

CONNECTIONS

SPRING 2018-19

OSU SOUTH CENTERS

TOUR *de farm*

More than 100 farms
come together to make
Third Annual Agritourism
Conference a success

By Christie Welch
Direct Marketing Specialist

Nearly 100 farms from all across Ohio met Monday, March 25 at Maize Valley Winery in Hartville, Ohio to learn how agritourism is having a positive impact on Ohio's farms.

Collaborating with OSU Extension, Wright & Moore Law, LPA, and Ohio Farm Bureau Federation to offer information and education to Ohio farmers, the day began with Bill Bakan, owner of Maize Valley Winery, sharing information with attendees on how to manage customer expectations. Throughout the day he and his wife, Michelle, shared information on how they have grown their once dairy farm into the successful agritourism destination it is today.

See AGRITOURISM Page 2



IN THIS ISSUE:

Direct Marketing Pages 1-2
SWBR Page 3
Co-ops Pages 4-5

MEP Page 7
Aquaculture Pages 8-9
Specialty Crops..... Pages 10-11



LEFT: *Bill & Michelle Bakan welcome attendees to Maize Valley Winery and share information about how they have grown their farm into a successful agritourism venue in Ohio.*

BELOW: *Diane Riehm of Riehm Produce Farm, LLC shares information on how her farm effectively uses email marketing for their Veggie Box, which has allowed the farm to grow and produce food nearly year round in northwest Ohio.*

AGRITOURISM from Front

What is agritourism? The USDA defines agritourism as “any business activity that invites visitors to come on the farm, ranch, or into a rural community to enjoy agriculture and the natural resources” (2004). And for many farmers and ranchers across the county, agritourism is proving to be a beneficial addition to the farm’s bottom line, as well as for spreading awareness of how food is produced.

There is a great deal of interest by consumers in how and where their food is produced. Agritourism operations invite these consumers onto their farm in a variety of ways to help them learn about food production and farming in Ohio. Agritourism is an agriculturally related educational, entertainment, historical, cultural, or recreational activity, including you-pick operations or farm markets, conducted on a farm that allows or invites members of the general public to observe, participate



in, or enjoy that activity (Kirk-Hall, 2018). And since most Ohioans do not live on a farm, their interest in visiting farms is high.

But don’t just jump right in. You need to do your homework and some planning to ensure you are managing the associated risks of having the general public come onto your farm to enjoy the setting and the products you produce. March’s conference was designed to assist new and existing farmers learn about agritourism trends; how to evaluate and manage risks;

understanding Ohio’s laws, rules, and regulations; how to work with your community; and see how others have successfully incorporated agritourism into their farming operations.

If you are considering adding an agritourism activity to your farm, the OSU South Centers Direct Food and Agricultural Marketing team can help. There are a number of agritourism resources on the team’s website, southcenters.osu.edu/direct-marketing, or they can meet with you to discuss your new enterprise.

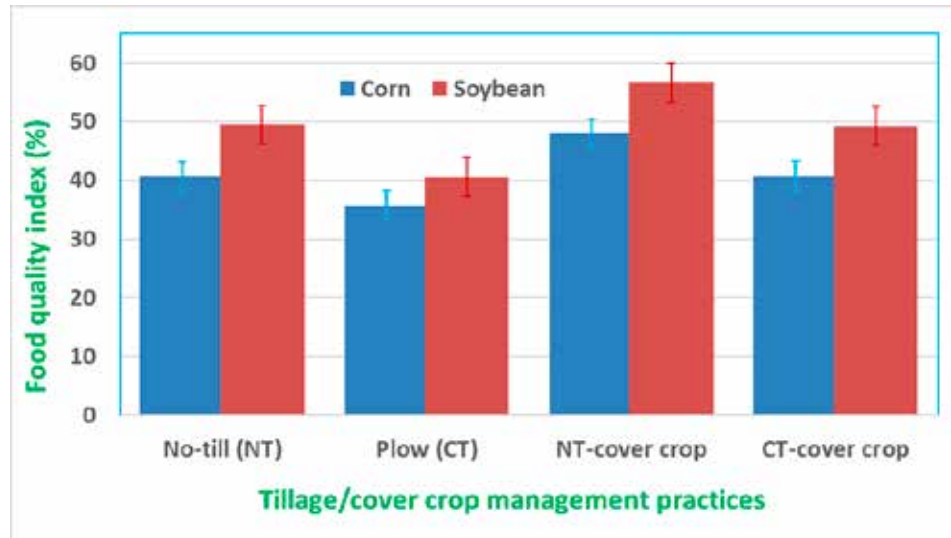
2019 CTC Annual Conference: **Healthy Soils, Healthy Food, & Healthy People**

By Dr. Rafiq Islam
SWBR Program Leader

Healthy soil is the foundation of climate-smart (sustainable) agriculture.

