

Beef cattle in a mobile outdoor system during winter – general and excretory behaviour



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Background

Grazing cattle is needed to preserve the semi-natural grassland

Weather shelter must be offered to cattle during winter

Traditional systems for winter keeping has become expensive



Photo: Jonas Jung

”Animal-driven sustainable beef cattle production systems”

The objective of the project was to work out a full-scale sustainable beef cattle production system adapted to Swedish winter climate

With potential to

- get full cost coverage including buildings and labour
- promote good animal welfare
- reduce nutrient losses
- promote good working environment

The aim was to...

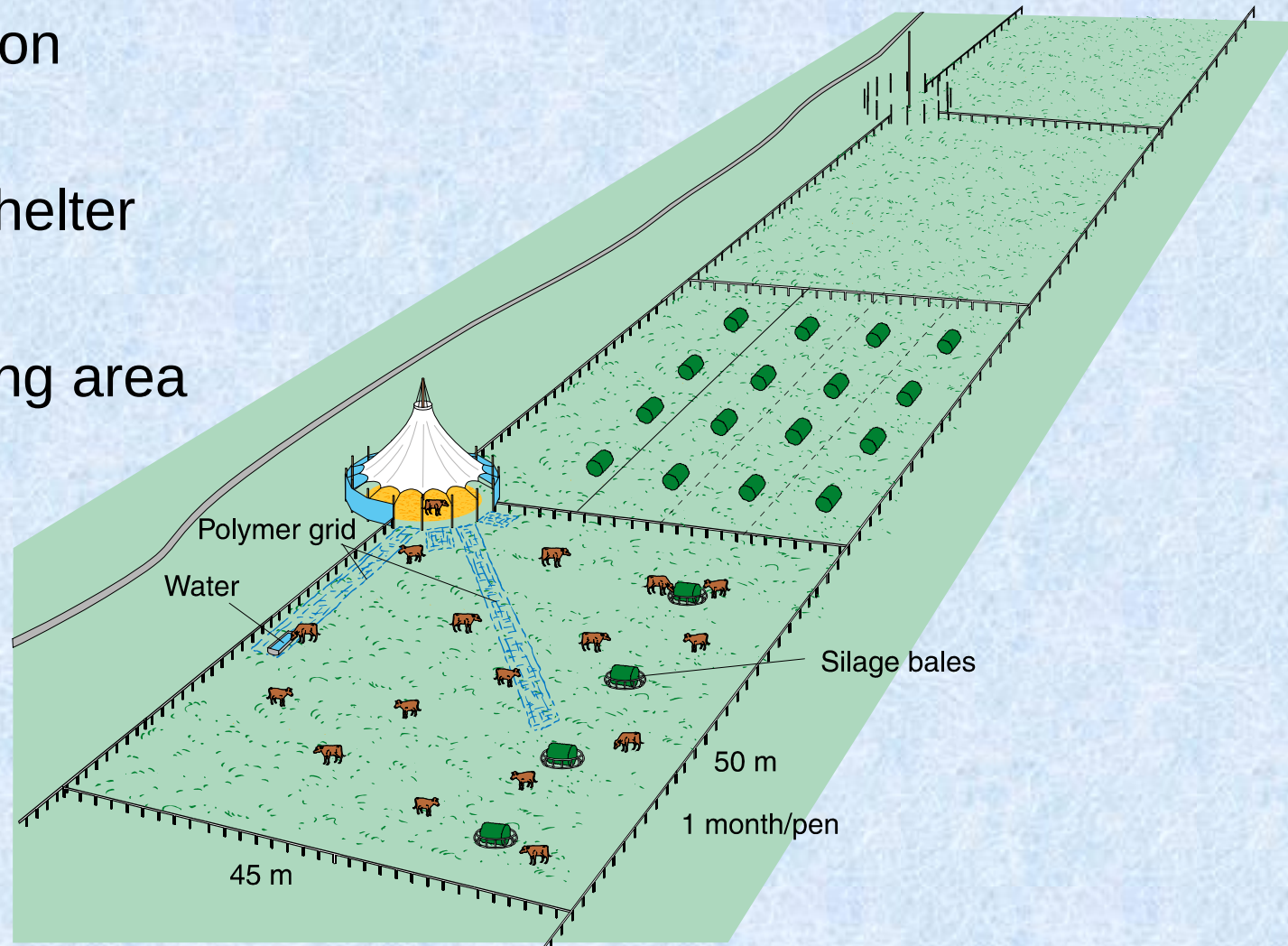
- Investigate behaviour of 17 heifers in relation to their use of resources
- Investigate where manure and urine were dropped



