

#### Robots to the Rescue!

Over the past three months, students at Lincoln University Cooperative Extension's (LUCE) 4-H Youth Development Program in Jefferson City, Missouri have been planning,



building and testing robotic designs. The goal is that these robots will help students respond to a mock natural disaster. Each robot must be able to alert the group of a looming disaster, gather supplies and then deliver them safely to a human on the team. As students built and programmed their

Insid			
Incid	hie	I C C I	IO:
		133	

Robots to the Rescue1			
Composting Workshop1			
LUCE Directories2			
Update on Aquaculture2			
Ag Discovery 20143			
Banquet in Sikeston3			
Native Plants/Sprouts and Roots4			

robots, they learned about and applied the engineering process. They also made custom parts on the MakerBot® 3-D printer.

On Friday, April 11, 2014, an event was held where emergency response robots were put to the test. Pairs of students took turns operating and, in some cases, repairing their robots as the event progressed.

At the end of the event, 26 students were given a survey to compare their level of interest before and after the robotics building project. Questions asked were about interest in the areas of science, technology, engineering and math. Of those students who at first had stated that they had an interest in science, two were now more interested; none were more interested in technology; three were more interested in engineering; and one was less interested in math. Of the students who initially were not interested, four were now more interested in science, none in technology, six in engineering and one in math. ■ *Gregory Pierson*, Human Resource Development and Intergenerational Programs



#### Successful Composting Workshop

On Thursday, March 27, 2014, Lincoln University Cooperative Extension (LUCE) conducted a workshop in Mt. Vernon, Missouri called "Keys to Successful Composting." The event took place at University of Missouri's (MU) Southwest Research Center. The day-long class had 35 attendees. Dr. Hwei-Yiing Johnson, LUCE State Extension Specialist, was the keynote speaker.



Johnson covered a various types of composting. She talked about aerobic composting as well as Effective Microbe <sup>™</sup> (EM<sup>™</sup>)/Bokashi composting (using fermented organic material). She also spoke about vermicomposting (composting with worms) and compost tea brewing (using water to extract nutrients).

Talks were also given by Nahshon Bishop, assistant, Southwest Region – Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers (OASDFR) program and Patrick Byers, MU Regional Horticulture Specialist. They discussed "Building Your Own Low-cost Compost Bin." They also addressed food safety concerns when making compost.

Each participant received a composting thermometer at the start of the workshop. This ensures the proper temperature will be reached and maintained at their own operations. 

\*\*Hwei-Yiing Johnson\*\*, Composting\*\*

# Lincoln University Cooperative Extension (LUCE)



Ms. Yvonne Matthews Interim Associate Administrator (573) 681-5550 MatthewY@LincolnU.edu

900 Chestnut Street Room 103A Allen Hall Jefferson City, MO 65101

Karen Galbreath Administrative Assistant (573) 681-5375 GalbreathK@LincolnU.edu

#### **State Extension Specialists**

Dr. Emmanuel Ajuzie State Extension Specialist - Agricultural Economics AjuzieE@LincolnU.edu

Dr. Charlotte Clifford-Rathert State Extension Specialist - Small Ruminants Clifford-RathertC@LincolnU.edu

Mr. Charles "Chuck" Hicks State Extension Specialist - Aquaculture HicksC@LincolnU.edu

Dr. Hwei-Yiing Johnson State Extension Specialist - Composting JohnsonH@LincolnU.edu

Ms. Yvonne Matthews State Extension Specialist - Human Resource Development and Intergenerational Programs MatthewY@LincolnU.edu

Dr. Zelalem Mersha State Extension Specialist - Plant Pathology MershaZ@LincolnU.edu

Dr. Nadia Navarrete-Tindall State Extension Specialist - Native Plants Navarrete-TindallN@LincolnU.edu Dr. Kamalendu Paul State Extension Specialist - Small Farms PaulK@LincolnU.edu

Dr. Jaime C. Pińero State Extension Specialist - Integrated Pest Management Pińero]@LincolnU.eduh

#### **LUCE Regional Satellite Offices**

Ms. Patrice Dollar, Coordinator **St. Louis Urban Impact Center (SLUIC)** DollarP@LincolnU.edu (314) 867-4915

Ms. Brenda Robinson-Echols, Coordinator Southeast Missouri RobinsonB@LincolnU.edu (573) 471-3059

Ms. Marion Halim, Coordinator **Kansas City Urban Impact Center (KCUIC)** HalimM@LincolnU.edu (816) 932-2631

Innovative Small Farmers' Outreach Program (ISFOP)

Dr. Kamalendu Paul, Director PaulK@LincolnU.edu

www.lincolnu.edu/web/cooperative-extension  $\bullet$  (573) 681-5543



### Cooperative Extension

Box 29, Jefferson City, MO 65102-0029 Lincoln University in Missouri and the U.S. Department of Agriculture Cooperating. Yvonne Matthews, Interim Dean, College of Agricultural and Natural Sciences. Distributed in furtherance of the Food and Agricultural Act, 1977 PL 95- 98. Dec. 22, 1981. Publications are distributed without regard to race, color, national origin, sex, age, religion or handicap.

