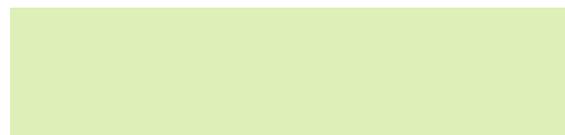
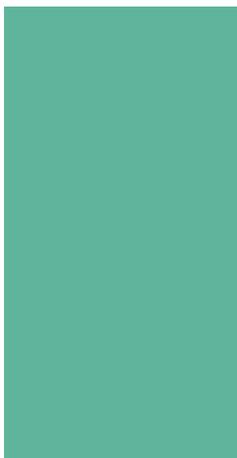




Northeast Regional
Center for Rural
Development



2020
Annual
Report

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Overview 2020

The year 2020 has been described as perhaps the most difficult that many Americans will experience in their lifetimes. Individuals, families and the communities in which they reside continue to reel from multiple economic and social shocks. Many have lost loved ones to COVID-19 or have fallen ill themselves. And perhaps most of all, Americans miss being together with family, friends, and colleagues.

Yet in this dark year we saw our colleagues and stakeholders across the region rise to multiple challenges, shifting to working from home and online collaboration, and working tirelessly to help their corner of the world lay the groundwork for a strong and more equitable recovery. It is a great pleasure to report on these many efforts in the present Annual Report;

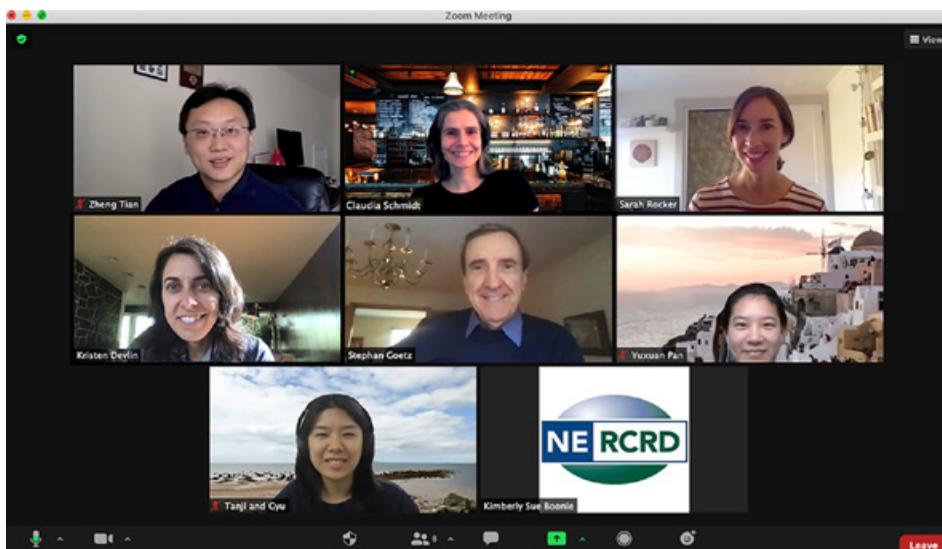
we are honored to be part of such an inspiring network of colleagues and collaborators, and grateful for the many opportunities to work on projects together.

Because much of our work involves analysis of place-based economic well-being and the food system—including supply chains which in turn are geographically dispersed—and the pandemic has also spread unevenly over space, we were able to quickly provide science-based insights and perspectives on the effect of the pandemic to decisionmakers. This included issues briefs and virtual presentations showing where farm and food sector workers could be most vulnerable to infection. A presentation to the Council of State Governments – East addressed the impact of the pandemic on agriculture

more generally. We published two timely commentaries in the *Journal of Agriculture, Food Systems, and Community Development*, and continue to explore with data scientists how emotions expressed in Tweets can help to predict localized food insecurity or scarcity in real time during a pandemic, as well as the role of community food services in reducing hunger.

As in years past, I am grateful to all those who made the work reflected in this report possible, and as impactful as it is: from the extension educators and faculty, researchers and administrators in the land-grant system across the region, including our Technical Advisory Committee and Board of Directors, to the staff here at the Northeast Center as well as our various federal partners in Kansas City and Washington, DC.

Stephan J. Goetz
Director
March 14, 2021



NERCRD staff, l-r from top: Zheng Tian, Claudia Schmidt, Sarah Rocker; center row: Kristen Devlin, Stephan Goetz, Yuxuan Pan; bottom left: Tanji Huang. Not shown: Kim Boonie, Elizabeth Dobis, Devon Meadowcroft.

2020 Impact Highlights

The NERCRD's 2020 research activities have resulted in new knowledge:

- Our research on food system impacts of the COVID-19 crisis revealed bottlenecks in supply chains, changes in consumer preferences and food-sourcing strategies, and potential future disease-related hot-spots and weak points in the food system (see page 3).
- Our more comprehensive measure of local innovation, showing that innovation is widespread even in rural places not typically thought of as innovative, will help decision makers think in new ways about innovation and how they can support it (Goetz, Han in *Research Policy*, see page 18).
- We found that in American communities with more fast food restaurants and extraction industry-based jobs, or higher population density, human life expectancy is shorter. This new knowledge can help communities identify and implement changes that may promote longer lifespans among their residents (see page 13).
- Scientists, practitioners, and community-based stakeholders have a better understanding of the relationship between high-risk jobs and opioid misuse issues (see page 11).
- NERCRD research appears in disciplinary and interdisciplinary high-impact journals, such as *Food Policy* and *Research Policy* (see page 15).

The NERCRD's 2020 outreach activities have increased capacity:

- Communities are better poised to engage their citizens around key topic areas, as a result of the USDA Office of Partnerships and Public Engagement workshops (see page 6).
- 35 Extension and research faculty from nine states are collaborating in new partnerships as a result of our small-grant funding program (see page 10).
- A three-fold increase in National Extension Tourism (NET) network membership allows for more efficient transfer of programs across states and regions (see page 7).
- More Extension educators are aware of the network-analysis approach to supporting new farmer networks (page 14).
- Improved understanding of the extent to which Extension programs nationwide address tourism and outdoor recreation in their programming will be used to identify programmatic gaps, challenges, and potential areas of improvement and future collaborations. (Arbogast and Pan, see page 18).

Impacts as defined by USDA: changes in knowledge, action, or condition

- "A change in knowledge occurs when the participant (scientist, trainee, or citizen) learns or becomes aware."
- "A change in action occurs when there is a change in behavior or the participants act upon what they have learned (adoption of techniques and methods or a change in practice)."
- "A change in condition occurs when a societal condition is changed due to a participant's action."

—NIFA Reporting Portal

Special Section: Responding to COVID-19

Although the global pandemic changed the way we work, the mission that guides our work is as relevant today as it ever was: to enhance the capacity of land-grant universities to foster regional prosperity and rural development. The research and outreach networks we've invested in enabled us to be responsive to the COVID-19 crisis and to support others' responses. Here are some examples.

COVID-19 Research Briefs

NERCRD produced a series of research briefs in response to the COVID-19 crisis, designed to provide information quickly or to stimulate discussion. The briefs explore the pandemic in the context of direct farm sales, the fruit and vegetable industry, consumer spending and sourcing, network science, and regional science. Titles in the 2020 series include:

- Goetz, Stephan J. ["COVID-19, Networks and Regional Science."](#)
- Goetz, Stephan J. ["Social Capital May Increase Social Distancing."](#)
- Goetz, Stephan J., Devon Meadowcroft, Claudia Schmidt, Prasenjit Mitra, and Francesco Di Gioia. ["In the Mid-Atlantic Fruit and Vegetable Industry, Market Workers and Local Specialized Freight Truckers May Be at Greatest Risk."](#)
- Goetz, Stephan J., Claudia Schmidt, Lisa Chase, and Jane M. Kolodinsky. ["Americans' Food Spending Patterns Explain Devastating Impact of COVID-19 Lockdowns on Agriculture."](#)
- Goetz, Stephan J., Zheng Tian, Claudia Schmidt, and Devon Meadowcroft. ["Rural COVID-19 Cases Lag Urban Areas but Are Growing Much More Rapidly."](#)
- Goetz, Stephan J., Heather M Stephens, Sarah J. Rocker, Rachel Welborn, Steven Turner, and Don E. Albrecht. ["Rural Broadband Investment Urgently Needed in the COVID-19 Crisis."](#)
- Schmidt, Claudia, Stephan J. Goetz, Sarah Rocker, and Zheng Tian. ["Google Searches Reveal Changing Consumer Food Sourcing in the COVID-19 Pandemic."](#)
- Schmidt, Claudia, Zheng Tian, Stephan J. Goetz, Benjamin Bartley, Brian Moyer, and Sarah J. Rocker. ["Farms with Direct to Consumer Sales in the Northeast Region and COVID-19: Some Early Challenges and Responses."](#)
- Tian, Zheng, and Stephan J. Goetz. ["Google Searches Predict Initial Unemployment Insurance Claims."](#)
- Tian, Zheng, and Stephan J. Goetz. ["Nonmetro COVID-19 Case Growth Higher in Metro-Adjacent Counties, but Case-Fatality Ratio Is Lower So Far."](#)



