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BROILER PERFORMANCE AT HIGH TEMPERATURES BETTER WITH HIGH FAT RATIONS

Professor Henry L. Fuller, University of Georgia, with grant support from FPRF, is studying diet modifications designed to improve the performance of chickens during hot weather. In a preliminary study five dietary treatments were tested under "hot" and "cool" temperature conditions. Triplicate lots of 10 birds each were fed in batteries at each temperature for three weeks (5-8 weeks of age).

The chicks in the hot environment did not consume as much feed nor gain as much as those in the cool environment on any of the diets fed. However, in the hot environment the following results were obtained.

1. Feed intake, total energy intake, and feed efficiency were increased by substituting calories from fat for calories from carbohydrates.
2. Lowering the protein level increased feed intake and weight gains to a greater extent in the hot environment than in the cool environment.

These preliminary data show that the feed intake of chickens is greatly influenced by heat increment (heat loss), especially in a hot environment. Fat calories permit greater gains than carbohydrate calories probably because less heat must be expended or dissipated.