

EXTENDING KNOWLEDGE *Changing Lives*

IN KNOTT COUNTY

Extension provides practical education you can trust by helping individuals, families, businesses, and communities solve problems, develop skills, and build a better future.



Chick Incubation Project

4-H Chick Incubation Project

Two hundred seventy-eight (278) students, ranging from first through 12th grades, participated in our Spring 2016 4-H Chick Incubation Project. Lessons varied depending on the age of the students but typically included; nutrition, farm to table facts, life cycle, and embryology development. Curriculum utilized for the program were the National 4-H Animal Series: Poultry, National 4-H Embryology in the Classroom series, as well as USDA My Plate Nutrition Guide: Protein.

Students learned the nutritional value of an egg, explored and labeled the parts of an egg, practiced how to grade eggs, identified the careers associated with the poultry industry, engaged in discovering the stages of embryonic development by using an ovascope along with a candler, and demonstrated

Priority Program Efforts

- A total of **258** people are now involved in addressing significant community issues
- **40** local residents implemented practices that promote sustainable agriculture
- **530** citizens (youth & adults) acknowledged utilizing the skills learned through Extension programming
- A total of **431** individuals reported making lifestyle changes (diet, exercise, managing stressors, healthy home practices, etc.) for the purpose of improving their health
- A total of **876** youth and adults demonstrated informed and effective decision-making skills

responsibility in caring for the chicks pre and post hatch. Students reported that they truly enjoyed this experience and gained new knowledge along the way.

Six teacher volunteers oversaw the care and maintenance of the classroom incubators for the 21-day incubation period. Some teachers repeated our lessons with their other classes giving more students the opportunity to participate in this experience. One school filmed a live feed of the actual hatching of a chick and uploaded it to Facebook for all the students to see. One teacher noted, "This project was very intriguing and engaged students who were typically uninterested in other science related projects." Another stated, "This project related well to their curriculum since students were able to see the life cycle process first hand." As a bonus, many other nutritional connections were made through these lessons.

Overall, this was a wonderful countywide classroom project that engaged students and was inclusive of many curriculum areas. Next year we hope to continue and grow this program. I hope that these students will eventually participate on our Knott Co 4-H Poultry Judging team.

"This project was very intriguing and engaged students who were typically uninterested in other science related projects."

- Lauren Dials, Carr Creek Elementary

Winter Storm Preparedness

Winter in Eastern Kentucky is extremely challenging due to the steep, narrow rural roads, with a high percentage of people living in poverty, and the lack of equipment to treat roads. On January 21, 2016, the National Weather Service issued a winter storm warning for the entire state of Kentucky. With a chance of 12 to 20 inches of snow, the Knott County Family and Consumer Science Agent prepared Eastern Kentucky residents by distributing

materials from: USDA, CDC, Extension Disaster Emergency Network (EDEN) through social media. Topics included: food safety, what to do if a power line is down, safety while traveling, exertion, how to maintain a good body temperature, and other emergency information. Within two days, the postings had been viewed 7,368 times on social media, shared by local government offices, as well as printed and distributed by the county judge to those without Internet access. Schools were closed for 12 days following the storm, but no lives were lost due to the severe weather.

Venison 101

Most Knott County residents hunt for sport as well as to provide additional food for their families. With the loss of coal industry jobs, families are relying more and more on wild game to help feed their families. To insure they are safely preparing the wild game, the Knott County Cooperative Extension Service and the Kentucky Fish and Wildlife Service presented a Venison 101 Workshop to twenty-two hunters and landowners. The program included dressing and skinning, identifying different cuts of meat, and sampling of a variety of recipes.

Sixty-eight percent (68%) of participants stated they now had a better understanding of Kentucky laws and regulations. Fifty percent (50%) of participants gained a better understanding of the equipment needed to process and field dress wild game. Sixty-four percent (64%) of participants reported an enhanced knowledge of equipment safety. Thirty-two percent (32%) said they learned more about wildlife plot management. Fifty-five percent (55%) of participants reported an increase in their knowledge of food safety and food preservation. Follow up conversations indicated that participants planned to use the information to more efficiently process and safely field dress their wild game, follow food safety guidelines when preserving wild game, and trying new methods to prepare and serve wild game.

