The mission of the Northeast Regional Center is to enhance the capacity of Land Grant Universities to foster regional prosperity and rural development.
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The Northeast Regional Center for Rural Development receives core funds from USDA's National Institute of Food and Agriculture, the Northeastern Regional Association of State Agricultural Experiment Station Directors and the Pennsylvania State University, College of Agricultural Sciences.

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Cover images via USDA (two larger images) and Unsplash (“open” sign and kayaker).
Overview 2017

Last year’s doubling of the four Regional Rural Development Centers’ core federal funding to $2 million not only confirmed the value placed on the Centers’ work in rural America by stakeholders and elected leaders in Washington, D.C., but also arrived at an opportune time, as we were in the midst of a strategic planning effort led by our Technical Advisory Committee. A clear finding from this effort was that states in the region are facing similar challenges, and that the interstate collaborations facilitated by the Northeast Center are more important than ever. With the new funding, we have expanded our efforts to catalyze new collaborations and strengthen existing networks.

For example, we are pleased to build upon our ongoing support of Extension efforts in the region by renewing our Interstate Extension Collaborations grant program, which has proven to be overwhelmingly successful at catalyzing new and long-lasting relationships across the region and beyond (see pages 5-7 and 17). We continue to partner with Extension staff on local engagement initiatives through several innovative projects (see pages 8, 10-12). Our new Associate Director for Extension will further leverage and significantly expand opportunities for collaboration and sharing of land grant university outreach programs.

Three key new signature areas are emerging for the Center on the research side, reflecting an alignment of stakeholder need and Center capacity: economic resilience, regional innovation, and human health including behavioral health issues associated with economic decline. Our research addresses each of these areas. In addition, our two new postdoctoral scholars will bolster the Center’s capacity to respond to emerging research needs and to reach more stakeholders.

As demonstrated by our growing number of collaborations, the Center continues to solidify its reputation for expanding the science-base and providing outreach and education around rural economic development (see page 2). In addition, earlier research projects are now bearing fruit in the form of many scientific papers, reports and other presentations.

We are deeply grateful to our federal funders at NIFA/USDA and other agencies, as well as to our land grant university collaborators in the Northeast, for making this work, and the funding increase, possible. In addition, the College of Agricultural Sciences at Penn State University continues to provide generous support to the Center, as does the Northeast Research Association (NERA) in the form of off-the-top funding, for which we are very thankful.

In 2017, the NERCRD worked on 16 distinct but related research and 11 outreach projects, resulting in 46 presentations and publications. Our website received more than 26,000 page views and we reached 25,000 more individuals through social media. Among other topics, we will in 2018 continue our seminal research and outreach on the determinants and impacts of local economic vitality, including behavioral health issues as well as the vital roles of local innovation.
Key Federal Agency Collaborations

US Department of Agriculture
Various projects funded through:
• National Institute of Food and Agriculture
• Agricultural Marketing Service
• Economic Research Service
• Rural Development
(See pages 8-12.)

US Department of Housing and Urban Development:
A meeting with HUD staff identified a significant gap in knowledge about the relationship between housing and rural development. In response, the RRDC Directors co-edited a book published by Routledge (see page 20).

Appalachian Regional Commission
This project led by Downstream Strategies is exploring best practices and policies that local leaders can use to enhance the future economic prospects of coal-impacted communities throughout the Appalachian Region (see page 12). West Virginia University is also a partner.

Economic Development Administration
A two-year project led by Indiana University seeks to create development strategies and policies that fit precisely with a region’s characteristics and capacities. Other collaborators include NSF, NAS, BEA, Ohio State University, and University of California San Diego (see page 10).

Substance Abuse and Mental Health Services Administration
Launched in 2014 to provide resources for local decision makers to better understand the behavioral health issues facing their regions, the CAPE project is a collaboration of the four RRDCs and is led by the NCRCRD. (see page 11).

New Extension Collaboration
Along with the other Regional Rural Development Centers, the Northeast Center is embarking on a new partnership with the National Extension Tourism Network, and we currently are exploring how the Centers can best support their work. In addition, the four Centers co-sponsored the group’s conference this year, which took place in Princeton, NJ in August.
Outreach Initiatives

This year we embarked on a three-part analysis of the region’s emerging economic and community development issues, and supported several new interstate Extension collaborations.

