

Genetic parameters for body weight at three different ages of growth in broiler chicken

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Aim

- Estimate genetic parameters for BW in male and female broiler chicken at three different ages of growth

Material and Methods

Data

- 54 selection rounds for growth rate
- 329398 males and 317305 females

Genetic parameter estimation

- Multivariate animal model using REML
- 6 trait analysis including males and females separately in the 3 ages
- Model

$$BW \text{ Male} = \mu + SRH + Animal + PE + e$$

$$BW \text{ Female} = \mu + SRH + Animal + PE + e$$

- Random effects: Direct genetic effect of the animal & maternal permanent environmental effect
- Fixed effects: Selection round & hatch batch

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Conclusion

- BW in the three ages should be considered as three different traits
- BW in the two sexes should be considered as two different traits



Results

Table : Genetic parameters for body weight in male and female broiler chicken at t, t-4 and t-7 days of age

No	Age (days)	N	rg(SE) b/n Ages	rg (SE) b/n Males & Females
1	t	441,769	1 & 2 0.88 (0.04)	0.89 (0.01)
2	t-4	83,003	2 & 3 0.98 (0.01)	0.89 (0.01)
3	t-7	121,931	1 & 3 0.83 (0.03)	0.94 (0.01)