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# Some Effects Of Lactobacillus Cultures On Egg Production

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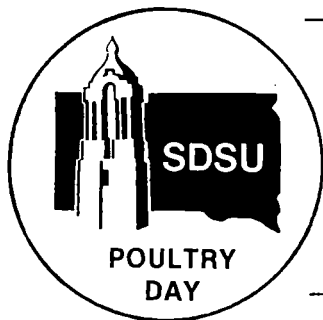
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## SOME EFFECTS OF LACTOBACILLUS CULTURES

### ON EGG PRODUCTION

C. C. Rakshit<sup>1</sup> And C. W. Carlson<sup>2</sup>

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Previous studies at this station on the addition of probiotics to turkey and broiler feeds have shown some favorable results; but, for the most part, there has been no response as has been the case for laying hens (see A.S. Series 76-10, 77-20 and 78-7). Probiotics usually contain, among other things, Lactobacillus types of cultures and are defined as being products which favor the establishment of life.

The present study is aimed at studying the effect of the addition of Lactobacillus acidophilus 1X, Lactobacillus acidophilus 2X and Lactobacillus acidophilus/Lactobacillus plantarum 1X/1X culture on egg production. For this, 432 De-Kalb birds 52 weeks of age were used at 108 birds per diet. The basal diet was a 16% protein corn-soy type of ration. The birds were arranged in multiple cages at 12 birds per group with nine groups for each diet. Feed consumption, egg production, body weight and other parameters were averaged for five 28-day periods as shown in Table 1.

A statistical analysis did not show any significant difference with respect to any parameter. However, considering individual data, it was evident that birds on diet three with the Lactobacillus acidophilus 2X culture showed somewhat better production. Performance of hens on diets two and three had been consistently 3 to 5% higher than that of the control groups. Further work is planned to evaluate the possibility that the use of these live cultures did indeed allow for their establishment in the gut of the birds. This in turn may have made for a more favorable microflora and therefore allowed for an improved performance.

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Table 1. Effect of Lactobacillus cultures on egg production  
(Averages for five 28-day periods)

Treatment	Hen-day produc- tion %	Hen-day feed con- sumption g	Kg of feed/dozen eggs	Egg weight g	Haugh unit value	Body weight kg
Basal	64.3	107.3	1.9	64.3	78.2	1.7
L. acidophilus 1X	66.2	106.7	1.9	64.2	76.9	1.7
L. acidophilus 2X	67.5	109.6	1.9	64.4	75.1	1.7
L. acidophilus 1X and L. Plantarum 1X	63.4	107.2	2.0	63.9	75.1	1.7