Rafiq Islam, the director of the Soil, Water, and Bioenergy Resources program at The Ohio State University South Centers delivered an in-depth research presentation titled “Healthy Soils, Healthy Food, Healthy People” at the Cover Crops, No-Till, and Soil Health session of the Conservation Tillage and Technology Annual Conference (CTTC) at Ohio Northern University in Ada on Tuesday, March 5.

In his presentation, Islam discussed how climate-smart agriculture, based on novel and holistic approaches of continuous no-till, cropping diversity with multi-species cover crops or blends, precision chemigation, soil amendments and chemical inducers, helps to improve soil quality and



health to provide healthy and nutritious foods in the support of public health.

Using long-term experimental data, Islam showed that healthy soils produce foods enriched and balanced with diverse amino acids and protein contents. Moreover, food grains produced on healthy

soils are fortified with both macro- and micronutrients (higher nutrient density) especially nitrogen, protein, calcium, sulfur, iron, zinc, and others. Foods enriched and fortified with optimum and balanced concentrations of diverse amino acids and nutrients are expected to improve food quality to support better public health.

Meet our new Visiting Scholar from the Chinese Academy of Agricultural Sciences, Du Jiaxing (Jacky)

By Dr. Rafiq Islam
SWBR Program Leader

Du Jiaxing (Jacky), a new short-term exchange scholar (2-months) from the Chinese Academy of Agricultural Sciences (CAAS) from the Heilongjiang (Jiamusi branch) has recently joined the Soil, Water, and Bioenergy Resources Program at The Ohio State University South Centers.

Jacky is a researcher at the Sustainable Agriculture Research Institute of the CAAS-Jiamusi, having worked on no-till equipment since 2015. He is also a graduate student pursuing his Ph.D. degree.

Under the supervision of Dr. Rafiq Islam and Wayne Lewis, he will be working on no-till equipment, cover crop planting, and other features of climate-smart agriculture.



