

# Burlap and Buddies: Enrichment Options to Reduce Weaning Stress in Piglets

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University  
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# Overview

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**Introduction** – What we did and why

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**Methods** – Experimental design and data collection

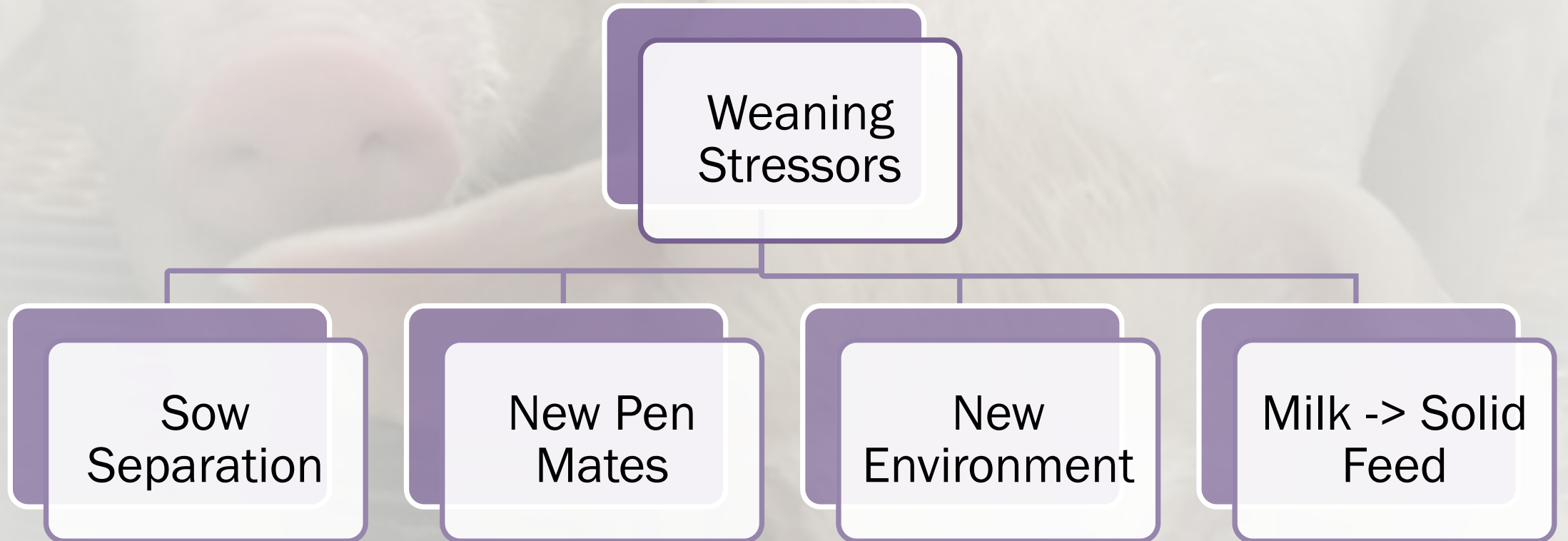
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**Results & Discussion** – Performance, health, welfare, & behaviour

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**Implications** – Meaningful information for the industry

# Introduction



# Objectives

Determine if:

- Social or object enrichment is beneficial
- Social and object enrichment interact to improve piglet welfare

**Social and/or object enrichment pre- and post-weaning would improve piglet performance, behaviour and welfare around weaning by reducing aggressive behaviours among weaned pigs.**

# Methods

- Commercial sow barn
  - 6,000-head sow barn
  - 4 farrowing rooms x 24 litters on trial per room x 3 replicates
  - 3,558 piglets on trial
- Pre-weaning socialization in farrowing rooms
- Burlap sheet supplied pre- and post-weaning as object enrichment



# Treatments



## Pre-wean Mixing

		4 crates	2 crates	1 crate
Enriched (burlap)	Yes	4E	2E	1E
	No	4N	2N	1N*

\* Control  
(industry standard)