Twitter/Google Trends Analysis of Food Security Under COVID-19

With colleagues from Penn State's College of Information Sciences and Technology and Hamad Bin Khalifa University (Qatar), NERCRD researchers secured seed-grant funding to examine how social media may predict food shortages or insecurity under COVID-19. Using Google Trends and Twitter data on searches and tweets related to food items, food supply, food shortage and insecurity, the research team is developing insights into local conditions related to the food system in different states (including rural areas of the nation). In turn, they will examine how these can be used to forecast shortages in real time in different parts of the country, as well as emerging problems, for example, with shortages at food banks. They will complement this with analysis of changing consumer sentiments over time in different

communities, related to food availability and quality. The researchers expect that our findings will reveal recommendations to facilitate interventions by governmental organizations, which could be rapidly deployed to address food shortages, and other related problems, should a similar scenario reoccur. Funding for this research was provided by the Penn State College of Agricultural Sciences Institute for Sustainable Agricultural, Food and Environmental Science.

NERCRD members of the project team include Stephan J. Goetz, Claudia Schmidt, Zheng Tian, and Yuxuan Pan. Other project team members include Prasenjit Mitra (Penn State College of Information Sciences and Technology) and Muhammad Imran (Qatar Computing Research Institute, Hamad Bin Khalifa University).

NERCRD Partners on Resource Hub for Local Food-System Response to COVID-19

NERCRD is partnering with the University of Kentucky (UK) and Colorado State University on a one-year Cooperative Agreement with the USDA Agriculture Marketing Service to research the impacts, adaptations and innovations of COVID-19 on U.S. Local and Regional Food Systems (LRFS) nationally. This highly engaged, real-time project focuses on capturing rapid responses of initial and ongoing COVID-19-related changes in the food system and is designed to support timely innovation by collecting and disseminating easily digestible ideas, best practices, and readily adoptable approaches to COVID-19 adaptation.

Team members publish emergent findings on the project website each month, including [sector impact assessment reports](#) for each segment of the LRFS documenting initial challenges of the pandemic on markets and populations and [innovation briefs](#) highlighting promising adaptations to new challenges. In addition, the project hosts a monthly [webinar series](#) for

researchers and practitioners, providing the latest updates and analysis from the field. The webinars will continue through May 2021.

Postdoctoral Scholar Sarah Rocker is representing the NERCRD on this project. She leads the social network analysis identifying cross-sector collaboration before and during the pandemic, serves on the Consumer Household Survey analysis team, and co-leads the qualitative research team, which has conducted 19 focus groups with over 120 professionals about market and community challenges and adaptations to COVID-19. She and Lilian Brislen (UK) also lead participatory action research elements of the project, including facilitating a cross-sector community of practice and its monthly workshops, where emergent research findings are discussed in real-time with food systems sector leaders and policy makers.

Learn more about the project at: <https://lfscovid.localfoodeconomics.com/about/>

Choices Magazine Special Issue: Rural Development Implications One Year After COVID-19

The Council on Food, Agricultural and Resource Economics (C-FARE) and the Regional Rural Development Centers are organizing a special issue for *Choices* to be published in 2021. Jane Kolodinsky (University of Vermont and C-FARE board member) and NERCRD Director Stephan Goetz are serving as co-editors of this issue, in consort with the *Choices* thematic issue editor, and NERCRD Business Manager Kim Boonie is providing administrative support. The team solicited papers on the topic of “Rural Development Implications One Year After COVID-19.”



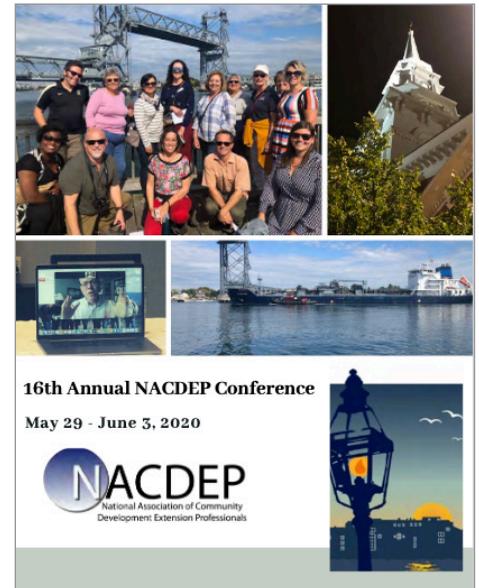
COVID-19 Outreach: Supporting Others’ Pivots to Virtual Programming

The Center provided substantial technical support that enabled other organizations to pivot in-person events to virtual programming due to the pandemic. NERCRD Communications Specialist Kristen Devlin hosted several online sessions of the Southern Region Science Association’s annual meeting, which served as an important opportunity for junior faculty, postdocs, and students to share their research and receive feedback. She also served on the planning committee for the virtual conference of the National Association for Community

Development Extension Professionals (NACDEP), co-hosting several of its virtual sessions.



NERCRD Postdoctoral Scholar Sarah Rocker led the planning of the companion meeting of the nation’s Community Development program leaders, which also was held virtually. With 290 people in attendance, the 2020 NACDEP virtual conference was among the top four most highly attended NACDEP conferences.



“Your response throughout COVID has been phenomenal. It kept people current and provided lots of excellent information.”

—Bernadette (Bunnie) M. Reichle, New York CARET Delegate and NERCRD Board Member

Outreach Initiatives: Helping Extension Help Communities

National Outreach Initiatives

Bolstering Capacity through Community Prosperity Workshops

Partnership with USDA Office of Partnerships and Public Engagement addressed veterans, workforce development, socially disadvantaged farmers and ranchers, and housing

Led by the Southern Rural Development Center, the Regional Rural Development Centers continued their partnership with the USDA Office of Partnerships and Public Engagement (OPPE) in delivering virtual workshops intended to strengthen the capacity of community-based organizations working at the state or community level on four key content areas: veterans, workforce development, socially disadvantaged farmers and ranchers, and housing. Postdoctoral Scholar Sarah Rocker represented NERCRD in this effort, and led the workshop planning for the socially disadvantaged farmers and ranchers content, which was targeted toward stakeholders in the Southern states and engaged more than 300 participants.



Learn more about all the workshops at:
<http://srdc.msstate.edu/community-prosperity/capacity-workshops>

National Behavioral Health Extension Network

Together with the other Regional Rural Development Centers, the NERCRD supported the establishment of a National Behavioral Health Extension Network (NBH E-Net) aimed at supporting training and technical assistance for the dissemination of science-based behavioral health resources within the land-grant university Extension system. Led by Dr. Richard Spoth, Iowa State University, the network has hired staff, started website development, obtained further funding, and initiated several educational events. This network is an outgrowth of the Extension Opioid Crisis Response Workgroup (EOCRW), led by former NCRCRD Director Mark Skidmore.

National Extension Tourism Network Makes Great Strides Toward Realizing Its Vision

Building on the momentum of their 2019 national conference, the NET leadership team is positioning the network as the go-to source for sustainable tourism research and education within the Cooperative Extension System.

With administrative and financial support from the Regional Rural Development Centers, members of the National Extension Tourism (NET) Design Team and NERCRD's Stephan J. Goetz convened in Savannah, GA, in early 2020 for a two-day facilitated strategic planning session that initiated the development of a formal strategic plan. The strategic plan provides organizational structure, goals, and strategies to generate measurable outcomes (<http://bit.ly/3ccZVUL>).

With staffing support from NERCRD's Kristen Devlin, the group overhauled their website and launched a successful webinar series, which has resulted in a three-fold increase in the number of people engaged in the



National Extension Tourism network (from 172 in 2018 to 562 in 2020), resulting in more efficient transfer of ideas and programs across states, regions, and institutions. The webinars were recorded and are archived online (see page 22).

They also established a process for engaging new Design Team members, resulting in a leadership team with Extension and Sea Grant representatives

from each region as well as federal liaisons (see below). Looking ahead, the group is planning its 2021 national conference, more webinars, a research agenda, and an awards and recognition program.

To learn more, visit the NET website at extensiontourism.net or sign up for the NET community listserv at <http://bit.ly/NET-list>.

