

Hill Farm Research Station
April 24, 2008
Field Day Summary Report

COMMODITY: Poultry

TITLE: A Comparison Of Poultry Equipment and Other Critical Variables on Fuel/Energy Consumption and Broiler Performance

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TAKE HOME MESSAGE:

Poultry production is Louisiana's largest animal industry and has held that position for five years. Poultry production contributes more than one billion dollars to the states' economy which makes it the second largest segment of Louisiana's agricultural industries. Today's broiler is a very fast growing bird capable of converting feed to meat very efficiently. To maximize daily weight gains, feed efficiencies, and yield potential, all aspects of broiler management must be considered and given a high priority. One area and the first to be addressed are brooding.

PROBLEM/TOPIC:

The first 7 days of a chick's life are very critical to the success of the flock. When we brood chicks we are trying to imitate what a mother hen does in nature. Brooding accounts for 70% of the cost in growing broilers. Rising fuel cost and stagnant grower pay, brooding has become an expensive process. A study to show the most beneficial and cost efficient way of brooding would help growers in equipment choices when retrofitting or building new houses. Ultimately the goal is to help the poultry producers of Louisiana to save money on fuel costs.

ACTION:

Two identical broiler houses (42'x500") are available at the Hill Farm Research Station. Tube heat will be placed in one house and radiant brooders in the other. Fuel meters will be placed on LP tanks going into each house and will be recorded daily. Temperature sensors, ammonia sensors, humidity sensors, and feed scales will be used and recorded daily. Birds will be provided by Pilgrims Pride the first year and then will be rotated every year with House of Raeford. Birds will sell with other producers but will not be included in settlement ranking. Results will be posted on LSU AgCenter website.

IMPACT:

In order to provide research based information to poultry producers of North Louisiana. The following objectives will be considered individually or in different combinations in the demonstration facility.

To compare fuel consumption of the two types of brooding equipment, 2) to compare energy usage 3) to compare bird performance(feed conversions and weights) 4) to

compare ammonia levels 5) to determine fuel options(solar, wind, biofuels for energy) to run test houses 6) to study external factors such as termites, darkling beetles, fire ants, and rodent control 7) to compare different lighting applications 8) to compare different types of litter(rice hulls, shavings, peanut hulls, ect.) and their nutrient values when used as fertilizer 9) to compare humidity levels 10) to compare litter treatments for ammonia and bird grading (breast blisters and paws).