The mobile system

The idea

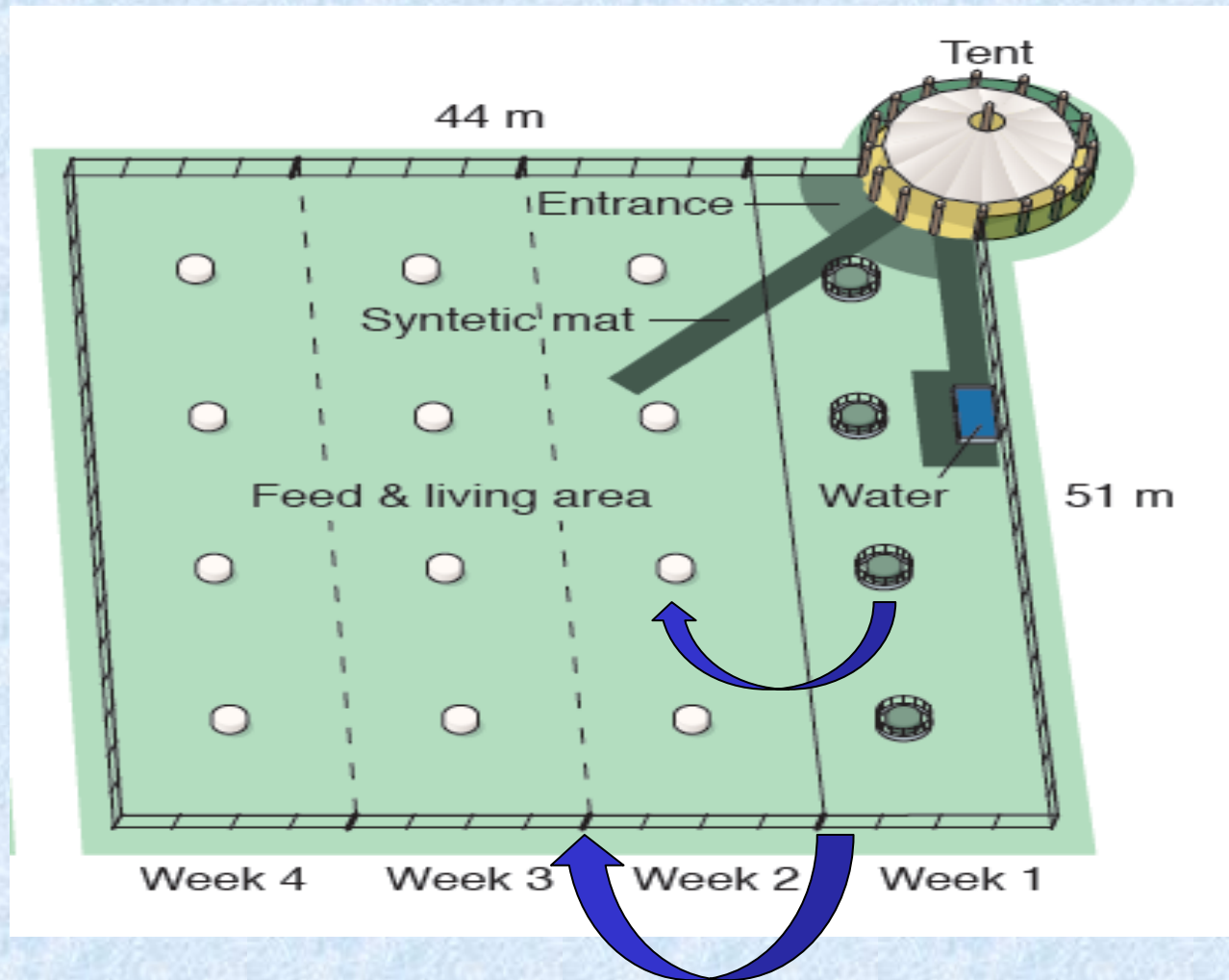
- Part of crop rotation
- Mobile weather shelter
- Mobile feed & living area