National Extension Tourism Design Team

Chair: Lisa Chase, University of Vermont Extension

Vice Chair: Andy Northrop, Michigan State University Extension

Secretary: Stacy Tomas, Oklahoma State University

Past Chair: Cynthia Messer, University of Minnesota Tourism Center

2021 Conference Chair
Bryan Fluech, Georgia Sea Grant

Federal Liaisons

- Brent Elrod, USDA NIFA
- Elizabeth Rohring, NOAA Sea Grant

Northeast Regional Representatives:

- Doug Arbogast, West Virginia University Extension Service
- Jen McCann, Rhode Island Sea Grant
- Penny Whitman, University of New Hampshire Cooperative Extension

Southern Regional Representatives:

- Julianne Dunn, University of Arkansas Cooperative Extension Service
- April Turner, South Carolina Sea Grant Consortium
- Matt Ulmer, Auburn University Extension

Western Regional Representatives:

- Dolan Eversole, Hawaii Sea Grant
- Miles Phillips, Oregon State University Extension Service/Oregon Sea Grant
- Jake Powell, Utah State University Extension

North Central Regional Representatives:

- Natalie Chin, Wisconsin Sea Grant
- Diane Van Wyngarden, Iowa State University Extension and Outreach
- Xinyi Qian, University of Minnesota Tourism Center

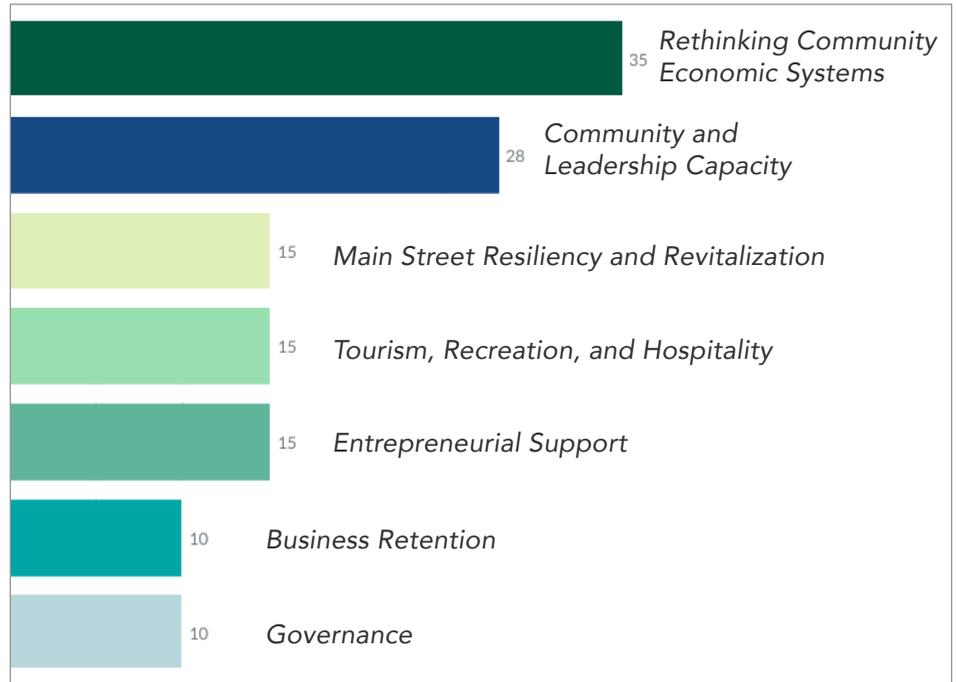
Regional Outreach Initiatives

Survey Reveals Strong Interest in Regional Research and Practice Affinity Groups

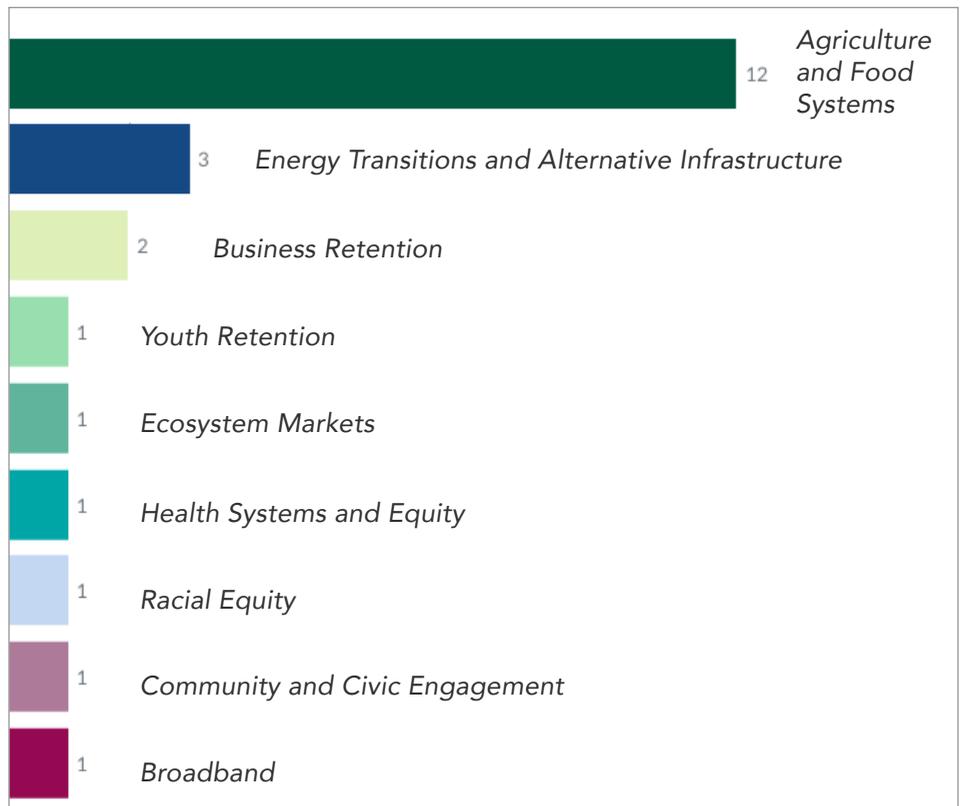
Led by Postdoctoral Scholar Sarah Rucker, NERCRD surveyed its stakeholders to explore the potential formation of Regional Research and Practice Affinity Groups as a way for Northeast-based practitioners and scholars to connect on core programming and research topics across institutions in the region.

The survey, which was introduced at the May 29, 2020 NACDEP regional meeting and later shared via the June NERCRD newsletter, received 54 responses. Results indicated strong interest of forming such groups, particularly in the topic areas of Rethinking Community Economic Systems, and Community and Leadership Capacity. Respondents were also asked to write in potential topic areas, and many identified “food systems” as another topic of interest. While recognizing that the topics of greatest interest may shift with changing economic and social contexts, NERCRD will be convening at least two affinity groups in 2021 to identify a process and structure that is most conducive to connecting and collaborating.

If you’re interested in participating or want to receive updates, send an email to nercrd@psu.edu with the subject line “Affinity Groups.”



Survey respondents were asked to indicate the topic areas in which they are most interested for the purpose of convening a regional working group. The graph above shows the number of responses for each of the fixed topics presented in the survey. Those shown below were identified by respondents as write-in topics.



“Agri-Cluster Resilience and Expansion” Project (ACRE) to Develop Value-Chain Planning Process

The Lyson Center for Civic Agriculture and Food Systems at Cornell University, in collaboration with the Cornell Cooperative Enterprise Program, the Community and Regional Development Institute at Cornell, and the NERCRD, announced the launch of the “Agri-Cluster Resilience and Expansion” (ACRE) Program in October 2020.

The goal of the program is to develop a strategic value-chain planning program and to pilot it with onion growers in the muckland areas of New York State, which comprise about 30,000 acres across four regions, 7,000 of which are planted to onions. These onion growers are considering developing a new midscale value chain that will allow them to compete more effectively in the Northeast and

U.S. markets. The ACRE team will take the onion growers through a strategic business planning process to explore the creation of a statewide brand under which all muck onion growers can aggregate, certify, and market their renowned pungent onions—ideal for cooking.

Early in 2021, the ACRE project learned that it was selected to receive funding through the Northeast Sustainable Agriculture Research and Education (NE-SARE) program to expand the ACRE program training throughout the Northeast. “Without [NERCRD] support of the muck onion pilot project, this would not have happened, said Lyson Center Co-Director Duncan Hilchey, who leads the project.



Photo by Misky via Unsplash

NERCRD Director Stephan Goetz and Postdoctoral Scholar Sarah Rocker are participating on the project team. NERCRD also provided funding to the initiative.

Learn more about the project at: <https://bit.ly/3vXSJoD>.

