

THE EFFECT OF SCD DRY Bio Livestock ON THE INTESTINAL VILLI AND LUMEN OF THE BROILER CHICKEN

Purpose: To determine the effect SCD DRY Bio Livestock lactic acid microorganisms have in the intestinal lumen and villus tissue of the broiler chicken. This preliminary experiment will allow us to determine specific items to look at in the next experiment.

Experimental On August 28, 1997, 50 Cobb-Vantress broilers were separated into two

Design: groups of 25 birds each. Twenty-five birds were designated control. The control diets contained no feed additives of any type. Twenty-five birds were designated test. The test ration was identical to the control rations with exception that 2 pounds of SCD DRY Bio Livestock Poultry Feed Grade were incorporated into the feed. There were no antibiotics or coccidiostats in either ration.

Following the table below, the entire intestinal tract was removed from one control and one test bird. The intestinal tracts were frozen and when trial was complete, all samples were sent to the Star-Labs Microbiology Laboratory for analysis.

Date	Day
08/28/97	0
08/29/97	1
09/01/97	4
09/02/97	5
09/04/97	7
09/05/97	8
09/08/97	11
09/10/97	13
09/12/97	15
09/15/97	18
09/16/97	19
09/18/97	21

Day 00 designates newly hatched chicks. Day 01 designates birds that have been fed for 1 day, and so forth.

The total SCD DRY Bio Livestock LAB values over time in the Tissue and Contents of Control and Test (SCD DRY Bio Livestock fed) birds

Control			SCD DRY Bio Livestock		
Day	Content	Tissue	Day	Content	Tissue
0C	3.00E+03	0.00E+00	0P	0.00E+00	0.00E+00
1C	0.00E+00	0.00E+00	1P	4.20E+08	6.32E+06
4C	0.00E+00	0.00E+00	4P	8.31E+06	3.38E+07
5C	0.00E+00	0.00E+00	5P	4.43E+07	1.21E+07
7C	0.00E+00	0.00E+00	7P	1.61E+04	4.20E+03
8C	0.00E+00	0.00E+00	8P	4.19E+04	1.03E+04
11C	2.70E+03	0.00E+00	11P	8.61E+04	1.28E+03
13C	1.30E+03	0.00E+00	13P	1.70E+02	4.38E+02
15C	3.96E+02	1.27E+03	15P	6.33E+02	9.60E+01
18C	8.85E+02	5.28E+03	18P	1.10E+03	3.41E+02
19C	1.10E+04	3.02E+02	19P	1.74E+04	1.15E+04
21C	1.43E+04	2.87E+04	21P	3.05E+02	6.90E+01
25C	1.15E+04	5.84E+03	25P	1.32E+03	3.73E+02

Also measured on Day 0 and Day 25 were Total Coliform level attached to the intestinal tissue. Those results are presented in the table below:

Sample ID	Day	Attached Total Coliform
Control	0	84
	25	50
Test	0	84
	25	28

In Conclusion:

Feeding SCD DRY Bio Livestock results in an initial colonization of the gut through the first 15 days. Highest level were maintained through the first 5 days. In control birds, significant level of LAB began to be observed on Day 15 through the end of the study on Day 25.

Also, the levels of Coliform organisms attached to intestinal tissue were reduced over the 25 day study by 44% comparing treated to controls. Therefore feeding SCD DRY Bio Livestock result in lower attached Coliform organisms, a definite benefit to the grower as this indicates healthier birds.

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