

The Natural Pig Toilet

Effects of a natural environment on elimination behaviour in domesticated pigs

(*Sus domesticus*)

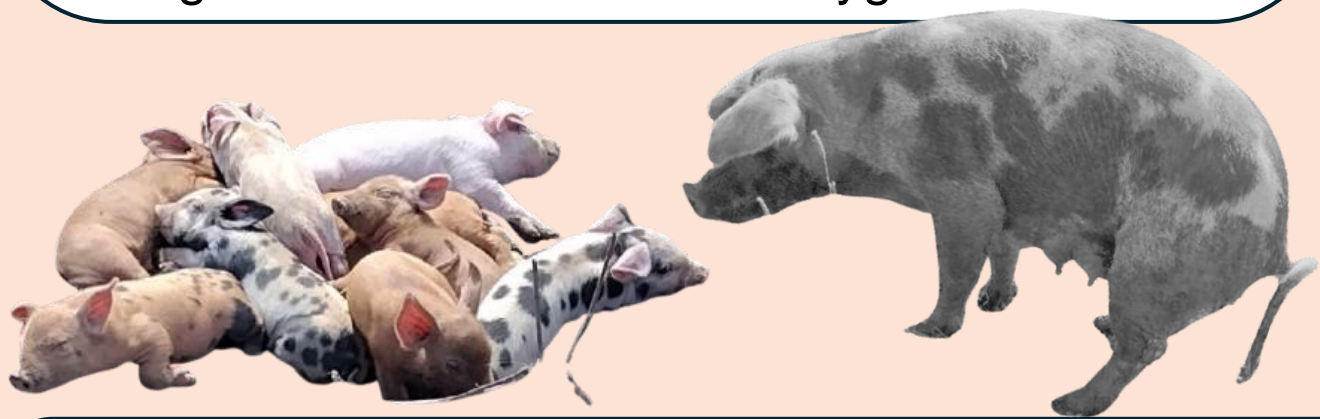
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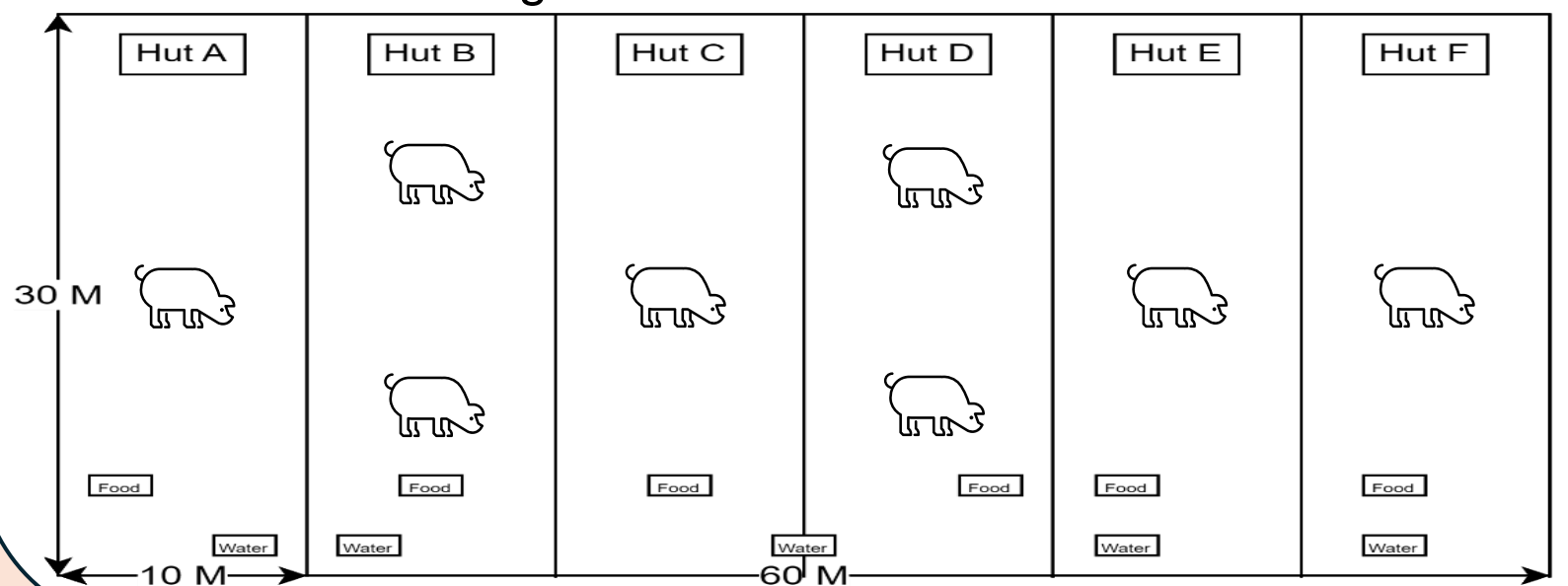
Introduction

Understanding elimination, the expelling of bodily wastes, and behaviours related to it is important for improving pig welfare and hygiene. I investigated the behaviours pigs express before eliminating and their elimination site preferences in a more natural environment compared to a typical commercial farm. Finding a preferred substrate and location where pigs eliminate could enhance welfare by encouraging pigs to eliminate in specific areas, making waste management more efficient and hygienic.