Coming to the Northeast in 2021 and 2022 - Save the Date!

NEES+NSS *Penn State* National Extension Energy Summit National Sustainability Summit 2021

The National Extension Energy Summit & National Sustainability Summit, a joint effort of the National Extension Energy Initiative, National Network for Sustainable Living Education, and National Extension Climate Initiative, will take place **October 4-6, 2021** at the Penn Stater Hotel and Conference Center on the Penn State campus.

<https://www.nationalextensionsummits.com/>

International Workshop on Agritourism



The International Workshop on Agritourism will take place **August 30 – September 2, 2022** at the Hilton Burlington Hotel in downtown Burlington, Vermont.

<https://www.agritourismworkshop.com>

NERCRD-Funded Projects Pivot in Response to Pandemic

In January 2020, NERCRD announced that four projects were selected to receive funding through the Center's 2019-2020 small grants program (see <http://bit.ly/37R2YO9>). While the pandemic has forced one of the groups to forego their project goals, others have been able to adapt their plans to meet their proposed objectives in creative ways.

Best Practices in Bike/Pedestrian Trail Data Collection and Monitoring

Led by Laura Brown (University of Connecticut), this team from Connecticut, New Hampshire, Vermont and Minnesota has carried out their co-learning activities virtually, and pivoted their previously planned in-person conference to a virtual event that was held in conjunction with the Center for Latino Progress Northeast Multimodal summit, and was attended by transportation and planning professionals and community members and leaders. Learn more and watch recordings at: <https://www.ctprf.org/2020summit/>

Main Street Revitalization

Exploring New Initiatives for Cooperative Extension in Strengthening the Economy, Bringing Vibrancy and Expanding Leadership in Rural Communities

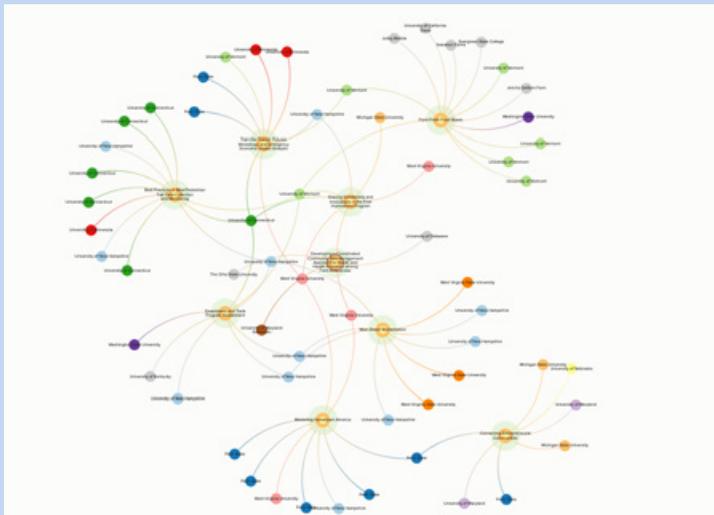
Led by Molly Donovan (Univ. of New Hampshire), this group from New Hampshire, Maine, and West Virginia has met to discuss what they are hearing and seeing given the dramatic impact COVID-19 is having on the economy and vibrancy of Main Street. They plan to invite others in the region and even nationally through NACDEP into the conversation. They are exploring moving the Main Street Academy content developed at UNH online so to be able to deliver training and programming to a wider audience. They will resume planning for the in-person aspects of their project in 2021.

Marketing Hometown America

The MHA curriculum was developed in the North Central region to guide rural communities through the decision-making process on how to market themselves to potential new residents. The NERCRD-funded team, led by Peter Wulforth, Penn State, and Michael Dougherty, West Virginia University, was able to host a two-day train-the-trainer event in Pennsylvania with project partners from North and South Dakota, West Virginia, and New Hampshire prior to the travel restrictions imposed by the pandemic.

Since then, Penn State Extension staff have identified a Pennsylvania community in which to pilot the program and began setting up facilitator training and learning circles. They conducted the program with the study circles both virtually and face-to-face in Spring 2021. Team members in West Virginia are planning to implement the program in a community in Spring 2021.

Visualizing the Impact of NERCRD's Small-Grant Program



NERCRD's Sarah Rucker created this visualization showing the Universities involved with our small-grants programs and connections across projects.

For an up-close, interactive look, visit: <https://bit.ly/3oaafSR>

Research Initiatives: Advancing Science for the Good of Communities

In addition to the COVID-19 research described on pages 3-4, the NERCRD continued several lines of inquiry within the broad topic areas of economic development, rural vitality and resilience, innovation, food systems, and social networks.

New Project to Create a Roadmap for Fostering Successful Agritourism Enterprises

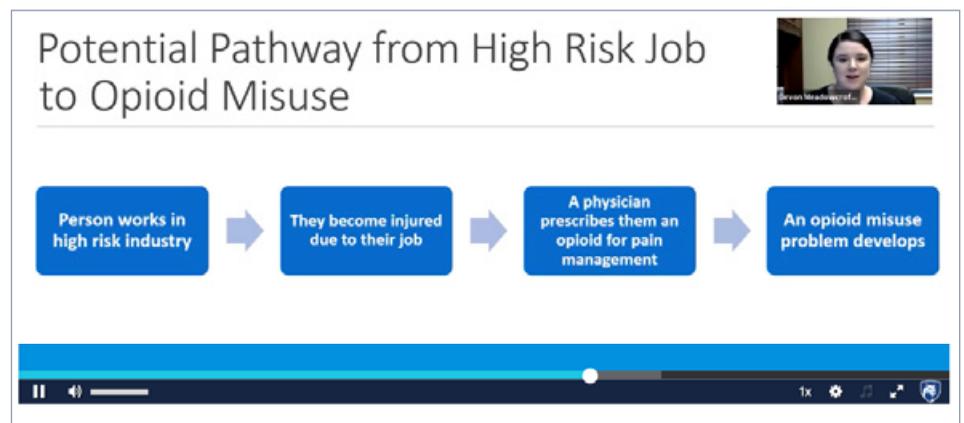
A team of researchers led by NERCRD Faculty Affiliate Claudia Schmidt will receive \$500,000 over three years to study agritourism in the U.S. and to develop research-based information and guidance for farmers looking to diversify their incomes through agritourism activities. The goal of the grant, funded by the USDA NIFA, is to develop and disseminate practical information that will allow rural communities and owners of small and medium-sized farms to benefit from the growing consumer interest

in on-farm experiences, said Claudia Schmidt, assistant professor of marketing and local/regional food systems in Penn State's College of Agricultural Sciences. In addition to Schmidt, project team members from NERCRD include Stephan Goetz, Zheng Tian, Sarah Rucker, and Yuxuan Pan, as well as additional researchers from Penn State, University of Vermont and Oklahoma State University. Read the full Penn State News story at: <https://bit.ly/38K9XKO>



Opioid Research Focuses on Potential Pathway to Misuse

Before taking a position at Mississippi State University in June, Postdoctoral Scholar Devon Meadowcroft conducted research on potential reasons why certain areas of the U.S. are impacted more than others with regard to opioid misuse issues. One such study shows that a county's percentage of workers in high-risk jobs is positively associated with their number of opioid-related deaths, which holds true for both illicit opioids and prescription opioids. These findings suggest that work-related injuries in high-risk industries could lead to more prescriptions for opioids for pain management, which in turn translate to higher rates of opioid misuse. Devon presented her findings at the Southern Regional Science Association virtual conference. A recording is available at: <https://bit.ly/3c2Rtre>.



