

# Egg Research Leads Sarah To Poultry Ambassadorship

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LANDISVILLE (Lancaster Co.) — To most people an egg is an egg to be eaten for breakfast or stirred into a favorite recipe.

But when Sarah Woodling looks at an egg, she sees it from a whole different perspective.

The small oval-shaped egg has provided her with years of scientific experimentation. It's earned her top level science awards. It's propelled her into a scientific career, and now it has given her the opportunity to represent the poultry industry through her new role as Lancaster County Poultry Ambassador.

While most people keep a dozen or so eggs in the refrigerator, Sarah keeps 40 dozen eggs in her basement.

Before someone complains, "Eggs must be refrigerated," Sarah has proof that there is more than one way to preserve an egg.

"I've kept eggs for 20 weeks without refrigeration," Sarah said.

Of course, anyone can keep an egg in the basement for 20 weeks if they aren't planning to eat it. But research shows that Sarah's 20-week-old eggs maintained their quality.

Sarah attributes her interest in eggs to her dad, who told her that when he participated in a wilderness project years ago, he was told that if an egg was boiled for 7 to 10 seconds, it would maintain its quality for 2 to 3 months.

Intrigued, Sarah decided to experiment with eggs. She used her research for a required project in her top-level science class at Hempfield High School. She then entered her project in the Lancaster and Science Engineering Fair where she received second place in the biology research. The following year, she did more in-depth research on eggs and again won second-place.

For the scientific experiment, Sarah tried boiling, microwaving, and waxing eggs for a variety of seconds to determine if the eggs would last.

"Boiling and microwaving

worked," Sarah said.

Waxing did not work, but Sarah said a more in-depth look could determine why.

"Perhaps the eggs had spores that bred beneath the wax," she said.

She tried experimenting with eggs that had been processed and those that had not. She experimented with double bagging and refrigerating with styrofoam and pulp cartons.

With those 40 dozen eggs—20 dozen that had been processed and 20 that had not been—Sarah cracked an egg each week to test the quality. Through contacting local egg companies, Sarah became acquainted with Tom Fox, quality assurance manager for Sauder's Eggs. She now does all her testing at the Sauder's facility.

"My research is in its infancy stage, but it has potential for marketing," Sarah said.

In fact, her research has already caught the attention of science colleges, labs, and researchers. She received an award from the Navy and Army for applied science—its real use in the outside world.

"Depending where they are stationed, the military must keep food without refrigeration for large periods of time," Sarah said.

Last year in her scientific research, Sarah did a comparison between European and U.S. methods of egg handling. Europeans do not process eggs. While the American public believes they are being protected from salmonella enteritidis and other bacteria impenetration, processing actually causes the egg to deteriorate faster, according to Sarah's research.

She said that processing washes off fecal matter and feathers, but the 90-degree washing removes the cuticle, a natural substance in the shell that serves as a natural defense and anti-spoilage barrier to the egg and leaves the egg at risk for bacterial penetration. In addition, the hot temperature from washing the eggs requires several days of refrigeration to cool the center of the egg. Eggs stuck in liquid nitrogen to speed up the cool-

ing process will cool the outside but leave the center relatively warm.

Sarah, an honor's student, attended the Governor's School for Ag Science this past summer. "I loved working in the labs and researching," she said. "So I know I'm headed in the right direction career-wise."

Sarah's contacts with the poultry industry and with working with Dr. John Schwartz at the extension office, opened up the opportunity for her to become the poultry ambassador.

While she is a well-qualified spokesperson for the industry and looks forward to the educational aspect of the position, Sarah had to learn to acquire the skill to make omelets to feed a crowd. After serving omelets at the Central Market's Harvest Breakfast, Sarah can flip omelets with ease.

As part of her ambassador duties, she will promote using eggs and poultry products in cooking.

"Our family is so busy, we like recipes where we can throw things together as fast as possible," said Sarah. She is the daughter of Russell and Barbara Woodling and has a brother Andrew, 13. The family lives in Landisville.

One of the family's favorites is Chicken Quesadillas: throw some boneless, skinless chicken meat into a skillet and lightly brown. Add some cooked rice, green pepper, cheese, and salsa in the amount preferred. Wrap in a tortilla and serve.

As the Poultry Ambassador, Sarah receives a \$1,000 scholarship. She plans a double major in food science and in poultry management to prepare her for continual research.

"I'd like to attend Penn State, but I'm keeping my options open. There are several other good colleges out there and whichever offers me the best scholarships will influence my decision," Sarah said.

According to reports, Sarah's chances for scholarships sound optimistic. Preliminary interviews with several colleges show that they are amazed that a 17-year-old has conducted quality research. She also uses the latest technology available.

Sarah said, "I found that you shouldn't be afraid to ask questions or to ask companies for materials needed for research. So many companies seemed excited



As the newly-appointed Lancaster County Poultry Ambassador, Sarah Woodling proves she is as adept at cooking as she is in conducting scientific experiments with eggs. Chicken Quesadillas is a family favorite.

when I expressed interest in using their products. Our basement is filled with boxes of supplies that companies send me to try."

While Sarah's research sounds as if it is a time-consuming project, the 17-year-old by no means limits her world to scientific research. She's deeply involved in music and performance. She is a first soprano in county chorus, in school chorus, band practice, and the color guard.

"I love music too much to make it my life. I do it for fun, but to succeed in music you must have incredible talent and focus entirely on one area," Sarah said.

Focusing on one area is not Sarah's style. She is involved in theater, plays, and musical at Hempfield. She works 12-16 hours bi-weekly at the Mennonite Home as a trayline aide and is the handler for family's show dogs—Pennbrook Welsh Corgi. She has been showing dogs since sixth grade.

The family's interest in show dogs happened by a fluke. They had purchased the Corgi as a family pet with no intentions of showing or even wanting a quality spe-

cies. At five months of age, the breeder noticed their dog and said, "Never get that dog neutered. Start showing it."

Since then the Corgi has won numerous awards as both American and Canadian breed champion.

"I like keeping busy. The problem is that I enjoy everything," Sarah said of her involvement in so many diverse activities.

Sarah and two other former participants at the Governor's Ag School will hold seminars to acquaint other students with the program.

"A lot of students aren't aware of career opportunities in food science and in agriculture," Sarah said. "Some want to go into biology but they don't realize that ag is biology that is more applied research than sitting around reading a textbook."

It was a little egg that opened a whole new world to Sarah.

She said, "I never knew about food science and agricultural career opportunities until I got involved in this project. Now I know that is the direction I want to take."



Lancaster County Poultry Ambassador Sarah Woodling has won major awards for her scientific experiences that show the shelf life of eggs can be expanded without the use of refrigeration. Egg research has propelled Sarah into the direction of food science and agricultural studies. Sarah looks forward to the educational aspect expected in her role as Poultry Ambassador.

## Homestead Notes

### Family Traditions Workshop Set

LANCASTER (Lancaster Co.) — The Lancaster County office of Penn State Cooperative Extension is offering the workshop "Strengthening Families With Holiday Traditions," Tuesday, Oct. 27, from 9 a.m. to 1 p.m. at the Farm and Home

Center.

The workshop is open to those who would like to learn new ideas for family traditions as they relate to family celebrations, fun in the kitchen, and holiday spending. Participants will enjoy hands-on food and greenery demonstrations, and

the opportunity to share their unique holiday traditions with others.

Cost of the workshop is \$10. Register by Wednesday, Oct. 21 through the Lancaster Cooperative Extension office at (717) 394-6851.