



2021 ANNUAL REPORT



Northeast Regional Center for Rural Development

*Enhancing the capacity of Land Grant Universities
to foster regional prosperity and rural development*

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2021 Overview



This report summarizes accomplishments and activities at the Northeast Regional Center for Rural Development in 2021, another very challenging year. Chief among these activities was the selection of NERCRD to provide leadership among the four Regional Rural Development Centers for a Listening Session Initiative to engage stakeholders and identify priorities and strategies for rural recovery in the wake of the COVID pandemic's effect on communities (see p. 8 of this report). Following the national survey of priorities in the fall of 2021, this work continues in 2022 and is being led by Jason Entsminger, who joined our staff in February as NERCRD Associate Director. We continued to collaborate

with the National Extension Tourism (NET) group, including on new grant funding from the New Technologies for Ag Extension program to help the group scale up and plan ahead (pp. 17-18). We partnered on a new NIFA competitive grant led by Doug Arbogast of West Virginia University, and on a new regional Hatch project, both focusing on tourism and resiliency through the lens of the COVID-19 pandemic (p. 7).

On the food security research front we launched a new collaboration involving the Colleges of Agriculture and Information Sciences and Technology at Penn State and an international research institute, based in Doha, Qatar. Using big data in the form of Tweets and artificial intelligence applied to real-time social media data, this project includes graduate students as well as postdoctoral scholars (p. 11).

We were sad to see Postdoctoral Scholar Sarah Rocker, who most recently led our food systems related

research and outreach on a USDA Agricultural Marketing Services-funded project (p. 10), leave the NERCRD. We were also sad to see long-term Board members Dyremple Marsh and Bunnie Reichle rotate off our Board of Directors. At the same time, we were delighted to welcome new Board members Moses Kairo of University of Maryland Eastern Shore, Brian Schilling of Rutgers University, Blair Siegfried of Penn State, James Davis of the USDA Economic Research Service, and Sarah Rocker in her new capacity as USDA NIFA national program leader. We are deeply grateful to our Board and TAC members for their continued guidance and leadership, especially to the respective Chairs for providing continuity in a turbulent time, and to the many collaborators and supporters of our work in the Northeast region and beyond.

Stephan J. Goetz,
Director and Professor
March 2022

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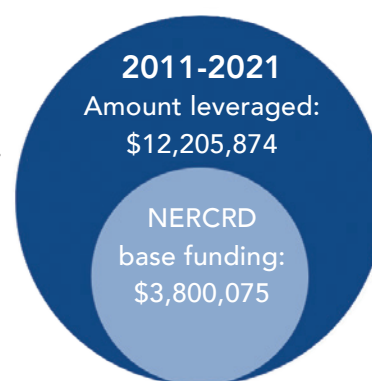


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NERCRD Funding Snapshot

Over the last decade, the NERCRD generated \$3.20 in external grants each year for every \$1.00 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.



Title	Sponsor	Start Date	End Date	Amount
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*
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 - FY2019	USDA NIFA	09/01/2019	08/31/2022	\$474,880
Twitter/Google Trends Analysis of Food Security Under COVID-19	The Pennsylvania State University	05/07/2020	04/30/2021	\$25,000
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*
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*
The Northeast Regional Center for Rural Development - FY2020	USDA NIFA	09/01/2020	08/31/2022	\$474,880
Listening Sessions on Rural Development Priorities and Needs	USDA NIFA	08/26/2021	06/15/2022	\$50,000
New Technologies for Agriculture Extension Accelerator Program: Northeast Listening Sessions on Rural Development	eXtension Foundation	09/01/2021	08/31/2022	\$40,000
New Technologies for Agriculture Extension Accelerator Program: National Extension Tourism Network	eXtension Foundation	09/01/2021	08/31/2022	\$85,000
The Northeast Regional Center for Rural Development - FY2021	USDA NIFA	09/01/2021	08/31/2022	\$494,027

* NERCRD portion

Economic Development, Innovation, and Resilience



Driven by the ongoing need for the U.S. economy to recover from COVID-19 impacts, we continued to pursue several lines of inquiry related to economic resilience and innovation.

Economic Development, Innovation, and Resilience Activities at a Glance:

- NERCRD researchers develop new tool for visualizing vulnerabilities in supply chains
- *Choices* magazine special issue focuses on COVID-19 impacts on Rural America
- New book dispels the myth that rural places don't innovate
- NERCRD expands its tourism and recreation economies portfolio
- NERCRD leading national initiative to identify rural community, economic, and workforce development priorities and capacities
- New report on craft beverage trail collaborations provides guidance for breweries and destination marketing organizations

Examples of NERCRD's 2021 Impacts

Researchers and practitioners have a better understanding of the COVID-19 pandemic's effects on rural areas, and of the gaps and opportunities exposed by the pandemic. (*Choices*)

A new model developed by NERCRD can potentially show supply-chain vulnerabilities to future shocks, such as pandemics or climate-change impacts.

More than 500 readers have downloaded the Center-published guide to setting up craft-beverage trails as an economic development strategy that also benefits local hop farmers.

With NERCRD support, a WVU Extension specialist developed a successful USDA NIFA project proposal, funded for \$648K.

NERCRD Researchers Develop New Tool for Visualizing Vulnerabilities in Supply Chains

The COVID-19 pandemic dramatically exposed the economic vulnerability of U.S. businesses, primarily because they are so interconnected: when one region experiences a labor shortage or supply interruption, adverse effects reverberate throughout the global economy. Researchers at NERCRD and the Korea Rural Economic Institute have developed a model to help visualize the interconnectedness of businesses and industries over geographic space, which potentially can show supply-chain vulnerabilities to future shocks, such as pandemics or climate-change impacts.

In their study, published in the journal *Sustainability*, they applied their model for illustrative purposes to three industries representing different sectors of the economy—grain farming, motor vehicle manufacturing, and data processing—resulting in geographic visualizations of each of these industries' supply chains.

For example, in their analysis of grain farming, they included not only the farms that produce corn, wheat and soybeans but also the businesses that provide those farms with inputs, such as fertilizer and equipment, as well as the processors who purchase grains to produce products ranging from livestock feed, high-fructose corn syrup and organic chemicals, to breads and pastries.

"Our visualizations confirm that grain farming is concentrated in the nation's 'breadbasket,' which includes the Great Plains states of Illinois, Iowa, Kansas and the Dakotas," said NERCRD Director Stephan J. Goetz. "However, because our model



considers upstream sellers of grain inputs and downstream grain buyers, it reveals that Arkansas, California and Washington also play important roles in the overall grain supply chain."

These states would not appear as critical to the grain industry if only grain production were considered, as is the case with rudimentary industry location maps, according to Goetz. By offering a higher-altitude view of the transactions between industries, the research offers potentially new insights into supply-chain vulnerabilities.

Yicheol Han, a research fellow at the Korea Rural Economic Institute in Nasu-si, South Korea, and formerly a research associate at NERCRD, led the study. NERCRD Faculty Affiliate Claudia Schmidt, an assistant professor of agricultural economics in Penn State's College of Agricultural Sciences, also contributed to this work, which was funded by USDA NIFA. Read the full Penn State press release at: <https://bit.ly/2RU2DZ2>.