Building Rural Community Resilience Through Innovation and Entrepreneurship

As reported last year, NERCRD supported Charlie French, University of New Hampshire Extension, with a research fellowship aimed at better understanding the characteristics of resilient, rural communities. His efforts will culminate in a book, titled “Building Rural Community Resilience Through Innovation and Entrepreneurship,” to be published through the Routledge Community of Practice series, which seeks to provide diverse scholarly perspectives on innovation in rural

I. Rural Innovation Concepts and Principles

- Rural Innovation Defined, by Charlie French, University of New Hampshire, University of New Hampshire
- The Geography of U.S. Rural Innovation and Entrepreneurship, by Stephan J. Goetz, Devon Meadowcroft, and Yicheol Han, NERCRD/Penn State, Mississippi State University, and KREI, Korea
- Fostering Innovation Ecosystems in Rural Places, by Jared Reynolds, University of New Hampshire

II. Dynamics of Rural Innovation

- Exploring Innovation Creation in Rural Places, by John Mann, Michigan State University
- Social Capital Building for Rural Innovation, by Thomas S. Lyons, University of Tennessee-Chattanooga
- Rural Innovation at the Community Level, by Cornelia Flora, Iowa State/Kansas State Universities
- Embracing Uncertainty, Risk and Anti-Fragility in Rural Innovation and Entrepreneurship, by Ted Alter, Penn State and Michael Fortunato, Creative Insight

places in the United States and its connection to entrepreneurship and community resilience. Drawing from empirical analyses, case studies, and a synthesis of best practices, chapter authors explore various forms and facets of innovation with the goal of characterizing how innovation manifests itself in rural places and how it contributes to entrepreneurial development and resilience. The outline follows:

III. Rural Innovation Practice

(incorporating case studies/vignettes)

- Digital Inclusion and its Role in Fostering Innovation and Entrepreneurship, by Roberto Gallardo, Purdue University
- Rural Flourishing through Artistic Imagination: Unleashing the Advantages of Nonmetropolitan America, by Timothy Wojan, National Science Foundation
- Innovating with People Power: Bolstering Regional Food Economies through Value Chain Coordination Networks, by Sarah Rocker, NERCRD/Penn State
- Rural Destination Management Innovation and Collaboration in Appalachia, by Daniel Eades and Douglas Arbogast, West Virginia University
- Innovating at the Intersection of Nature & Main Street: Connecting Downtowns and Trails: by Shannon Rogers, Molly Donovan, Casey Porter, and Geoffrey Sewake, University of New Hampshire
- From Principles to Practice: Lessons for Fostering Rural Innovation, by Charlie French, University of New Hampshire

The Role of Innovation in Rural Firm Emergence and Vitality

The major goals of this USDA NIFA-funded project are to deepen our understanding of whether and how entrepreneurial innovation can mitigate the growing economic threats facing rural U.S. workers and communities. The working hypothesis is that innovation activity is much more widely distributed over space than previously thought. To test this hypothesis, the researchers are linking data from the 2014 Rural Establishment Innovation Survey to other measures available in administrative and survey datasets compiled by the Census Bureau. Recent work has focused on the association between the complexity of buying and selling relationships within detailed industries and continuous improvement.

Continuous improvement may be the basis for respondents reporting innovation, but an NSF-sponsored cognitive interview study revealed that respondents did not regard continuous improvement as innovation. The researchers are examining whether this might lead to a downward bias in self-reporting innovation activities in Census Bureau datasets.

NERCRD Director Stephan Goetz and Postdoctoral Scholar Zheng Tian are collaborating on this project with Timothy Wojan (ORISE Established Scientist Fellow, National Science Foundation) and Anil Rupasingha (Branch Chief, Economic Impact Branch, Innovation Center, USDA Rural Development).

Community Factors Influence Life Expectancy, Study Shows

While lifestyle choices and genetics go a long way toward predicting longevity, a new study shows that certain community characteristics also play important roles. American communities with more fast food restaurants, a larger share of extraction industry-based jobs, or higher population density have shorter life expectancies, according to researchers from the NERCRD and West Virginia and Michigan State Universities. Their findings can help communities identify and implement changes that may promote longer lifespans among their residents. Read the full news release at <http://bit.ly/38Fwqaw>.



Photo by Christopher Williams via Unsplash

- Dobis, Elizabeth A., Heather M. Stephens, Mark Skidmore, and Stephan J. Goetz. "Explaining the Spatial Variation in American Life Expectancy." *Social Science & Medicine* 246 (February 2020): 112759. <http://bit.ly/3uShdit>.

Looking at 2020 Census Challenges and Opportunities

A collection of articles recently published in *Choices Magazine* explores the theme of "Amplifying the Rural Voice: 2020 Census Challenges and Opportunities."

Steve Turner, Director of the Southern Rural Development Center, served as the collection's guest editor. The articles explore

factors associated with lower Census counts; anticipated participation across the rural-urban continuum; strategies for improving participation; and, the importance of the Census to Cooperative Extension programs and services across the U.S. NERCRD's Stephan J. Goetz and Zheng Tian co-authored an article for the issue with Charlie French (UNH), titled "Problem of Low 2020 Census Participation Will Vary with Sociodemographic Factors and Distance from Metro Areas."



Choices is an outreach publication of the Agricultural and Applied Economics Association, and is available online: <https://bit.ly/3qnRefC>.

As a trusted voice in rural America, the RRDCs also provided assistance to the Census Bureau to help raise awareness among rural audiences through various channels, including our social media platforms, websites, and newsletters.

For Small and Minority Farmers, Networks Influence the Bottom Line

In a study looking at the social networks of small-scale and minority specialty-crop farmers in Tennessee, Maryland, and Delaware, farmers who played a more prominent role in their network reported greater sales. The findings can help farming groups and agricultural support organizations leverage networks to enhance the farmers' success.

"Small-scale and minority-owned farms don't always have the same access to external resources that larger farms do, so they often rely more heavily on their internal or social networks for information and resource sharing," said NERCRD Director Stephan Goetz, one of the study's co-authors. "Our research shows that this networking pays off, in terms of their sales. Farmers who added a single new connection to their network experienced up to a 25% increase in sales."

"People who have stronger connections—at work, in society, with friends—have advantages," Goetz said. "They may be more gregarious and more easily make contacts, and therefore also have more access to information. It's not difficult to imagine how this would translate into an advantage in terms of greater sales for a small-scale vegetable farmer."

For example, Goetz said that connecting with other farmers could help an individual acquire knowledge about new market opportunities, learn about new technologies that increase production efficiency, or gain access to farm-related information such as a new crop variety, all of which could enhance sales.

The researchers also examined the extent to which demographic and socio-economic factors influence a farmer's position in the network, and found that older, more educated farmers had higher centrality positions in their network than their younger, less educated peers. They also found that male farmers had higher degree-out centrality than females, suggesting that female farmers are less likely to reach out to other farmers than males.



The research team, which was led by Aditya Khanal, assistant professor of agricultural economics in the College of Agriculture at Tennessee State University, reported their results this year in the *Journal of Agriculture, Food Systems, and Community Development*, and also produced a training manual to help agricultural support organizations conduct their own network analyses. By identifying and characterizing farmer networks, organizations can more effectively disseminate information by targeting those farmers who have greater centrality and are more likely to share it with other farmers.

In fact, as reported in the NERCRD 2019 Annual Report, one member of the research team used the manual to help form a new farmers network in Delaware. Andy Wetherill (Delaware State University and NERCRD TAC member) used the framework in the manual to support the formation of the First State African American Farmers Association.

In addition to Goetz, Khanal, and Wetherill, other members of the research team include Fisseha Tegegne (professor of agricultural economics at Tennessee State University), Lan Li (formerly at Tennessee State University and now an economist at the U.N. Food and Agricultural Organization), Yicheol Han (formerly at NERCRD and now at the Korea Rural Economic Institute), and Stephan Tubene (University of Maryland-Eastern Shore).

The research was funded by a USDA National Institute of Food and Agriculture Capacity-Building Grant (TENX-2011-02563, Grant#2011-38821-30966).

Reflecting on the Impact of NERCRD Research

Impact factor of journals in which NERCRD research was recently published

Journal Name	Google Scholar H-5 index	Journal Impact Factor	5-year Impact Factor	Immediacy Index	Citable Items	% Articles in Citable Items	Acceptance Rate
<i>Research Policy</i>	88	5.35	7.93	1.62	192	100	10%
<i>International Journal of Production Research</i>	77	4.58	4.15	1.84	389	88	
<i>Food Policy</i>	59	4.19	5.34	0.96	111	95	
<i>Journal of Labor Economics</i>	55	3.36	5.50	0.79	48	100	8%
<i>Journal of Economic Geography</i>	45	3.29	5.12	1.25	48	100	
<i>Entrepreneurship & Regional Development</i>	34	2.89	4.11	0.72	50	96	
<i>PLOS ONE</i>	175	2.74	3.23	0.50	11244	97	47%
<i>Papers in Regional Science</i>	32	2.22	2.17	0.56	110	100	
<i>Journal of Wine Economics</i>	16	1.77		1.48	25	100	
<i>Spatial Economic Analysis</i>	16	1.63	1.93	1.41	17	100	
<i>Journal of Agricultural and Resource Economics</i>	15	1.18	1.77	0.20	35	100	
<i>Applied Economics</i>	39	1.10	1.18	0.32	420	100	30%
<i>Journal of Agriculture, Food Systems and Community Development</i>	12						
<i>Journal of Extension</i>	10						30%
<i>Agricultural and Resource Economics Review</i>	16						

Definitions (compiled by Yuxuan Pan):