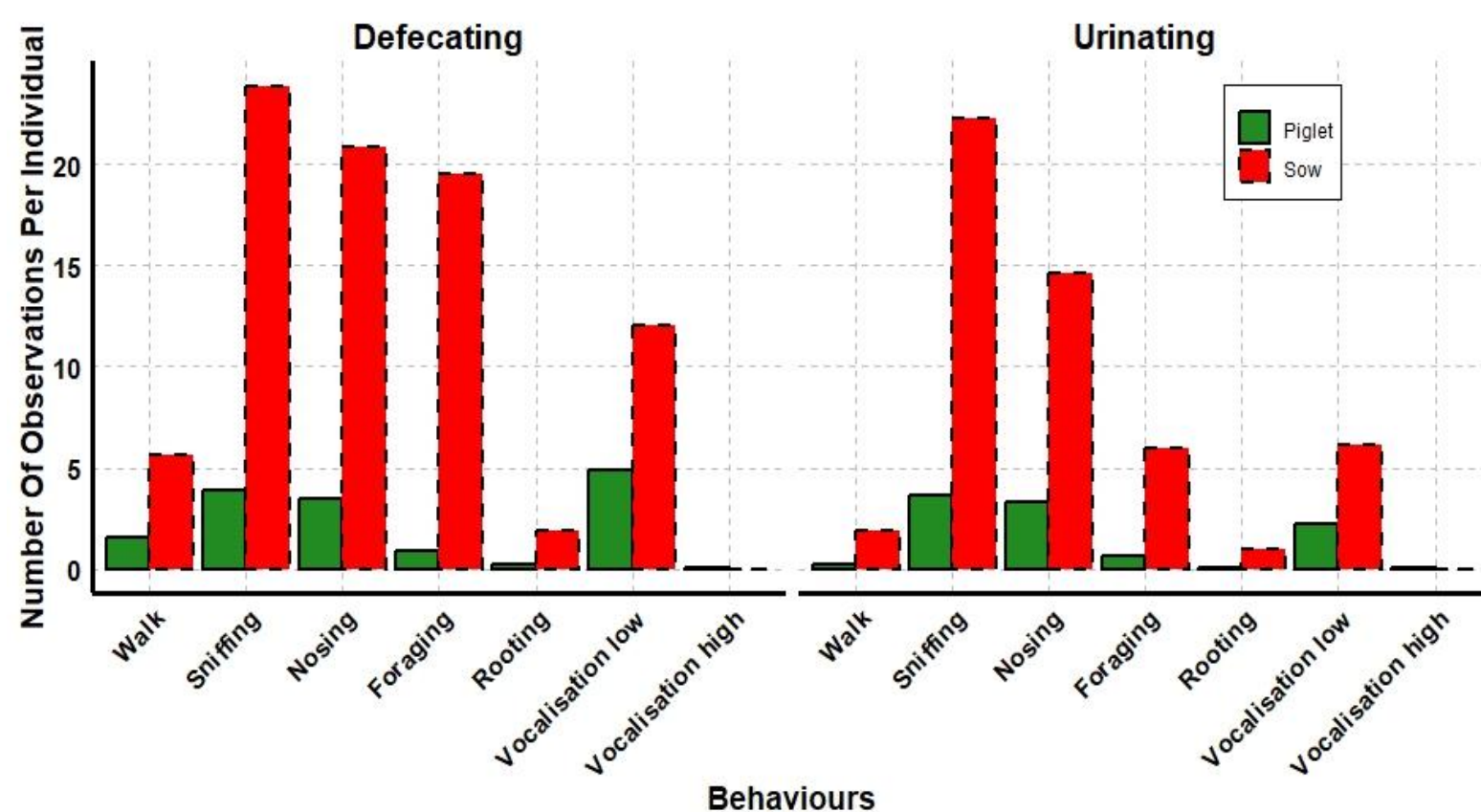


Materials and Methods

- Study performed at Ängavallen Farm in Skåne, Sweden
- Old cropland, untouched for 5 years
- 8 sows, 36 piglets spread across 6 pens
- Data collection occurred during June 24 – August 23 2024
- Behaviour sampling on a group level basis
- GPS used to register elimination sites