A fresh look at the Northeast: Emerging issues, priority areas, and opportunities

At their October 2016 in-person meeting, members of the Center’s Technical Advisory Committee (TAC) proposed that the Center lead an inquiry into the current economic challenges facing the rural Northeast, in order to ensure that the Center is addressing the region’s most pressing needs and to identify potential issues around which multiple states in the region might collaborate. The inquiry, completed in September 2017, was three-fold.

- TAC Chair Paul Gottlieb and Rutgers University undergraduate student Sean Gilbert conducted an economic analysis of all Northeast states. They shared their findings with Extension leaders in the region for corroboration and feedback.

- TAC member Heather Stephens and West Virginia University undergraduate student Stella Barrat conducted an inquiry to identify common “challenge areas” within the rural Northeast and explored the extent to which existing federal and state programs were already addressing these issues. Their goal was to shed light on unmet needs in the region that the Center might be poised to organize around. They presented their results at the Southern Regional Science Association meeting in Memphis, TN, in March.

- NERCRD staff surveyed Extension stakeholders in Northeast states on the most pressing community and economic development issues they face and how NERCRD might help states address these issues. Responses from the nine respondents indicate that many states are facing similar challenges. For example, seven NE states identified business recruitment, retention, and expansion as pressing issues. Rural “brain drain,” substance abuse, and balancing development with rural and agricultural needs were each reported as pressing issues by at least three states.

At its 2017 in-person meeting, the Center TAC, Board of Directors (BOD), and staff began to synthesize their findings from this three-pronged effort. One very clear finding that emerged is that the Center should continue promoting and facilitating interstate collaborations in the region. See pages 5-8 for information on our work in this area.
"What are the most pressing Community, Regional, and/or Economic Development issues facing you and your team?"

When we asked this of a number of our stakeholders, their responses revealed four broad challenge areas: economic, environmental, health, and infrastructure issues. Here’s a breakdown of their responses.

**Economic**
- Business attraction, retention & expansion
  - State regulations that impede business development
  - Need for resources around entrepreneurship development
- "Brain Drain"
- Unemployment
- Generating interest in blue-collar jobs
- Transition away from low-tech manufacturing
- Wages
  - Lack of gap funding to support new businesses

**Infrastructure**
- Rural internet access
- Food systems
- Regional food systems
- Rural roads & bridges
  - Integrating development and transportation infrastructure
  - Housing & housing redevelopment

**Environmental**
- Coastal resilience & waterway development for sustainability, environmental protection
- Balancing development and rural quality of life
- Brownfield redevelopment
- Loss of farmland
- Pollution issues

**Health**
- Substance abuse (& its impact on businesses)
- Health care
- Healthy urban communities
- Civil dialogue

Credits, starting with top center icon and going clockwise: investment by priyanka, mixed group by Peter van Driel, coast anonymous, Camping by Aneeque Ahmed, healthy by Adrien Coquet, Flyover by Vineet Kumar Thakur, Network by Agni, building by Oksana Latysheva. All acquired through The Noun Project.
Building bridges: Seeding new interstate Extension collaborations
New funding program: “Impacts of Successful Extension and Outreach Programs”

At the recommendation of its TAC and BOD, the Northeast Center issued a new competitive grant opportunity this year, which was designed to help Northeast land-grant faculty and educators document the impacts of their work while also encouraging collaboration across state lines. With guidance from an external review panel, three teams comprising 22 people from nine states were selected to receive funding.

Developing a Coordinated Community Risk Management Approach to Health and Health Insurance among Farm Enterprises

- Virginia Brown, University of Maryland Extension (PI)
- Maria Pippidis, University of Delaware Cooperative Extension (Co-PI)
- Shoshannah Inwood, The Ohio State University (Co-PI)

Abstract: Farming is dangerous. Having health insurance serves as an important risk management tool protecting farmers against unforeseen costs associated with injury and illness. The goal of this project is to enable individuals and partnerships to take the lead in focusing on farming viability through a coordinated community risk management approach to health and health insurance for the farming enterprise. This community development approach will build on two previously successful initiatives, the Vermont Summit on Health, Agriculture and Rural Economic Development and the Smart Choice-Smart Use Health Insurance curriculum. Success will be documented through short-term program outcomes and NERCRD Impact Indicators.