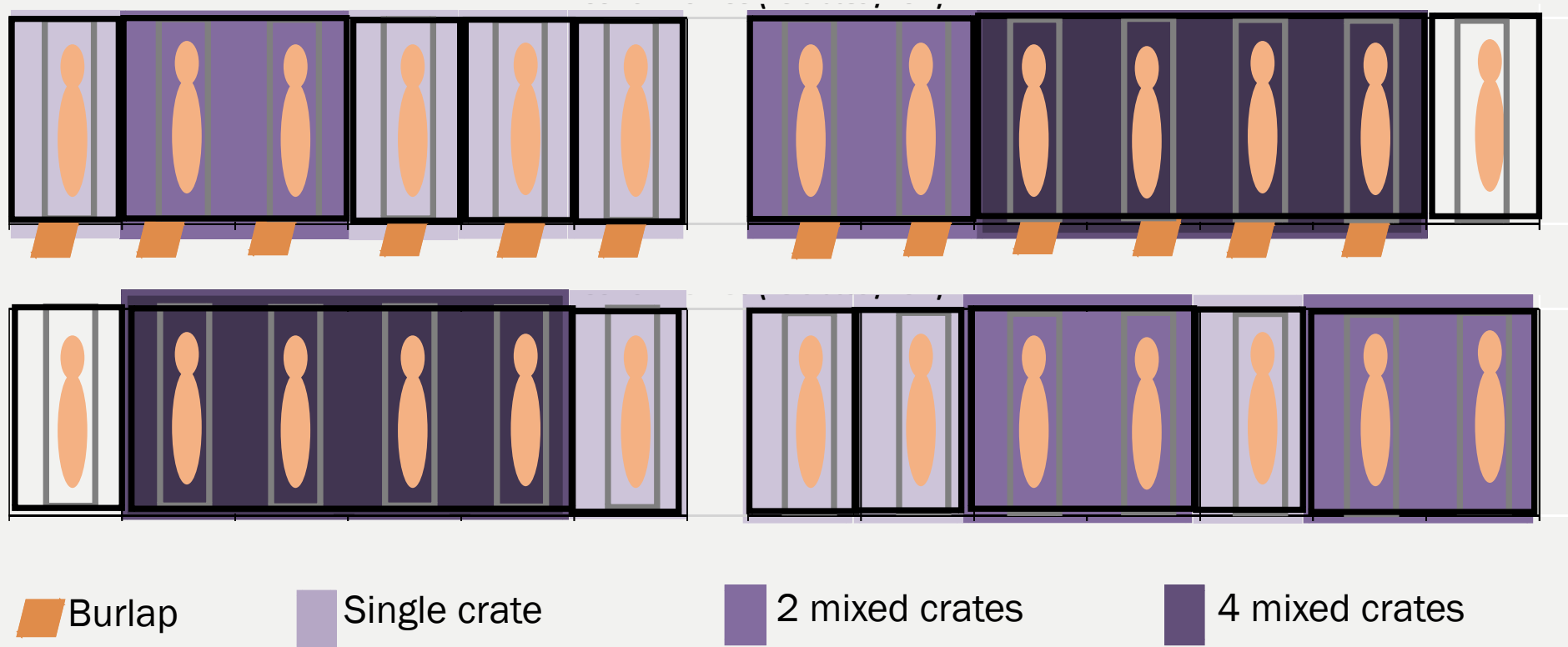
# Data Collection

- **Sow barn – 3 weeks**
  - *Birth weight*
  - *Piglet lesions*
  - *Behaviour observations*
  - *Weaning weight*
- **Nursery – 1 week**
  - *Piglet lesions*
  - *Behaviour observations*
  - *1-wk post-weaning weights*



# Data Compilation

- Values are averaged per EU and per-pig







# RESULTS & DISCUSSION

# Use of Enrichments

- Burlap was manipulated by piglets in enriched crates
- Approx. 25% of pre-weaned piglets in multi-litter groups travelled between crates
  - *Travel between crates increased with age*
- Cross-sucking rarely occurred
  - *Piglets in larger multi-litter groups cross-sucked more*





