

BEHAVIORAL RESPONSES OF HOLSTEIN COWS TO MATS COMPOSED OF INTERLACED COLORS

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INTRODUCTION AND OBJECTIVE



Understand how chromatic stimuli modulate **locomotor & exploratory responses** of experienced animals.

Consider dichromatic cattle vision and welfare impacts.

MATERIALS & METHODS



SUBJECTS:
6 Lactating
Holstein cows



LOCATIONS:
Tested individually
and in groups,
in familiar (FA) and
unfamiliar (UA)
areas



STIMULI:
Nonwoven fabric
mats with interlaced
stripes: Lilac/Red,
Lilac/Black,
Lilac/Yellow



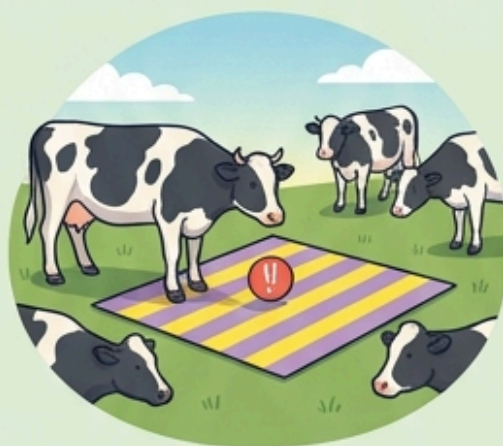
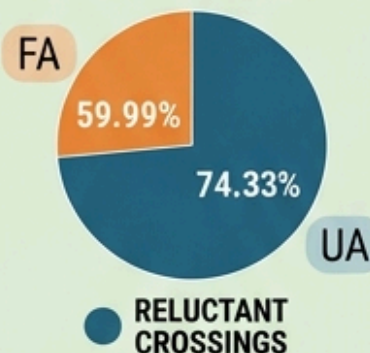
**BEHAVIORS
OBSERVED:**
Crossing
Reluctant crossing
Exploration
Retreat
Attempts to jump



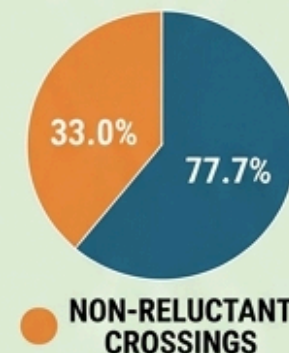
ANALYSIS:
Nonparametric
Kruskal–Wallis
and Nemenyi tests

RESULTS AND DISCUSSION

GROUP BEHAVIOR ON LILAC-YELLOW MAT



INDIVIDUAL BEHAVIOR ON LILAC-YELLOW MAT



- Adult cows generally showed confidence crossing obstacles, regardless of color or environment.
- Differentiated behavior on Lilac-Yellow mat: **High reluctant crossings** in groups.

- Collective hesitation suggests **contrast** between easily perceived yellow and low distinction lilac creates depth illusion.
- Modulates **spatial perception** under social influence.

CONCLUSIONS

- Although experienced adult cows show lower sensitivity to visual stimuli, the **Lilac-Yellow pattern alters behavior**.
- Reinforces that visual contrasts and group dynamics affect management.



FUTURE WORK / REFERENCES

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