Downtowns and Trails Program Assessment

- Shannon Rogers, University of New Hampshire (UNH) (PI)
- Molly Donovan, UNH (Co-PI)
- Charlie French, UNH (Co-PI)
- Casey Hancock, UNH (Co-PI)
- Laura Brown, University of Connecticut (Co-PI)
- Lisa Chase, University of Vermont (Co-PI)
- Rebecca Sero, Washington State University (Co-PI)
- Collaborator: Jayoung Koo, University of Kentucky

Abstract: Communities in New England often seek support for downtown economic development engagement and planning from Extension Educators. Communities are also beginning to question how their natural assets can be better integrated into improvements in quality of life and downtown vibrancy. Trail infrastructure can be an important natural asset. We are proposing the creation of a knowledge sharing network in New England so that Extension organizations can better understand and leverage existing knowledge, resources, and programs to help communities connect downtown economic development and local trails. This network will result in a guide to be used throughout New England and beyond.

Farm Fresh Food Boxes: A Marketing Innovation Linking Farmers to Rural Retailers, That Benefits Local Economies

- Jane Kolodinsky, University of Vermont (UVM) (PI)
- Lisa Chase, UVM (Co-PI)
- Marilyn Sitaker, The Evergreen State College (Co-PI)
- Julia Van Soelen, University of California, Davis (Co-PI)
- Diane Smith, Washington State University (Co-PI)
- Hans Estrin, UVM (Co-PI)
- Weiwei Wang, UVM (Co-PI)
- Lauren Greco, UVM (Co-PI)
- Mary Peabody, UVM (Co-PI)
- Christa Alexander, Jericho Settlers Farm, VT (Co-PI)
- Sara Snow, Salvation Farms, VT (Co-PI)
- Mike Trackim, Jolley Mobile, VT (Co-PI)

Abstract: Farm Fresh Food Boxes is a multi-state collaboration between Extension and research that tests an innovative entrepreneurial model in which farmers and rural retailers partner to offer pre-ordered boxes of fresh local produce to local consumers. In addition to the metrics we are already collecting for outcome evaluation of the study, we propose to include Extension “action” and “impact” indicators that support a “but for” explanation of observed outcomes.
Monitoring impacts: Tracking activities of previously funded teams

This year’s funding opportunity described on page 5 builds on the highly successful grant program the Center sponsored in 2015-16, which funded two teams of Extension staff from seven states and resulted in new community development Extension programming in the region. Among these projects’ outcomes are several long-lasting relationships forged between team members. Their ongoing collaborations have resulted in new impacts in the region and beyond. Here are just a few:

First Impressions spreading through the Northeast and beyond

In 2015, the Northeast Center provided funding to West Virginia University (WVU) Extension and partner institutions to expand WVU’s First Impressions (FI) program into other states. Since then, team members have implemented FI in their states, making adaptations and enhancements to address their states’ unique needs and opportunities.

University of Connecticut (UConn) Extension has partnered with the Connecticut Main Street Center to match communities interested in implementing the FI Community Exchange Model, in which volunteers from two communities of similar size, location, amenities or natural features conduct assessments of each others’ towns. Since establishing their partnership, they have facilitated several assessments, and are recruiting future participants. UConn Extension staff also have developed a robust First Impressions website, with example community reports, resources, and tools, including links to various FI adaptations throughout North America.

Team members from Michigan State University have adapted FI to help rural Michigan communities expand or enhance their tourism opportunities, and have developed an informative and appealing brochure and website designed to recruit participating communities. After conducting two pilot assessments in 2015 and 2016, they have used their tourism-centered framework to evaluate four additional communities. They expect to share their findings with communities in early 2018.

University of New Hampshire (UNH) Extension staff partnered with the UNH Planning Student Organization and trained students to conduct an FI assessment, including how to use the mobile application Collector for ArcGIS for FI data collection. Under the supervision of Extension Community Development Program Coordinator, Casey Hancock, and Program Coordinator for Community and Environmental Planning, Mary Friedman, six students carried out an FI assessment in Somersworth, NH, which they presented to the Somersworth City Council and at the UNH undergraduate research conference. In addition to providing planning students with very relevant experience, the arrangement aligned with UNH Extension’s organizational goal of building connections with students and faculty, and bolstered their capacity to carry out FI in a new way.

