By Hannah Scott, OCDC Program Manager

The Ohio Cooperative Development Center was recently recognized by the U.S. Department of Agriculture Rural Development with an Award of Excellence. The award was granted, “In honor of nearly two decades of steadfast promotion and support of co-ops, leading to the success of innumerable rural and agricultural-based businesses in the Buckeye state.”

The Ohio Cooperative Development Center was founded in 2000 at The Ohio State University South Centers. The mission of the center is to improve the economic condition of rural areas in Ohio and West Virginia through the development of all types of cooperative businesses and cooperative-like groups. (continued on page 2)
OCDC Receives Award of Excellence from U.S. Department of Agriculture (continued)

OCDC is a part of the Business Development Network at the OSU South Centers, which also has programs in small business development, farmers’ market promotion, and direct agricultural marketing.

Sam Rikkers, Administrator of USDA Rural Development’s Rural Business Cooperative Service presented the award to OCDC staff along with Tony Logan, Director of USDA Rural Development in Ohio. The two visited Piketon to help kick off Co-op Month and to announce awards for USDA's Rural Cooperative Development Grant (RCDG).

Under the RCDG program, the Ohio Cooperative Development Center will receive $199,984 over the next year to assist businesses in Ohio and West Virginia, focusing particularly on businesses in agriculture, forest and wood products, transportation, and energy. OCDC provides cooperative education, formation counseling, member and director training and assistance with feasibility studies, marketing plans, and business plans, among other activities. The center also facilitates the Ohio and West Virginia Food Hub Network and administers a seed grant program for new and emerging cooperatives.

The Rural Cooperative Development Grant program awarded $5.8 million to 29 projects across the country in order to support rural economic development.

National Cooperative Month is recognized by the US Department of Agriculture, along with a number of other cooperative associations, each October. Activities throughout the month raise awareness about the co-op business model and highlight their economic impact and importance to communities throughout the country. The Ohio Cooperative Development Center is celebrating Co-op Month by sharing a variety of information related to cooperative development through social media and the OSU Business Development Network blog. You can follow the "Biz Team" on Twitter at @OSUBizNetwork, Facebook at OSU Business Development Network, and the blog at u.osu.edu/osubusinessdevelopmentnetwork.

Welcome, Ivory Harlow!

The Ohio Cooperative Development Center (OCDC) at The Ohio State University South Center welcomes Ivory Harlow. Ivory is a Program Specialist with OCDC, which works to improve economic conditions in rural areas of Ohio and West Virginia through the development of cooperative and cooperative-like businesses. She holds a Bachelor of Arts in Business Administration from Strayer University and earned a Master of Arts from Ohio Christian University.

Ms. Harlow is a veteran of the United States Air Force, where she served as a medical material logistics journeyman. She is a graduate of Syracuse University Whitman School of Management’s Veteran Women Igniting the Spirit of Entrepreneurship (V-WISE) program, and Entrepreneur Bootcamp for Veterans (EBV) at the Trulaske College of Business, University of Missouri.

Ivory has a background in agriculture and business development. She is the owner of Dickie Bird Farm LLC in Ross County, Ohio. She writes Farm Forward, a weekly agriculture column for Farm and Dairy Newspaper.

Ms. Harlow is eager to assist cooperative development projects in agriculture, forestry, manufacturing, transportation and exports in the region.
Research, Education, and Extension Collaboration between the Ohio State University South Centers and Jiamusi Branch of Heilongjiang Academy of Agricultural Sciences

By Dr Rafiq Islam, Soil, Water, and BioEnergy Program Director

Drs. Tom Worley, Larry Brown and Rafiq Islam, along with Alan Sundermeier from Ohio State University visited the People’s Republic of China at the invitation of the Chinese National Academy of Agricultural Sciences (Heilongjiang and Jiamusi Branches). The Soil, Water and Bioenergy Resources program at the Ohio State University South Centers has established and coordinated research, education and extension activities with the administration and scientists of the Heilongjiang Provincial Academy of Agricultural Sciences – Jiamusi Branch in 2014. Dr. Worley, Director of the Ohio State University South Centers, accompanied by Rafiq Islam and Alan Sundermeier to further strengthen the bridge of collaboration.