Material

This study

- Arable grassland
- 17 pregnant beef cattle heifers
- 4 weeks per pen
- 750-2250 m²

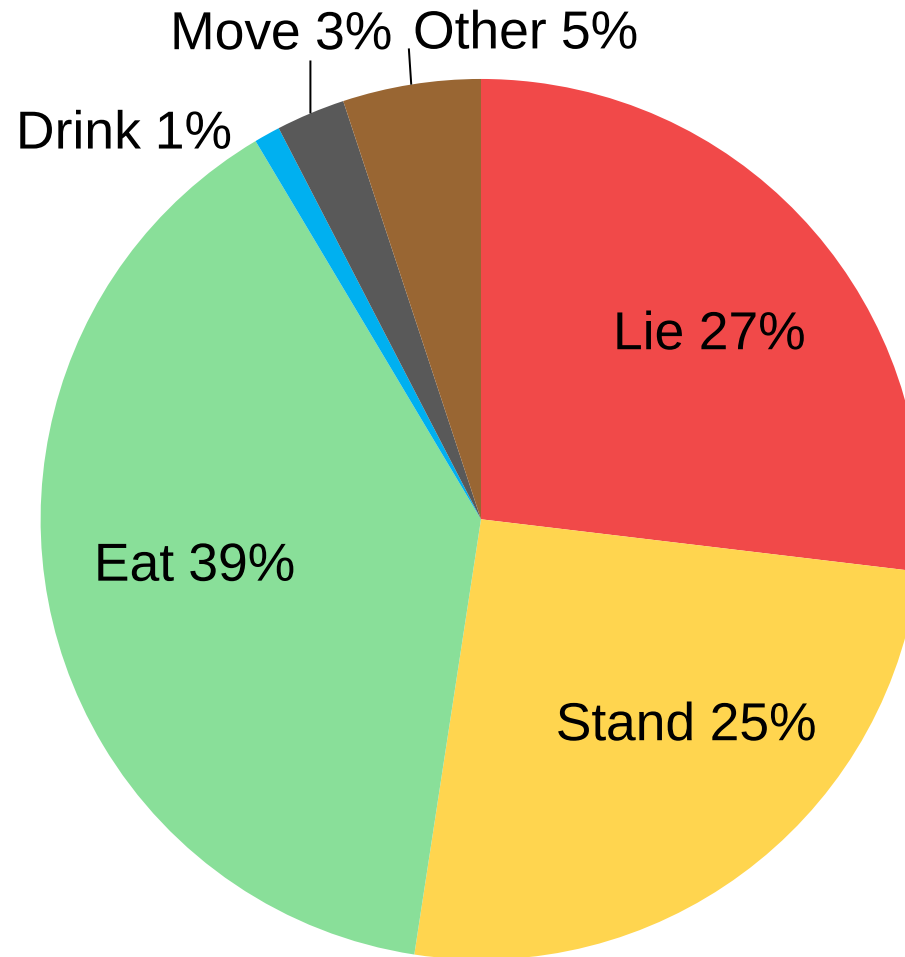




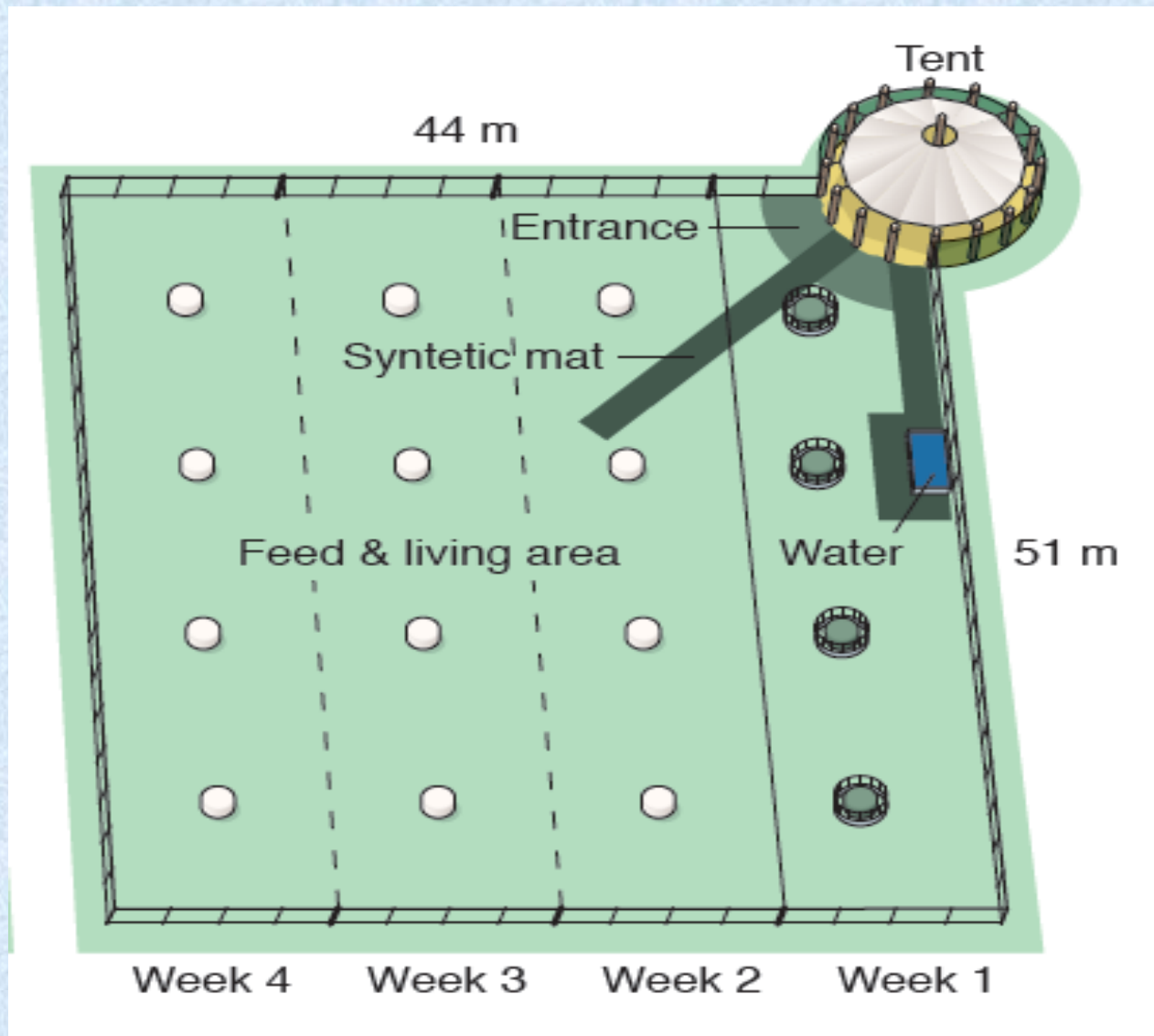
Method

- Commercial farm in Sweden, February – March
- Behaviour studies during day-time (7am – 5pm)
- 10 h per week for 6 weeks
- Every 15 minutes
 - Number of heifers in each visually sub-area
 - Type of behavior
- All defecation and urinations was recorded on a map over the pen (7am -5pm)