Choices Magazine Special Issue Focuses on COVID-19's Rural Impacts

The special issue was prepared in collaboration with the NERCRD on behalf of the Regional Rural Development Centers.

Choices magazine, which covers food, farms and resource use and is published by the Agricultural and Applied Economics Association, released a special themed issue on "Rural Development Implications One Year After COVID-19." The issue contains eight peer-reviewed papers that explore the pandemic's effects on aspects of rural life ranging from employment and childcare to recreational trail use and farming. The papers were commissioned by the Council on Food, Agriculture, and Resource Economics (C-FARE). C-FARE also hosted a companion webinar, which was attended by 126 people.

"We thought that assessing the differential impact of the COVID-19 pandemic on rural versus urban regions of the country, as well as different sectors of the economy, one year into the pandemic was important both in its own right and in order to help policymakers formulate strategies and policies for not only helping rural areas recover but also to be better prepared for future pandemics," said NERCRD Director Stephan J. Goetz, who served as guest co-editor of the issue, along with Jane Kolodinsky, C-FARE Board Member and Professor/Chair at the University of Vermont. NERCRD Business Manager Kim Boonie provided administrative and editorial support.

Kolodinsky and Goetz also wrote a Theme Overview, which introduces the issue and provides an overview of the eight papers. They conclude that, taken together, the papers paint a somewhat dark picture of the pandemic's effects on Rural America, and offer insights into how public policy can shape a more equitable recovery, especially as the findings relate to federal investments.



Papers in the special issue included:

- **Theme Overview** by Jane Kolodinsky and Stephan J. Goetz
- **Lost and Found? Job Loss and Recovery in Rural America during COVID-19** by Seung Jin Cho, Jun Yeong Lee, and John V. Winters
- **Impact of the Paycheck Protection Program on U.S. Producers** by Anil K. Giri, Dipak Subedi, E. Wesley F. Peterson, and Tia M. McDonald
- **Rural Counties That Rely on Dairy and Animal Agriculture Saw Higher Unemployment Rates due to COVID-19** by Andrew W. Stevens and Daniel W. Bromley
- **After COVID-19, Will Child Care Survive in Rural Areas?** by Elizabeth E. Davis, Hasan K. Tosun and Mallory Warner-Richter
- **Exploring the Implications of Increased Rural Trail Use During the COVID-19 Pandemic on Health, Planning, Equity and Inclusivity** by Laura E. Brown, Molly Basak-Smith, Kimberly Bradley, Stacey F. Stearns, Anita T. Morzillo, and Sohyun Park
- **USDA's Community Facilities Program May Help Rural America Cope with COVID-19** by Julia H. Cho and Anil Rupasingha
- **COVID-19, the Accelerated Adoption of Digital Technologies, and the Changing Landscape of Branch Banking** by Wade H. Litt

Image credit: Choices

NERCRD-Supported Book Dispels Myth That Rural Places Don't Innovate

With funding support from the NERCRD, Charlie French (University of New Hampshire Cooperative Extension) teamed up with 26 leading community development scholars and practitioners from around the country to publish a new book that explores how innovation manifests itself in rural places and ultimately contributes to entrepreneurial development and community resilience. More than a dozen collaborators from the Northeast region contributed to the book.

Much attention has been placed on how metropolitan areas innovate, but relatively little work has been done to explore innovation in rural places. The common measures of innovation—the number of startups, patents, and R&D activity; access to venture capital; density of technology firms; and the number of STEM degree holders—are biased towards more urban places with high concentrations of businesses, institutions, and capital. The book's authors set out to demonstrate that rural places do innovate, albeit what that innovation looks like may differ significantly from more metropolitan areas. Rural-based innovation

may result from new forms of collaboration; programs that leverage rural assets to address critical service gaps; novel strategies for accessing financial capital; or the infusion of arts into aspects of community life.

In addition to French, collaborators from the Northeast region include Stephan J. Goetz, Ted Alter, Devon Meadowcroft, Yicheol Han, Doug Arbogast, Daniel Eades, Sarah Rocker, Shannon Rogers, Molly Donovan, Casey Porter, Jared Reynolds, and Geoff Sewake. NERCRD researchers contributed two chapters, one focusing on the geography of rural innovation and entrepreneurship in the U.S., and another on the role of value chain coordination networks in bolstering regional food economies. Learn more at: <https://bit.ly/3l6HobK>.



Image credit: Routledge

New Report on Craft Beverage Trail Collaborations in Pennsylvania Provides Guidance for Breweries and Destination Marketing Organizations

Many craft breweries in Pennsylvania engage in some form of beer tourism, and these activities are often developed in collaboration with destination marketing organizations to enhance local and regional tourism. To better understand these collaborations, a team of Penn State Extension researchers led by NERCRD Faculty Affiliate Claudia Schmidt conducted a study of six beer trails across the commonwealth. They interviewed trail managers and administrators about how their trails began, gamification components



(passports and memberships), the challenges they encountered, and what recommendations they might have for others who would like to establish a trail in their county. The study, funded by the Pennsylvania Liquor Control Board, culminated in a report published by the NERCRD, titled "Craft Beverage Trail

Collaborations in Pennsylvania—A Resource for Breweries and Destination Marketing Organizations." It has been downloaded more than 500 times and is available at: <https://bit.ly/PA-beer-trails-report>.

NERCRD Expands Its Tourism and Recreation Economies Portfolio

An exciting development in our tourism and recreation economies work is the funding of two new projects, both led by West Virginia University, that will examine tourism and resiliency through the lens of the COVID-19 pandemic.

Rural Community Well-Being: Using Tourism Indicators to Identify, Understand and Address COVID Pandemic Impacts and Strategies for Resiliency

NERCRD TAC Member and West Virginia University (WVU) Associate Professor and Rural Tourism Specialist Doug Arbogast will lead this four-year USDA NIFA-funded project, which was developed with support from NERCRD and will launch in 2022. With a working title of Tourism, Resiliency, and Indicators for Post-Pandemic Planning (TRIP), the goals of this integrated research-Extension include:

- Identifying economic, social, and environmental indicators for sustainable tourism (across all U.S. counties and in three case-study communities);
- Surveying residents and visitors in case-study destinations to identify social and environmental indicators;
- Delivering Extension programming in targeted “gateway” communities using research-based insights generated by the project and the First Impressions destination assessment tool; and,
- Assessing change over time and associated impacts, providing a mechanism to regularly update the data, monitor changes, and reflect on community goals.

In addition to Arbogast, other collaborators include: Daniel Eades and Jinyang Deng (WVU); Stephan J. Goetz, Jason Entsminger, Claudia Schmidt, and Harry Crissy (Penn State); Lisa Chase (University of Vermont); and Penelope Whitman (University of New Hampshire). Learn more at the USDA NIFA project page: <https://bit.ly/3HZbTQF>.