At the Northeast Center, we have added a new section to our website dedicated to First Impressions, where we will curate FI resources from our partners, and document FI activity in the region: aese.psu.edu/nercrd/community/first-impressions.
NERCRD-funded team honored for “Excellence in Teamwork”

The multi-state team funded by the Northeast Center to transfer the FI program across state lines was honored this summer in Big Sky, MT by the National Association of Community Development Extension Professionals (NACDEP) with the NACDEP Northeast regional award for Excellence in Teamwork. The “Sharing Scholarship and Innovations in the First Impressions” program team includes:

- Doug Arbogast – West Virginia University (WVU) Extension Service
- Daniel Eades – WVU Extension Service
- Allison Nichols – WVU Extension Service
- Laura Brown – University of Connecticut Extension;
- Lisa Chase – University of Vermont Extension;
- Casey Hancock – University of New Hampshire Cooperative Extension;
- Geoffrey Sewake – University of New Hampshire Cooperative Extension;
- Cynthia Messer – University of Minnesota Tourism Center; and,
- Andy Northrop – Michigan State University Extension

A community of practice for data analysis

In 2015, a team of extension professionals from six Northeast states traveled to Minnesota for a learning exchange with University of Minnesota Extension colleagues around the topic of helping communities use economic data for decision making. The members have continued to pursue questions related to accessing and interpreting data, and how best to present data to community stakeholders. They recognize the value of being able to discuss these issues with CRED colleagues from around the country, and have launched an informal community of practice around these issues. The aptly named “Community of Practice for Data Analysis” currently has 21 group members representing 14 states and all four of the Regional Rural Development Center regions. Using the Google Groups platform, they’ve shared information about professional development activities, answered accounting questions related to IMPLAN models of local agriculture initiatives, and discussed how impact studies are being used in state-level policy decisions.
National Extension collaboration: Agricultural Marketing Service and Technical Assistance (AMSTA)

Launched in 2014 to provide grant-writing training to potential applicants of the USDA Agricultural Marketing Service (AMS) grants related to promoting local foods and farmers markets, this project provided training to more than 3,000 individuals in all 50 US states in its first year. All state trainings were geared towards expanding the participants’ understanding of how to write a better grant application to USDA AMS. In year two, the project provided additional grant-writing training in 16 high-priority states.

With the training portion of this project now complete, team members are conducting follow-up assessments in South Carolina. We plan to conduct follow-up evaluations with existing Farmers Market and Local Foods Promotion Programs (FMPP and LFPP) grant recipients and are also in the process of exploring with AMS how to support the grantees who received FMPP and LFPP grants in carrying out their work.

AMSTA trainings were held in all 50 states, plus Puerto Rico and the U.S. Virgin Islands. Credit: Google

Connecting with our stakeholders

Through multiple channels—online, in print, and in person—we engage in the national conversation around community and economic development issues, connect with new audiences, and share the great work of our regional colleagues. Here’s a look at our reach, by the numbers:

- 28,630 unique page views at nercrd.psu.edu
- 11,495 Tweet impressions
- 13,270 reached on Facebook
- 46 presentations and publications
Research Initiatives

As several projects come to a close, they are culminating in a number of research papers, presentations, and outreach products.

Rural innovation research featured in special sessions at North American Meetings of the Regional Science Association

In 2016, with funding from the USDA Economic Research Service (ERS), the Northeast Center established an award program that provided three research teams with access to a new data set that allowed them to explore ways in which business innovation is happening in rural areas, and its impact on rural communities and regional economies. Members from each of the funded teams presented their findings in two special sessions co-organized with ERS at the North American Meetings of the Regional Science Association in November.

- I. Rural Innovation is Multifaceted: Findings from the Rural Establishment Innovation Survey
  - Determinants of Rural Business Innovation*
  - The Effects of Sources of Innovation on Innovation Type: Firm-Level Evidence from the United States*
  - Varieties of Innovation and Firm Survival: Does Pursuit or Incremental or Wide-Ranging Innovation Make Firms More Resilient?
  - The Impact of Knowledge Management Strategies on Innovation Outcomes of Rural and Urban Businesses in the United States*
- II. Rural Innovation in Space: Findings from the Rural Establishment Innovation Survey
  - Do Industries Cluster in Rural Regions? Evidence from the Rural Establishment Innovation Survey*
  - Exploring Rural and Urban Firm Innovation: Analysis of the National Survey of Business Competitiveness
  - Design, Innovation and Rural Creative Places: Are the Arts an Attractive Amenity, the Cherry on Top, or Secret Sauce?

