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C. W. Carlson
South Dakota State University

R. A. Nelson

A. B. Kashani

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GROWER DIETS FOR LAYER PULLETS USING CORN OR OATS

C.W. Carlson, R.A. Nelson and A.B. Kashani¹
Department of Animal Science
Poultry-Meats Section

South Dakota State University
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In previous studies with low-protein (12%) diets for growing pullets, the diets that have supported the best subsequent production and with the least mortality and layer feed have contained some oats. Last year's results showed a 30% oats diet to be just as good in that regard as one containing 80% oats. A 12% protein diet with only corn as the grain component caused the hens to produce at a 2.7% lower rate of production (440 hens per treatment, significant at 0.05).

The study this year involved only two grower treatments, the all-corn and the corn-oats, 12% protein diets from last year (see A.S. Series 78-2). Babcock-300 pullets were fed these diets from 10 to 20 weeks of age, following which two layer diets were used, a 16% protein control and a 12% protein experimental diet supplemented with lysine and methionine.

Growth during the 10 weeks was 596 vs 607 grams and in units of feed per unit of gain, 7.85 vs 8.12 for the corn and corn-oats diets, respectively. Appearance of the birds was good for both treatments. The slightly poorer conversion would reflect the lower energy content of the corn-oats diets.

As shown in Table 1, all egg production parameters measured were not influenced by the grower diet used. Production was about 1% greater for the previously corn-oats fed hens, but for the approximately 900 birds on each treatment this was not statistically significant. Hens on the 16% protein layer diet produced more eggs more efficiently than those on the 12% protein diet. With 10% better feed conversion, the diet could cost 10% more and still make the 16% protein diet most economical. This would not always hold true.

¹ Professor and Leader, Poultry Research and Extension; former Superintendent, Poultry Research Center, and Acting Superintendent, Poultry Research Center.

Table 1. Effect of Dietary Regime on Production Parameters

Treatment	Hen-day produc- tion %	Feed per day g	Feed per dozen eggs kg	Average egg wt. g	Produc- tion Grams per day	Grams egg per grams feed	Haugh units	Shell thick- ness mm	Final body wt. kg	Hen- housed mortal- ity %
<u>Grower Diet</u>										
12% protein										
Corn-oats	70.8	98.0	1.63	59.4	42.1	.43	74.8	.354	1.78	13.3
Corn	70.0	97.5	1.64	59.1	41.6	.43	73.5	.355	1.77	13.1
<u>Layer Diet</u>										
16% protein	72.3**	95.7*	1.56**	59.6	43.3*	.45*	72.8	.354	1.82	13.3
12% protein	68.6	99.8	1.72	58.8	40.5	.41	75.4**	.356	1.73	13.1

* P<0.05.

** P<0.01.