Tourism Resilience and Community Sustainability: Adaptation and Recovery of Rural Businesses and Destinations

Also led by Doug Arbogast in collaboration with the National Extension Tourism Research Committee, this multi-state Hatch research project will examine resilience and recovery through the lens of rural tourism in the Northeast region. Planned objectives include conducting collaborative assessments of rural tourism at the multi-state level; investigating the resilience, adaptability, and recoverability of different components of the rural tourism system; and identifying strategies that tourism businesses and destinations are using to cope with the pandemic. In addition to Arbogast, other team members of this project include:

- Jinyang Deng, West Virginia University
- Daniel Eades, West Virginia University Cooperative Extension
- Charlie French, University of New Hampshire Cooperative Extension
- Robert Robertson, University of New Hampshire
- Penelope Whitman, University of New Hampshire Cooperative Extension
- Stephan J. Goetz, Penn State/NERCRD
- Jason Entsminger, Penn State/NERCRD
- Xinyi Qian, University of Minnesota Cooperative Extension
- Matt Ulmer, University of Alabama Cooperative Extension
- Miles Phillips, Oregon State University Cooperative Extension

NERCRD Leads National Initiative to Identify Priorities and Capacities for Rural Community, Economic, and Workforce Development

With coordination and leadership from NERCRD Associate Director Jason Entsminger, the Regional Rural Development Centers collaboratively planned and launched a year-long national initiative aimed at gathering stakeholder feedback to inform regional and national priorities for a sustainable, resilient rural recovery from multiple chronic challenges that were exacerbated by the COVID-19 pandemic.

The initiative launched with a national survey, which received 680 responses during the two-week period it was open. A preliminary report with initial analysis of the feedback was shared USDA NIFA in October, and was released publicly in January 2022, along with several infographics showing key findings from the survey response. Additional data tools are under development. Findings from the analysis are already being incorporated into the NERCRD 2022 plan of work.

As part of the second phase of this initiative, the RRDCs will host a series of facilitated dialogues with invited stakeholders in March and April of 2022. These listening sessions are aimed at diving deeper into the survey findings and identifying long-range

strategies on key priorities. The NERCRD, like each of the other RRDCs, will host one regionally focused listening session as well as one of national scope focused on a specific topic area. The topics for the four national discussions:

- Broadband and the Digital Divide, hosted by SRDC;
- Community Planning and Engagement, hosted by WRDC;
- Innovation and Entrepreneurship, hosted by NERCRD; and,
- Workforce Development, hosted by NCRCRD.

The effort is funded under the New Technologies for Agricultural Extension (NTAE) program, which is made possible by funding from USDA NIFA through a partnership with Oklahoma State University and the Extension Foundation. In addition to funding, selected projects receive engagement and technical support from the Extension Foundation. NERCRD's role as coordinator is additionally funded via a Cooperative Agreement with USDA NIFA. Access the report, infographics, and data at: <https://bit.ly/RRDCListeningSessions>

Project on Innovation in Rural Firm Emergence and Vitality Continues

Our work continues at the Penn State-based Federal Statistical Research Data Center, which was closed during part of the pandemic. This USDA NIFA-funded project has the goal of understanding the role that innovation currently plays, and could play, in the emergence of rural firms and their resilience over time. In support of this objective, we are in the process of merging several data sets over various years, including the Rural Establishment Innovation Survey; Business Research and Development

and Innovation Survey; Standard Statistical Establishment List; Longitudinal Business Database; Annual Survey of Entrepreneurs; and Annual Business Survey. As part of this, we are including the latent industry innovation measure developed separately at the NERCRD as a potential predictor in firm-level innovation. We also are currently analyzing the effect of innovation on employment and earnings growth over time, using various model specifications.

Food Systems and Agriculture



We continued our long-running research and outreach program focused on local and regional food systems, most recently applying the tools of regional economic analysis to understand various dimensions of how the food system is changing over time and is affected by external threats such as a pandemic.

Food Systems and Agriculture Activities at a Glance:

- NERCRD research provides new insights on COVID-19's food system impacts
- Study examines importance and unique characteristics of U.S. female farmers
- Strategic planning process for agriculture projects poised for expansion
- Three-year project aims to create an effective support system for agritourism operators

Examples of NERCRD's 2021 Impacts

Members of multiple agricultural sectors have a better understanding of how to build resiliency into food systems.

Brewing professionals, destination marketing organizations, and others learned about craft-beverage collaborations to promote tourism (e.g., beer trails), and the challenges and opportunities presented by these ventures.

Policy makers and citizens have a greater understanding of how households have been affected by the pandemic in terms of food insufficiency, and of the role of food pantries early in a pandemic.

Consumers of news media, including agricultural service providers, are more aware of the importance and unique characteristics of female farmers in the U.S.

NERCRD Research Provides New Insights on COVID-19's Food System and Food Security Impacts

In 2020, NERCRD quickly pivoted its research program to provide science-based insights and perspectives on the effect of the COVID-19 pandemic on the food system, focusing on direct farm sales, the fruit and vegetable industry, and consumer spending and sourcing. We continued this line of inquiry in 2021, documenting the disruptions that occurred, both for businesses and individuals, and demonstrating that the food system accommodated pandemic-related shocks through supply-chain adjustments and with shorter-term price increases. This line of research resulted in several publications and presentations.

Food pantries essential for reducing hunger among middle-class in 2020

In research to be published in the *Journal of Agricultural and Resource Economics*, NERCRD researchers demonstrated that food pantries, soup kitchens, and other community food services played a critical role in helping Americans meet their food needs, especially during the first five months of the COVID-19 pandemic. They found that food insufficiency increased across all income classes during the pandemic, but especially for lower- and middle-income households. The beneficial effect of community food services was significant when all income classes were considered over the 21-week survey period, and the effect was greatest in the first five months among those households earning between \$50,000-74,999 per year before the pandemic. The findings demonstrate a key role these programs can play in times of crisis. Read the full Penn State press release at: <https://bit.ly/34KrWD7>.

Other outputs include:

- Goetz, S.J., Pan, Y., Rocker, S.J., Schmidt, C., & Tian, Z. (2021, April 29). Resiliency Examined: An Overview of Covid-19 Impacts to U.S. Food Supply. Penn State Ag Council meeting, online.
- Goetz, S., Pan, Y., Entsminger, J., & Tian, Z. (2021). [U.S. Household Food Insufficiency Falls Below Pre-Pandemic Level](#). NERCRD COVID-19 Data Report 21-02



- Goetz, S.J., Tian, Z., Schmidt, C., & Pan, Y. (2021). [Pennsylvania Food Insufficiency Reached New High at the End of 2020](#). NERCRD COVID-19 Data Report 21-01.

As partners on a USDA AMS cooperative agreement led by University of Kentucky, we also contributed to research examining COVID-19 impacts on local and regional food systems and emerging strategies and innovations that address these shocks. Postdoctoral Scholar Sarah Rocker represented NERCRD in this highly engaged project (until her departure in September 2021), which collected and disseminated easily digestible ideas, best practices, and readily adoptable approaches to COVID-19 adaptation, available on the project website: <https://lfscovid.localfoodeconomics.com/>.