Papers marked with * were presented by grantees, and will be available on the NERCRD website in the future. For more information about the funding program, visit: goo.gl/JnqF1q.
Enhancing the Viability of Minority-Owned Small Farms and Rural Communities Using Emerging Network Science

Another project that came to a close this year was a competitive, USDA-funded capacity-building project that provided traditionally underserved farmers in Tennessee, Maryland, and Delaware an opportunity to expand their networks. Economic and social networks organized around local and regional food systems or value chains have the potential to increase farmers’ access to the resources, skills and scale of logistical or distribution assets that are prerequisites for profitable expansion into urban markets.

The Northeast Center provided key support to partners at Delaware State University (DSU), University of Maryland Eastern Shore (UMES), and Tennessee State University (TSU), who utilized network analysis to document the farmers’ networks, and developed a curriculum on network analysis for Extension educators.

The curriculum, titled “Network Analysis of Farmer Groups: A Training Manual for Extension Educators,” was released as a publication in the Northeast Center’s Rural Development Working Paper series and is available online at goo.gl/bVVXKZ. It was prepared by team members Stephan J. Goetz, Yicheol Han, Erica Hildabridle (Penn State); Lan Li and Fisseha Tegegne (TSU); Stephan Tubene (UMES); and Andy Wetherill (DSU).

Local Foods Resource Mapping (LFRM)

This project, launched in 2015, was designed to improve the understanding of state food system barriers and opportunities in selected states (AL, AR, AX, KY, MI, NC). Team members conducted focus group events and online surveys in all six states, and are using results to conceptualize how local foods producers and consumers can be better connected through markets.

Indiana University and Economic Development Administration Project: Regional Economic Development as a New Theoretical Framework

This project seeks to build models and analytical tools that will enable policy makers and practitioners to craft development strategies and policies tailored to a region’s characteristics and capacities. The research team will expand theory about regional economic development to include more comprehensive data and a diverse array of academic disciplines, and will build a complex computational model that integrates data science and regional economic science. In addition to drawing on traditional socioeconomic information and methods, it will make use of data from unconventional sources such as social media, mouse clicks and data extracted from websites via web-scraping tools. See page 20 for a full list of collaborators.
Enhancing Food Security in the Northeast through Regional Food Systems (EFSNE)

Team members on this seven-year project, which ends in February 2018, have spent the last year synthesizing and writing up their results for dozens of planned project outputs. Project researchers are preparing at least eleven manuscripts for peer-review publication, many of which have already been published. A number of supply chain case studies have been published jointly with Cornell University. And, Outreach team members are preparing a set of general-audience research briefs. Find them at the EFSNE project website: agsci.psu.edu/research/food-security.

Community Assessment and Education to Promote Behavioral Health Planning and Evaluation (CAPE)

Members of the CAPE Project conducted a national survey of mental health literacy and synthesized their findings into four infographics that were released during May 2017 (mental health month). The infographics can be found online at healthbench.info. The research was widely reported on by media outlets including Michigan Public Radio, New York Magazine, and dozens of health-related blogs. In addition, team members are in the process of developing several research papers based on the survey findings.

CAPE Team members also developed and administered a series of trainings designed to help communities address emerging behavioral health problems. The curriculum provides a valuable framework for community development and other Extension professionals who want to play a leading role in helping communities address a broad range of behavioral health challenges. Team members presented key elements of the curriculum at the National Association of Community Development Extension Professionals (NACDEP) conference in June. Team members also presented their research using Google Trends analysis to predict suicide and alcohol- and drug-related deaths at a conference organized by the Michigan Department of Health and Human Services.

In June 2017, CAPE was extended so that team members can carry out a pilot data-collection effort to gauge the feasibility of implementing a nationwide county-level behavioral health surveillance system that would monitor 18 behavioral health indicators at the county level.