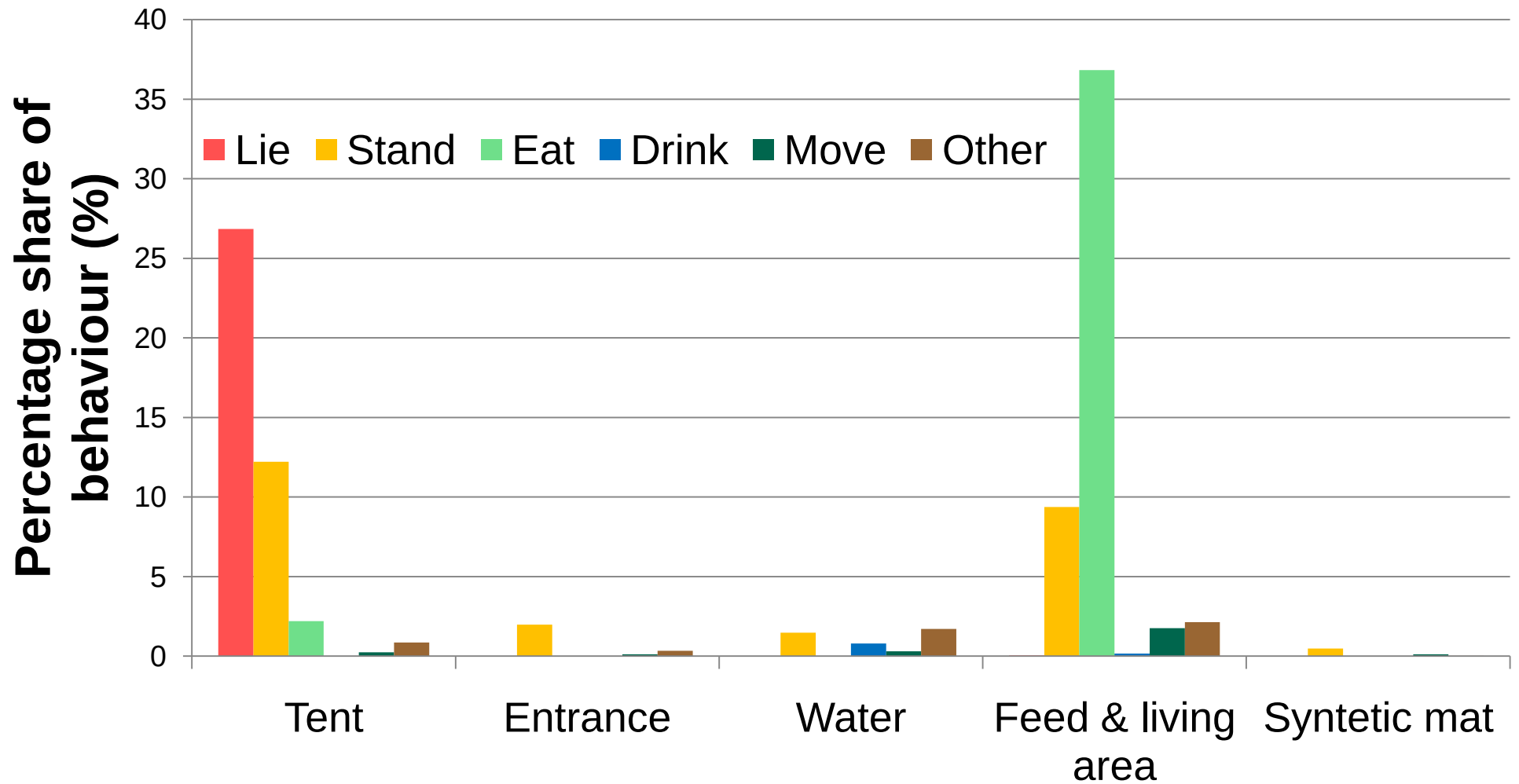
How was the behaviour divided?