New Interdisciplinary Collaboration Examines Food Insecurity During a Pandemic

With funding from Penn State's Institute for Sustainable Agricultural, Food, and Environmental Science, and other sources, we assembled a multi-disciplinary team of researchers from the Colleges of Agricultural Sciences and Information Sciences and Technology at Penn State, and the Qatar Computing Research Institute of Hamad Bin Khalifa University in Doha, Qatar. In this project we assess whether Tweets analyzed in real-time may help policy makers and food assistance providers target food supplies in an effective and timely manner to places where they are most needed. We use artificial intelligence-based

natural language processing to extract the sentiments and emotions expressed in food security-related tweets early in the pandemic at the U.S. state level. Our early findings suggest that although the emotion *joy* (or relief) expressed in these tweets dominated all other emotions, the emotions *anger*, *disgust*, and *fear* were statistically correlated over time with actual contemporaneous state-level food insufficiency rates collected in the Household Pulse Survey. We also find that emotions such as anger expressed in food insufficiency-related tweets are strongly correlated with actual food insufficiency in some states.

Study Examines Importance and Unique Characteristics of Female Farmers

While women can be drawn into farming for many reasons, NERCRD researchers found that female-owned farms in the U.S. are more common in areas that are closer to urban markets, that engage in agritourism activity, and that offer greater access to childcare.

Led by Claudia Schmidt, assistant professor of marketing and local/regional food systems in Penn State's College of Agricultural Sciences and NERCRD faculty affiliate, NERCRD researchers conducted an analysis to examine the relationship between a county's share of female-operated farms and the conditions in the county. Their goal was to shed light on aspects of the local economic and agricultural ecosystems that are most strongly associated with female-owned farms.

The analysis, which was published in *Food Policy*, shows that more female-owned farms are found where average farm size is below 50 acres, where annual farm sales average less than \$10,000 per farm, where more farms specialize in grazing sheep or goats, and where agritourism activities—which attract visitors to farms—are more common.

The researchers also found that direct-to-consumer sales are more prevalent in counties with more female-owned farms.

"Without knowing more about female farm-operators' decision making, agricultural service providers have had to make assumptions about the type of information and products that are useful to them," Schmidt said. "Our analysis shows some of the ways in which female-owned farms are unique and it can offer important insights into how best to serve this population."

NERCRD Director Stephan J. Goetz and Research Associate Zheng Tian also contributed to this research, which was funded by USDA NIFA. Learn more about the study and access the paper at: <https://bit.ly/3uFq5b8>.

Creating an Effective Support System for Agritourism Operators

The goal of this three-year project, funded by USDA NIFA and led by NERCRD Faculty Affiliate Claudia Schmidt, 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.



contribute to county-level growth or stagnation in agritourism. They delivered three webinars focusing on legal issues and regulatory challenges when establishing an agritourism business and collaborating between businesses.

The research team has analyzed qualitative survey data of agritourism operators to arrive at a working list of categories which will inform their work going forward. These categories include challenges facing agritourism operators, resulting impacts of these challenges, and relevant attributes of operators. The team also developed an econometric model to examine factors that

In addition to Schmidt, an assistant professor of marketing and local/regional food systems in Penn State's College of Agricultural Sciences, project team members from NERCRD include Stephan J. Goetz, Zheng Tian, Yuxuan Pan, and Sarah Rocker (until her departure in September 2021), as well as additional researchers from Penn State, University of Vermont and Oklahoma State University. Learn more about the project at: <https://bit.ly/38K9XKO>.

Strategic Planning Process for Agriculture Projects Poised for Expansion

Beginning in 2020, NERCRD provided support to the AgriCluster Retention and Expansion (ACRE) Program, a new strategic planning program for farmer-led marketing and environmental projects by the Thomas A. Lyson Center for Civic Agriculture and Food Systems, which is affiliated with Cornell University. Led by a trained facilitator, an ACRE project takes farm groups ("agriclusters") that are starting up or at a strategic crossroads through a multi-step planning process. The framework was piloted in 2021 with a group of New York onion growers, who explored collaborative promotion and marketing. In March, the ACRE Project team was awarded a Northeast Sustainable Agriculture Research and Education (NE-SARE) professional development grant to train and certify Northeast professionals in conducting the ACRE Workshops. Other project outputs include:

- A report on the NY Muck Onion value chain, "Analysis of the U.S. Onion Industry with a Focus on New York State Issues," by Philippe Jeanneaux;
- An economic impact study of the muck onion growers in New York using IMPLAN;
- A partial budget-analysis tool, to help the onion growers determine the impacts of shifting undifferentiated onions into a new collaboratively marketed onion brand.

With additional funding from NE-SARE, the Lyson Center team is developing in 2022:

- A 15-unit self-paced Moodle course on Conducting an ACRE Workshop; and
- An ACRE community of practice (CoP) to expand the use of the ACRE approach to agriculture development in the Northeast and elsewhere.

For more information, contact Duncan Hilchey at duncan@lysoncenter.org.

General Capacity Building



NERCRD serves as a regional hub for our land-grant partners, linking research and Extension faculty across state lines to facilitate collaborative knowledge- and program-sharing networks and partnerships. As a result, participants can work more effectively to foster regional prosperity and rural development.

Capacity-Building Activities at a Glance:

- NERCRD outreach capacity expands with new associate director position
- Publication provides guidance on hosting intergenerational events
- New knowledge-sharing networks emerge from NERCRD-funded projects
- New funding fuels growing momentum for National Extension Tourism Network

Examples of NERCRD's 2021 Impacts

A six-state group from academic, public, and non-profit entities has formed to develop a multi-state bicycle-pedestrian data collaboration.

Extension staff in three states have been trained in the Marketing Hometown America (MHA) project and have adapted the curriculum for online delivery. One PA community has begun implementing the MHA process.

With NERCRD support the National Extension Tourism group continues to grow and has received new external funding.

With NERCRD support, the distribution, depth, and breadth of tourism and outdoor recreation programming offered by the Land- and Sea Grant Extension services has been documented.

NERCRD Outreach Capacity Expands with New Associate Director Position

In early 2021, Dr. Jason Entsminger joined NERCRD as Associate Director, taking primary lead on outreach, coordination, and capacity-building efforts. Since his arrival, our capacity to support community and economic development Extension professionals and researchers across the Northeast has greatly expanded.

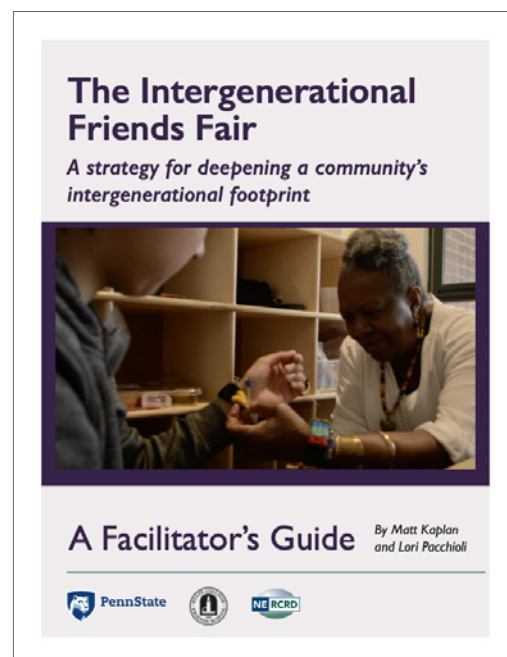
In addition to the ongoing capacity-building initiatives described in this section, we were able respond to emerging needs of community and economic development Extension professionals and researchers across the Northeast. For example, Entsminger provided technical assistance and coordination with regional stakeholders on new funding opportunities. He also led discussions with regional community development Extension professionals regarding the formation of a working group around the theme of Recovery, Revitalization, and Resiliency. Postdoctoral Scholar Sarah Rocker conducted research with the National Community Resource and Economic Development Indicators Team to learn about promising community

development practices and programs designed to help communities respond to the challenges posed by COVID-19, and the impacts these programs may have had. Communications Specialist Kristen Devlin provided communications support to the planning committee of the joint National Extension Energy and National Sustainability Summits, including website development and publicity for the biennial event, which is taking place May 15-18, 2022.