The CAPE Project is a collaboration of the four Regional Rural Development Centers and is funded by the Department of Health and Human Services Substance Abuse and Mental Health Services Administration and facilitated by USDA/NIFA. The project is led by the North Central Regional Center for Rural Development.
Health Insurance, Rural Economic Development and Agriculture (HIREDnAg)

The very first project of its kind, HIREDnAg has attracted interest and attention from the media and from elected officials nationally.

The goal of HIREDnAg, a multi-state project led by Dr. Shoshanna Inwood of the University of Vermont with a national group of collaborators, is to understand how health insurance policy influences farmers’ decisions to invest, expand and grow their enterprises, and how these decisions contribute to workforce vitality, development and security in the food and agricultural sector, state by state. As part of the research activities, the team distributed a survey to farmers and ranchers in Vermont, Massachusetts, Pennsylvania, Michigan, Nebraska, Mississippi, Kentucky, Washington, Utah and California. As partners on the project, the Center helped generate awareness of this survey among potential respondents by tapping into its broad network of food and agriculture professionals across the region.

The researchers received 1,062 responses, and in July released preliminary findings, which included information gleaned from interviews of up to 10 families in each of the study states. The results have received tremendous interest from Congressional leaders, the farming community, and the national media, with reporting on the results appearing in Bloomberg, Mother Jones, Modern Farmer, Politico, Vermont Public Radio, and more.

The research team hosted a webinar in October to offer an in-depth explanation of their findings. It is archived online at hirednag.net/webinars.

Appalachian Regional Commission Project: Strengthening Economic Resilience in Appalachian Communities

The economies of many counties and sub-regions in the Appalachian Region have historically depended on a few dominant industries, such as mining or manufacturing. In recent years, Appalachian coal production—particularly in the Central Appalachian coal basin—has plummeted. Coal companies have gone bankrupt, resulting in job losses with devastating effects on families, communities, counties, and states. Using state-of-the-art research methods, focus groups, and community-level surveys, this project investigates best practices, strategies, and policies that local leaders can use to enhance the future economic prospects of coal-impacted communities throughout the Appalachian Region.
Center News and Announcements

Staffing changes and new faces at the Northeast Center

Staff announcements

• We are pleased to announce that Heather Manzo will join the Center in 2018 as Associate Director for Extension.

• We are also pleased to announce that Samantha Sheckler has been promoted to the position of administrative support coordinator for the Northeast Center. This position was formerly held by Kathleen (Katey) Burke, who accepted a promotion elsewhere at the University in February. While we were sorry to say goodbye to Katey, we celebrate her promotion and the opportunity to work with Samantha in this new capacity. Previously, Samantha served as the Center’s administrative assistant and provided support to the LFRM and AMSTA projects.

• Congratulations to Minghao Li, a Northeast Center research assistant and Penn State doctoral candidate who successfully defended his dissertation in Agricultural, Environmental and Regional Economics on June 1, 2017. His dissertation research focused on intergenerational mobility and resulted in three essays. He has been appointed to a postdoctoral position at Iowa State University.

• Congratulations to postdoctoral researcher Houtian (Frank) Ge, who joined Cornell University as a postdoctoral research associate in the Charles H. Dyson School of Applied Economics and Management in August 2017. We are pleased that due to his continued association with the EFSNE project, we will still have the opportunity to work with Frank.

New faces at the Northeast Center

Sarah Denny, Graduate Research Assistant

Sarah Denny is a first year master’s student at Penn State studying Agricultural, Environmental, and Regional Economics on assistantship with Stephan Goetz and funded by the Department of Agricultural Economics, Sociology, and Education. In May of 2017, she graduated from the University of Missouri with a degree in Agricultural Economics. During her undergraduate studies, she worked at World Economic and Environmental Services, where she helped perform agricultural commodity forecasts and scenario analyses to guide private and public sector decision makers. Her interests lie in community resilience and food security, and the unique issues faced in rural areas.
Elizabeth Dobis, Postdoctoral Scholar
Dr. Elizabeth A. Dobis joined the Center in October as a Postdoctoral Scholar in the area of Regional Economic Growth and Development. She holds a doctoral degree in Agricultural Economics from Purdue University specializing in Space, Health, and Population Economics, which she completed in 2017. Her research interest is spatial economic analysis, particularly in the fields of demography, poverty, and health, and her dissertation explores growth patterns and interactions among cities within the American system of cities. She holds a master's degree in Agricultural Economics from Purdue University, which she completed in 2011. Her master's thesis explores health care utilization of vulnerable and non-vulnerable populations in the United States and was awarded an Outstanding Master's Thesis—Honorable Mention award from the Agricultural and Applied Economics Association in 2012. She also is a recipient of the Frederick N. Andrews Fellowship from Purdue University. She holds a Bachelor of Arts degree in Geography, an honors Bachelor of Science degree in Economics, and a minor in Mathematics from the University of Minnesota—Twin Cities, which she completed in 2008.