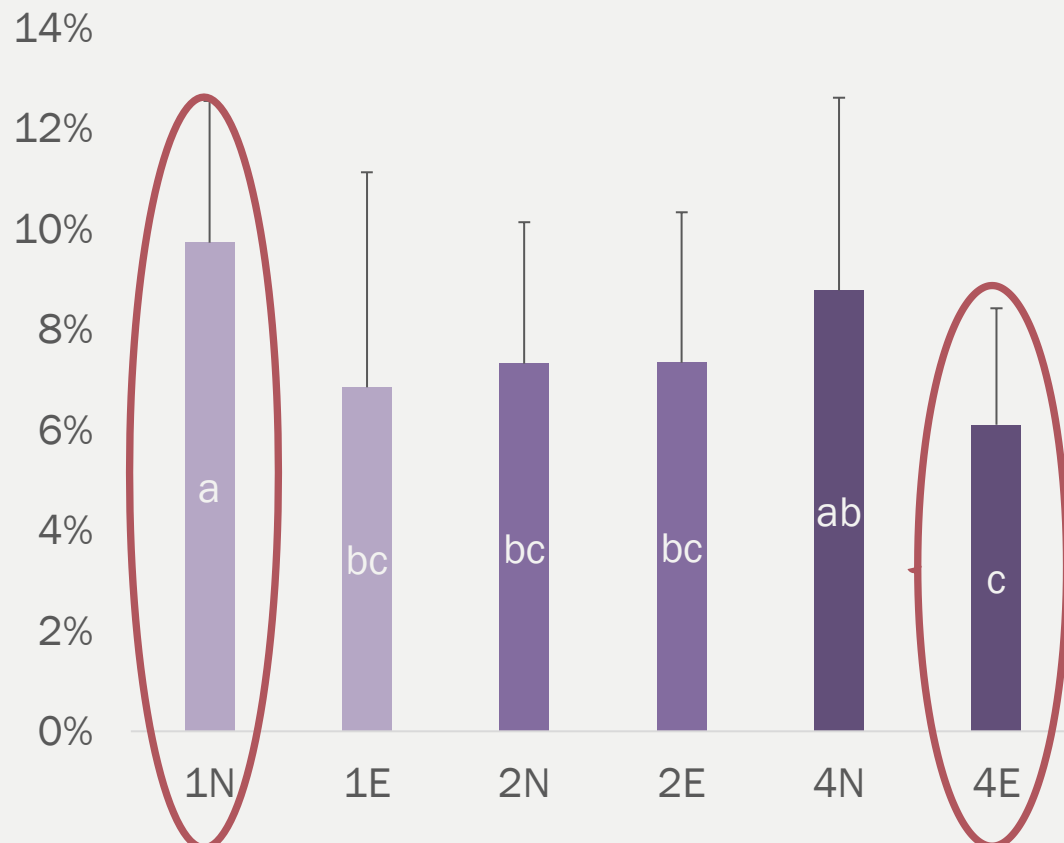
# BEHAVIOUR

Results & Discussion

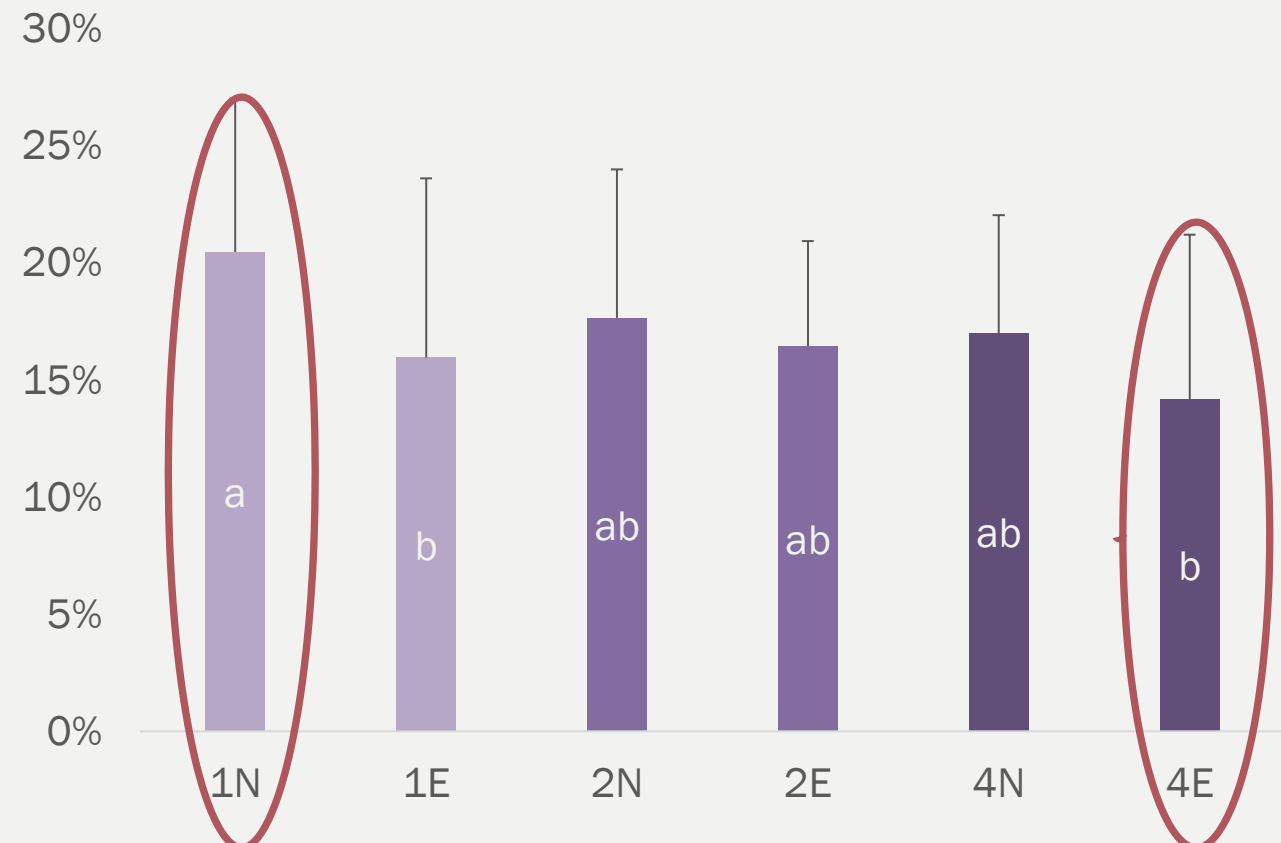
# Post-weaning Behaviour

- No observed difference between piglets using burlap or piglets resting