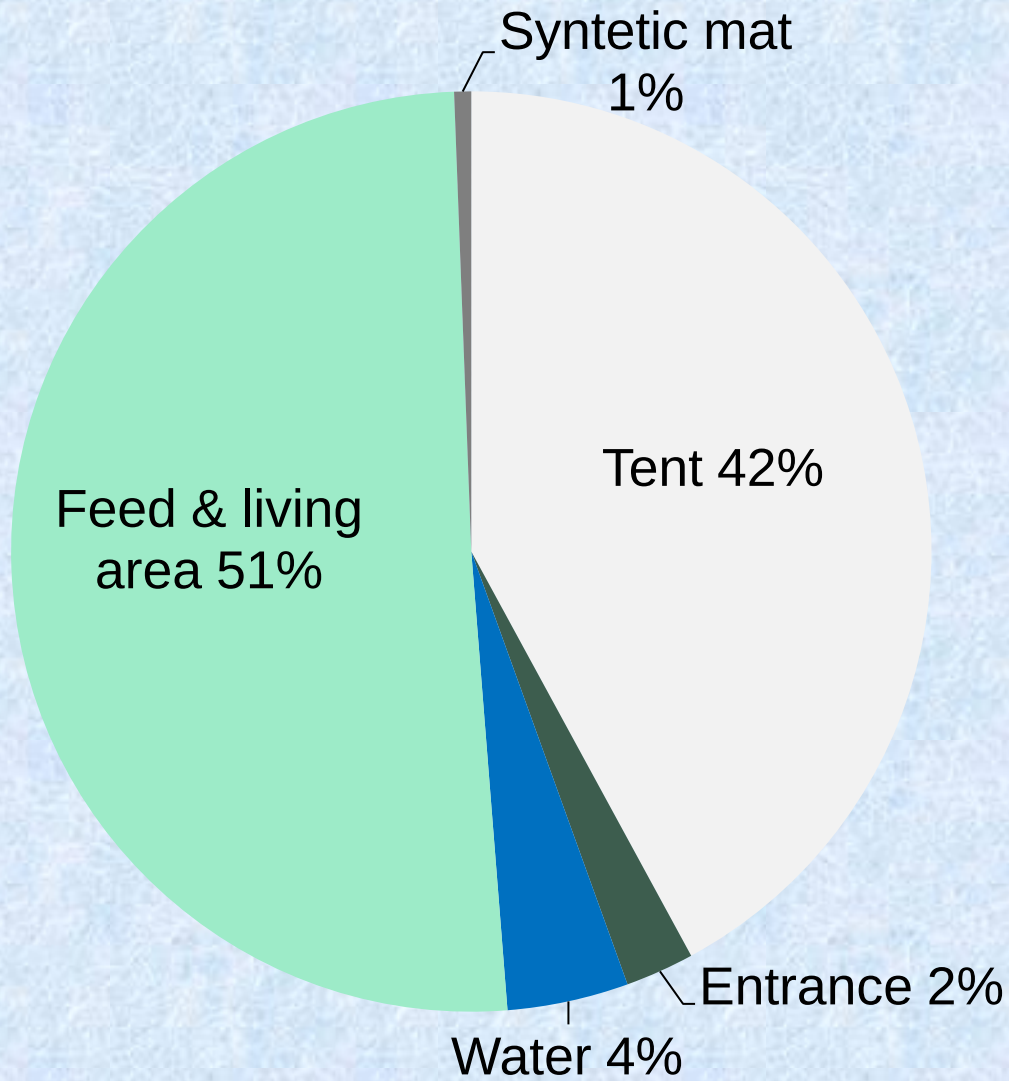
Visually classification of pen (sub-area)



