Evaluating the annual egg production and live body weight for four tropically adapted chicken breeds in two station farms in Ethiopia

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Introduction

Chicken production system in Ethiopia is primary free range based on smallholder system. Upgrading the smallholder system is essential to improve the livelihood of farmers.

The African Chicken Genetic Gain (ACGG) project was established to upgrade the smallholder system to small scale commercial system using productive tropically adapted breeds.

ACGG has been testing the performance of tropically adapted breeds of chicken in three African countries (Ethiopia, Tanzania and Nigeria).

Objective

Evaluate the annual egg production (AEP) and live body weight at week 20 (LBW) for four tropically adapted breeds: Horro (improved local breed), Koekoek, Kuroiler, Sasso_RIR in two stations (Debre Zeit and Haramaya) in Ethiopia.

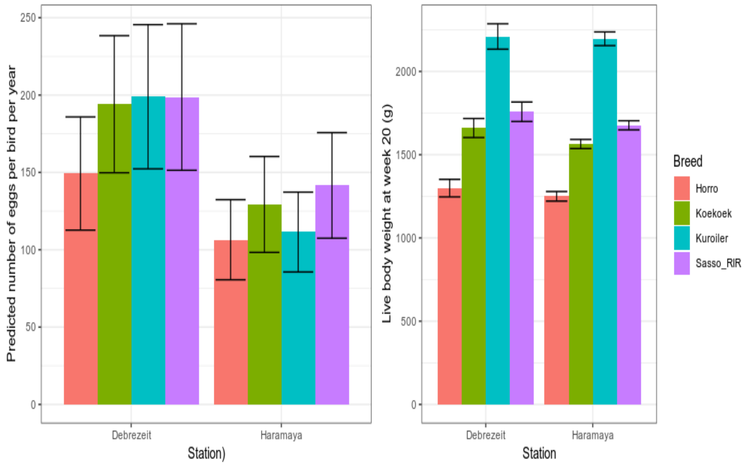
Conclusion

The imported breeds (Sasso_RIR, Kuroiler and Koekoek) yielded larger AEP and LBW than the improved local Horro.

There is a very good prospect in producing chicken that yielded higher LBW and AEP if it is coupled with proper management.

Crossing the local breed with the imported breeds may produce a breed with desirable traits (yield + adaptability + disease resistant).

Results



Methods

Eggs were collected from 1232 hens.
LBW was recorded from 1673 chickens.

Model

Linear mixed model was fitted.

$$y = XB + Zg + e$$

Fixed effects;: breed, station
Random effects: Pen (both traits) week (AEP)

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