They visited Heilongjiang Provincial Academy of Agricultural Sciences, and discussed future on collaboration possibilities to develop exchange scientists and students to conduct applied research and educational programs on 21st century sustainable agricultural management practices with especial reference to climate mitigation and adaptation.

As part of their visit, Dr. Worley delivered a presentation on “Economics of soybean production in the USA – Ohio.” Alan Sundermeier from OSU Extension (Wood County) gave a presentation on “Managing nitrogen availability in soil,” and Dr. Rafiq Islam delivered a presentation on “Climate change and future agriculture with reference to China.” The Chinese scientists showed a tremendous interest to learn more about our research on no-till, cover crop blends, crop rotation, soil health, and ecosystem services.

Dr. Rafiq Islam also provided demonstrations and hands-on training to Academy students and technicians on greenhouse gas emission, soil quality evaluation, cover crops decomposition and nitrogen release, and soil, water and cover crops sampling techniques during his 1-month stay in China. Based on their acquired experience on Chinese agricultural management practices and in-depth discussion, Rafiq and others developed a long-term research project entitled “Tillage and Cropping Systems’ Impact on Soil Health and Agroecosystem Services” for academic and applied research activities for the Jiamusi Branch of the Chinese National Academy of Sciences. They are expected to visit China every year to further strengthen the collaborative research and educational programs between the Ohio State University and Heilongjiang Academy of Agricultural Sciences - Jiamusi Branch, China.
Soil, Water and Bioenergy research and education collaboration across continents

By Dr Rafiq Islam, Soil, Water, and BioEnergy Program Director

Over the years, the Soil, Water and Bioenergy Resources Program at the Ohio State University South Centers has developed widespread research and educational collaboration with different countries in the world. Currently, three new visiting scholars joined the Soil, Water and Bioenergy resources Program. They are: Gai Zhjia (Peter) from China, Dr. Natalia Didenko from Ukraine, and Dr. Botir Haitov from Uzbekistan.

Peter is a short-term visiting scientist from the Chinese Heilongjiang Academy of Agricultural Sciences – Jiamusi Branch who is working on sustainable agricultural management practices to improve soil health for economic crop production with enhanced ecosystem services. Peter is the second intern to come to the OSU South Centers for a two-month training period from the Heilongjiang Provincial Academy of Agricultural Sciences – Jiamusi Branch.

Natalia is a Norman Borlaug short-term post-doctoral visiting fellow from Ukraine. Currently, she is working as a Scientific Researcher, Institute of Water Problems and Land Reclamation, Kyiv, Ukraine. Her current research focuses on soil compaction, soil quality, and water management related to climate-smart agricultural practices. At Ohio State University, she is working on transferring science-based knowledge to adopt sustainable agricultural management practices in Ukraine. The science-based knowledge and research experience she is gaining in the U.S. will be directly applicable to her research interests in Ukrainian agriculture. She is one of the outstanding researchers selected to present her current research at the J-1 Exchange Research Exposition organized by the office of the OSU vice president for research. Recently, she attended the World Food Prize conference in Des Moines, IA.

Botir is a Fulbright post-doctoral research fellow from Uzbekistan. He is a senior researcher and associate professor in the Plant Science Dept., Tashkent State Agrarian University, Tashkent, Uzbekistan. Current agricultural production systems in Uzbekistan rely heavily on irrigation, excessive tillage, and limited crop rotation approaches which are not functionally efficient for agroecosystem services. Moreover, the threats of climate change are constantly increasing, and its impact on agricultural production in Uzbekistan has already started; therefore, it is crucial for us to start acting now. The goal of his Fulbright research fellowship is to study the long-term effects of continuous NT with multi-functional cover crops in a wheat-corn-soybean rotation for enhanced agroecosystem services including cover crops biomass nutrient contribution, soil bio-diversity, soil C sequestration, compaction alleviation, and soil health and farm productivity.
By Christie Welch, Direct Agricultural Marketing Specialist

The Direct Agricultural Marketing team collaborated with the OSU South Centers Business Development Network to present a train-the-trainer Maps & Apps workshop to Ohio Small Business Development Centers Business Counselors. This hands-on training provided information on how different consumers use mobile devices and obtain information, as well as shared best practices for small businesses to effectively communicate with their target customers.