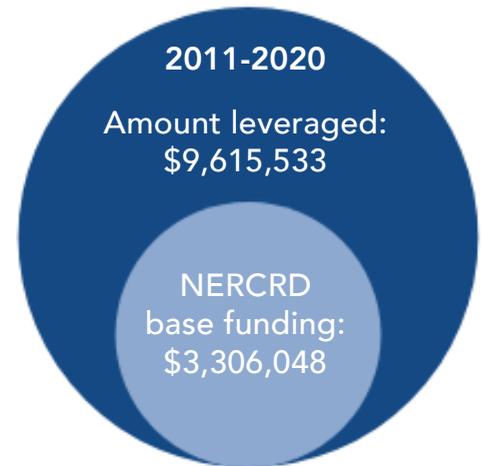
- **Impact Factor:** "A journal impact factor is a calculation based on a two-year period and is calculated by dividing the number of citations in the JCR year by the total number of articles published in the two previous years. An impact factor of 2 means that, on average, the articles published one or two years ago have been cited two times." (Source: [University of Michigan Library Resource Guides](#))
- **5-Year Impact Factor:** "The 5-year journal impact factor is the average number of times articles from a journal published in the past five years have been cited in the chosen JCR year." (Source: [University of Michigan Library Resource Guides](#))
- **Immediacy Index:** "The immediacy index is the average number of times an article is cited in the year it is published. It is a way of determining the "hot topics" in a discipline." (Source: [University of Michigan Library Resource Guides](#))
- **Citable items:** "are those items that comprise the figure in the denominator of the Journal Impact Factor calculation. These items are those identified in the Web of Science as an article, review or proceedings paper and are considered the substantive articles that contribute to the body of scholarship in a particular research field and those most likely to be cited by other articles. Other forms of journal content, such as editorial materials, letters, and meetings abstracts, are not considered as citable items." (Source: [Clarivate Analytics](#))
- **% Articles in Citable Items:** "The % of Articles in Citable Items emphasizes a journal's original research by calculating the percentage of articles that count toward the total Citable Items. For example, in 2013, Nature has 829 articles and 28 reviews for a total Citable Items of 857. 96% of the Citable Items are original research." (Source: [Clarivate Analytics](#))
- **H5-index:** "It is the largest number h such that h articles published in [the past 5 years] have at least h citations each". Thus, an H5-index of 60 means that that journal has published 60 articles in the previous 5 years that have 60 or more citations each." (Source: [American University Scholarly Research Impact Metrics](#))
- **Acceptance Rate:** "The number of manuscripts accepted for publication compared to the total number of manuscripts submitted in one year. The exact method of calculation varies depending on the journal. Journals with lower article acceptance rates are regarded as more prestigious." (Source: [University of Missouri Library Guides](#))

NERCRD Funding Snapshot

Over the last decade, the NERCRD generated \$3 in external grants each year for every \$1 in base funding.

The core federal investment in NERCRD allows us to build strong collaborative networks in the Northeast and across regions.

Through this network, the NERCRD is able to work across federal, state, and private agencies to secure funding with our partners to address the nation's pressing rural development issues.



Current Active Grants - 2020

The table below provides a snapshot of the NERCRD grant portfolio in 2020.

Title	Sponsor	Start Date	End Date	Amount
The Role of Innovation in Rural Firm Emergence and Vitality	USDA National Institute of Food and Agriculture (NIFA)	05/01/2018	04/30/2022	\$499,993
The Northeast Regional Center for Rural Development - FY2018	USDA NIFA	09/01/2018	08/31/2021	\$474,880
Critical Success Factors for Advancing Beer Tourism in Pennsylvania	Commonwealth of PA Liquor Control Board	10/08/2019	04/07/2021	\$47,276*
The Northeast Regional Center for Rural Development - FY2019	USDA NIFA	09/01/2019	08/31/2022	\$474,880
Industry Clusters and the Location of Agriculture: Establishing a Theoretical Base for Economic Development Practice	Rutgers -The State University of New Jersey	08/01/2017	07/31/2021	\$140,440*
Creating an Effective Support System for Small and Medium-Sized Farm Operators to Succeed in Agritourism	USDA NIFA	07/01/2020	06/30/2023	\$133,628*
USDA AMS Local and Regional Food Systems COVID-19 Rapid Response	University of Kentucky Research Foundation Inc.	05/15/2020	05/14/2021	\$44,995*
The Northeast Regional Center for Rural Development- FY2020	USDA NIFA	09/01/2020	08/31/2022	\$474,880
USDA Office of Partnerships and Public Engagement (OPPE)-Miss State	Mississippi State University	04/01/2020	11/15/2020	\$15,000*
Twitter/Google Trends Analysis of Food Security Under COVID-19	The Pennsylvania State University	05/07/2020	04/30/2021	\$25,000

* NERCRD portion

Staff Announcements

Welcoming Our Newest NERCRD Team Member, Jason S. Entsminger

We're delighted to welcome to the Northeast Center our new assistant research professor.

Just as we were wrapping up the production of this annual report, we welcomed Jason S. Entsminger, who fills a new assistant research professor position with the NERCRD. Jason will lead the Center's outreach-oriented activities primarily by fostering and strengthening the Center's relationships with Northeast land grant universities and rural development partners, and by identifying and responding to opportunities for cross-state collaborations and sharing of programs. He also will contribute to the Center's research program.



Prior to joining NERCRD, Jason served as a research associate and fellow with the McQuinn Center for Entrepreneurial Leadership at the University of Missouri, where he received his doctoral degree in agricultural and applied economics in 2020. His dissertation research explored how we classify firms to think of markets as ecologies, using the lens of local and regional food systems. He brings to NERCRD

multi-disciplinary and international experiences, which include projects related to agribusiness, food systems policy, agro-environmental management, community development, impact analysis, food security planning, and international trade.

Jason's primary research is in the fields of organizational economics and strategic management, including market structures, entrepreneurship and innovation, minority-owned enterprises, and collective strategies.

Learn more about Jason at <https://bit.ly/3jK2HUL>.

Fond Farewell to Two Postdoctoral Scholars

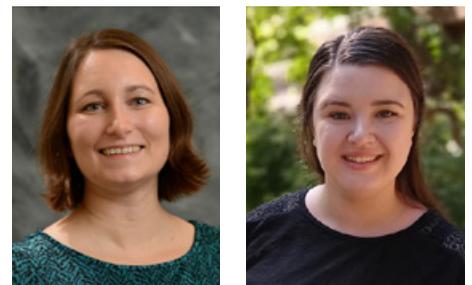
Dobis and Meadowcroft are the most recent to join the ranks of NERCRD alumni

We said goodbye to two postdoctoral scholars in 2020: Elizabeth Dobis and Devon Meadowcroft.

Dobis accepted a permanent position as a research agricultural economist in the Rural Economy Branch of the Resource and Rural Economics Division at the USDA Economic Research Service.

Meadowcroft joined the Department of Agricultural Economics at Mississippi State University, where her research and extension efforts focus on rural development topics, in particular those related to health and community development.

We will be filling the vacated postdoctoral positions in 2021.



Elizabeth Dobis (left) and Devon Meadowcroft

2020 Publications, Presentations, and Meetings

Scientific Publications

- Arbogast, D., Eades, D., Goetz, S.J., & Pan, Y. (In progress). Extension and Tourism: Previous Efforts, Current Trends, and the Future.
- Chenarides, L., Bonanno, A., & Palmer, A. (2020). If You Build Them... Will it Matter? Food Stores' Presence and Perceived Barriers to Purchasing Healthy Foods in the Northeastern U.S. *Applied Economic Perspectives and Policy*, aapp.13098.
- Cuomo, R.E., Davis, D.B., Goetz, S.J., Shapiro, J.D., & Walshok, M.L. (2020). Religiosity and Regional Resilience to Recession. *Risk, Hazards & Crisis in Public Policy*, 11(2), 166–187.
- Dobis, E.A., Stephens, H.M., Skidmore, M., & Goetz, S.J. (2020). Explaining the spatial variation in American life expectancy. *Social Science & Medicine*, 246, 112759.
- Goetz, S.J., & Han, Y. (2020). Latent innovation in local economies. *Research Policy*, 49(2), 103909.
- Goetz, S.J., Schmidt, C., Chase, L., & Kolodinsky, J. (2020). Americans' Food Spending Patterns Explain Devastating Impact of COVID-19 Lockdowns on Agriculture. *Journal of Agriculture, Food Systems, and Community Development*, 1–3.
- Khanal, A., Tegegne, F., Li, L., Goetz, S.J., Han, Y., Tubene, S. and Wetherill, A. (2020). Small and Minority Farmers' Knowledge and Resource Sharing Networks, and Farm Sales: Findings from Communities in Tennessee, Maryland, and Delaware. *Journal of Agriculture, Food Systems, and Community Development*, 1–14.
- Reid, N., Goetz, S.J., Dobis, E.A., Gottlieb, P.D., & Hira, A. (2020). The Impact of the Craft Beer Revolution on the American Hop Industry. In A. Kratzer, J. Kister, & F. Zirkl (Eds.), *Rural – Urban Linkages for Sustainable Development* (pp. 126-142) Taylor & Francis.
- Schmidt, C., Goetz, S.J., Rocker, S., & Tian, Z. (2020). Google Searches Reveal Changing Consumer Food Sourcing in the COVID-19 Pandemic. *Journal of Agriculture, Food Systems, and Community Development*, 1–8.
- Tian, Z., & Goetz, S.J. (In progress). Spatial Variation in Census Responses, Voting behavior, and Labor Participation: A Spatial SUR Analysis.
- Tian, Z., Goetz, S.J., & French, C. (2020). Problem of Low 2020 Census Participation Will Vary with Sociodemographic Factors and Distance from Metro Areas. *Choices*, Quarter 4.

