

## Penn State conducts egg study

**PENN STATE** — Poultry producers have known for years that all eggs are not created equal. Some are larger, some are smaller, and some have a greater tendency to crack.

Cracked eggs cost the Pennsylvania poultry industry an estimated \$15 million annually. These costs are passed on to consumers directly and indirectly. As many as ten percent of all eggs are broken long before they hit the frying pan.

In one Penn State eggshell damage study, Extension personnel found a marked difference in eggshell quality between the first six months and second six months of laying, says Herb Jordan, Extension poultry science specialist at Penn State.

Figures for the first half-year-long laying period indicated the greatest percentage of cracks showed up after cooling the eggs overnight.

"Before this stage of the egg gathering process, the eggs

showed no visible signs of cracks," explains Jordan. "But, apparently the eggs that cracked after being kept perfectly still inside a standard farm cooler had prestressed weaknesses."

County Extension Director Charles M. Skillington conducted the eggshell damage study in Elk County over a three year period. Jordan assisted in interpreting the results. Total egg damage was almost 9 percent for 3800 eggs from four flocks.

For the study, the researchers gathered 100 egg samples each month from each of four flocks of single-combed white Leghorns, housed in two large cage houses.

Each egg was measured for several quality parameters. All of the cracked eggs were divided into categories of handling: as laid, after gathering, after cooling, after washing, and after weighing and candling.

During the first six month period cracks after cooling were the greatest. Lesser percentage of

cracks occurred after laying, washing, belt gathering, candling and weighing.

But more cracks occurred in the stages during the second six months of laying, when eggshell quality normally declines. Nearly twice as many eggs were damaged at point of lay and during washing. Three times as many eggs cracked during gathering.

However, fewer eggs showed

cracks in the cooler during the second laying period.

Jordan notes that the study indicates that poultry producers may need to slow down machinery and use plastic floor inserts in cages during the second six months of lay.

On the average, a 30 cents per dozen lower price than Grade A is paid for cracked eggs. For 70,000

layers, average normal production being 21 dozen marketable eggs producer per year, this represents an annual loss of over \$38,000.

Eggshell quality also varies with such factors as breed of bird and feed quality. Careful health and growth records of how pullets are raised must be kept and evaluated for further study and improvements in the industry.

## Freeze surplus eggs

**HARRISBURG** — Have your hens laid too many eggs lately? Or, are your eggs beginning to stockpile in the refrigerator?

If so, you may want to consider freezing your extra eggs, according to Vicky Wass, Pennsylvania Egg Promotion Specialist with the Pennsylvania Department of Agriculture.

"If you don't plan to use eggs within four to five weeks, freezing is a good way to store your surplus," Wass said. Eggs are frozen without the shell. Whites and yolks use different freezing techniques.

To freeze egg whites, just pour the separated whites into freezer containers, seal tightly, label with number of eggs, date and freeze. To make the process even easier, freeze each white in an ice tray and then transfer to a freezer container.

Egg yolks and whole eggs require extra care when freezing because of the gelatin property of the yolk. To help retard gelatin add either 1/8 teaspoon salt or 1 1/2 teaspoon corn syrup per 1/4 cup egg yolks (4 yolks) or whole eggs (2 whole eggs). Be sure to label the container with the number of yolks, or whole eggs, and whether you've added salt (for the use in main dishes) or sugar or corn syrup (for baking or desserts).

Yolks can be hard-cooked by carefully placing yolks in a saucepan. Cover yolks with water.

Cover the pan and bring water to a boil. Remove from heat and let stand covered in hot water for 15 minutes. Remove with a slotted spoon and drain well before packing for freezing. Hard-cooked yolks can be used later for toppings or garnishes.

Frozen eggs can be thawed overnight in the refrigerator or under cold running water. Once thawed, whites beat to a better volume if allowed to sit at room temperature for about 30 minutes. Use these frozen eggs just as you would use fresh eggs.

## Here's something to cluck about

**WASHINGTON, D.C.** — U.S. hens laid a record 69.7 billion marketable eggs last year for food processors, groceries, hatcheries, and export markets.

But hens might cluck louder about another record because all these eggs came from nearly 2 1/2 million fewer birds than 1979's 289 million.

Why more eggs and fewer hens? Because the average laying hen produced 243 marketable eggs, up

from the previous high of 240 in 1979. So despite the smaller flock, U.S. hens produced nearly half a billion more eggs than in 1979.

Back in the 1950's an average hen produced only about 120 eggs per year. However, research by poultry scientists on feeding, lighting, housing, and other management practices has created a revolution in egg production.

## Some eggciting facts

**HARRISBURG** — The largest egg produced comes from an ostrich. An ostrich egg is eight inches long and six inches in diameter. The volume is equal to two dozen hen eggs. The shell of an ostrich egg is strong enough to support a man's weight. And, if you want to hard-cook one, plan on boiling the egg for 40 minutes.

What's the record for egg-laying? Princess Te Kawan, a Black Orpington, holds the record, producing 361 eggs in 364 days. The highest number of yolks ever found in an egg is nine.

How far can you throw an egg without it breaking? The longest

drop recorded with the egg staying intact was 600 feet. Another was reported hurled 350 feet without harm. The longest egg and spoon race was a 27-mile marathon which lasted four hours and 17 minutes.

Americans are always looking for new challenges, and what a better way to do it than with eggs? Two blind men shelled 1,050 dozen or 12,600 eggs in seven hours and 15 minutes at a hotel restaurant. The record for eating eggs is eggstraordinary. One individual ate 14 hard-cooked eggs in 58 seconds; the record for eating 32 soft-boiled eggs is 78 seconds; while someone ate 13 raw eggs in only 2.2 seconds.

# Give Eggs a Break



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