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## Aureomycin For Laying Hens

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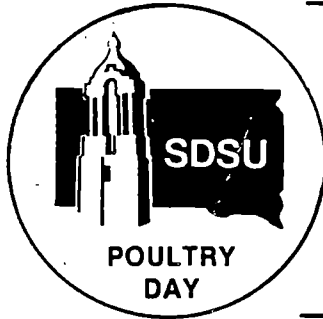
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## AUREOMYCIN FOR LAYING HFNS

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POULTRY 82-3

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Antibiotics have generally been more effective in counteracting, somewhat at least, the growth depression caused by feeding diets containing lower density cereal grains. However, growth responses have not been as consistent using other types of diets. In spite of extensive studies on the subject of antibiotics, their exact mechanism of action is yet to be clearly understood. Several factors have been shown to interfere with the intestinal absorption of these compounds for therapeutic purposes. Among these, calcium level and source have been shown to influence the blood level of tetracyclines.

In a previous study, antibiotics appeared to produce variable effects on laying hen performance, depending on the stage of production (POULTRY 81-9). Aureomycin at 50 grams per ton fed 1 week per 4-week period was ineffective in improving hen-day egg production or feed efficiency. This year again an oats based diet (Table 1) was used to investigate the effect of 100 grams of Aureomycin fed continuously for 1 week in each 28-day period.

A total of 860 pullets previously fed one of the grower diets (see report 82-1) was used in six replicates initially. Table 2 shows that the addition of Aureomycin had no beneficial effect during the early phases of production. Later in the study, from the fifth through the ninth periods, hens fed Aureomycin produced consistently more eggs, which resulted in the overall means being significantly greater for those periods. Neither feed consumption nor feed conversion were influenced by the antibiotic. Since hens on the control diet produced eggs of high interior quality, the significant improvement in Haugh units resulting from Aureomycin in the diet is of little practical concern here. Whether Aureomycin will reduce the incidence of lower quality eggs remains to be determined.

Although the diet used is not typical of most layer diets, the positive response from Aureomycin does show that its addition to layer feeds may in time have merit.

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Table 1. Composition of Basal Layer Diet

Ingredient	%
Ground oats	63.35
Yellow corn	16.60
Meat and bone meal	5.70
Alfalfa meal	3.30
Soybean meal	1.40
Limestone	6.00
Dicalcium phosphate	1.50
Yellow grease	1.00
Salt premix	.50
Vitamin premix	.50
DL-methionine	.15
<u>Calculated analysis</u>	
Protein (%)	13.0
M.E. (kcal/kg)	2494.0
Calcium (%)	3.34
Available phosphorus (%)	.67
Crude fiber (%)	8.3

Table 2. Effect of Aureomycin on Performance

	<u>Periods 1 through 4</u>		<u>Periods 5 through 9</u>	
	<u>Level of Aureomycin</u>		<u>Level of Aureomycin</u>	
	0	100 g/ton fed 1 week per period	0	100 g/ton fed 1 week per period
Hen-day egg production, %	81.7	81.3	74.5	77.4*
Grams egg/day	50.7	50.6	49.6	50.7*
Egg weight, g	61.8	62.0	65.6	65.4
Haugh units	86.8	87.5	79.7	81.2*
Feed/day, g	123	124	128	131
Feed/dozen, kg	1.76	1.77	2.00	1.98
G egg/100 g feed	41.8	41.2	38.8	38.8
Average body wt., kg	1.71	1.72	1.71	1.72
Mortality, %	2.9	3.3	7.9	8.7

\* Values differ from the corresponding control (P<0.05).