In the coming year, and as public health precautions allow, the Associate Director will continue to expand NERCRD outreach through site visits with stakeholders across the region.

New Publication Provides Guidance on Hosting Intergenerational Events

A new publication provides guidance on facilitating Intergenerational Friends Fairs—family-oriented, daylong events designed to engage community residents in a wide range of intergenerational activities, while also providing local groups with a platform for connecting with the public, establishing new partnerships, and garnering increased support for their programs. This facilitator's guide was written by Matt Kaplan (Penn State) and Lori Pacchioli (State College Friends School) based on their own experience hosting a fair in State College, PA, with support from NERCRD. It is available on the NERCRD website at <https://bit.ly/34Th3zr>.



New Knowledge-Sharing Networks Emerge from NERCRD-Funded Projects

Despite the ongoing travel restrictions and other challenges imposed by COVID-19, the three teams funded through our 2020 small grants program have accomplished many of their objectives through creative adaptation. Learn more about each of the project teams at <http://bit.ly/37R2YO9>.

Best Practices in Bike/Pedestrian Trail Data Collection and Monitoring

Led by Laura Brown (University of Connecticut), this team initially included members from Connecticut, New Hampshire, Vermont, and Minnesota. One of their stated objectives was to establish a peer network of colleagues interested in ongoing collaboration. To that end, they have welcomed many new collaborators into their network, forming a broad coalition of academic, public, and non-profit entities in the region. This group met throughout 2021 to create a regional unified strategy for collecting, aggregating, and using bike-pedestrian data to inform local and regional decision making and planning and transportation investments. They also are exploring further funding options. Outputs of this project include a peer-reviewed research article published in *Choices* magazine, and four informational sheets published on the project website: <https://ctrailcensus.uconn.edu/nercrd/>



- Brown, L.E., M. Basak-Smith, K. Bradley, S.F. Stearns, A.T. Morzillo, and S. Parkand. 2021. "Exploring the Implications of Increased Rural Trail Use During the COVID-19 Pandemic on Health, Planning, Equity and Inclusivity," *Choices*. Quarter 3.
- An Introduction to Monitoring and Modeling Bicycle and Pedestrian Traffic Learning from Minnesota
- Establishing Baseline Data for Trail Use and Maintenance Examples from Connecticut
- Learning from Vermont's Park Bike and Pedestrian Non-motorized Count Programs
- Using Data and Engagement to Capitalize on Multi-Use Trails Examples from New Hampshire

Marketing Hometown America (MHA)

The MHA curriculum was developed in the North Central region to guide rural communities through the decision-making process about how to market themselves to potential new residents. Penn State Extension in collaboration with West Virginia University Extension and University of New

Hampshire Extension received training to deliver the Marketing Hometown America (MHA) curriculum in their respective states. With the arrival of COVID-19, Penn State led the adaptation of MHA resources for virtual delivery. They piloted the online program with one Pennsylvania community,

culminating in a Community Action Forum in June. The community established four “Action Teams” to carry out work in the areas of Community Beautification, Signage, Community Marketing Guide, and Welcome Wagon. The Penn State team will continue to work with this community through 2022, and plans to convene and facilitate four “community huddles” to discuss and celebrate the Action Teams’ collective work. This process is designed to institutionalize the Action Team and Community Huddle process into the culture of the communities where MHA is conducted. Team members in West Virginia have initiated a similar process, with the intent to engage several communities in one county. Team members in New Hampshire are adapting components of the MHA curriculum into their existing Extension programming. Learn more at <https://extension.psu.edu/marketing-hometown-america>.

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 (University of New Hampshire), this group from New Hampshire, Maine, and West Virginia has explored the possibility of replicating UNH’s Main Street Academy program in the Northeast region as a new approach to building capacity for revitalization. They have identified a niche for Extension of working with the rural communities who lack capacity for a traditional main street program. They have determined that volunteers are key to starting the revitalization process and building momentum for expanded investment. Extension-trained volunteers can engage the community, determine revitalization projects and priorities, and do placemaking to improve the appearance and create vibrancy on main street. This

Remembering George Morse (1943-2021)

George Morse, a longtime and highly regarded friend and colleague of NERCRD, died on March 28, 2021 at the age of 77. His wife of 56 years, Elizabeth Morse, survives at home in Maine.



As a member of the NERCRD TAC (2013-2016) and as NERCRD Special Projects Manager (2015-2016), George was a champion for two major NERCRD projects. He coordinated and led a Learning Circle on Community, Regional, and Economic Development (CRED) Impact Indicators to help Extension professionals document their impacts. He also helped launch the Center’s small-grants program, designed to encourage collaboration across state lines, by playing the critical role of connecting participants and helping them envision their projects. Since its inception, the small-grants program has served as a vehicle to connect 49 CRED researchers and educators in 13 states and has expanded CRED programming in the region.

“Thanks to George’s support of and advocacy for the small grants program, Extension, research, and teaching faculty and staff in the Northeast organized around critical and emerging issues that served to increase community vitality and leverage the rich resources of our communities,” said Charlie French, former fellow TAC Member with the University of New Hampshire Extension.

Learn more about George’s illustrious career and his role at NERCRD at: <https://bit.ly/GeorgeMorse>.

multi-state collaboration is building the capacity of Extension to work in this area of rural community economic development. Results of their learning collaboration will be presented at the National Association of Community Development Extension Professionals (NACDEP) conference in Indianapolis, Indiana, in June 2022.



Spotlight on the National Extension Tourism Network

Our support of the National Extension Tourism network ramped up this year, as has the momentum behind the NET leadership team as they implement the work outlined in their strategic plan and take on several new initiatives.

NET and NERCRD Partner on “New Technologies for Agricultural Extension” Project

Building on our longstanding partnership, the NERCRD and the NET Design Team were selected to participate in the New Technologies for Agricultural Extension (NTAE) project accelerator program, made possible by funding from USDA NIFA through a partnership with Oklahoma State University and the Extension Foundation. Through the resources of the Extension Foundation and with the continued support of the NERCRD, the NTAE program is helping NET pursue organizational growth that makes it more financially sustainable and increases the reach of tourism and recreation Extension programming and research. NERCRD Associate Director Jason Entsminger is providing leadership to the initiative and Lisa Chase of University of



Vermont Extension is the project’s Fellow. Scott Reed, emeritus vice provost for University Outreach and Engagement at Oregon State University, is serving as the project’s “Catalyst,” providing mentorship and guidance and connecting team members to the Extension Foundation’s expertise. The project has already resulted in the development of a conference proceedings (forthcoming), a new evaluation working group, the formation of a Diversity, Equity, Inclusion, and Access committee, and the launch of a publication series that is being used to raise awareness of the role of tourism programming in the Cooperative Extension system. Learn more at: <https://bit.ly/3H3CfQ5>.