Average Percent of Piglets Observed Eating

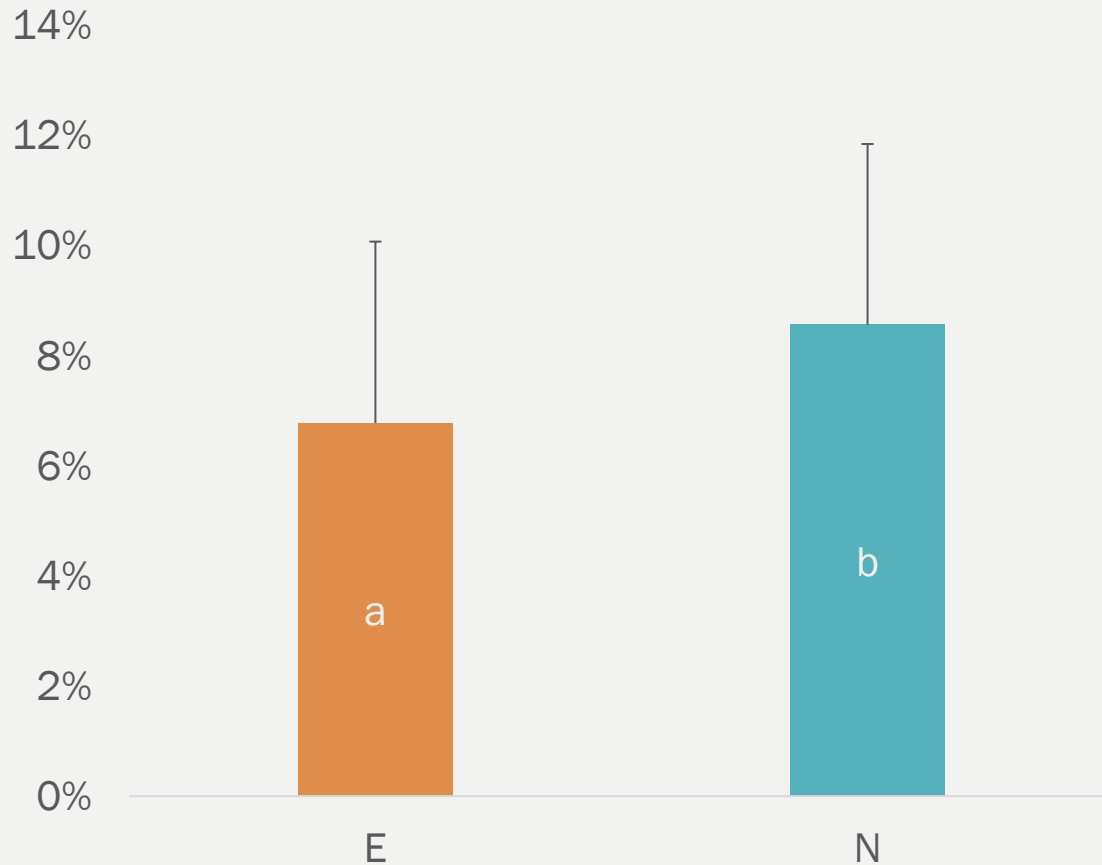


Average Percent of Piglets Observed Active

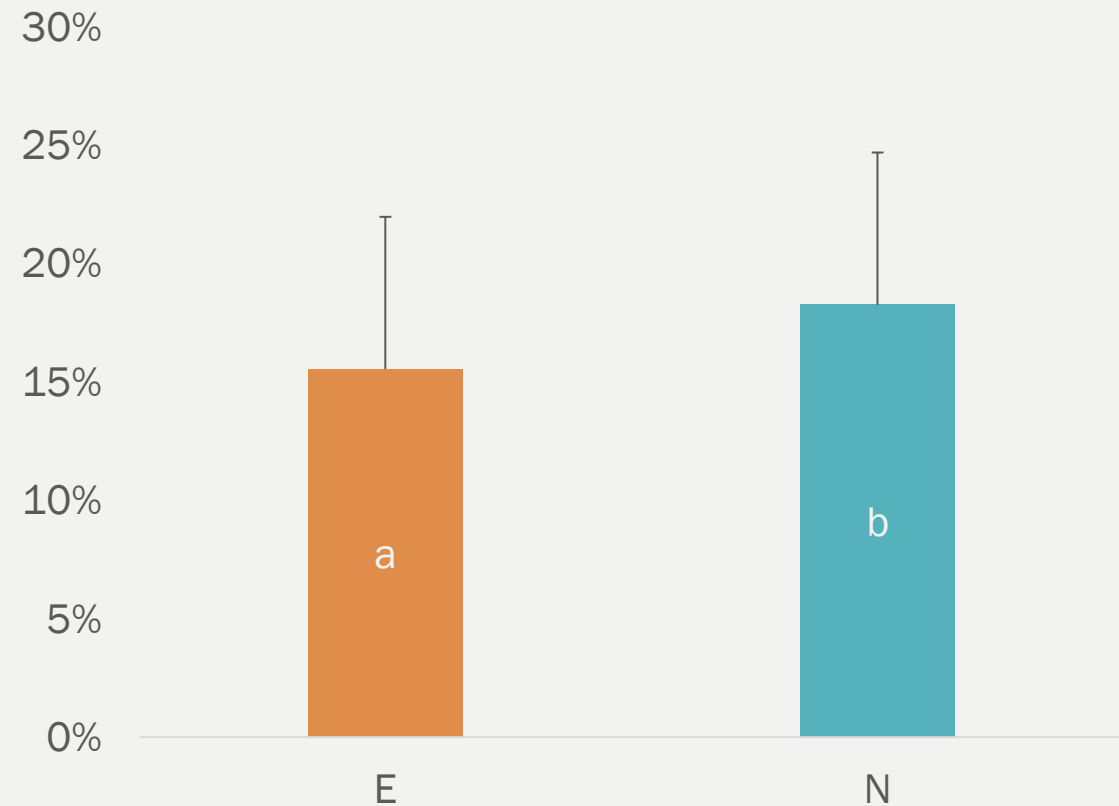


# Post-weaning Behaviour

Average Percent of Piglets Observed Eating