Du Jiaxing
Exchange Scholar

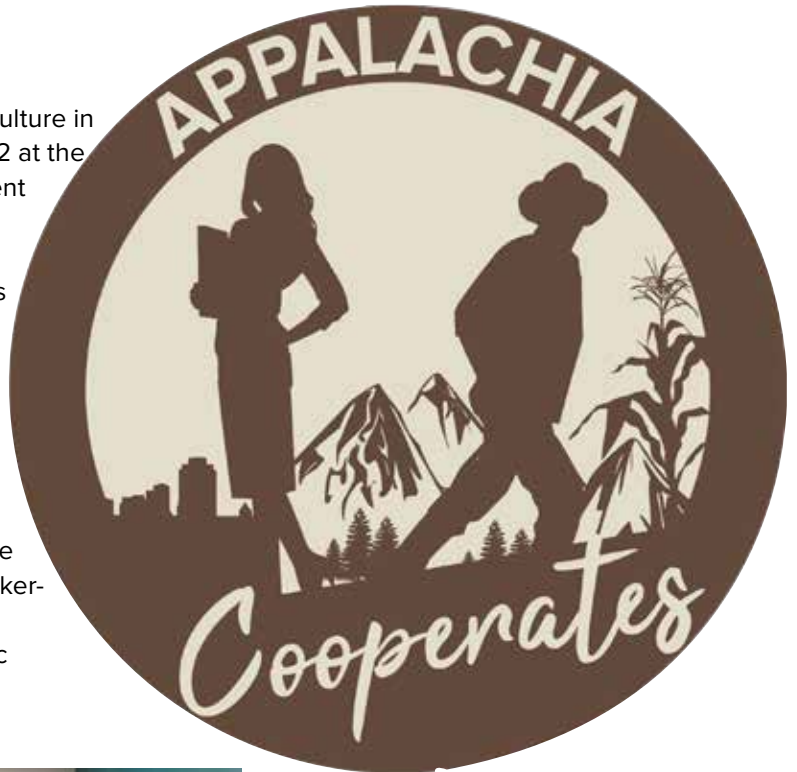
CFAES CENTER FOR COOPERATIVES KICKS OFF APPALACHIA COOPERATES INITIATIVE

By Joy Bauman

Center for Cooperatives Program Coordinator

A group of individuals interested in growing co-op culture in Central Appalachia filled the meeting room March 22 at the West Virginia State University Economic Development Center in Charleston, W.Va. when The Ohio State University CFAES Center for Cooperatives hosted the inaugural meeting of the Appalachia Cooperates Initiative. The group ranged from farmers and small business owners, to attorneys, credit unions, and cooperative business development agencies.

Featured speakers included Dr. J. Todd Nesbitt, Professor in the Department of Sociology, Anthropology, and Geography at Pennsylvania's Lock Haven University and Leslie Schaller, one of the founding members of Casa Nueva, a successful worker-owned restaurant cooperative and also the Director of Programs at the Appalachian Center for Economic Networks (ACEnet) in Athens, Ohio.



Leslie Schaller, one of the founding members of Casa Nueva, a worker-owned restaurant cooperative and Director of Programs at ACEnet, shared her personal experiences with starting and operating a worker-owned co-op.

Nesbitt, who has studied and developed a course on sustainability in Appalachia, shared “A Case for Economic Distributism in West Virginia.” Schaller shared the history and development of Casa Nueva and insights on the success of the cooperative business.

Participants also heard from Gail Patton, Executive Director, and Ursulette Huntley, Program Director, at Unlimited Future, Inc., a non-for-profit microenterprise development center and business incubator; they shared their experience with the development of one of West Virginia's first non-agriculture cooperatives.

During lunchtime, attendees viewed the film, Shift Change, and learned about worker-owned co-ops not far from the Appalachian region and around the world.

See CO-OPS Page 5

CO-OPS from Page 4

“Seeing how a worker-owned co-op can empower members of a community and provide jobs and economic growth for an area helped to spark some ideas among those in attendance,” said Joy Bauman, program coordinator at the OSU CFAES Center for Cooperatives.

Daniel Eades, West Virginia University Rural Economics Extension Specialist, and Michael Dougherty, West Virginia University Community Resources and Economic Development Extension Specialist, led a discussion about challenges with developing businesses in Central Appalachia, ways Appalachian communities are uniquely positioned to develop businesses, and what resources and tools work well in Central Appalachia’s environment. This activity led to much discussion and discovery of ways those interested in growing the cooperative culture in Central Appalachia can network to assist each other and share solutions.

OSU CFAES Center for Cooperatives program manager Hannah Scott spoke about resources and technical assistance offered by the Center and encouraged participants to stay connected and consider becoming involved on a regular basis with the Appalachia Cooperates Initiative group. “Getting cooperative-minded people together to connect and learn from each other’s experiences will help them build a network that fosters cooperative business,” Scott explained.

Scott said that the CFAES Center for Cooperatives will soon be planning another activity for those interested in the Appalachia Cooperates Initiative, and that she hopes to hold quarterly events for the group over the coming year. If you are interested in developing co-op culture in Central Appalachia, for more information, or to be added to the Appalachia Cooperates Initiative email list to be notified about upcoming events, contact Joy Bauman at 740-289-2071 ext. 111 or email bauman.67@osu.edu.



LEFT: The CFAES Center for Cooperatives Twitter account is very active, and sent out this tweet during the event.

BELOW: A Geography Professor at Lock Haven University, Todd Nesbitt has a special interest in sustainability in Appalachia.





Duane Rigsby: Problem Solved

ABOVE: Duane Rigsby checks out the HVAC system in the Endeavor Center, just one of his many duties at The Ohio State University South Centers. (Photo; Bradford Sherman/CFAES)

(Editor’s Note: The following is the latest in a series of feature stories highlighting The Ohio State University South Centers Staff)

By Bradford Sherman
CFAES/OSU South Centers

If your computer won’t start, or the running water won’t stop; if the temperature is too hot, or too cold; or if the phones are down, or anything else is up ... there is one man who everyone calls first.

His name is Duane Rigsby. His official title is Systems Developer/Engineer, and he most famously wears the hat of a technology coordinator at The Ohio State University South Centers, but he is anything but your typical IT guy.