NET Releases New Report, “Extension Tourism: Impacts and Opportunities of Land- and Sea-Grant Programming”

The NET Design Team and the Regional Rural Development Centers carried out a national survey process from 2017 to 2019 to catalog current tourism and recreation programming being conducted by U.S. Extension professionals. The findings are summarized in a new report released in November, which:

- documents the distribution, depth, and breadth of tourism and outdoor recreation programming offered by the Land- and Sea Grant Extension services;
- demonstrates the regional impacts of this programming; and,
- highlights opportunities for expanding this programming nationally.



Learn more at: <https://bit.ly/3EN5Qg4>, where there also is an interactive map of the findings.



NET 2021 Conference Provided Opportunity to “Navigate the Uncharted”

The NET Design Team held its 13th national conference in November, hosted in Savannah, GA, by University of Georgia Marine Extension and Georgia Sea Grant. The theme, “Navigating the Uncharted,” was a nod to the new territory in which tourism communities find themselves, facing challenges ranging from natural disasters to an ongoing global pandemic. It provided a forum for tourism professionals to share responses and adaptations to these challenges and to reflect on approaches to Extension programming that best serve stakeholders’ needs.

The conference included both in-person and remote options, and of the 99 people registered, 72 people attended in person. Nearly three-quarters of attendees completed the post-conference evaluation, in which 67% said the conference exceeded their expectations, and 33% said it met

their expectations. Similarly, 100% strongly agreed or agreed that the conference was a good professional opportunity.

In addition to an impressive lineup of more than 40 breakout presentations and posters, participants also heard from keynote speakers Brent Elrod (USDA NIFA), Stefanie Benjamin (Tourism RESET), and Monica Smith (Southeast Tourism Society). In-person attendees had an opportunity to attend one of five mobile workshops selected to showcase agritourism, cultural and heritage tourism, and ecotourism success stories from the surrounding coastal communities. USDA NIFA and National Sea Grant provided support to the conference.

Photos above, L-R: Victoria Smalls speaking on the Gullah Geechee Heritage Corridor; Doug Arbogast addressing opening session; Xinyi Qian as incoming NET Vice Chair; USDA NIFA’s Brent Elrod delivering opening keynote. All photos courtesy of University of Georgia.

NET Webinar Series Continues to Connect Tourism Educators Across the Nation

Launched in 2020, the NET Webinar Series continued to connect tourism educators and practitioners to the expertise of the broader network. It has also served to drive growth in the network, which currently engages more than 800 participants. The Webinar Committee is co-chaired by Doug Arbogast, West Virginia University, and Bryan Fluech, University of Georgia Sea Grant, with webinar hosting and co-organizing support from NERCRD Communications Specialist Kristen Devlin. This year’s five webinars engaged more than 400 attendees in sharing and learning about community and coastal tourism projects.

- Barry, S., N. Chin, and K. Decker. Panel Discussion: Highlights from Sea Grant Tourism Programming.
- Chase, L., D. Singh-Knights, and P. Leff. Agritourism Around the US: Findings from a National Survey.
- Eversole, D. Framing Tourism Impacts on Oahu and the Emergence of Destination Management Plans in Hawaii.
- Powell, J. Thriving or Surviving? – Exploring GNAR(ly) Challenges Occurring in Western Gateway Communities.
- Northrop, A. First Impressions Tourism Assessments: Summary of Successful Three Years.

Staff Announcements

Welcoming Our Newest NERCRD Team Member, Luyi Han

We are pleased to welcome to the NERCRD Postdoctoral Scholar Luyi Han, who arrived in July after receiving his doctoral degree in economics from Oklahoma State University. His research interests include applied microeconomics, regional and urban economics, development economics, labor economics, and energy economics, and he already has several scientific papers accepted or in press. Dr. Han will contribute his expertise to several NERCRD research efforts, including the USDA NIFA-funded and Census Research Data Center-based rural innovation project as well as to projects on general recovery from COVID-19 including workforce development and economic resiliency.



Farewell to Longtime NERCRD Scholar, Sarah Rocker

We bid a fond farewell to Postdoctoral Scholar Sarah Rocker, who accepted a position as a National Program Leader with USDA NIFA, effective November 22. Rocker's three-year tenure with the NERCRD ended on September 1.

As a postdoctoral scholar, Sarah contributed her expertise in local and regional food systems, social network analysis, value chain coordination, and evaluation strategies. Most recently, she represented NERCRD on a USDA Agricultural Marketing Service (AMS) cooperative agreement with the University of Kentucky and Colorado State University. The project examines the impacts, adaptations, and innovations of COVID-19 on U.S. local and regional food systems. Before that, she coordinated the AMS Technical Assistance Program (AMSTA), which provided national programming and support for grantees of USDA's Farmers Market and Local Food Promotion Programs (FM/LFPP).



Sarah's first affiliation with NERCRD was in 2014, when she served as a member of its USDA NIFA-funded research and outreach project called Enhancing Food Security in the Northeast (EFSNE) while pursuing her PhD in Rural Sociology at Penn State. She provided collaborative leadership to the EFSNE internship program and contributed to the project's consumption and education research.

In her new role as National Program Leader for the USDA NIFA Family and Community Health portfolio, Sarah will provide programmatic leadership for the Regional Rural Development Centers, Farm and Ranch Stress Assistance Network, and New Technologies for Agricultural Extension.

While we are so sorry to see Sarah go, we share in her excitement as she embarks on the next chapter of her career and look forward to working with her in this new capacity.

Entsminger Selected as Fellow in NAREA Career Advancement and Mentorship Program

NERCRD Associate Director Jason Entsminger has been selected as a Fellow in the 2021-2022 cohort of the Northeastern Agricultural and Resource Economics Association (NAREA) Career Advancement and Mentorship (CAM) Program.



The CAM Program is designed to help early career scholars develop and enhance their professional networks. As a CAM Fellow, Entsminger will connect with 19 others through activities that support their networking goals and career objectives, and to organize a panel at the NAREA annual meeting in 2022. Fellow cohort members represent 14 higher education institutions from eight Northeast states, plus California.

“I’m looking forward to engaging with other early career economists in the region, getting to learn about the research, teaching, and outreach they are doing across the Northeast, and to build connections through them with the institutions where they work,” Entsminger said. “For me, this is a great opportunity to collaborate with other economists working in and for our region, and to learn from both peers and established colleagues.” Learn more at: <https://bit.ly/344pS56>.

NERCRD Research Recognized for Its Impact

The paper “Evaluating U.S. Rural Entrepreneurship Policy” by Stephan J. Goetz, Mark Partridge, Steven C. Deller, and David A. Fleming received the Mid Continent Regional Science Association (MCRSA) Research Impact Award for Outstanding *Journal of Regional Analysis and Policy* (JRAP) article. It was published in JRAP in 2010.

