



# EXTENDING KNOWLEDGE

## *Changing Lives*

### IN GREEN COUNTY

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



*Green County 4-H'ers participated in hands-on, experiential investigations of Kentucky's hydrology through the extensive karst systems from caves at Mammoth Cave National Park.*

### Priority Program Efforts

- A total of **544** people are now involved in addressing significant community issues
- **440** youth made an impact in their community through service projects
- **7** local residents implemented practices that promote sustainable agriculture
- **12** Producers reported an economic impact (i.e., increase in agricultural productivity, increase in higher returns, decrease in expenses) in their agricultural operations
- **279** youth indicated an increase in leadership skills, knowledge or confidence through participation in Extension-related leadership programs
- **717** citizens (youth & adults) acknowledged utilizing the skills learned through Extension programming
- A total of **19** individuals reported making lifestyle changes (diet, exercise, managing stressors, healthy home practices, etc.) for the purpose of improving their health
- A total of **69** youth and adults demonstrated informed and effective decision-making skills
- **120** individuals incorporated new or additional conservation practices.

### Youth Identify Community Environmental Issues

Green County is geographically located in the third most diverse ecosystem in the United States. The Green River which flows through the county has three endangered mussel species with an additional three species on the threatened list. The Green County 4-H Council through evaluations observed a need to increase the environmental awareness and conservation of our youth and communities. The Green County 4-H clubs in grades 4-12 participated in natural resource activities and projects discovering the connected webs and systems of our environments. Humans can have adverse effects on animal, water and soil systems. Two hundred ninety one youth participated in at least one environmental education program. Of these youth, 90% responded they have a better understanding of how natural systems are connected, like how pollution can harm aquatic wildlife. Thirty-four (34) youth participated in a hands-on investigation of how pollution can damage subterranean systems that are not easily seen through a cave study. Eighty-two percent (82%) had never seen a cave damaged due to pollution and 100% committed to encouraging others not to pollute our natural systems.

## **Literacy, Eating and Activity for Primary (LEAP)**

The LEAP for Health curriculum uses storybooks to teach children about staying healthy, being physically active, and eating more fruits and vegetables, low-fat dairy products, and whole grains. During LEAP classes, children are read a story and then allowed to try new and different foods. Over the last



*Little LAMBS Preschoolers make caterpillars out of fruit while enjoying the story *The Very Hungry Caterpillar*.*

## **Master Cattleman Program**

Green County's landscape encompasses over 36,000 head of beef cattle according to 2016 national agricultural statistics. Beef cattle production makes up over 24% of the Green County agriculture economy. In 2016, the Adair, Green, and Taylor County Cooperative Extension Services collaborated to host the Master Cattleman program, an intense 10 session course that includes 40 hours of instruction on all aspect of cattle production. A total of 37 farmers participated with 17 of them being from Green County. Survey results indicated that participants adopted a total of 25 practices as a result of knowledge gained from the program. Some examples included 25% of the participants converted from a year-round calving season to a defined calving season and 37% adopted rotational grazing. When asked what areas of their farm they had made improvements, 87% cited nutrition, 93% cited reproduction, and 87% cited health. After the last session there was an awards banquet held for all participants to hand out certificates and farm signs. During this banquet the group was asked about other sessions; 85% of the class said they would like to keep participating in other programs like Master Cattleman.

## **Science Club Inspiring New Dreamers**

According to the US Department of Education, only

16% of high school students are proficient in math and interested in a STEM career. Of those who pursue Science, Technology, Engineering or Math (STEM) degrees, only half will actually work in a STEM related career. Green County 4-H discovered through surveying youth in 4-H programs there was a strong desire for more STEM based programs. The Green County 4-H Council partnered with a state grant to receive over \$8000 to create our first 4-H Science Club for middle school students.

The 4-H Science Club requires members to submit a formal application for the science intensive program. The supplies used can also be used with other 4-H projects and activities outside of the Science Club. Multiple sessions have been held from week long day camps, robotics camps, computer program sessions and hands-on physics demonstrations allowing youth to practice the scientific method as they learn to solve every day problems with over 491 participants.

During the state fair, two teams from our local science club demonstrated their engineering design and computer programming as they participated in science challenge. Youth had to demonstrate their ability to build an original designed robot and construct the programming to make it complete an obstacle course and to



*Green County 4-ers Caleb Pierce and Will Bonta wait anxiously for their uniquely designed and custom programmed robot to compete in the maze event at the Kentucky State Fair.*

out autonomously maneuver an opponent. Our youth were able to complete the challenges demonstrating their new STEM based abilities. These same 4-H Science Club youth offered a computer program workshop for other 4-Hers who are not in the Science Club. When the participants of the Science Club were asked about their intention to pursue a STEM career, 90% said they were now considering a STEM career and felt they could be successful with this degree in their future.

## **Training the Next Generation of Leaders**

Ralph Nader said, "The function of leadership is to

produce more leaders, not more followers." Green County 4-H sought to increase the number of leaders in our county programs by recruiting and training volunteers equipping them with the necessary skills to be successful. Working with our County 4-H Advisory Council and our 4-H Teen Council, potential volunteers were identified and contacted about being involved in 4-H programs. The 4-H Council provided funding to assist volunteers with training fees, equipment and supplies.