Average Percent of Piglets Observed Active

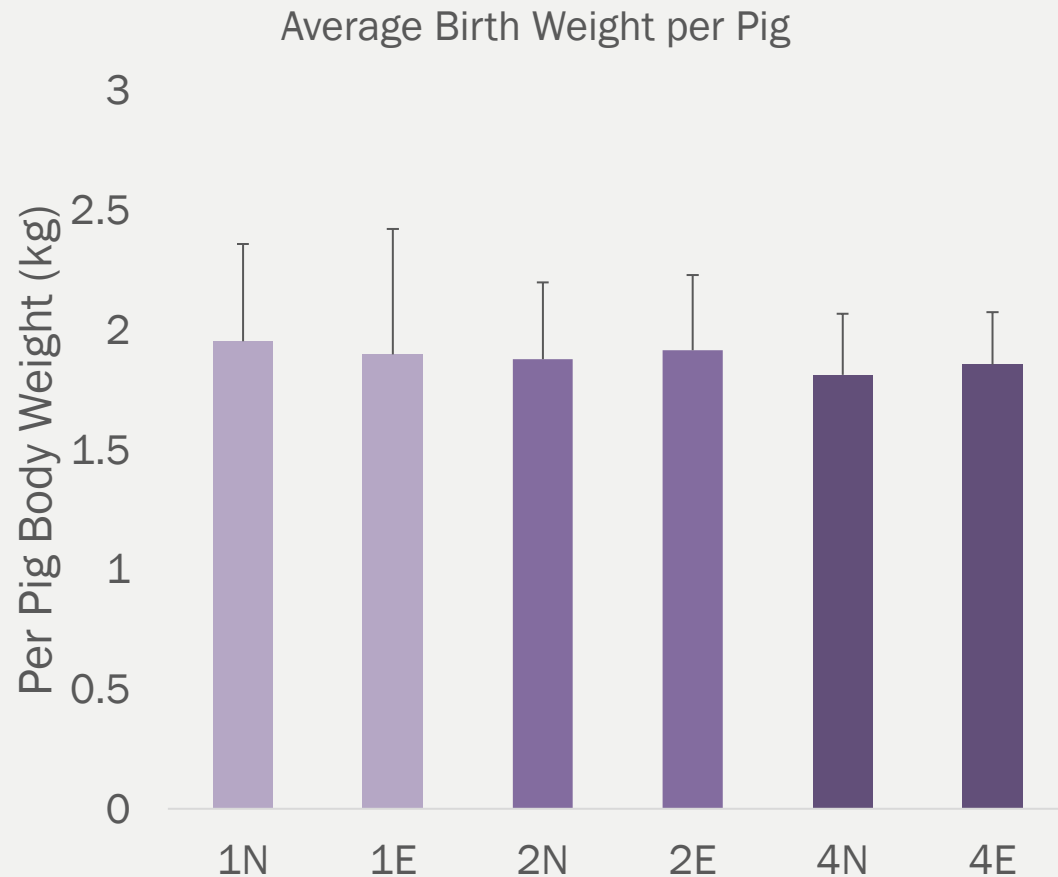


# HEALTH & PERFORMANCE

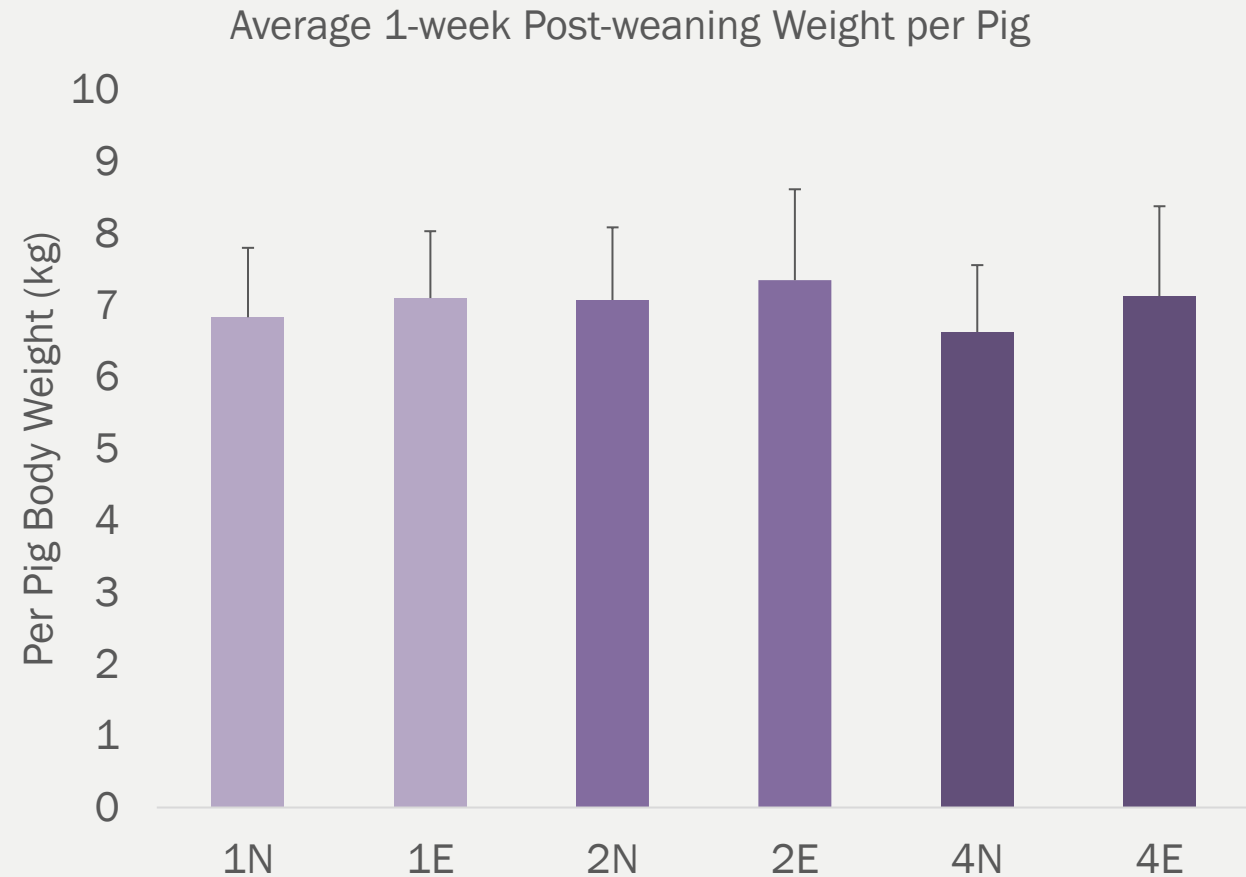
Results & Discussion

# Body Weights

Birth weights per piglet were similar between treatments