Growing Agriculture in Appalachia

In rural Appalachia, agriculture persists on a very small scale for many families. Currently Knott County has a very weak economy due to the downturn in the coal industry. The Agriculture Agent has worked to give the people of the county many opportunities to possibly supplement their income with new innovative ideas. Growing mushrooms has been around for a few decades, although it has been several years since a program has been offered in Knott County. In February 2016, the Knott County Extension Service partnered with Grow Appalachia and offered a Shiitake Mushroom Workshop on the campus of Hindman Settlement School.

The Shiitake Mushroom Workshop was presented by Keith Hackworth, Floyd County Extension Agent for Agriculture and Natural Resources. Agent Hackworth is very experienced and knowledgeable in the process of growing shiitakes. In the workshop, he discussed the process of growing, harvesting, and the real value of shiitake mushrooms. During this event, each participant received the opportunity to practice on logs provided by the extension service. They drilled holes into each log and then inserted the shiitake mushroom spawn dust into the log with specialized tools. Once they drilled and filled the holes, they learned to seal each hole with hot cheese wax.



Shiitake Workshop

This hands-on workshop allowed over 80% of the participants to take part in learning how to prepare shiitake logs for the first time. Also, each of them were given University of Kentucky shiitake publications and made aware of other resources needed to begin production on their own. The program had twenty-six participants, several who were first time extension visitors. One hundred – percent (100%) said they acquired new knowledge and skills on how to grow mushrooms. Since the program, several individuals have contacted the agent about wanting additional classes and have plans to begin their own production of shiitake mushrooms. Plans are currently underway for us to provide another workshop opportunity in the fall of 2016.

Extension Involved in Education at Knott County Trail Ride

Knott County has become known in the last few years as the largest horse trail ride in the Eastern United States with an average attendance of over 10,000 at each of the spring and fall rides. Because of these numbers, the Knott County Cooperative Extension Service and the UK College of Agriculture, Food and Environment began looking at opportunities to share our equine resources with this massive audience. With the efforts of the extension staff this spring, Knott County Extension reached over 1,000 of those participants at the spring ride.

Suggested by the Knott County Extension Board, the staff prepared packets containing educational and programming information including equine nutrition, recipes, and material on available 4-H programs. Also, an informational booth geared around equine nutrition, forage quality, hay testing and saddle up safely was offered by the extension service. Many great extension resources were given out to horse owners during the trail ride, and plans are underway to participate and continue our education and outreach at all future trail rides.



L to R: Sterlin Bolen, Jenna Johnson, Jackie Johnson, and Ashley Cox

4-H Poultry BBQ Team

Five members of Knott County 4-H trained to compete in our first county fair's 4-H BBQ competition. Four members competed, two in our senior division and two in our junior division. All county participants went forward to compete at the state 4-H BBQ Poultry competition held in Madison County. The youth brought home one blue and three red ribbons in their first year of competition!

This program teaches various nutrition, food safety, and cooking skills. It is also a great review of poultry parts for our current 4-H poultry judging team. These youth must exhibit skills, knowledge, and make wise decisions toward food safety to be successful in this program. Each participant will continue to use the skills gained to help them throughout their every day lives.

During the competition, each participant was trained in the complete step-by-step process. This process includes learning the skills of cleaning the meat, creating a delicious BBQ sauce, how to properly use a grill, and determining when the meat is completely cooked and safe to eat.

The competition strengthened our relationship with the local FFA chapter, and added an element of interest to our first county fair. We expect to see a higher participation rate as this program grows over the upcoming years.

Food Preservation

The US Bureau of Labor Statistics reported in May of 2013 that the county unemployment level was 14.1%. The Small Area Income and Poverty Estimates reports that in 2013, 28.3% of Knott County residents lived in poverty. The Family and Consumer Science Agent along with three county extension homemakers offered a food preservation workshop to 21 participants. A team teaching method was used to demonstrate: pressure-canning green beans, freezing green beans, making tomato juice, making apple jelly and demonstrating the water bath technique.

One-hundred percent (100%) of the participants reported learning something new, such as: how to water bath, when to begin timing the processing, and the importance of safety and following USDA recommended guidelines. In a follow-up survey, 100% reported utilizing the home processing of fresh fruits and vegetables.

Quantities of processed food included: 128 quarts of canned beans, 52 pints of canned corn, 10 bushels of dehydrated beans, 206 quarts of tomato juice, 91 pints of salsa, 133 pints of jams and jellies, 30 pints of kraut, 18 quarts of greens, 44 quarts of peaches, and 36 pints of pickles.

Among the items that were frozen were 52 quarts of apples, 84 quarts of beans, 26 dozen ears of corn, and 112 pints of corn.



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