

Effects of incubation humidity upon embryo and chick

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Objectives:

- Determine effect of incubational humidity
 - Embryo growth and physiology
 - Chick performance
- Examining humidity effects during period of incubation (early & late)

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Purpose

- Determine if control of humidity with single stage incubators is superior to humidity control using multistage incubation

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Hatching egg storage and antioxidants with breeder hens

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Objectives

- Previous work (Donaldson, Wineland & Christensen)
 - 2 female lines on same male that demonstrated different abilities to maintain viable embryos after storage
 - Differences in peroxidation of vitelline membrane between the lines

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Objectives:

- Determine if a reduction of peroxidation of vitelline membrane can be accomplished by feeding additional antioxidants
- Determine if feeding of the antioxidants will improve viability of stored hatching eggs

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Purpose

- Allow for improved embryo viability during incubation in eggs stored for greater than 10 days

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Metabolic heat production of “classic type” and “high yield type” broiler embryos during incubation

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Objectives:

- Compare “classic” vs “high yield”
 - Measure metabolic heat production of embryo
 - By determining oxygen consumption and carbon dioxide production
 - Different ages of embryo
 - Different egg sizes
 - At different incubation temperatures

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Purpose

- Determine if there really is a difference in heat production, is it egg size, or is it incubator design
- Use information to determine incubation parameters better.

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