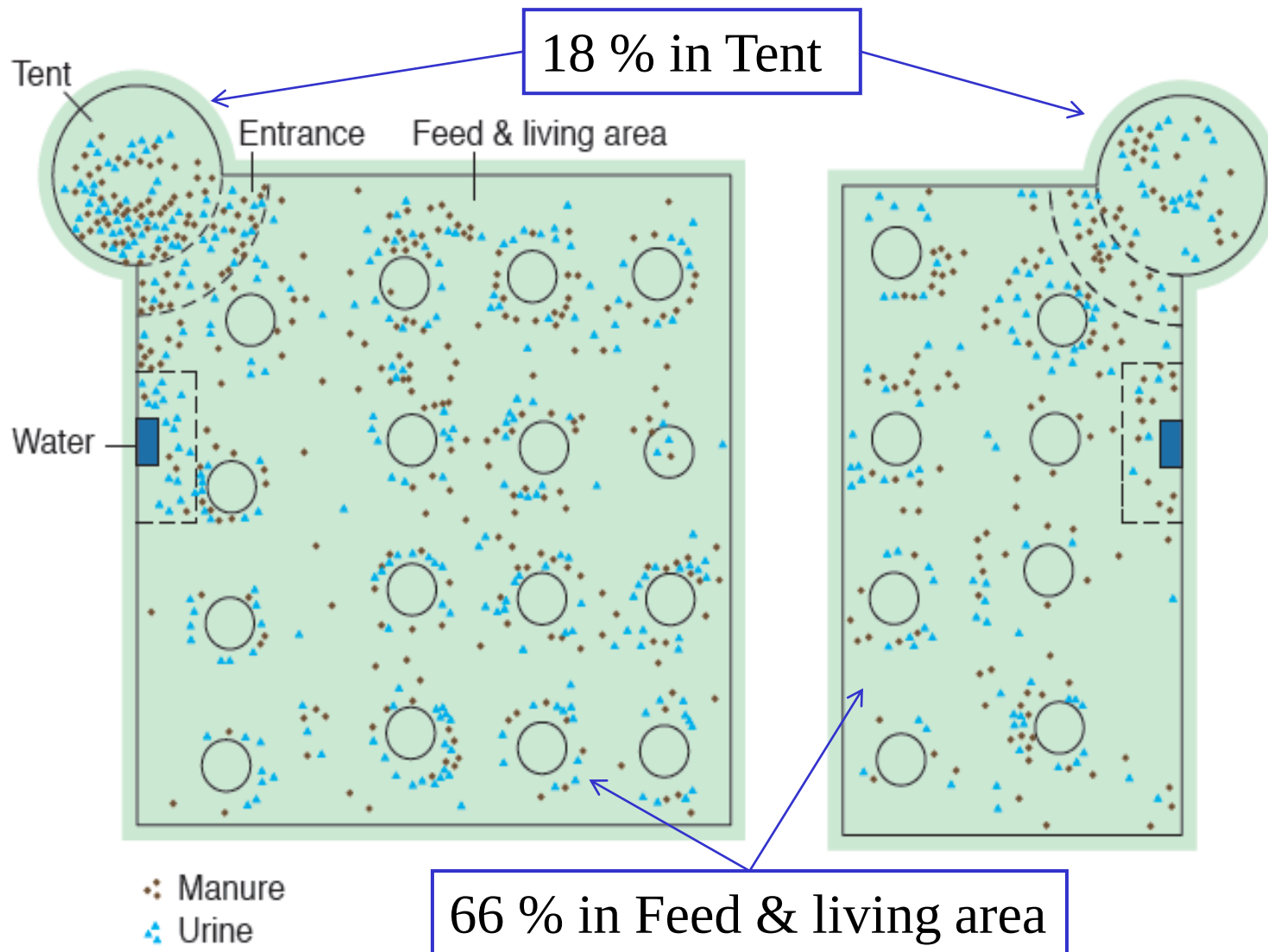
What behaviour in what sub-area?



