

**Gymkhana Results**

Twenty-three mothers shared a special day with their children at the first Gymkhana for the Boots & Saddles 4-H Club.

Held at the Lower Hopewell Horse Center, Lititz, on "Mother's Day," the event had several winners:

**ADVANCED CLASSES**  
**Grooming & Showmanship 16 & Over:**  
 1. Becky Preiss with Monte Stepsaver, 2.

Leah Harvey with Misty.  
**Grooming & Showmanship 12 & Under:**  
 1. Dan Talbot with Miss Landmark, 2. Jennifer Goodman with Gray Cloud, 3. Barry Gochbauer, with my Lil Buddy.  
**Grooming & Showmanship 13 to 15:**  
 1. Nate Stoltzfus with S R Invest-in-Me, 2. Rein Hess with Hia Flashy Smoky.  
**Dollar Bareback:** 1. Erin Hess.  
**Driving:** 1. Jennifer Goodman, 2. Samara Shuster-Edelson.  
**Western Equitation Senior:** 1. Becky Preiss, 2. Nate Stoltzfus.  
**Western Equitation Junior:** 1. Dan Talbot, 2. Jennifer Goodman, 3. Sara Harris.  
**Egg & Spoon:** 1. Jennifer Goodman, 2.

Erin Hess, 3. Leah Harvey.  
**Western Pleasure Horse:** 1. Becky Preiss, 2. Robert Shuster-Edelson, 3. Nate Stoltzfus.  
**Western Pleasure Pony:** 1. Jennifer Goodman, 2. Dan Talbot, 3. Sara Harris.  
**Hunt Seat Equitation Senior:** 1. Jessica Hill, 2. Erin Hess, 3. Leah Harvey.  
**Hunt Seat Equitation Junior:** 1. Samara Shuster-Edelson, 2. Abigail Just, 3. Elizabeth Heisey.  
**Break & Out:** 1. Erin Hess, 2. Sara Harris, 3. Jessica Hill.  
**Hunter Under Saddle Horse:** 1. Samara Shuster-Edelson, 2. Abigail Just, 3. Erin Hess.  
**Hunter Under Saddle Pony:** 1. Jessica Hill, 2. Elizabeth Heisey.  
**Hunter Hack Pony:** 1. Jessica Hill.

**Trail Horse:** 1. Erin Hess, 2. Nate Stoltzfus, 3. Samara Shuster-Edelson.  
**Trail Pony:** 1. Sara Harris.  
**BEGINNER CLASSES**  
**Walk Jog Equitation:** 1. Alison Lemke, 2. Jennifer Talbot, 3. Emily Hill.  
**Walk Jog Equitation:** 1. Tim Goodman, 2. Barry Gochbauer.  
**Walk Trot Pleasure:** 1. Alison Lemke, 2. Emily Hill, 3. Krystle Charles.  
**Walk Jog Pleasure:** 1. Barry Gochbauer, 2. Tim Goodman.  
**Walk Equitation:** 1. Ashley Good.  
**Egg & Spoon:** 1. Tim Goodman, 2. Barry Gochbauer, 3. Jennifer Talbot.  
**Walk Trot Jog Carter:** 1. Alison Lemke, 2. Emily Just, 3. Laura Niemeyer.  
**Walk Cavalletti:** 1. Ashley Good.  
**Walk Trot Jog Cavalletti:** 1. Alison Lemke, 2. Barry Gochbauer, 3. Emily Just.  
**Walk Trot Jog-Trail:** 1. Emily Just, 2. Emily Hill, 3. Barry Gochbauer.



4-H volunteers from Berks County re 1992 Pennsylvania State Leaders Forum on the Pennsylvania State University left, Anita Wolter, Reading; Sandra S Brenda Anderson, Reading; and I Kutztown.

The evening ended with Jessica Hill's program on the 4-H show circuit levels of competition and trail ride safety. Refreshments were served.  
 For more information, call (717) 569-3068.

# Students Should Learn Ways To Prevent Foodborne Illness

**ANDY ANDREWS**  
**Lancaster Farming Staff**  
**LEOLA** (Lancaster Co.) — A recent poll indicated that only about half of the American public washes its hands before handling food, including teen-agers. And many teens will, at one time or another, work in the food industry. The importance of good personal hygiene and the essentials of food safety in schools were emphasized to about 60 home economists at the Lancaster-Lebanon IU 13 at their meeting last week. Dr. Stephen J. Knabel, assistant

professor of food science at Penn State, discussed an array of projects that teachers can use to address the issues of food safety to school-age children. Knabel said that personal hygiene and food safety must be emphasized in the school, "because from what I can tell, people think there is less and less of this taught. Many of these students will eventually go into the food service industry and be out there handling food."  
 Knabel spoke about the role of bacteria (microorganisms) and their role in the food chain.



Dr. Stephen J. Knabel

**Hitchhikers**  
 "Bacteria are like hitchhikers," he said. "They hitchhike from one surface to another. And your hands are the primary method of hitchhiking."

Home economists need to understand the importance of instilling in the students an understanding of microorganisms, the importance of knowing how to maintain good personal hygiene when handling food, the proper heating and cooling techniques for food, and ways students can understand food safety through "hands-on projects."

But first, teachers must understand that microorganisms can be a potential threat. Knowing how they are threatening and under what conditions is key.  
 "Food safety experts realize it is microorganisms that are really the major health problem when it comes to food safety," said Knabel. Consumers tend to think only in terms of "catastrophic" illnesses, or things beyond their control, such as pesticides or food additives that may cause cancer. According to the food safety expert, problems such as microorganisms are those that can be "controlled" by the homemaker.

**Rid of risks**  
 But consumers have to understand that it is impossible to get rid of all risks when handling food.  
 "There is always some risk involved in eating," he said. "We can reduce the risk to a very negligible level, but we can never have zero risk."

Bacteria are everywhere — in the food we eat, in our bodies, in the entire "ecosystem" of the earth. "You're never going to eradicate bacteria from the face of the earth," he said. "We have to control them."  
 Knabel suggested that the home economics teachers team up with science and math teachers and use projects to study microorganisms and their relationship to food. Through the use of borrowed lab equipment, such as a microscope, students can actually observe bacteria, both good (the kind in yogurt) and bad, or pathogenic bacteria, such as Listeria, Salmonella, and Campylobacter.

**Grow logarithmically**  
 Knabel said that bacteria grow "logarithmically," dividing in half or doubling rapidly. By growing this way, a small amount of bacteria can become a large amount in a very short time.  
 Some projects Knabel suggested for the classroom in order to study bacteria include:  
 • Place some pure water in a petri dish or test tube. Sprinkle in a little dirt. Observe little or no bacteria growth. Take another dish and place in some dried soup mix and dirt. Observe. Next, combine the dirt, the dried soup mix, and water, and watch the buildup of bacteria. This shows that bacteria need food and water to grow.  
 • Expose some hamburger to oxygen. Watch the buildup of aerobic bacteria (bacteria that need oxygen to grow). Then place olive oil around another batch of burger. Watch the buildup of anaerobic bacteria (bacteria that only grow in the absence of oxygen), including gas and bubbling.  
 • Study pH through yogurt. A cup of yogurt can contain about 10 billion bacteria per spoonful (lactic acid bacteria). This is a way of teaching children that some bacteria are good. Allow some bacteria to stand and ferment. The pH will drop and, eventually, the students will see the buildup of mold, which thrives under conditions of low pH.

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