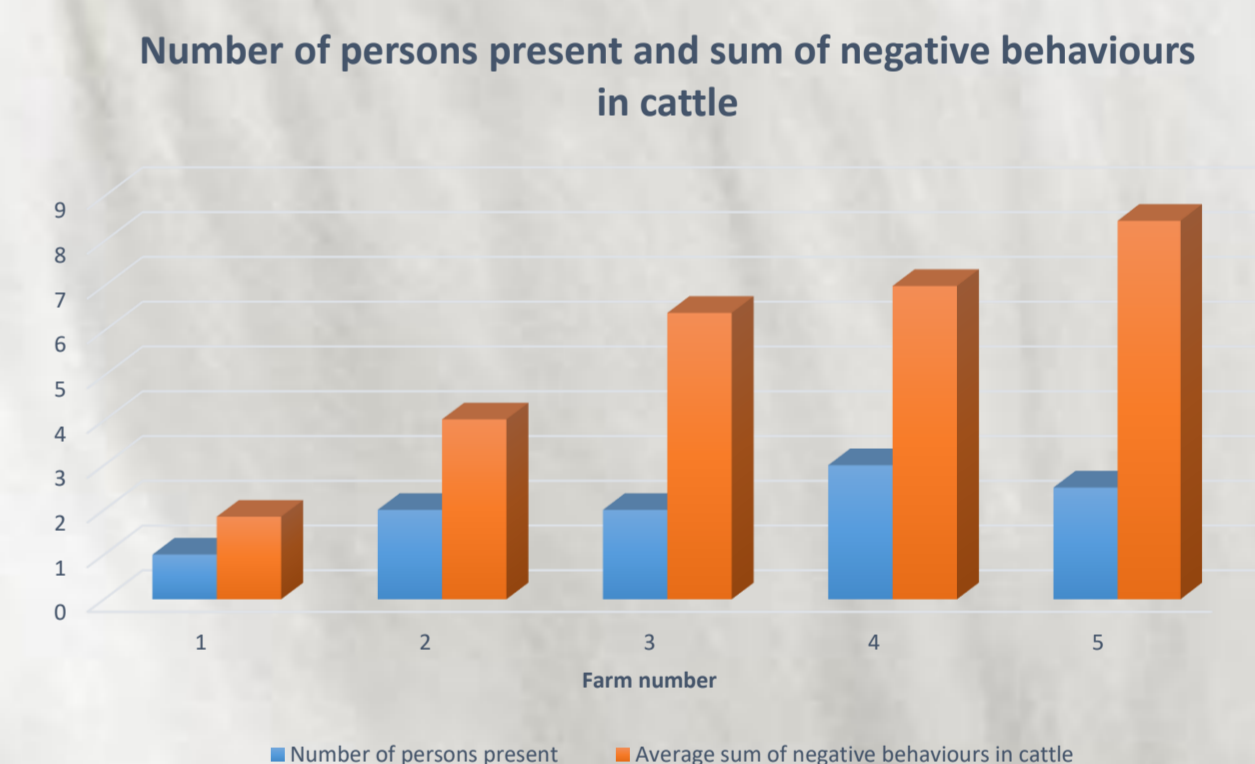
The 25 interviewed farmers had 170 animals that were manipulated (eg. weighed, ear-tagged, vaccinated) 4 times a year (range: 1-10). On average there were 2,24 persons present during handling (range: 1-4). On average, the animals grazed on 59 ha (0-500) and remained outside during 7 months (young cattle), 4 months (bulls) and 8 months (cows)(range: 0-12), with 4,8 visual inspections per week (range: 1-7). The animals were touched on average 0,92 times per week.

On 10 farms, a special handling box was present.

On 13 farms there was a fixed driving installation (eg with races towards chute)

On 17 farms there were mobile driving installations (eg mobile fences)

On 18 farms, the handlers used a stick for driving; on 2 farms an electric prod was used.



Questions scored on a scale of 0 (very low) to 5 (very high)	Average score	Range
How high would you score the ease of approaching your cattle?	2,08	1-4
How high would you score the ease of handling?	2,2	1-5
In case you have a handling box, how often do the animals refuse to enter the box?	2	0-3
How high would you score the animals' restlessness during handling?	2,8	1-4
How stressful do you estimate the manipulations to be for your cattle ?	2,76	1-5
How bad do you feel when the handling did not go smoothly for the animals?	3,48	1-5
How high would you score the negative impact of stress on productivity and meat quality?	3.84	1-5

## Conclusion

Similar to other studies, we found that number of handlers and handler behaviour can strongly affect cattle behaviour. Low-stress manipulation is a concern to the Flemish farmers. Education about the animals' behaviour and affect in relation to human behaviour and infrastructure design may help the farmers to reach this goal.

## Odisee University College

Agro- and Biotechnology, Ethology and Animal Welfare,  
Hospitaalstraat 21, 9100 Sint-Niklaas, Belgium  
Questions? Mail: hilde.vervaecke@odisee.be

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