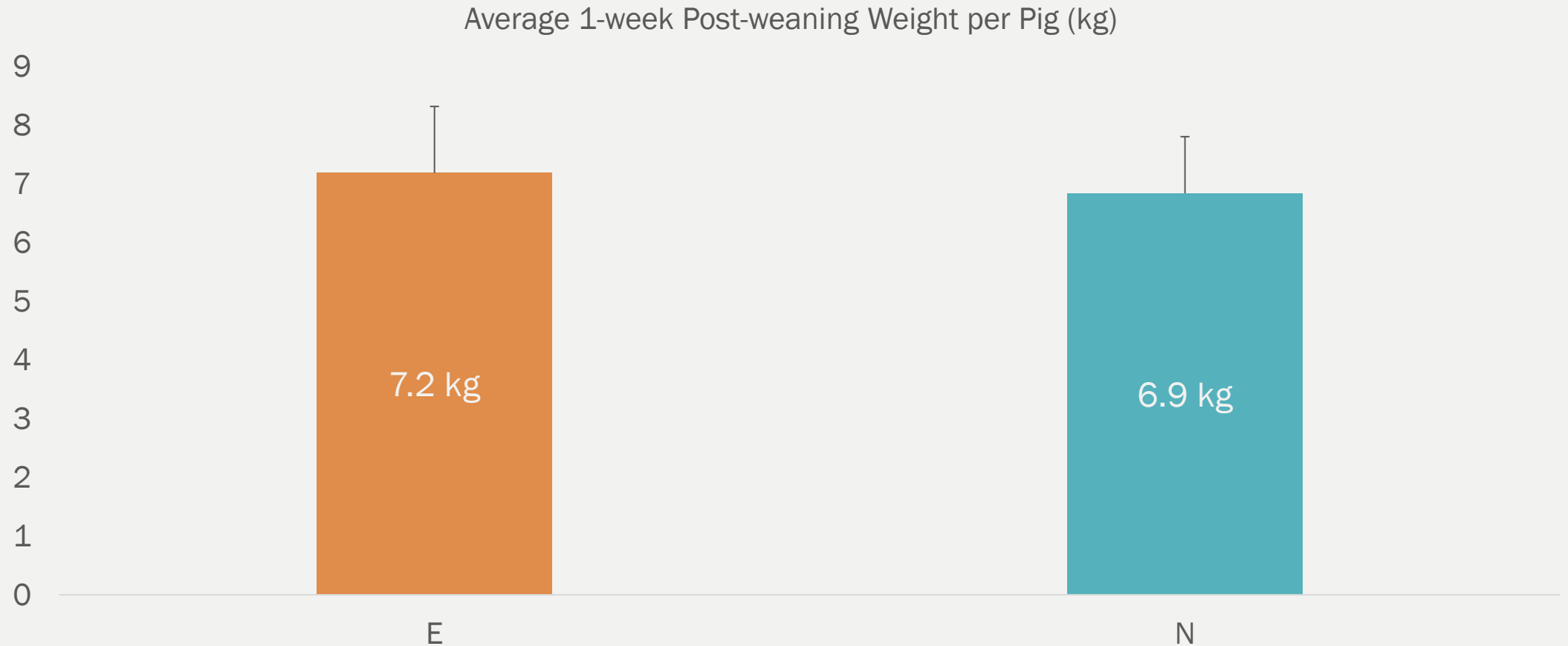


1-week post-weaning weights per pig were similar between treatments



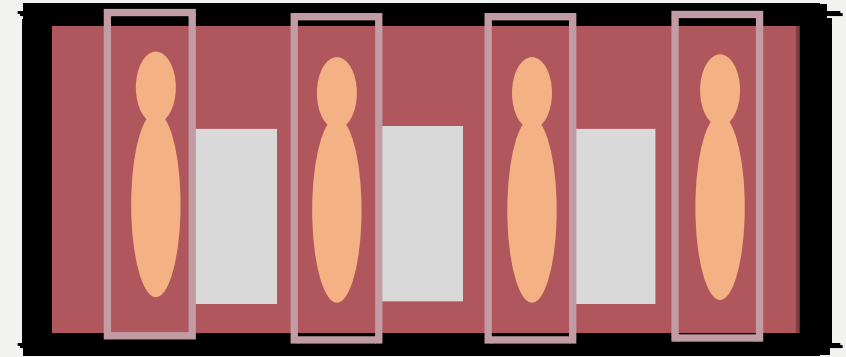
# Body Weights – Post-weaning

Piglet weights 1-week