COVID-19 Research Briefs

- Goetz, S.J. (2020). COVID-19, Networks and Regional Science. NERCRD COVID-19 Issues Brief No. 2020-2. <https://bit.ly/2xFyS3U>
- Goetz, S.J. (2020). Social Capital May Increase Social Distancing. NERCRD COVID-19 Issues Brief No. 2020-4. <https://bit.ly/3h7equd>
- Goetz, S.J., Meadowcroft, D., Schmidt, C., Mitra, P., & Di Gioia, F. (2020). In the Mid-Atlantic Fruit and Vegetable Industry, Market Workers and Local Specialized Freight Truckers May be at Greatest Risk. NERCRD COVID-19 Issues Brief No. 2020-10. <https://bit.ly/3bvUwFV>
- Goetz, S.J., Schmidt, C., Chase, L., & Kolodinsky, J.M. (2020). Americans' Food Spending Patterns Explain Devastating Impact of COVID-19 Lockdowns on Agriculture. NERCRD COVID-19 Issues Brief No. 2020-9. <https://bit.ly/3dppu49>

(Continued on next page.)

COVID-19 Research Briefs (continued)

- Goetz, S.J., Stephens, H.M., Rucker, S.J., Welborn, R., Turner, S., & Albrecht, D.E. (2020). Rural Broadband Investment Urgently Needed in the COVID-19 Crisis. NERCRD COVID-19 Issues Brief No. 2020-6. <https://bit.ly/35tlgFE>
- Goetz, S.J., Tian, Z., Schmidt, C., & Meadowcroft, D. (2020). Rural COVID-19 Cases Lag Urban Areas but Are Growing Much More Rapidly. NERCRD COVID-19 Issues Brief No. 2020-3. <https://bit.ly/2R8al8V>
- Schmidt, C., Goetz, S.J., Rucker, S.J., & Tian, Z. (2020). Google Searches Reveal Changing Consumer Food Sourcing in the COVID-19 Pandemic. NERCRD COVID-19 Issues Brief No. 2020-7. <https://bit.ly/2xuEG0i>
- Schmidt, C., Tian, Z., Goetz, S.J., Bartley, B., Moyer, B., & Rucker, S.J. (2020). Farms with Direct to Consumer Sales in the Northeast Region and COVID-19: Some Early Challenges and Responses. NERCRD COVID-19 Issues Brief No. 2020-1. <https://bit.ly/2Jybubm>
- Tian, Z., & Goetz, S.J. (2020). Nonmetro COVID-19 Case Growth Higher in Metro-Adjacent Counties, but Case-Fatality Ratio is Lower so Far. NERCRD COVID-19 Issues Brief No. 2020-8. <https://bit.ly/2YzZDC9>
- Tian, Z., & Goetz, S.J. (2020). Google Searches Predict Initial Unemployment Insurance Claims. NERCRD COVID-19 Issues Brief No. 2020-5. <https://bit.ly/3f9CwV6>

Presentations

- Cleary, R., Goetz, S.J., & Schmidt, C. (2020, June 27). Population Thresholds Models for Local Alcoholic Beverage Manufacturing. 14th Annual Conference of the American Association of Wine Economists, Verona, Italy. (Canceled due to COVID-19.)
- Fleming, D., Goetz, S.J., & Han, Y. (2020, February). Happiness and Creativity. Presented at the Development Studies Association of Australia Meeting, Melbourne, Australia.*
- Goetz, S.J. (2020, May 22). COVID-19 Economic Impacts on Agriculture and Rural Areas. Presented at the Council of State Governments East, online.
- Goetz, S.J. (2020, February 25). Hidden Innovation in Local Economies. Penn State Millennium Science Café. University Park, PA.
- Goetz, S.J. (2020, October 2). Input Output Tables and Other Data Sources for Network-Based Research in Economics and Regional Science. Presented to the University of Nevada-Reno Economics Department, online.
- Goetz, S.J. (2020, November 17). Northeast Regional Center for Rural Development. Presented at the University of Vermont Capable Communities Result Area Team, online.
- Goetz, S.J. (2020, September 25). Northeast Regional Center for Rural Development. Presented at the Northeast Extension Directors Board Meeting, online.
- Goetz, S.J. (2020, December 9). Strengthening Economic Resilience in Appalachia. Panel Discussion Presented at the Appalachian Regional Commission's Appalachia Leadership Institute, online.
- Goetz, S.J., & Devlin, K. (2020, May 14). Northeast Regional Center for Rural Development. Penn State Extension Weekly Update, online.
- Goetz, S.J., Han, Y., & Schmidt, C. (2020, February) Changing Resilience of the U.S. Food System: A Network Perspective. Presented at the Australasian Agricultural and Resource Economics Society Annual Meeting, Perth, Australia.*
- Meadowcroft, D., & Goetz, S.J. (2020, March 18). Connecting Overlapping Labor Market Areas to U.S. Innovation: A Regional Analysis. Western Regional Science Association Annual Meeting, Waikiki, HI. (Canceled due to COVID-19.)
- Meadowcroft, D., & Goetz, S.J. (2020, April 2). The Relationship between Opioid-Related Deaths and High-Risk Jobs. Southern Regional Science Association Annual Meeting, Savannah, GA. (Canceled due to COVID-19.)

* International travel supported by non-federal funds.

(Continued on next page.)

Panel Discussion Explored Strategies for Informing Public Policy

NERCRD Technical Advisory Committee Chair Heather Stephens (West Virginia University) and Steven C. Deller (University of Wisconsin) co-organized a symposium, with planning assistance from Stephan J. Goetz, for the 2020 virtual meeting of the Agricultural & Applied Economics Association, held September 30, 2020. The panel discussion explored the role of regional and rural development economists in promoting better public policies to support rural economic growth and vitality and provided four unique perspectives from researchers at various stages of their careers and with a wide-range of experiences. Together, the presentations and discussion identified the

challenges and barriers to disseminating research beyond academia and possible ways to overcome these challenges. The session was recorded and is available at: <https://bit.ly/2PQGNEN>.

Moderator:

- Dawn D. Thilmany McFadden, Colorado State University

Panelists:

- Sarah A. Low, University of Missouri
- Steven C. Deller, University of Wisconsin
- Heather Stephens, West Virginia University
- Steven C. Turner, Mississippi State University and Southern Rural Development Center

Presentations (continued)

- Meadowcroft, D. (2020, August 19). The Relationship between Opioid-Related Deaths and High-Risk Jobs. Southern Regional Science Association virtual session, online.
- Meadowcroft, D., & Goetz, S.J. (2020, March 18). The Role of Firm Innovation and Overlapping Labor Market Areas in U.S. Income Inequality. Western Regional Science Association Annual Meeting, Waikiki, HI. (Canceled due to COVID-19.)
- Podor, A., & Goetz, S.J. (2020, January 6). Entrepreneurship Education and Entrepreneurship Outcomes in Higher Education in Estonian HIEs. United States Association for Small Business and Entrepreneurship, New Orleans, LA.
- Rocker, S.J. (2020, August). Accessing Markets through Partnership Building and Coordination. Presented at the Building Community Capacity for Socially Disadvantaged Farmers and Ranchers Workshop, sponsored by USDA, Office of Public Participation and Engagement and Regional Rural Development Centers, online.
- Rocker, S.J. (2020, October). Building Social Infrastructure for Resilience: Developing Networks in the Agri-Food System and Beyond. Presented at the panel discussion of the Resilience Academy for Small Business and Community, University of New Hampshire Extension and Small Business Development Center of New Hampshire, online.
- Rocker, S.J. (2020, January). Developing Grain and Malt Value Chains through People Power: The Importance of Social Infrastructure and Value Chain Coordination. Penn State Extension Craft Beverage Research Network, online.
- Rocker, S.J. (2020, March). Roles of Value Chain Coordination: A Development Framework to Bolster Regional Food Economies. National Good Food Network Conference, New Orleans, LA.
- Rocker, S.J. (2020, February). Thinking in Value Chains: Collaboration in Building the Small Grains Economy. Philadelphia Grain and Malt Symposium at University of the Sciences, Philadelphia, PA.
- Rocker, S.J. (2020, June). Value Chain Coordination for Extension Professionals: Opportunities for Supporting and Developing Regional Food Systems. National Association of Community Development Extension Professionals, online.
- Rocker, S.J. (2020, December 1). Value Chain Coordination for Extension Professionals: Opportunities for Supporting and Developing Regional Food Systems. Presented at the Economic, Business and Community Vitality Unit Town Hall, Penn State Extension, online.