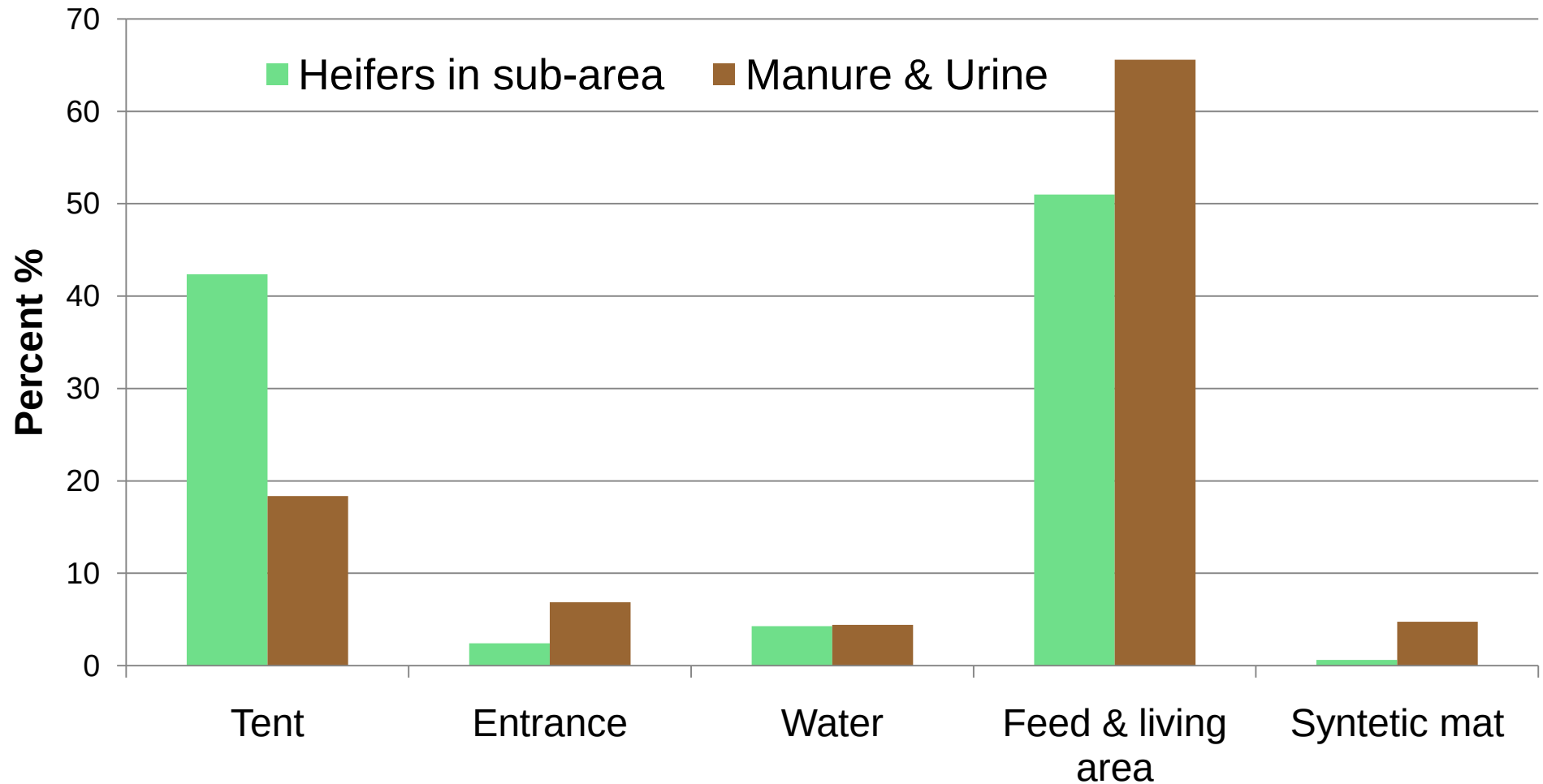
Heifers per sub-area



Spreading of manure & urine



Heifers per sub-area vs. spreading of manure and urine



Conclusion

- The results indicate that in this case-study all heifers in this system had unrestrained access to weather shelter and feed
- By moving feed-racks weekly defecation and urination were spread reasonable evenly over pasture, without point-loads and decreased risk of plant nutrient losses



Thank you!



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