“Not many IT people wear work boots,” he said jokingly, as he motioned his hand down toward his rugged footwear.

You will be hard-pressed to find him just sitting around in front of a monitor, the natural habitat for many of his contemporaries. Instead, he is usually out-and-about the South Centers campus doing what he does best – solving problems. In fact, it’s the variety of tasks he performs here that he says is his favorite part of the job.

“When you walk in each day, you never know what you are going to actually be doing,” Rigsby explained. “You could be mopping up a water spill from where a water pipe busted overnight, or you could come in with no power, or you can come in with a computer that

won’t start up, or you could come in and one of our business partners in the Endeavor Center maybe has an issue.”

Rigsby, who interestingly always wanted to be a forest ranger, earned a degree in natural resources from Hocking College. He worked in a lumber yard and for a construction company before joining South Centers as one of its original employees in 1991.

Now in his 28th year here, he has held several titles over that span. He began as a Research Assistant, and then around the turn of the millennium, moved over to the role similar to the one he performs today, Systems Manager.

See RIGSBY Page 7

RIGSBY from Page 6

“When we first started, we all did everything as a team versus as individuals,” he explained.

“As for the IT, our first director noticed that I was interested in it, I would be looking over his shoulder at lunch time, and one day he said, ‘you seem to be interested in computers.’”

And with those words, he was set on a path toward managing the phones, as well as one IBM computer and five black and white computers running NeXT software (which for our younger readership was a project headed up by Apple founder Steve Jobs during his exile from the company in the mid 80’s, and would eventually morph into today’s MacOS and iOS). Of course, he still worked out in the field during this time as well.

“I would be out in the field, and Marsha would have a problem, so she called me – of course, we didn’t have cell phones back then. We carried two-way radios. I would come in and fix whatever needed fixing, and then I would go back out to the field and resume whatever it was I was working on.”

As the technology needs kept growing, and then during a hiatus of a former maintenance coordinator, Rigsby’s role transformed to the one we know him in today.

“During that time frame, someone had to fill the void. There was still things breaking, and things that need to get done. So I stepped up and took care of all of that.” Soon thereafter, Rigsby was given the permanent gig.

“Tom (Worley) was our director by then and said, ‘well, you are already doing half of it, you may as well do the other half,’” Rigsby recalled.

Now today, in addition to overseeing all of the technology needs of South Centers, Rigsby serves as the facilities manager, which encompasses pretty much everything else he does – maintenance and upkeep of HVAC systems, water lines, building repairs, phone system, and more.

That is a resume that covers pretty much any problems that could arise at South Centers. So if you ever encounter a problem here, there is a simple solution ... just call Duane.

Rigsby and his wife, Linda, reside in Scioto County with their daughter Katie. He also has a step-daughter and a granddaughter.

DIVERSITY: A KEY ASPECT OF ANY ORGANIZATION, MEP CAN HELP

Submitted By Dorinda Byers

MEP Growth Advisor

Workforce is the biggest challenge faced by manufacturers today. Around 71% of manufacturers cited attracting and retaining a quality workforce as their top challenge in the most recent NAM Quarterly Outlook Survey. We have expanded our workforce service offerings to add a new training helping manufacturers bridge the generation and diversity gaps, “Bridge the Generational and Diversity Gaps in the Workplace with DISC”.

Diversity is an important aspect of any organization and differences matter in the workplace. Knowing your style, recognizing others’ styles, and “flexing” your style to interact more effectively with those who have styles different from yours can help.

Whether you’re managing a multigenerational or multicultural workforce, diversity is a source of enrichment and opportunity that can bring a wealth of benefits. Assembling talent from diverse backgrounds helps develop a team with broad knowledge, varied viewpoints, and innovative ideas.

But, diversity can also create challenging situations. Team members may feel inhibited or self-conscious when working with people from different cultures or generations. Understanding individual diversity is an important aspect of succeeding in any position and it helps your team become a cohesive and productive unit. The result of team members that value individual differences is an accepting, dynamic, and effective work environment.

Everything DISC Workplace provides team members with the tools to understand their own personality styles as well as those of others. This understanding enables employees of all generations and cultural backgrounds to have safe and comfortable conversations using a common language to bridge gaps.