post-weaning were numerically higher for ENRICHED pens





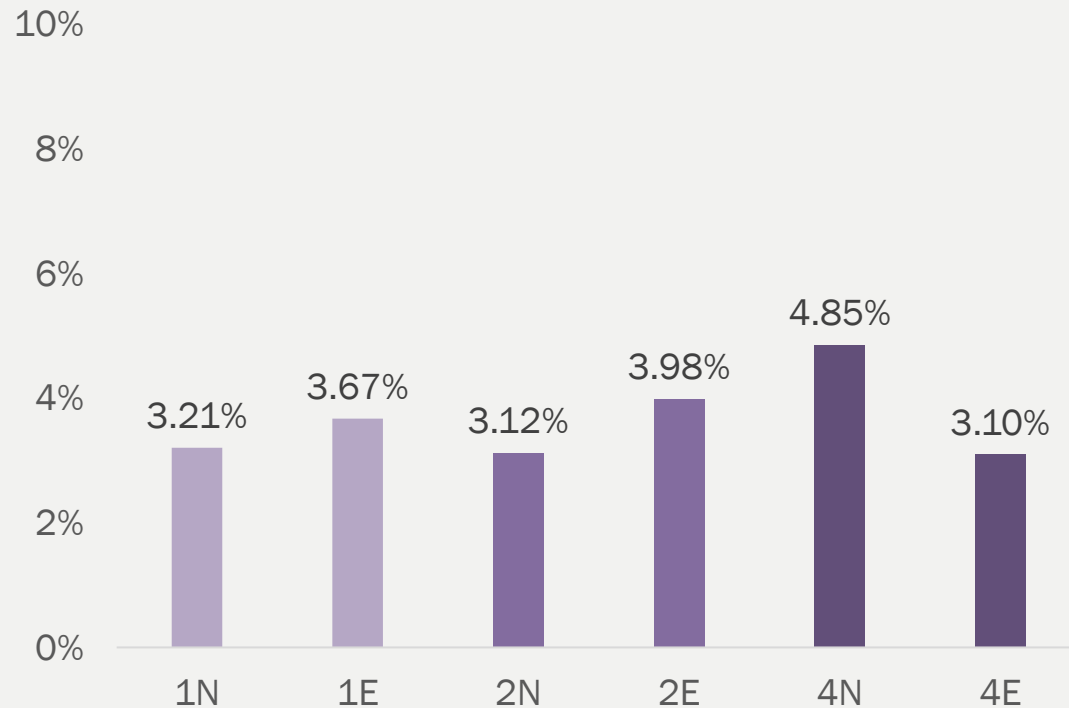
# Pre-Weaning Mortality



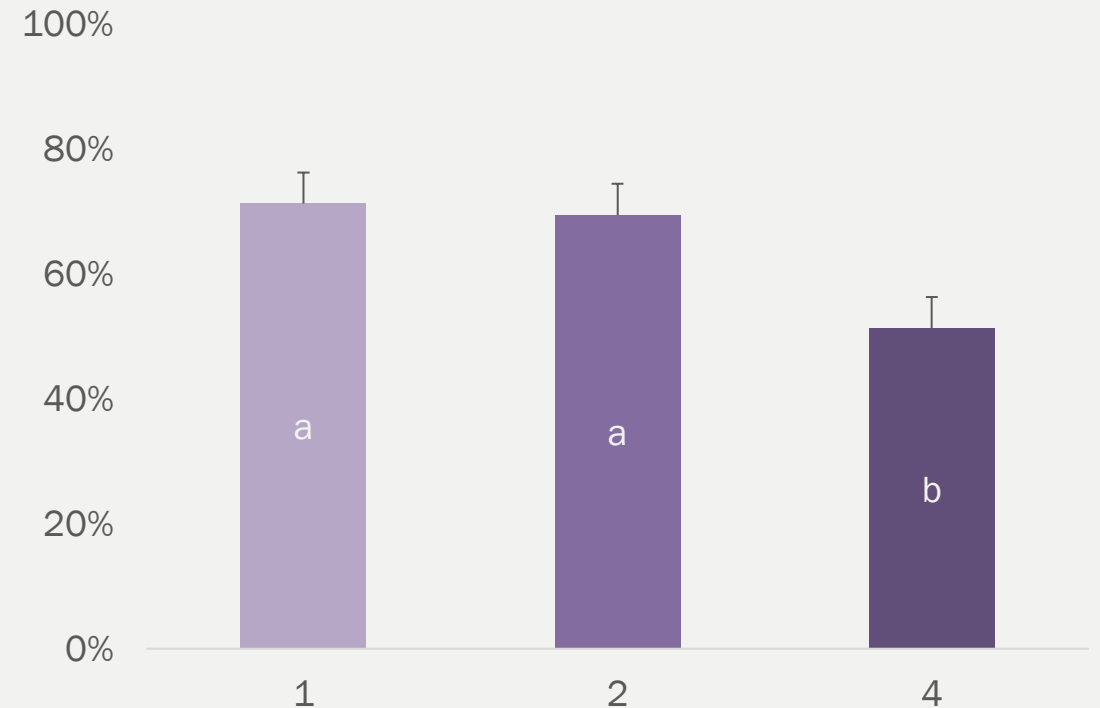
Total piglet mortality was similar between treatments (day 3 - 21)