This six-hour workshop was held at the Nationwide and Ohio Farm Bureau 4-H Center on main campus. Participants in the training increased their knowledge of common maps and applications commonly used on mobile devices. Training topics included: How Customers Find & View Your Business on Mobile Devices, How Consumers Use Social Media, and How Consumers Utilize and Access Apps, GPS, and gadgets. In addition, participants were provided with the power point presentation and workbook so they can use the Maps & Apps program with their small business clients around the state.

As a result of the positive feedback received, the DM team will be presenting Maps & Apps at the statewide Ohio Small Business Development Centers annual conference. The annual conference provides professional development for Ohio’s small business development specialists.

Team members delivering the training are: Rob Leeds, County Director & ANR Educator Delaware County; Jacci Smith, Program Coordinator Ag/4-H Youth Development Delaware County; Mary Griffith, ANR Educator Madison County; Eric Barrett County Director & ANR Educator Mahoning County; and Christie Welch, Direct Marketing Program Director.

The Small Business Development Centers of Ohio program is partially funded by the Ohio Development Services Agency and the U.S. Small Business Administration. The Ohio SBDC fosters a strong climate for small business growth with many local community partners, including colleges and universities, economic development agencies, chambers of commerce, and other community organizations. The statewide network offers a wide range of services to Ohio’s small businesses.

To learn more about the OSU Direct Ag Marketing program visit: southcenters.osu.edu/marketing.

To learn more about the OSU South Centers Business Development Network visit: southcenters.osu.edu/business

To learn more about the Ohio SBDC visit: https://www.development.ohio.gov/bs/bs_sbdc.htm.
Aquaculture education update

By Matthew A. Smith, Aquaculture Extension Specialist

It’s been a busy few months for the Extension Aquaculture Program since the last Ohio State University South Centers Connections Newsletter was released. Our first big education moment of the quarter came during the annual Ohio State University Farm Science Review (FSR) in London, Ohio from September 20-22. I presented three presentations on September 21; Aquaculture Opportunities in Ohio, Sustainable Aquaponics, and Aquaponics: the Good, the Bad, and the Ugly. The last presentation was certainly the most popular with over 70 attendees, and total presentation attendees were over 120 for the day. In addition to the presentations, we had a mobile barrelponics display in the Firebaugh building. The running display consisted of kale, red-leaf lettuce, and goldfish. Fresh Harvest Farm allowed OSU to borrow the display and assisted in education on the second day. FSR total attendance was over 125,000 and at least 500 people passed by the display and talked to someone about aquaculture, aquaponics, the Ohio Aquaculture Association, and the Aquaculture Boot Camp 2 program. Needless to say, OSU South Centers will have their own mobile aquaponics system for education purposes in the near future.

The next large education moment of the quarter took place right here in Piketon, Ohio. Science Alliance is an annual high school education event that was developed and coordinated by the Department of Energy and Fluor-BWXT. It is held at the Portsmouth Gaseous Diffusion Plant site and was established to educate high school students about STEM opportunities throughout the country. This year over 1,400 junior and senior students from Pike, Ross, and Scioto County learned about aquaculture, aquaponics, the Ohio Aquaculture Association, and the Aquaculture Boot Camp 2 program. Needless to say, OSU South Centers will have their own mobile aquaponics system for education purposes in the near future.