Research by Alessandro Bonanno and Stephan Goetz also was called out on Twitter as one of the most-read articles in the peer-reviewed journal *Economic Development Quarterly*. The 2012 paper is titled “WalMart and Local Economic Development: A Survey.”



Presentations and Publications

PRESENTATIONS

- Chase, L., Schmidt, C., & Hollas, C. (2021, May 15). Agritourism Development and Research in the USA. International Conference on Agritourism, hosted by Agri Tourism India, online.
- Entsminger, J. (2021, October 18). Classifying Primary Agricultural Producers in Local Foods Marketing Channels: Using the Organizational Species Concept to Understand Strategic Profiles. 2021 Food Distribution Research Society Annual Meeting, online.
- Entsminger, J. (2021, November 22). Investing in Rural Recovery: Findings from a Rapid Assessment of Stakeholder Priorities for Rural Development. Briefing to USDA NIFA Economic Recovery Team, online.
- Goetz, S.J. (2021, March 26). Modeling Spatial Supply Chains. Regional Economics Applications Laboratory (REAL) at the University of Illinois at Urbana-Champaign and Pontifical University Catholic of Rio Grande do Sul (PUCRS), Brazil joint Seminar Series, online.
- Goetz, S.J. (2021, June 24). The Northeast Regional Center for Rural Development. Northeast Extension Directors (NEED)/Northeast Regional Association of State Agricultural Experiment Station Directors (NERA) Virtual Joint Summer Sessions, online.
- Goetz, S.J., Heaton, C., Imran, M., Pan, Y., Tian, Z., Schmidt, C., Qazi, U., Ofliid, F., & Mitra, P. (2021, October 14). Twitter/Google Trends Analysis of U.S. Food Security During COVID-19. Penn State SAFES COVID Seed Grant Outcomes Forum #1, online.
- Goetz, S.J., Pan, Y., Rocker, S.J., Schmidt, C., & Tian, Z. (2021, April 29). Resiliency Examined: An Overview of Covid-19 Impacts to U.S. Food Supply. Penn State Ag Council meeting, online.
- Han, L. (2021, November 11). Broadband, Self-Employment, and Work-from-Home—Evidence from the American Community Survey. 68th North American Meetings of the Regional Science Association International, Denver, CO.
- Han, L., Goetz, S.J., Eades, D., Entsminger, J. and Arbogast, D. (2021, November 8). An Early Assessment of COVID-19's Impact on Tourism in U.S. Counties: Decline and Recovery. National Extension Tourism Conference, Savannah, GA.
- Rocker, S.J. (2021, June 2). Building Social Infrastructure for Resilience. University of New Hampshire Extension's Resilience Academy, online.
- Rocker, S.J., & Brislen, L. (2021, June 15). Dashing the 'Bottom Line': Economic complexity and existential reckoning in local and regional food systems in response to Covid-19. Panel: COVID and Regional Food Systems, part of Agriculture, Food, and Human Values conference.
- Rocker, S.J., & Whitmer, W. (2021, May 17). CRED Indicators Workgroup 2021 Survey: COVID-19 Response Adaptations and Innovations. National Association for Community Development Extension Professionals Northeast Regional Meeting, online.
- Schmidt, C. (2021, December 7). Agritourism as a Tool for Rural Development and Women's Empowerment. Panel Moderator, Agritourism Gatherings webinar, online.
- Schmidt, C. (2021, February 10). Agritourism Collaborations and Trails—Best Practices. Mid-Atlantic Fruit and Vegetable Convention, Pennsylvania Vegetable Growers Association, online.
- Schmidt, C. (2021, March 8). Getting Started in Agritourism. Penn State Extension's Starting and Improving Farms Conference.

(Continued on next page.)

PRESENTATIONS (continued)

- Schmidt, C., Goetz, S.J., & Crissy, H. (2021, August 3). Beer Trail Development in Pennsylvania. American Agricultural and Applied Economics Association Annual Meeting, Austin, TX.
- Schmidt, C., & Schweichler, J. (2021, October 6). Agritourism across Pennsylvania – Challenges and Opportunities. Penn State Extension Local Government Webinar Series, online.
- Schmidt, C., Tian, Z., & Goetz, S.J. (2021, April 8). Determinants of Brewery Locations in Pennsylvania: A Tract Level Zero-Inflated Negative Binomial Analysis. 60th Meeting of the Southern Regional Science Association, online.
- Tian, Z., & Goetz, S.J. (2021, November 11). Spatial Correlation and Variation in Census Responses, Voting Behavior, and Labor Participation: A Spatial Seemingly Unrelated Regression Analysis. 68th North American Meetings of the Regional Science Association International, Denver, CO.
- Tian, Z., Schmidt, C., & Goetz, S.J. (2021, April 7). Food Insufficiency and the Mitigating Effect of Community Food Services during the Pandemic in the U.S. 60th Meeting of the Southern Regional Science Association, online.
- Tian, Z., Schmidt, C., & Goetz, S.J. (2021, April 8). The Impact of Female-Operated Farms on U.S. Farm Viability Over Time. 60th Meeting of the Southern Regional Science Association, online.

SCIENTIFIC PUBLICATIONS

- Arbogast, D., Eades, D., Goetz, S.J., & Pan, Y. (forthcoming). Extension and Tourism: Responding to the Changing Needs of Society and New Opportunities. *Journal of Extension*.
- Davlasheridze, M., & Goetz, S.J. (2021). [Explaining Spatial Disparities in Fatal Drug Overdoses, 1970-2016](#). *Review of Regional Studies*.
- Han, Y., Goetz, S.J., & Schmidt, C. (2021). [Visualizing Spatial Economic Supply Chains to Enhance Sustainability and Resilience](#). *Sustainability*, 13(3), 1512.
- Kolodinsky, J., & Goetz, S.J. (2021). [Theme Overview: Rural Development Implications One Year after COVID-19](#). *Choices*, Quarter 3.
- Schmidt, C., Goetz, S.J., & Tian, Z. (2021). [Female farmers in the United States: Research needs and policy questions](#). *Food Policy*, 101, 102039.
- Tian, Z., Schmidt, C., & Goetz, S. J. (forthcoming). [The Role of Community Food Services in Reducing U.S. Food Insufficiency in the COVID-19 Pandemic](#). *Journal of Agricultural and Resource Economics*.

BOOK CHAPTERS

- Goetz, S.J., Meadowcroft, D., & Han, Y. (2022). The Geography of Rural Innovation and Entrepreneurship in the United States. In *Building Rural Community Resilience Through Innovation and Entrepreneurship*, edited by Charlie French. Routledge: Taylor & Francis Group.

(Continued on next page.)

BOOK CHAPTERS (continued)

- Reid, N., Goetz, S.J., Dobis, E. A., Gottlieb, P. D., & Hira, A. (2020). The Rise of Craft Beer and Its Impact on Demand for Local Hops. In *Rural – Urban Linkages for Sustainable Development* (pp. 127–142). Routledge: Taylor & Francis Group.
- Rucker, S.J., & Smith, J. (2022). Innovating with People Power: Bolstering Regional Food Economies through Value Chain Coordination Networks. In *Building Rural Community Resilience Through Innovation and Entrepreneurship*, edited by Charlie French. Routledge: Taylor & Francis Group.

