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Comparisons of a Midget vs. a Standard  
Sized Strain of Laying Hens

E. Guenther and C. W. Carlson<sup>1</sup>

Two new strains, one standard sized and the other approximately 70% as large, were acquired and tested for performance. The chicks were grown in floor pens to 20 weeks of age on standard growing diets and then placed in 12- and 16-inch layer cages. The hens were placed in cages at normal and high density, i.e., 3 or 4 hens per 12-inch cage and 4 or 5 hens per 16-inch cage. All were fed the same diet, 16% crude protein and 2900 Cal. M.E. The test lasted 10 months.

The main effects of strain, cage size and population density are shown in Table 1. Egg production of the midgets was well below that of the standard sized strain. Considerably more soft-shelled eggs were produced by the midgets. Although the diet contained 2.75% Ca, which apparently was enough for the standard strain, the midgets were probably not getting enough calcium because of their lower feed intake, 65 gm vs. 96 gm daily.

Production was slightly better in 16-inch cages than in 12-inch cages, but putting an extra hen in either size cage reduced the rate of production. However, considering the potential for a certain space, e.g., 12 inches, 3 hens laying at 60% produce 1.8 eggs daily, whereas 4 hens laying at 57% would produce 2.3 eggs daily. In times of high egg prices as at present, this increased yield would be an important difference.

The midgets weighed 0.5 kg (1.1 lb) less than the standard sized strain. However, because of the lower rate of egg production and slightly smaller eggs, the midgets did not convert feed as well as the larger hens.

The midgets showed good livability, mortality was 5.8% vs. 23.8% for the standard sized strain.

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<sup>1</sup>Assistant Professor and Professor and Leader, Poultry Research and Extension, respectively.

Table 1. Performance of a Midget vs. a Standard Sized Strain of Laying Hens

	HDEP %	Feed per day gm	Body weight kg	Egg weight gm	Mortality %
<b>Strain</b>					
Standard	71.0	96.4	1.6	57.3	23.8
Midget	46.5	64.9	1.1	55.8	5.8
<b>Cage size</b>					
12-inch	56.7	78.2	1.4	56.9	15.8
16-inch	60.7	83.1	1.4	56.2	13.8
<b>Density</b>					
Normal	60.2	82.3	1.4	56.5	15.8
High	57.2	79.0	1.4	56.7	13.8