Lastly, the OSU South Centers 25th anniversary celebration was a huge success and a few families in the area submitted an application for ABC-2 following tours of the educational aquaponics system. E-mails and phone calls are frequent as we approach the beginner aquaculture and aquaponic farmer workshop that will be held at the OSU South Centers on October 29th. We encourage those interested to contact us or the Ohio Aquaculture Association.
OCARD receives award to host 2nd Aquaculture Boot Camp (ABC-2)

By Dr. Hanping Wang, Senior Scientist and Matthew A. Smith, Extension Aquaculture Specialist

The Ohio Center for Aquaculture Research and Development (OCARD) at the Ohio State University (OSU) South Centers, in partnership with Ohio Aquaculture Association (OAA), University of Wisconsin-Stevens Point (UWSP), and other partners have received an award of ~$600,000 from the United States Department of Agriculture (USDA) National Institute of Food and Agriculture Beginning Farmer and Rancher Development Program (BFRDP) to develop and operate the 2nd Aquaculture Boot Camp (ABC-2). The USDA Secretary announced our funded project, along with 26 other awards in August. The ABC-2 program will utilize a “3-I” (Intensive, Intermediate, Introductory) training and multi-faceted approach, including classroom and hands-on training, paired with industry mentoring to enhance the sustainability of new and beginning aquaculture/aquaponic and next generation farmers in the Midwest. OCARD was the first aquaculture unit to receive this type of project from the USDA. The specific goals of the ABC-2 program will be achieved through collaborations among aquaculture, horticulture, and business teams at the South Centers, and partnerships with four nongovernmental and community-based organizations, two agricultural colleges, and six aqua-farms.

The 3-year ABC-2 project will serve the following Target Audience in Ohio and the Midwest:

- Beginning and new aquaculture/aquaponic farmers with less than 10 years of farming experience.
- Limited-resource beginning aqua-farmers: most aqua-farmers have low levels of farm sales and low household income, as most of them are new and located in rural areas.
- Next generation farmers: students and those without a family farming history.
- Other new farmers attempting to diversify their existing farming enterprise.

ABC-2 will utilize a modified model of the successful Phase 1 Aquaculture Boot Camp developed and delivered over the past three years by our team. During ABC-2, we will offer new and next generation farmers three levels of involvement, three topic areas and three types of integrated training in aquaculture/aquaponic production and business management strategies. The three levels of participation are: Intensive, an in-depth level involving immersion in a year-long hands-on training and classroom/mentoring program; Intermediate, a mid-level involving participation in a variety of learning activities and workshops; and Introductory, a general or entry level where sharing of information is the goal, and involving participation in the ABC-2 online education and webinars. The three areas which will be covered are general/traditional aquaculture, recirculating aquaculture/aquaponics, and related business and marketing. The three types of instruction are hands-on, classroom/mentoring, and internet/webinar.

Up to 30 highly motivated new (less than 10 years of farming experience) and beginning fish farmers and aquaponic producers from across Ohio and the Midwest will be enlisted in the Intensive Boot Camp program. Recruits will be individuals actively involved in aquaculture/aquaponics or seriously dedicated to developing skills for entry into the industry.

Applications for participation in the program will be accepted until the close of business on November 4th and applications can be found at go.osu.edu/abc2. For more information about the ABC-2 program, please contact Sarah Strausbaugh at strausbaugh.54@osu.edu. After October 30th, our new ABC-2 Program Coordinator Jordan Maxwell will be available to field your questions at 740.289.2071 x124.
Welcome Jordan Maxwell - New ABC-2 Coordinator

By Dr. Hanping Wang, Senior Scientist

Jordan Maxwell was hired in October 2016 to be the program coordinator for the Aquaculture Boot Camp-2 (ABC-2) program. She assists Dr. Hanping Wang and the ABC-2 team to execute the educational and research activities for the aquaculture programs at OSU South Centers. She will be helping to plan, coordinate, and implement educational activities, including development of training materials, coordination of aquaculture training projects, providing one-on-one support for training and teaching aquaculture production. She will also be collecting data and writing project progress reports, publications, and news articles. ABC-2 is funded through the United States Department of Agriculture National Institute of Food and Agriculture Beginning Farmer and Rancher Development Program.