Leadership training was made available to our volunteers locally, in partnership with our district and on the state level. Participants attended workshops, retreats and conferences learning how to become more effective leaders. During a single activity, our Progressive Agriculture Ag Safety day, the number of leaders more than quadrupled as our leaders were better equipped to identify others to inspire and engage in offering the safety program. Through this activity, over four hundred youth learned how to be safe around their home and community. Because of the over fifty new empowered volunteers from one single project, 4-H youth are learning valuable life skills to ensure their safety.



*4-H programs provide youth exposure to skills, leadership opportunities and connections to caring adults. Summer camp allows youth to become independent under the guidance of caring adult and teen leaders like Angie Atwood and Jill Sanders.*

### **Beef and Grain Field Day**

To aid farmers, the Green County Cooperative Extension Service, in conjunction with the local Green County Cattlemen's Association, offered the Beef and Grain Field Day. Over 120 local Green County farmers attended the event held at the Green County Agriculture Center. Participants were able to attend a trade show of over 20 exhibitors, attend workshops on topics such as forage fertility, economics of fertility in the hay field, and view demonstrations. We had several co-sponsors for this field day which supplied several pieces of equipment for demonstration, such as combine, disc mower, hay roller, hay tetter, hay wrapper, and more. All

exhibitors said they would like for us to make this an annual event. Eighty percent of the participating producers' evaluations stated that the topics presented were relevant to their operation needs and 90% would like to see this type of event every year.



*Local farmers look on as Tony Cowherd from Cowherd Equipment demonstrates a hay wrapper.*

### **Food Preservation Proves to be good for Individuals**

People choose to can foods at home for many reasons: to preserve the harvest from their gardens or local farmers markets for year-round enjoyment; to gain more control over what is in their food by limiting or avoiding salt, sugar or preservatives; to save money; to get better-tasting canned foods; to follow family traditions; or just for the sense of satisfaction that home canning provides.

Home canning has changed over the last 200 years. Scientists have found ways to produce safer, higher quality products, including the design of better home canning equipment and supplies. Because many microorganisms live and multiply quickly on the surfaces of fresh fruits and vegetables, methods of home canning should always follow research-based recommendations. The advantages of home canning are lost when you start with poor quality fresh foods; when jars fail to seal properly; when food spoils; or when color, texture, flavors and nutrients deteriorate during prolonged storage. Following the correct procedures can ensure safely canned foods that are of top quality and may be stored for up to two years.

The residents of Green County expressed an interest in a Food Preservation Workshop. Residents reported they would like to gain more confidence through experience before beginning their own food preservation methods for this year's summer's bounty. The Green County Cooperative Extension Agent for Family and Consumer Sciences along with

a team of food preservationists from the University of Kentucky held a three-day hands-on Food Preservation Workshop in Green County. Over the three day period, participants were able to gain knowledge through experiences in pressure canning, drying, freezing basics and boiling water canning. During this hands-on workshop, participants learned how to can green beans, dry apple slices, and preserve homemade salsa, jams and jellies. Before beginning the workshop:

- 66% of participants expressed that they had a desire to learn how to do home canning.
- The other 34% reported that they already felt confident enough to do home canning.

Over the three-day workshop:

- 100% reported learning about food preservation.
- 77% reported that their skill level increased during the workshop.
- 100% reported that they would make some changes when preserving foods.

### **County Agricultural Investment Program (CAIP)**

Phase I funding continues to play an integral part of the agriculture of Green County. The Green County Agricultural Development Board helped to administer over \$320,000 to the agriculture producers of Green County.

The council funded producers with the C.A.I.P. program that included: genetics, fencing, on farm water development, cattle handling, hay storage, diversification, technology, dairy diversification, and forage improvement. Several different educational offerings were included as part of the participation in these programs.

Although the initial savings created by cost share can significantly enhance a producer's bottom line, adding new and improved practices to a farm operation yields long term results that add to overall farm profitability. Follow up visits and surveys with producers that have participated in the different programs indicate that those who have improved facilities have better herd health, less labor costs, better variety selection, increased paddocks, etc. As a result, these individuals have been able to show an economic gain to their operation.

### **Help, Hope and Hands Continues Community Service Projects**

Help, Hope and Hands volunteers are still turning trash into treasures! The group of now 15 volunteers meet weekly to work on projects that they give back to the community. Over the last few months, 18 sleeping mats have been donated to individuals in need in Bowling Green, KY. Most recently, 100 cancer caps were donated to the Green County Public Library to be given to those in need. With each cap taking at least 4 hours to make, these volunteers have spent more than 400 hours on hats alone.



*Help, Hope and Hands donate 100 cancer caps to the Green County Library.*

***"Be it caps, mats, lap quilts, or baby needs...Help, Hope and Hands is always the place to come. Donations of any craft supply or plastic bags are always welcome. Your request for our donations are always considered."***

***- Judy Kuchenbecker,  
Help, Hope and Hands Volunteer***



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***Extending Knowledge,  
Changing Lives***  
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