% of mortality due to laid-on deaths tended to ↓ with larger groups

Pre-weaning Mortality per Treatment



% of Mortality Due to Laid-on Deaths



A photograph of a pig in a pen, with another pig in the foreground. The image is darkened and serves as a background for the text.

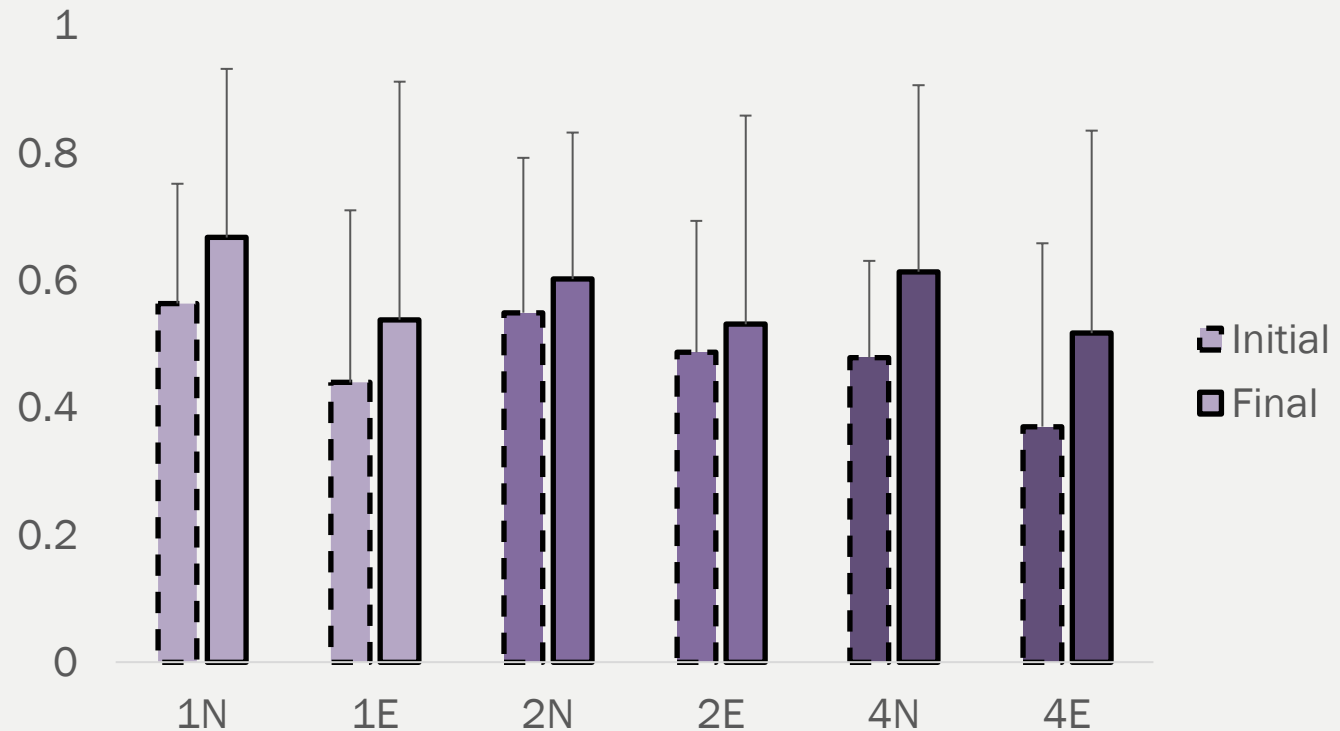
# WELFARE

Results & Discussion

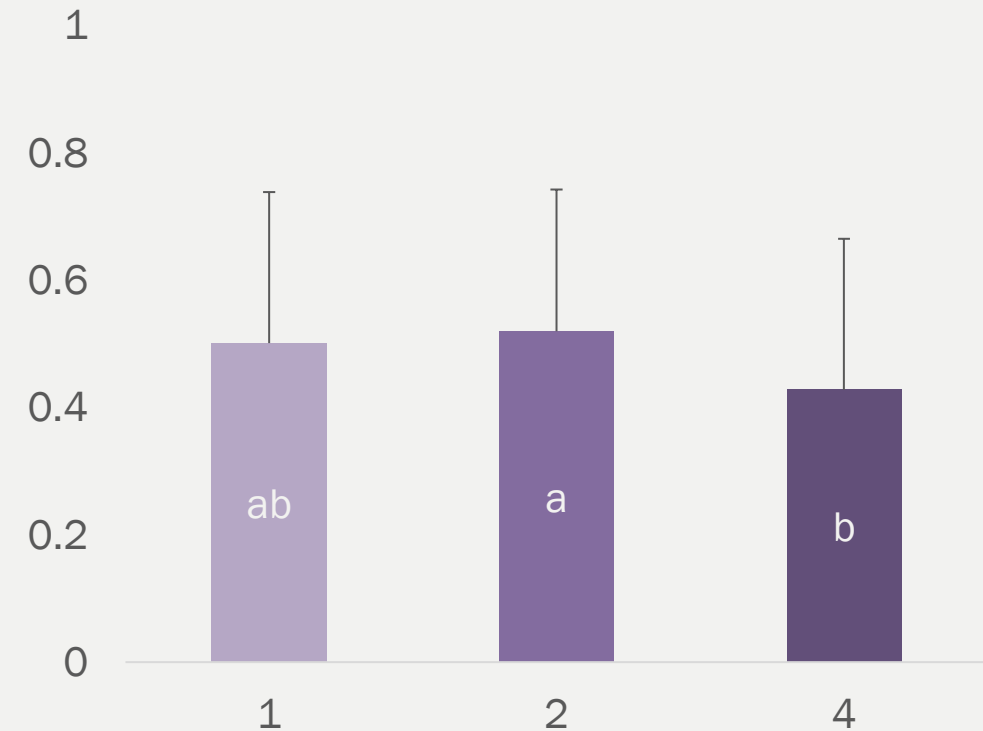
# Lesions – Post-weaning

- Red marks or scabs on pig's ears, tails, or body
  - *Result of chewing/biting and/or aggression*

Lesions per Pig by Treatment

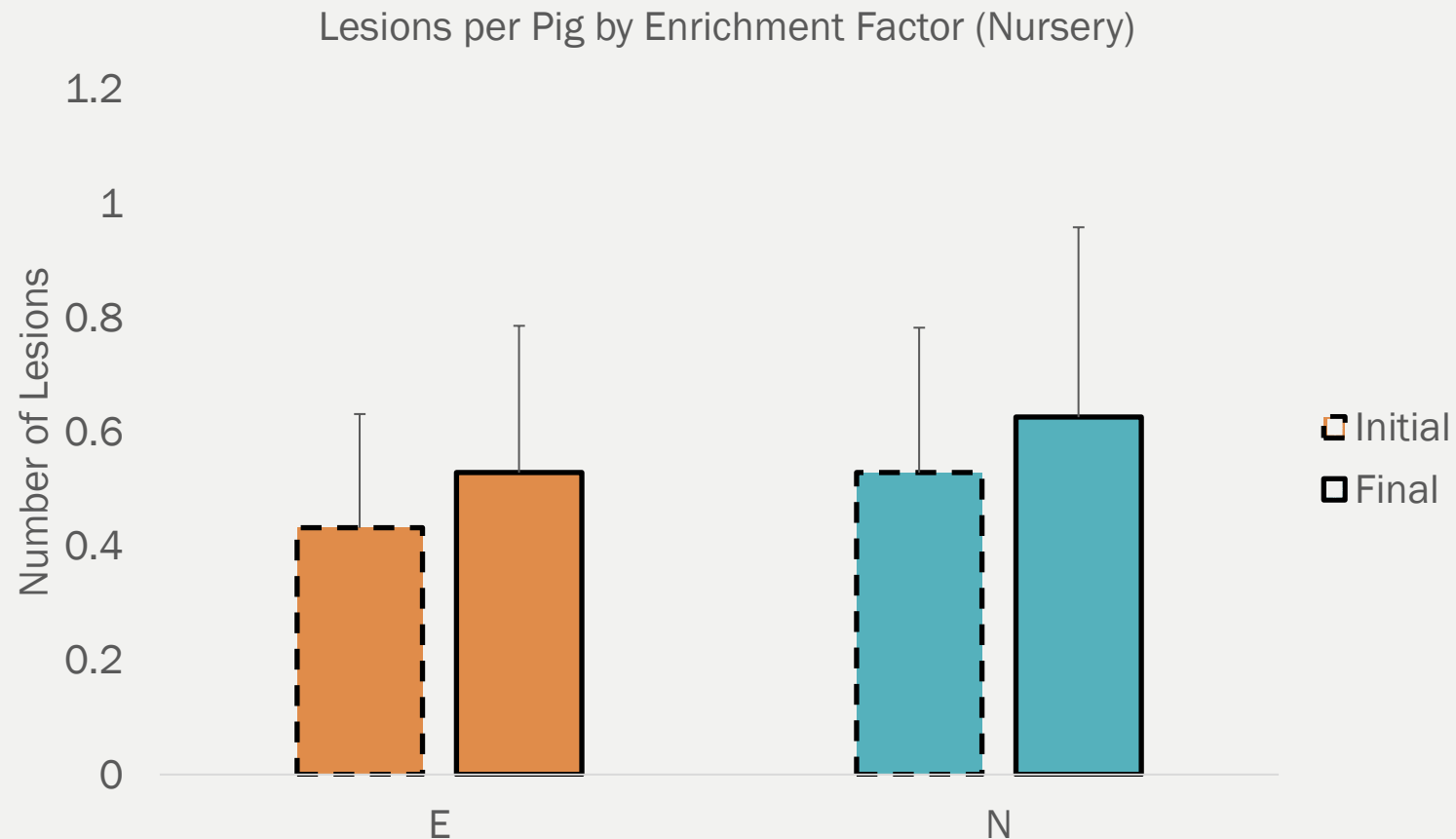


Initial Lesions per Pig by Mixing Factor



# Lesions – Post-weaning

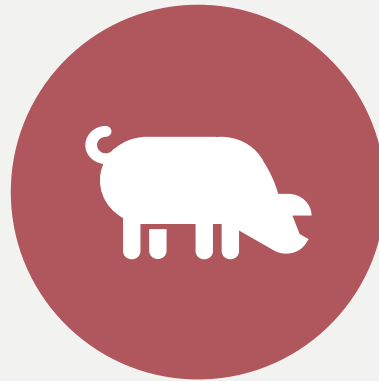
- Enriched groups had fewer lesions per pig than non-enriched groups initially after weaning and 1-week post-weaning



# Industry Implications



REDUCE WEANING  
STRESS



IMPROVE PIGLET  
PERFORMANCE



BENEFIT ENTIRE  
PRODUCTION SYSTEM



# Acknowledgments

- **Advisor:**

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THANK YOU

Questions?