Ms. Maxwell received a B.S. in Wildlife and Fish Management from The University of Rio Grande, and also holds an Associate's Degree in Wildlife Resources Management from Hocking College. She has teaching and coordination experience at Hocking College, and has aquaculture/hatchery experience at the West Virginia Division of Natural Resources Applegrove fish hatchery and the Hocking College fish hatchery. Ms. Maxwell has a passion for aquaculture and is eager to join our team. We believe her prior experience and academic preparation will highlight the ABC-2 Program and its initiatives at The Ohio State University South Centers.

Dr. Hanping Wang co-organizes and co-chairs 2nd International Symposium on Perch and Bass

By Dr. Hanping Wang, Senior Scientist

Dr. Hanping Wang from Ohio State University South Centers and Huazhong Agricultural University (HZAU) co-organize and co-chair the 2nd International Symposium on Perch and Bass, held in HZAU, Wuhan, China, from October 27-30, 2016. The conference is a continuation of the first conference of its kind held in 2013. The International Symposium on Perch and Bass is designed to provide a forum on recent developments and future directions in perch and bass research, development, and production. With many invited speakers, the conference is an excellent opportunity to exchange ideas and applications in these internationally important aquaculture species. Invited scholars, who are engaged in the perch and bass research and development from America, China, Australia, Spain, Belgium, and Singapore, will be giving the speeches. A bilanguage (English and Chinese) book, “Culture and Breeding of Perch and Bass” based on the two conferences will be published. Dr. Hanping Wang is the Co-Chair and Co-Editor for the conferences and book. He also speaks as a keynote speaker at the conference. For more information, visit go.osu.edu/ispb2.

Initiated by OSU South Centers, OSU and HZAU signed a partnership MOU earlier this year. In the past many years, OSU South Centers and HZAU have jointly trained three PhD students and four postdocs/scholars at the OSU South Centers, and co-published eight papers. This conference is another fruit of the partnership.
Fruit production is very popular in China due to consumers’ demand for a healthier lifestyle. Dr. Gary Gao got to work with a few fruit growers and researchers in two provinces in China from late September to early October, 2016. He shared his expertise on small fruit production with them and also learned a lot about fruit production in northern China.

Dr. Gao’s first stop was Hebei Province. He was invited by the Hebei Agricultural Enterprises Association in China to give technical advice to raspberry and grape growers in several counties in Hebei Province in September 2016. Raspberry production is relatively new to Chinese farmers in Hebei Province. Raspberry cultivars from England, Poland, Russia and the USA were planted there. There are also native raspberries in China. The native raspberries are mainly cultivated as medicinal herbs. Both fruit growers and researchers in Hebei Province had a very limited understanding of raspberry production. Gary was able to share his experience and expertise on trellising, pruning, fertilization, and pest management of raspberries with the growers there.

Table grape production is quite advanced in many parts of Hebei Province. Dr. Gao shared his expertise on soil and tissue testing and mineral nutrition with growers and researchers. Bagging of grape clusters for disease and insect prevention and management is a common practice. Bagging each grape cluster is a very time-consuming process. However, grape growers manage to make it happen with available labor. It is hard to know how much longer this practice will last since labor in China is getting more and more expensive.

Apple production in Shanxi Province encompasses many counties. Many of the apple orchards are on top of the mountains in western and southern counties in Shanxi Province. Dr. Gao visited several apple production counties. It was a good learning experience for him since he does not conduct research on apples in Ohio. Fruit bagging in apple production is also very popular. It is hard for American apple growers to imagine that all of the apples on each tree get bagged. Chinese apple growers have been doing this every year for quite some time. While he was in Shanxi Province, he worked with several fruit professors of Shanxi Agricultural University. He did notice that viral diseases are quite common in apple trees since virus indexing is as well practiced there as it is in the USA.