TECHNICAL PUBLICATIONS

- Arbogast, D., Goetz, S.J., Entsminger, J., Devlin, K., Ulmer, M., Qian, X., Eversole, D., Philips, M., Powell, J., & Rohring, E. (2021). [Extension Tourism: Impact and Opportunities of Land- and Sea-Grant Programming Across U.S. Regions](#). National Extension Tourism Design Team and Northeast Regional Center for Rural Development.
- Entsminger, J., Green, J. J., Welborn, R., Garner, R., Wiatt, R., Bednarikova, Z., Gayle, R., Pan, Y., & Goetz, S.J. (2021). [Investing in Rural Recovery: Findings from a Rapid Assessment of Stakeholder Priorities for Rural Development](#). Regional Rural Development Centers.
- Goetz, S., Pan, Y., Entsminger, J., & Tian, Z. (2021). [U.S. Household Food Insufficiency Falls Below Pre-Pandemic Level](#). NERCRD COVID-19 Data Report 21-02.
- Goetz, S.J., Tian, Z., Schmidt, C., & Pan, Y. (2021). [Pennsylvania Food Insufficiency Reached New High at the End of 2020](#). NERCRD COVID-19 Data Report 21-01.
- Schmidt, C., Cornelisse, S., & Crissy, H. (2021). [Craft Beverage Trail Collaborations in Pennsylvania: A Resource for Breweries and Destination Marketing Organizations](#). Northeast Regional Center for Rural Development.

NON-TECHNICAL PUBLICATIONS

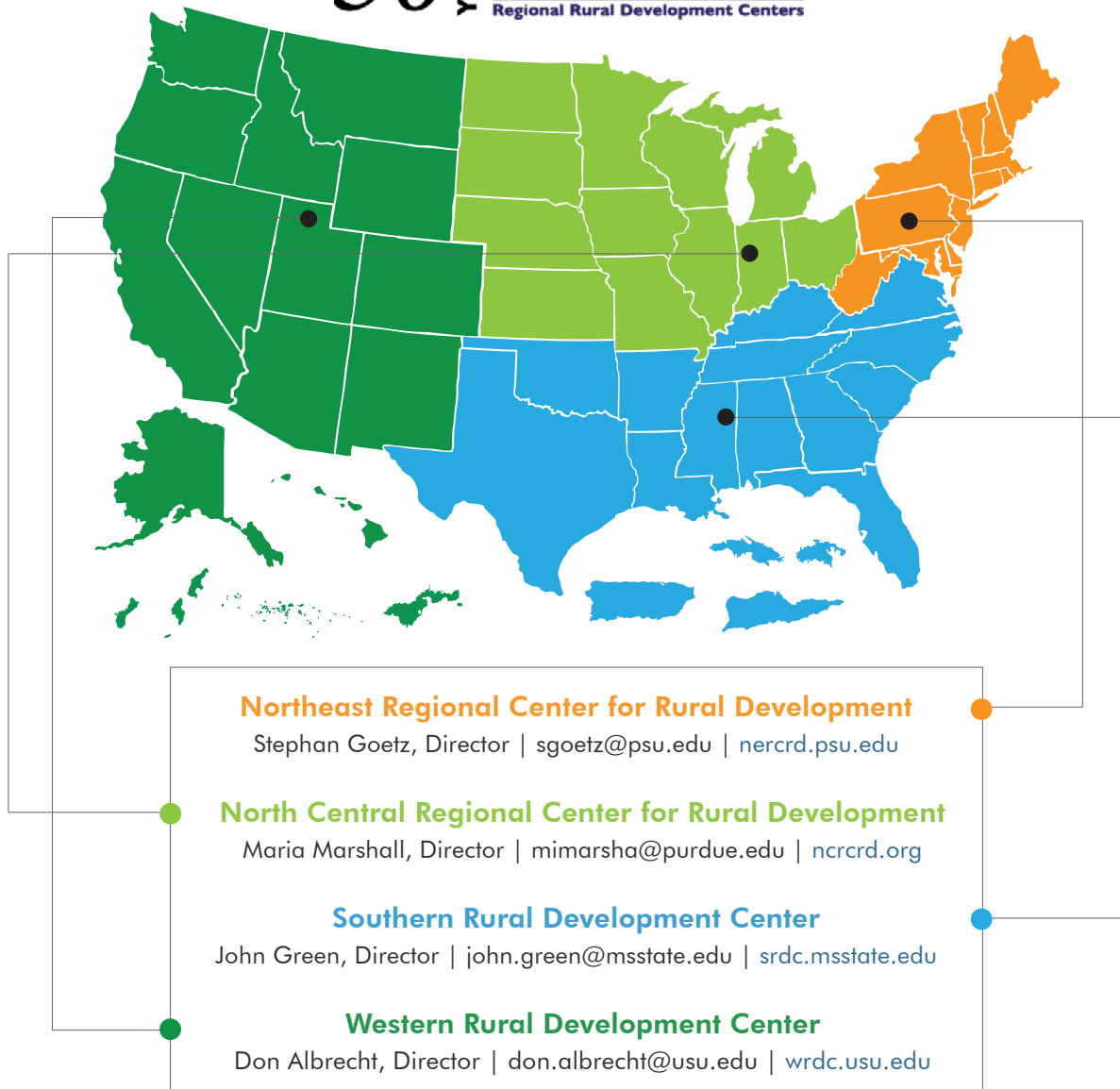
- Devlin, K. (2021). [About National Extension Tourism](#). National Extension Tourism Design Team and Northeast Regional Center for Rural Development.
- Devlin, K. (2021, February 9). [Researchers develop new tool for visualizing vulnerabilities in supply chains](#). Penn State News.
- Devlin, K. (2021, October 21). [Food pantries essential for reducing hunger among middle-class in 2020](#). Penn State News.
- Devlin, K., Schmidt, C., & Goetz, S.J. (2021, March 1). [New study examines importance and unique characteristics of U.S. female farmers](#). Penn State News.
- [NERCRD: How We Work](#) (2021). Northeast Regional Center for Rural Development.
- Regional Rural Development Centers. (2021). [Informing the New Administration: How the RRDCs' work intersects with the Biden-Harris administration's priority areas](#).
- Tian, Z., & Goetz, S.J. (2021, September 23). [More Americans couldn't get enough to eat in 2020 – a change that hit the middle class hardest](#). *The Conversation*.
- Tian, Z., & Goetz, S.J. (2021, September 27). [More Americans couldn't get enough to eat in 2020. The middle class was hit hardest](#) | Opinion. *Pennsylvania Capital-Star*.

Looking Ahead: Celebrating 50 Years of Rural Development

The year 2022 marks the 50th anniversary of the passage of the Rural Development Act. Among its many outcomes, the Act led to the creation of the nation's four Regional Rural Development Centers (RRDCs). The RRDCs play a vital connecting role in rural America, linking the research and educational outreach capacity of the nation's public universities with communities,

local decision-makers, entrepreneurs, families, and farmers and ranchers to help address a wide range of rural development issues. We plan to commemorate the anniversary throughout the year with special events, publications, and engagement opportunities. [Join the NERCRD mailing list to receive updates on what's planned!](#)

50 YEARS **RRDC**
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