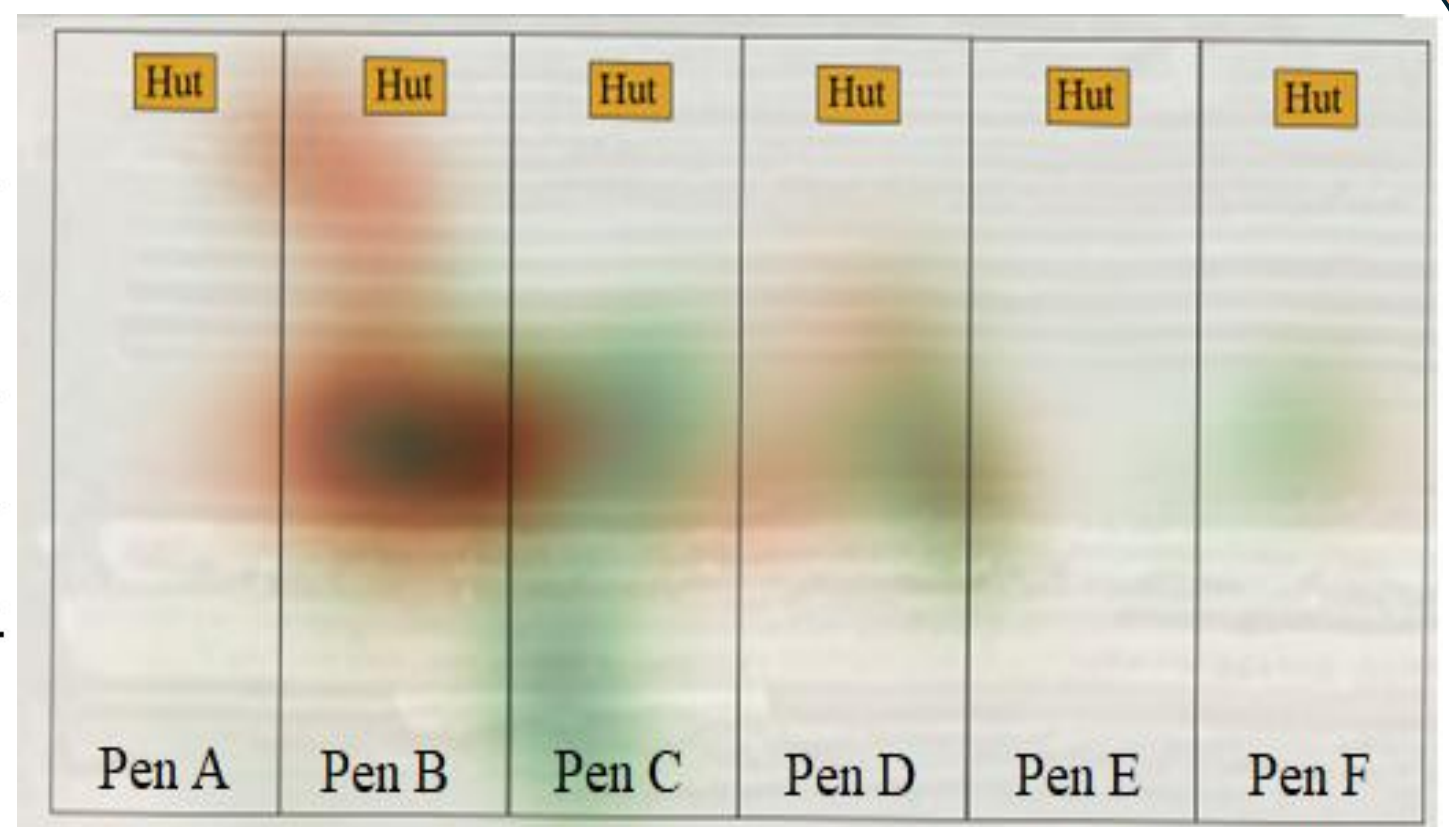


Results



Normalised number of observed behaviours of piglets and sows before defecation and urination.

For sows and piglets, sniffing and nosing were commonly expressed behaviours. Sows expressed foraging behaviour more frequently before defecation. Piglets vocalised more frequent before defecation.



Combined heatmap of sow (red) and piglets (green) elimination events across six pens.

A high concentration of eliminations occurred in the central pen areas, especially in Pens B and C. Some additional hotspots appeared near the huts and the sides of the pens.

Discussion

I observed pigs in a natural outdoor setting and found explorative behaviours.

Sows and piglets mainly expressed explorative behaviours, such as sniffing and nosing, before elimination. Foraging in sows before defecation may relate to easier movement and food access. Increased vocalisations in piglets is likely due to social interactions, as piglets often stayed together

Heatmaps show spatial preferences.

Many elimination events occurred in the central pen areas, possibly influenced by olfactory reasons and the lack of conspecifics to move away from. Piglets eliminating in the southern part of Pen C may be due to increased vegetation cover. These insights can help with the further understanding of pig behaviour regarding elimination and can aid future studies that investigate the elimination behaviour of pigs.