This publication is available upon request and online. Contact the LUCER Media Center (573) 681-5554

Pamela Donner, Coordinator and Senior Editor Cherilyn Williams, Graphic Designer Bené Williams, Web Designer Andrew Erb, Video Conference Technician Yuki Teramoto, Multimedia Technician Nancy Browning, Assistant Editor lincolnu.edu/web/extension-and-research/media-center

(573) 681-5543



United States Department o Agriculture National Institute of Food and Agriculture

## **Update on Extension Aquaculture**

Eight cages have been built and placed in Dr. Easterly's lake near Jefferson City. This spring, they will be stocked with four cages of white female by black male hybrid crappies and four cages of black female by white male hybrid crappies. The fish will be fed twice a day, every twelve hours for the entire summer.

In the fall, the cages will be harvested. This is when the fish will be individually

weighed and measured. Their size will determine how viable the cage culture processing of crappie will be in Missouri ponds and lakes. And, it will also be determined which type of hybrid crappie performs best under these conditions.

■ Charles E. Hicks, Aquaculture



#### Ag Discovery Program 2014

Once again this summer, the Ag Discovery program for students will be held on Lincoln University campus beginning Sunday, July 13 through Saturday, July 26, 2014. This is the third year Lincoln University Cooperative Extension (LUCE) has hosted Ag Discovery participants. They will stay one week in student housing and the second week at the LUCE Youth Development Cabins located at Alan T. Busby Farm.

Ag Discovery is an outreach program sponsored by the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS). Youth between the ages of 14 to 17 apply to the program and must be able to travel to and from the college campus. They must also be able to pay for any incidentals, but food and shelter are provided by the university they visit. Ag Discovery helps students learn about careers in animal science, veterinary medicine, agribusiness and plant pathology by giving them hands-on experiences.

This two week program allows participants to live on a college campus and learn about agricultural science from university professors, practicing veterinarians and



professionals working for the US government. Students who participate in Ag Discovery will gain real life experience in labs, workshops, field trips and other group and team building activities. David Kiesling, Human Resources Development and Intergenerational Programs



### Sikeston Office hosts Local Community Banquet



On Saturday, March 22, 2014, Lincoln University Cooperative Extension (LUCE) Sikeston staff hosted the 30th annual Daughters of Sunset banquet. The event was held at the Clinton Building in Sikeston, Missouri.

Dr. Roy Nabors was the keynote speaker; Brenda Robinson-Echols was the emcee. The theme was "Empowering Our Community Through Education." LUCE recognized the achievements of the group. Over 150 people attended.

The Daughters of Sunset is a civic organization that is committed to community service. For 30 years, they have provided college scholarships to minority students in Sikeston. 

Brenda Robinson-Echols, Southeast Missouri

#### Getting into Spring with Native Plants, Sprouts and Roots and the Farmers' Market

Spring has barely begun, but Lincoln University Cooperative Extension's (LUCE) Native Plants Program (NPP) and Sprouts and Roots has already held several classes. Courses taught so far have been "Aromatherapy," "Cooking with herbs and spices" and "Planting tomatoes and peppers from seed." Participants were also able to consult with staff on how to grow cool season vegetables. Each course was taught or facilitated by Amy Hempen, Jeff Hargrove, Maggie Hopper and Veronica Taylor.

Classes "Introduction to Native Plants" and "Native Plant Propagation" were offered on campus, followed by a hands-on training on "Garden Maintenance." Sue Bartelette, Hempen and Nadia Navarrete-Tindall taught these classes. Navarrete-Tindall also gave a presentation titled "Native Plants



for Native Pollinators" to the Lake Bloomers Garden Club.

The Glasper's (Bill and Mary) and John Blackmon coordinated activities with community members in the Bootheel region. They planted potatoes and started herbs from seed at the FINCA in Haywood City. Later on this spring, Sprouts and Roots, and the regional offices in Kansas City, St. Louis, Sikeston and Caruthersville will offer events on gardening, wellness and nutrition. These classes will be open seniors.

Natalie Benjamin is the new program assistant for LUCE's NPP and Sprouts and Roots. During the year, she will run the booths at LUCE's Farmers' Market and organize summer camps. LUCE Farmers' Market manager Maggie Hopper says winter/early spring sales have been a huge success.

■ Nadia Navarrete-Tindall, Native Plants

