

Why Layers Need Calcium

According to Werner J. Mueller, Penn State University, in the August issue of Poultry Digest, 5 to 7 per cent of all eggs produced are broken during handling and marketing.

The average egg shell contains about two grams of calcium. If a hen produces 250 eggs per year she has a requirement of about 500 grams of calcium to put shells on all of them. Since the total calcium in the hen's body weighs only 25 grams, she must put 20 times more calcium into shells than the entire calcium content of her body.

In 1960 the National Research Council recommended raising the calcium content of laying rations from 2.25 to 2.75 per cent. A number of researchers were not satisfied that even this amount was sufficient. Idaho workers, for example, recommended a calcium level of 3.75 per cent for temperatures below 70 degrees, and 4.5 to 5 per cent for temperatures above 70 degrees.

Simply increasing the amount of calcium in the feed is not the whole answer. The efficiency of calcium utilization is not 100 per cent. If the feed is low in calcium, the hen may utilize up to 80 per cent of it. However, as the calcium content of the diet increases, the efficiency is reduced drastically and may go as low as 20-30 per cent.

A safe assumption is that about 50 per cent of the cal-

cium is utilized. Therefore, if the bird needs two grams of calcium a day, it is necessary to feed four grams.

The next problem is feed consumption. If the bird consumes 200 grams of feed a day she can get by with two per cent calcium.

If her feed consumption drops to 100 grams a day, she must have a four per cent calcium diet to get her needed four grams. So it can readily be seen that it is the amount of calcium that the hen consumes that is important, not the percentage in the feed. The smaller the feed intake, the higher the per cent calcium must be to take care of the hen's daily needs.

Environmental temperature is another complicating factor. As the temperature is increased from 55 to 90 degrees, feed consumption drops about one third. Therefore, assuming other factors remain constant,

the amount of calcium included in the diet at 90 degrees must be one-third more than at 55 degrees.

Two other factors that further confuse this calcium picture are individual variations due to rate of production and egg size.

The disadvantage of trying to include the maximum amount of calcium in the diet is that it upsets the balance of the other nutrients. For example, if the limestone being used contains 39 per cent calcium, and it is desired to provide a feed with five per cent calcium, 250 pounds of the calcium supplement would have to be added to each ton of feed.

The simple solution to this complex problem is to feed calcium in the form of oyster shells or some other readily consumed form. This works well for floor birds. It becomes more difficult when dealing with cage birds.

Mueller recommends that if

Bull & Tabor Chairmen Of Farm-City Week

Two department heads in the state government—Leland H. Bull, Secretary of Agriculture, and John K. Tabor, Secretary of Commerce, will serve as honorary co-chairmen of Farm-City Week, Nov. 20-26, according to Jack R. Grey, general chairman.

Grey, deputy state Secretary of Agriculture, today said both honorary chairmen will be closely identified with this

year's observance, the theme for which is "Discover the New Pennsylvania through Farm-City Week."

Particular emphasis, he stated, will be placed upon the Commonwealth's program for promoting its economic growth, a project that embraces all Pennsylvania.

Secretary Bull, a former Pennsylvania chairman of Farm-City Week, has been active in this effort for better rural-urban relations from the time the movement originated ten years ago.

Appropriate activities are being planned in most Pennsylvania counties under the direction of county chairmen, many of whom are the county agricultural agents.

An international observance, Farm-City Week will be an occasion for encouraging better acquaintance and understanding between farm people and city residents throughout the United States and Canada.

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