



# Current Report

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## THE ARAUCANA "Easter Egg" CHICKEN

OST COLLECTION  
Oklahoma State University Library  
Stillwater, Oklahoma

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Since its introduction into the United States in the early 1920's the Araucana has evoked considerable interest among many who have an interest in unusual poultry characteristics. The bird itself, as imported from Chile, was quite striking in appearance. It had "ear-tufts" or growths of feathers under the base of the beak on both sides of the head. It was also "rumpless," that is, had no evidence of a tail or an oil gland. It weighed approximately 4 pounds, about the size of a Leghorn, however, its rumplessness gives it a more blocky appearance than the Leghorn. A wide variety of color patterns were present in the original imports and have been perpetuated through succeeding generations. Pictures of the Araucana as it was originally imported were published in the National Geographic Magazine April 1927.

The egg shells of the Araucana are pastel blue-green in color and are consistently the same shade of color throughout a hens production period. Within a flock the shell colors may exhibit considerable range and will represent a mixture of the colors red and green. These are the only shell color pigments available through the circulatory system. This colored shell characteristic appears to be an eminently dominant genetic factor. It will be expressed in future generations, regardless of genetic crosses.

All other characteristics, rumplessness, ear-tufts and color patterns may or may not be expressed in future generations dependent upon the genotype

of the sire and dam. Undoubtedly there are many strains of individual chickens in the country today whose phenotype resembles the original import from Chile. Most examples seen at fairs and poultry shows lack the rumpless condition of the original. Many color patterns have been well standardized and by action of the American Poultry Association in November 1976, the Araucana breed was officially accepted into the American Standard of Perfection. Some 5 varieties or color patterns are now accepted in recognized poultry shows. Birds will be disqualified if they lack ear-tufts and possess even a rudimentary tail.

### Why the Increased Public Interest

Although the Araucana has captured the curiosity of the geneticist and the interest of the hobbyist, a segment of the general public became extremely interested in the bird during the late 1960's and early 1970's. The reason for this interest was because implied information indicated a causal relationship between cholesterol and circulatory difficulties and that eggs produced by the Araucana contain no cholesterol.

Although the relationship between cholesterol and circulatory difficulties in man is a rather nebulous one, several research projects by medical and poultry scientists are underway to determine the presence or absence of this relationship.

Dr. F. E. Cunningham of Kansas State University found that eggs from Araucana chickens do indeed contain cholesterol. This information was pub-

lished in the March 1977 issue of Poultry Science. Eggs were collected from 10 midwestern states in an attempt to determine whether differences might exist among different geographical locations, feeds, or management conditions, (Table 1). These data prove that Araucana eggs do contain cholesterol. Although some differences between states are evident, they are not of practical value.

Table 1. Cholesterol contents of yolks from Araucana eggs collected from ten mid-western states.

State	Cholesterol (mg./100g)		
	Low	High	Average
Arkansas	1094	1684	1368
Nebraska	1178	1347	1299
Kansas	1052	1431	1269
Oklahoma	1136	1380	1258
Iowa	1120	1390	1275
North Dakota	1094	1684	1274
Colorado	1105	1400	1300
Texas	1275	1430	1320
New Mexico	1128	1433	1319
Missouri	1200	1505	1346

The Kansas State researchers also tested eggs from other breeds, (Table 2). Although these data indicate considerable variation among breeds, the fact that composit samples were used in the analysis eliminated the individual hen variation. Thus, the statistical combination of the individual differences, shown in Table 1, and the data from Table 2 results in the conclusion that eggs from the Araucana breed contain the highest percent of cholesterol of the three breeds tested.

Table 2. Cholesterol content of yolks from eggs laid by Araucana, White Leghorn, and Plymouth Rock hens.<sup>1</sup>

Breed	Shell color	Cholesterol (mg./100g.)
Araucana	Blue-green	1315
Leghorn	White	1163
Plymouth Rock	Brown	1255

<sup>1</sup>Average of 6 composited samples.

Proximate analyses were made of the albumen and yolk for the Araucana and Leghorn eggs with the results presented in Table 3. These data also substantiate the conclusion that only slight differences exist among the chemical composition of eggs produced by different breeds. When analyzed statistically, these data also indicated that the differences between samples were as great as the differences between breeds. These proteins were analyzed further and the results definitely showed that these proteins had the same component parts. Thus, eggs from both breeds are virtually equal in all respects.

Table 3. Analyses (Percent) of eggs produced by Araucana and Leghorn hens of the same age.<sup>1</sup>

Albumen	Araucana	Leghorn
Solids	12.2	12.0
Protein	10.7	10.8
Glucose	0.38	0.37
NaCl	0.30	0.30
Yolk		
Solids	50.5	51.5
Protein	16.1	16.3
Fat	32.0	31.9
Glucose	0.17	0.18
Cholesterol	1.31	1.16

<sup>1</sup>Averages of 4 composited samples.