

Pullets grown on the low energy diets consumed considerably more feed during the growing period than did those receiving high energy diets (Table 5). This combined with increased consumption in the laying house resulted in these pullets consuming considerably more feed for the combined grower and layer phase. Although pullets grown on the low protein diet consumed more feed during the layer period (Table 14), they consumed less during the grower period (Table 5). This difference in feed consumption during the grower period would be an advantage for using the low protein diet for delaying sexual maturity of pullets. In general, feed consumed per pullet during the growing period (Table 5) was determined by the energy content of the diet. Each change of 10 Calories of productive energy per pound of diet resulted in an inverse change of 1 percent in the amount of feed consumed.

### SUMMARY

Two experiments were conducted with commercial egg production type pullets to determine the effect of feeding grower diets varying widely in protein and energy content.

It was found that a delay in sexual maturity of pullets was obtained by reducing the level of either protein or energy in the diet. The use of grower diets (8 to 21 weeks) low in protein is proposed as a new method of growing replacement pullets when delay of sexual maturity is desired.

The energy or protein level in the grower diet did not significantly affect the total rate of egg production; however, pullets raised on diets low in either protein or energy tend to lay at a higher rate after 32 weeks of age.

Egg weight at any given age was not influenced by the diet which the pullet received during the grower period.

The amount of feed consumed during the grower period was inversely related to the energy content of the diet. Each change of 10 Calories of productive energy per pound of diet resulted in an inverse change of 1 percent in the amount of feed required. Pullets restricted in protein or energy during the grower period consumed more feed after being placed in the laying house and reaching a normal adult weight.

Based on results of these experiments, it is suggested that pullets being grown for the production of commercial eggs be "full fed" from 8 to 21 weeks a diet containing 16 percent protein and a level of at least 940 Calories of productive energy per pound of diet.