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Presentations (continued)

- Rocker, S.J. (2020, March). Value Chain Coordination Open Space: Community of Practice Networking and Discussion Session. National Good Food Network Conference, New Orleans, LA.
- Schmidt, C. (2020, April 21). Beyond Corn Mazes and Hayrides. Women in Agritourism Risk Management Webinar Series, online.
- Schmidt, C. (2020, November 18). Changing Consumer Food Sourcing in the COVID-19 Pandemic. Presented at the Penn State Extension Land Use Webinar Series, online.
- Schmidt, C. (2020, May 4). Legal Risks. Women in Agritourism Risk Management Webinar Series, online.
- Schmidt, C. and Crissy, H. (2020, October 7). Agritourism and COVID-19. 6th annual Lancaster County Ag Week, online.
- Schmidt, C., Dobis, E., & Goetz, S.J. (2020, March 11). Beer Trail Development in Pennsylvania. 4th Culinary and Wine Tourism Conference, Geisenheim, Germany. (Canceled due to COVID-19.)
- Schmidt, C., & Goetz, S.J. (2020, March 11). Agritourism Development in Pennsylvania. 4th Culinary and Wine Tourism Conference, Geisenheim, Germany. (Canceled due to COVID-19.)
- Schmidt, C., & Goetz, S.J. (2020, May 13). Estimating the Vulnerability of Workers in the F&V Sector. Presented to the Penn State Agricultural Sciences Meeting of PA Fruit & Vegetable Industry Representatives, online.
- Schmidt, C., Goetz, S.J., Chase, L., Tomas, S., and Schweichler, J. (2020, October 28). Agritourism Support Indicators for the United States. International Workshop on Agritourism, Burlington, VT. (Canceled due to COVID-19.)
- Tian, Z., & Goetz, S.J. (2020, November 10). Using Google Trends to Predict Initial Claims of Unemployment Insurance During the COVID-19 Pandemic. Presented at the North American Regional Science Council annual meeting, online.
- Tian, Z., Goetz, S.J., & French, C. (2020, March 18). Hard-to-Count Populations and Census Participation Across the Rural-Urban Continuum. Joint Meeting of Pacific Regional Science Conference Organization (PRSCO) and the Western Regional Science Association (WRSA), Waikiki, HI. (Canceled due to COVID-19.)
- Wetherill, A. (2020, June 1). How Network Analysis of a Minority Farmers' Group Helped Expand Socio-Economic Opportunities and Engage Youth in Agriculture. National Association of Community Development Extension Professionals Virtual Conference, online.

USDA Local and Regional Food Covid Response Project Events

(co-organized and co-hosted by Sarah J. Rocker)

- "Marketing Innovations When Communities Eat at Home: Featuring Wallace Center, National Farm to School Network and National Niche Meat Processors Association," webinar, October 2020.
- "Developing Technical Assistance to Key Stakeholders: Feature Focus from University of Arkansas and James Beard Foundation," monthly meeting (online), October 2020.
- "Impacts and Innovations from the Field: Feature Focus from The Food Corridor and National Farm to School Network," monthly meeting (online), September 2020.
- "Building Cross-Sectoral Food and Agriculture Networks: Feature Focus from Bread Lab at Washington State University and Local Catch Network," monthly meeting (online), August 2020.
- "Building Better Beyond," kick-off meeting (online), July 2020.

NET Webinars (co-organized and hosted by NERCRD)

- Arbogast, D., D. Eades, B. Fleuch, S.J. Goetz, & C. Messer (2020, February 20). Findings from the national survey of Land Grant and Sea Grant tourism programming. Registered: 63; Attended: 41.
- Chase, L., C. A. Northrop, & M. Phillips. (2020, April 23). Adapting Extension Tourism Programming to COVID-19. Registered: 118; Attended: 75
- Cox, L. (2020, October 22). The Long Journey to Hawaii’s Sustainable Tour Certification Program. Registered: 124; Attended: 48.
- Cygler, A. (2020, June 18). Aquaculture Tours in Rhode Island: Opportunities for Cross-Learning and Conflict Resolution. Registered: 79; Attended: 47
- Fluech, B. (2020, December 17). Coastal Georgia Tourism Discussions—A Lesson in Flexibility. Registered: 59; Attended: 32.
- Northrop, C.A. (2020, August 20). Spawning Sustainable Tourism Initiatives via Regional Collaboration. Registered: 164; Attended: 99
- Hargrove, C. (2020, May 21). Navigating the Tourism Industry in your State: Partners, Agencies and Opportunities for Collaboration. Registered: 171; Attended: 107

Non-Technical Publications

- Devlin, K. (2020, January 2). Craft-beer boom linked to record number of US states growing hops. Penn State News.
- Devlin, K. (2020, January 2). Innovation is widespread in rural areas, not just cities. Penn State News.
- Devlin, K. (2020, March 9). Community factors influence how long you’ll live, study shows. Penn State News.
- Devlin, K. (2020, April 20). For small and minority farmers, networks influence the bottom line. Penn State News.
- Devlin, K. (2020, July 9). Researchers to create a roadmap for fostering successful agritourism enterprises. Penn State News.
- Devlin, K., and S.J. Goetz (2020, June 29). Sources of inspiration matter to business innovation outcomes. NERCRD Innovation Issues Brief 2020-1.
- Devlin, K., and S.J. Goetz (2020, June 29). The impact of external knowledge sourcing on innovation outcomes in rural and urban businesses in the U.S. NERCRD Innovation Issues Brief 2020-2.
- Goetz, S. J. (2020, June). COVID-19, Networks and Regional Science. NARSC Newsletter, Vol. 8, Issue 1.
- NERCRD 2019 Annual Report. (2020). <https://aese.psu.edu/nercrd/publications/annual-report>

Other Services Performed by Center Staff in 2020

Stephan J. Goetz

- President of the North American Regional Science Council (NARSC), 2019-2020.
- Member, Northeast Agricultural Ecosystems Services and Markets Symposium organizing team.
- Representative of the Agricultural and Applied Economics Association to the Council of Professional Associations on Federal Statistics (COPAFS), 2018-2020.
- Served on the Board of Directors of the Center for Rural Pennsylvania, a bicameral agency of the state, Aug. 1999 through July 2020.
- Serves on the editorial board of: *Agricultural and Resource Economics Review*; *Growth and Change*; *Papers in Regional Science*, *Journal of Agriculture, Food Systems and Community Development*.
- Proposal Reviewer, USDA NIFA
- Served as peer reviewer of 14 articles submitted to scientific journals.

Sarah J. Rucker

- Reviewer, *Journal of Agriculture, Food Systems and Community Development*
- Grant Reviewer, USDA NIFA Rural Economic Development Program, 2020 Grant Year
- Grant Reviewer, USDA NIFA Small Business Innovation Program (SBIR), 2020 Grant Year
- Organizing Member on Sessions Committee, National Association of Community and Economic Development Professionals (NACDEP), 2020 Conference
- Northeast Representative, National Community Resource and Economic Development Indicators Work Group

Zheng Tian

- Reviewer, *Spatial Economic Analysis* and *International Regional Science Review*
- Served as discussant, 2020 North American Meetings of Regional Science Association panel on COVID-19 Impacts on Employment

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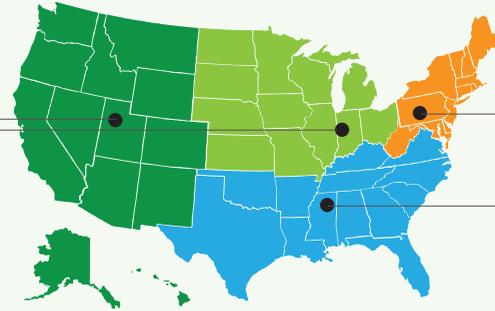
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