One of the counties he visited is on the eastern side of Yellow River, which is known to be the muddiest river. Farmers in that region grow apples, pears, Chinese jujubes and small grains on these tall mountains of yellow clay soils with some sandstone rocks.
Building great partnerships

By Patrick Dengel, Business Specialist/OSU-Rio Grande Collaboration Coordinator and Ryan Mapes, Endeavor Center Manager

Dr. Thomas Worley, Director of the OSU South Centers named the University of Rio Grande & Rio Grande Community College (URG/RGCC) the 2016 OSU South Centers Supporter of the Year. This award was presented to Dr. Michelle Johnston, President of URG/RGCC at the 25th Anniversary Celebration at the OSU South Centers on September 15, 2016.

This award recognized the strong commitment and collaborative efforts between the two Universities. Through their contribution of time, resources, ideas and collaborative efforts, The University of Rio Grande & Rio Grande Community College has been providing support and direction, as well as enhancing the overall quality of the OSU South Centers.

“I am honored to receive this award,” Johnston said. “Our partnership with OSU South Centers contributes to our efforts to serve our communities and provide our students with quality learning environments to help them succeed.”

Dr. Worley stated, “Dr. Michelle Johnston has become a very strong supporter and advocate of OSU South Centers during her time as President at University of Rio Grande. Our collaborative work in business development and in broadcasting has blossomed under her leadership. Her participation as a host of her own show is a tribute to her commitment to our shared efforts. I am very confident that we will continue to find ways to collaborate as we work to serve the residents of Southern Ohio.”

The OSU South Centers contracted with URG/RGCC in July 2009. At that time, the primary emphasis was in providing experiential learning formats to both MBA and undergraduate students enrolled in the Emerson E. Evans College of Business, as well as to work with students enrolled in other educational Programs. The OSU-RIO Collaboration is the “nickname” to the contracted agreement between The Ohio State University South Centers and URG/RGCC.

Since that time, URG/RGCC has become a very strong collaborator with a number of our programs at The Ohio State University South Centers. As a result of initial collaboration, one major joint program has had a significant effect on both of our universities. (continued on page 11)
Building great partnerships (continued)

Our OSU-RIO broadcasts on television, radio, and live-streaming programs on the web have allowed both universities to promote joint educational programs to clients, students, small businesses, and interested viewers in Southern Ohio, across the State of Ohio, and beyond.

It was recognized by administration and staff from both universities that increased content, viewership, and a more concerted effort with the broadcasts would result in better visibility of educational and research programs both at the University of Rio Grande and The Ohio State University South Centers.

Some program highlights include:

- Over 60,000 viewers and listeners have touched at least one YouTube or internet radio program.
- Listeners or viewers from 178 Countries have tuned in to at least one of the broadcasts.
- Tallies show that approximately 350 listeners/viewers each week touch one of the archived educational broadcasts.
- Several students under tutelage of Mike Thompson have tried their hand at RIO RADIO – a daily and weekly radio show.
- Both administrations and key personnel from both universities host different shows on educational and informational subjects.

The University of Rio Grande & Rio Grande Community College and The Ohio State University South Centers have shared resources in promoting programs that enhance clients, students, and businesses throughout the areas each serves. This working collaboration has demonstrated a well-defined effort while providing needed information to its perspective clients, students, and community members. Please visit the link below to explore some of the various shows. https://www.youtube.com/channel/UCrv0SYonHCbXs1WgoOHa6mw

Carter speaks at national conference

*By Brad Bapst, SBDC Director*

Melissa Carter, a Business Advisor with the Small Business Development Center (SBDC) at the OSU South Centers, presented a seminar session at the America’s SBDC Conference in Orlando, Florida in September. Carter was selected to present “Navigating Online Marketing for Clients” which covered topics such as understanding and utilizing social media, managing website content and optimization, and tips to increase online visibility for businesses. Over 75 individuals attended the ninety-minute session.

Annually, the America’s SBDC Conference is held to provide professional development and networking opportunities to Business Advisors and Directors throughout the country. Over 1,400 individuals attended the September conference.
South Centers celebrated 25 years

In September, the Ohio State University South Centers recently celebrated 25 years of extending knowledge, growing southern Ohio, and enhancing lives. There were around 250 people in attendance that day and they enjoyed seeing our facility. Below are a few images highlighting the day of celebration.