It also enables team members to develop the skills to gain greater understanding and respect from others by recognizing their styles and meeting them where they are. This course highlights how to successfully recognize the personality styles of others and how to flex and adapt your style to be more effective in interacting with others thereby creating common leadership and interpersonal language within your company.

Contact Dorinda Byers, MEP Growth Advisor, to learn more about how we can help your company with training. We also have other trainings available including leadership, lean, safety, quality, Six Sigma, and many others. Email her today for more information: byers.18@osu.edu.

Faster-growing, all-female yellow perch available for industry

By Dr. Hanping Wang
Senior Scientist

Yellow perch is one of the top three aquaculture species in the Midwest and North Central Region of the United States. Funded by a NOAA-Sea Grant, the Ohio Center for Aquaculture Research and Development (OCARD) at OSU South Centers has developed technology that enables us to produce commercial-scale, faster-growing, all-female yellow perch for the aquaculture industry.

This spring, OCARD produced around 70,000 all-female fry, and the monosex fingerling will be delivered to the aquaculture industry in early this summer for commercial use, demonstration, or technology transfer.

Yellow perch females grow significantly faster and larger than males. All-female monosex populations will significantly benefit the aquaculture industry. OCARD at Piketon has created a large number of neomale broodstock of yellow perch with a female genotype.

A growth performance test of the all-females vs. a mixed-sex group showed that all-females grew around 30% faster than the mixed group, and 66.0% faster than males. The large numbers of superior neo-male broodstock will enable us to produce commercial-scale, all-female monosex yellow perch for commercialization of the monosex production technology.

For more information about this fast-growing strain, you can contact Dr. Hanping Wang at wang.900@osu.edu.



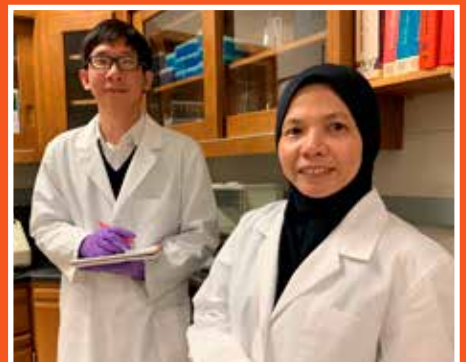
OCARD welcomes two new scholars

Two research scholars, Dr. Rafidah Binti Othman and Mr. Dingkun Xie (pictured right) recently joined the Ohio Center for Aquaculture and Development (OCARD) for their post-doctoral and PhD dissertation research.

Rafidah Othman is a new visiting postdoctoral researcher at Dr. Hanping Wang's Lab inside OSU

South Centers. Originally from Malaysia, she is a lecturer and researcher from the Borneo Marine Research Institute at the Universiti Malaysia Sabah. She earned her PhD in Veterinary Sciences from the Universiti Putra Malaysia.

See *SCHOLARS* Page 9





Mr. Dingkun Xie (standing) and Dr. Rafidah Binti Othman (seated) recently joined the Ohio Center for Aquaculture and Development (OCARD) for their post-doctoral and PhD dissertation research. (Photo; Bradford Sherman/CFAES)

SCHOLARS from Page 8

Her research has been focused on health and disease management in aquaculture and other animals. Currently under the mentorship of Dr. Wang, her research involves the effect of stress on sex determination and sex differentiation in fish. She will explore details of the mechanisms involved in stress response due to high stocking density and chemical stressors in sex determination and sex differentiation during a critical period of early development.

The findings from this study is important to gain insight into the potential development of new or better techniques for enhancing breeding strategies and sexual manipulation in aquaculture, and in producing monosex fish (either all-female or all-male) for a more sustainable aquaculture production.

Mr. Dingkun Xie, a PhD student, is from Nanchang University in China. He is working on his dissertation in Dr. Wang's laboratory, focusing on the sex control and the sex differentiation in aquaculture species with marker screening and sex gene interference.

The markers are the specific sequences, and are different between male and the female fish. Because sex specific markers and SNPs can be used in the rapid sex identification for sex control and selective breeding in fish, these markers have high application value in aquaculture. Besides, as we know, overexpression and interference are the usual ways to regulate the gene expression. In sex regulation, hormones are often used to regulate the sex of fish in order to reach the goal of artificial sex-control for aquaculture.

Through this research, we can better understand how some sex control genes play roles in gender regulation with siRNA and miRNA interference.

