

REPRODUCTIVE EFFICIENCY IN BROILER BREEDERS

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Research Project: Genotypic, Growth and Photostimulatory Effects on Reproductive and Metabolic Efficiency in Female Broiler Breeders

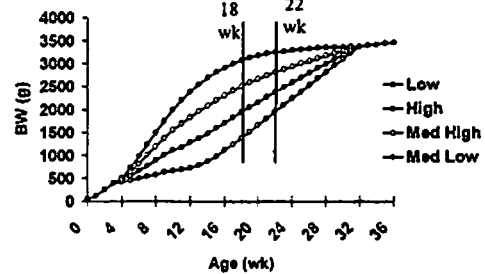
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Research Objectives

- To define the relationship between growth rate and sexual maturation in three strains of pullets.
- To examine juvenile, point-of-lay, and end-of-lay carcass composition
- To study reproductive efficiency (rate of lay, egg sequence length, fertility and hatchability).
- To mathematically describe egg and chick output.
- To incorporate the data into an overall bio-economic model of the broiler supply chain.

BW Targets and Age at Lighting



Identification of early indicators of metabolic and reproductive dysfunction from over-feeding female broiler breeders



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Research Objectives

- To determine the relative growth and yield potential of commercial and specialized lines
- To characterize genetic variation in response to acute full-feeding both prior to and during sexual maturation.
- To characterize the physiology of the reproductive response of commercial and specialized broiler breeder strains under normal and challenging nutritional states.
- To identify early indicators of metabolic and reproductive dysfunction



Growth patterns and reproductive efficiency and livability in male broiler breeders

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J. L. Wilson (University of Georgia)



Research Objectives (a)

- To determine how chick quality impacts the ability of a male to grow and be a viable male.
- To see if males that experience a linear, concave or convex growth curve from 0 to 22 weeks of age vary in performance and end-of-cycle carcass traits and testis morphology?
- To find out if body weight and carcass morphology influence reproductive success and health status.
- To see how important flock uniformity is to livability.

Research Objectives (b)

- To discover if spiking males stimulate increased mating activity in original males.
- To determine if males that mate more frequently exhibit better testes morphology and higher testosterone levels late in lay.
- Does testes weight give the same data, as does examination of the amount of functional spermatogenic tissue determined histologically?



The Impact of Timing of Protein Intake on Reproductive Efficiency in Broiler Breeder Females

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Research Objectives (a)

- To determine the impact of varying protein intake pattern during the rearing phase on carcass traits and reproductive potential.
- To characterize the physiology of the reproductive response under normal and alternative CP intake.
- To seek early indicators of metabolic and reproductive dysfunction.
- To determine if changes in dietary CP affect the way females will deposit breast muscle.

Research Objectives (b)

- To determine if changes in dietary CP affect the way females will deposit breast muscle.
- To study the responsiveness of the ovary to early and standard photostimulation ages.
- To trace changes in weight and external fleshing measurements in commercial broiler breeder flocks and relate these measurements to the health, livability and reproductive status of the birds at the end of lay.