



IMPROVED WELFARE VS. MEAT QUALITY: IMPACT OF ENRICHMENT AND STOCKING DENSITY ON BROILER CHICKEN

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AIM

This study aimed to implement access to **enrichment** (**perches** vs. **no perches**) and **two stocking densities** (**41** vs. **35 kg/m²**) and **its interaction** with **sex** of the birds.

MATERIAL AND METHODS

Data for the study:

- One-day-old **Ross-308** chickens (**n= 180**) were assigned to **6 groups**
- Stocking density** of either **35 kg/m²** or **41 kg/m²**
- Access to **enrichment** (**perches** vs. **no perches**)
- Interaction** with **sex** of the birds



Lab analysis:

- Myopathies** performed **24 hours** after the slaughter by three trained panelists
- Natural drip** using the **EZ-Drip Loss** methodology
- Cooking loss** measured on the thawed samples, kept for two months at **- 20 °C**
- BMORS texture** was performed **6 h** to **24 h** after cooking

Data analysis:

- The principal component analysis (PCA)** was performed to visualise the differences between pairs of experimental-control groups with **texture parameters**



RESULTS

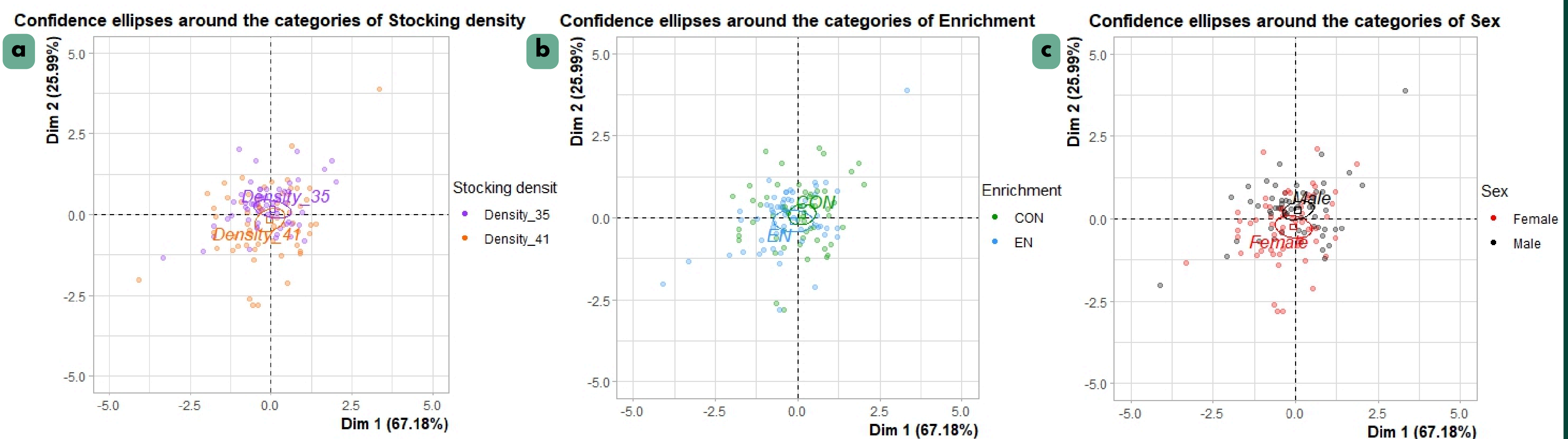


Figure. Principal Component Analysis (PCA) of a. **stocking density**; b. **enrichment**; c. **sex**, on texture indicators (WB Force and Energy, BMORS Force and Energy).

CONCLUSION

Environmental enrichment and **stocking density** **do not impact** slaughter traits or myopathies, but **do affect** certain aspects of chicken **meat quality**

- Slaughter traits**, including slaughter weight, carcass weight, and weight of breast muscles, and legs, were **not affected** by the treatment and varied significantly between sexes
- Males' muscles had greater incidence and severity of **myopathies** than females
- None of the other **meat quality traits** were influenced by the stocking density.