Update on Blueberry Production Research

By Dr. Gary Gao

Associate Professor and Extension Specialist

Growing blueberries in Ohio has been a challenging proposition for both commercial growers and backyard gardeners. This is because blueberries require an acidic pH of 4.5, high organic matter of 4-7%, and excellent drainage. Idea blueberry soils look like a sandy beach with high organic matter content and readily available water. Only a few selected places, such as northern Indiana, northwest Michigan, Hammonton in New Jersey, northeast North Carolina, and Willemette Valley in Oregon, have ideal conditions for blueberries. We are still trying very hard to mimic those ideal blueberry grounds with acidifying soil by applying elemental sulfur, increasing soil organic matter content through addition of peat moss or aged sawdust, and by building raised beds.

If you are thinking about growing blueberries commercially, you may want to get a copy of the Midwest Blueberry Production Guide available online: www2.ca.uky.edu/agcomm/pubs/id/id210/id210.pdf

See *UPDATE* Page 11



RIGHT: A blooming blueberry bush in a 10-gallon container. Photo by Gary Gao, The Ohio State University.



Ricardo Medina (A Ph.D. student from Brazil), Ryan Slaughter (Research Assistant with OSU South Centers), and Dr. Pengfei Wang (a visiting scholar from Shanxi Agricultural University in Taigu, Shanxi, China) are shown here discussing the finer details of blueberry grafting.

UPDATE from Page 10

If you want to purchase a hardy copy of the bulletin, visit: southcenters.osu.edu/news/midwest-blueberry-production-guide for more information. A limited number of copies are available.

If you want to grow blueberry in a home garden, you may want to check out this fact sheet at OSU Extension's OhioLine: ohioline.osu.edu/factsheet/HYG-1422 or check the OSU South Centers blueberry page: southcenters.osu.edu/horticulture/fruits/blueberries.

Grafting Blueberries

We are working on cold hardy and alkaline soil tolerant blueberry rootstocks. We are seeing some promising selections, but we still need a lot of patience. Our team members Ricardo Medina, Ryan Slaughter, and Pengfei Wang gathered together in April to work on blueberry grafting. Our team is certainly looking forward to grafted blueberry trees from our research project, and is very grateful for the financial support of a USDA Specialty Crop Block Grant from the Ohio Department of Agriculture.

Growing Blueberries in Containers – More of a Reality than Fiction

It is so exciting to see the beautiful blooms on blueberry bushes in containers. After three years of trials and tribulations, we are getting really good at growing blueberries in pots. The container size is 10 gallons. Blueberry production is not terribly hard, after all. If you are thinking about doing this commercially, feel free to visit our trial plots at OSU South Centers in Piketon. Either Ryan



A complete renovation of old blueberry bushes at OSU South Centers in Piketon. Photo by Gary Gao, The Ohio State University.

Slaughter or Dr. Gary Gao can give a demonstration or we can compare notes.

Some of the suggested blueberry cultivars for container production include Blue Gold, Draper, Legacy, Nelson, and Sweetheart. Each of these flowers should turn into a blueberry, as long as honeybees or bumble bees do their part.

Recording, Editing, and Publishing Videos

Gao and Slaughter, along with video producers Duane Rigsby and Sarah Swanson, have been working on recording videos on fruit production. Gao says his program has a great team in place to produce this kind of education content, and hopes to produce quite a few videos.

“I jokingly told our folks that one of my career goals is to star in at least one fruit production video

that draws one million views,” Gao said. “

A few days ago, my research assistant Ryan Slaughter took my message to heart and recorded one fun and educational videos with Duane. He told me that the video on total blueberry renovation with a chainsaw drew more than 500 hundred views in one day.”

Follow this link for the video on the South Centers' YouTube Page at youtube.com/watch?v=Sxpn29w0TZE

“It is a lot of fun to watch,” Gao continued. “I shared Ryan's video on Facebook myself – I wonder if this video will go viral?”

“I will be happy and jealous at the same time. It is very possible that Ryan's video will reach the one million mark before mine,” he exclaimed.

The Ohio State University South Centers
1864 Shyville Road
Piketon, OH 45661
Phone: 740-289-2071
Toll Free: 800-297-2072
Fax: 740-289-4591
southcenters.osu.edu



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information, visit cfaesdiversity.osu.edu. For an accessible format of this publication, visit cfaes.osu.edu/accessibility.