Sarah Rocker, Graduate Research Assistant
Sarah Rocker is a doctoral candidate in Rural Sociology in the Department of Agricultural Economics, Sociology and Education at Penn State. Her interests lie at the intersection of food systems, agricultural change, and community development. Her dissertation research focuses on the use of social network analysis as a tool for understanding social and community dynamics in regional food value chains. She holds a master's degree in Public Administration with a focus on food policy from The Evergreen State College and a Master of Arts degree in Germanic studies from the University of Colorado. She is a founding steering committee member for the North American Food Systems Network and a former board member of the Cooperative Food Empowerment Directive, a national non-profit committed to empowering students to create cooperatively run food businesses on college campuses, of which she was a founder. She joined the Northeast Center in September 2017 and currently works on the USDA AMS Local Food Resource Mapping and Technical Assistance projects.
New faces (continued)

Zheng Tien, Postdoctoral Scholar
Dr. Zheng Tian joined the Center as a postdoctoral scholar in October 2017. His research interest is regional and urban economics, focusing on industrial agglomeration, migration, spatial econometrics, and the input-output model. Dr. Tian obtained his Ph.D. in Economics from West Virginia University (WVU) in 2014. His dissertation examines the relationship between industrial agglomeration and input-output linkages among industries. He was the winner of the 2012 M. Jarvin Emerson Student Paper Competition and the 2014 Barry M. Moriarty Student Paper Competition. After graduating from WVU, he worked as an assistant professor at the International School of Economics and Management of the Capital University of Economics and Business in Beijing, China, from 2014 to 2017. He was a visiting scholar at the Regional Research Institute, WVU, before joining the Center. His research has been published in the Journal of Regional Analysis and Policy, the Cambridge Journal of Regions, Economy and Society, and the Journal of Urban Affairs.

Funding Snapshot

The four Regional Rural Development Centers’ core federal funding was doubled to $2 million, confirming the value collectively placed on the Centers’ work in rural America by stakeholders and elected leaders in Washington, DC.

Evolution of NERCRD funding, 1999-present:
Nominal (bars) and Real (2010=100 dashed line) levels.
Leveraging NIFA’s investment $7.5 to $1

The core federal investment in the four Regional Rural Development Centers allows the Centers to do what we do best—build strong collaborative networks in our own regions and across regions that produce the outcomes and impacts described in these pages. Through this collaborative network, the Northeast Center 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, thus leveraging the NIFA investment 7.5 to 1. Here’s a snapshot of our currently active projects:

<table>
<thead>
<tr>
<th>Currently Active Projects: Award Name and Sponsor</th>
<th>Amount ($)</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
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<tr>
<td>Enhancing Food Security of Low-Income Populations in the Northeast through Sustainable Regional Food Systems, USDA National Institute of Food and Agriculture</td>
<td>$4,999,985</td>
<td>03/01/2011</td>
<td>02/28/2018</td>
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<tr>
<td>Agricultural Marketing Service Technical Assistance (AMSTA) USDA Agricultural Marketing Service</td>
<td>$900,000</td>
<td>9/1/2015</td>
<td>8/31/2017</td>
</tr>
<tr>
<td>AMS Local Food Resource Mapping (LFRM) Project USDA National Institute of Food and Agriculture</td>
<td>$800,000</td>
<td>09/01/2015</td>
<td>08/31/2018</td>
</tr>
<tr>
<td>The Northeast Regional Center for Rural Development - 2017 USDA National Institute of Food and Agriculture</td>
<td>$474,880</td>
<td>09/01/2017</td>
<td>08/31/2018</td>
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<tr>
<td>The Northeast Regional Center for Rural Development - 2015, USDA National Institute of Food and Agriculture</td>
<td>$237,680</td>
<td>08/15/2015</td>
<td>08/14/2018</td>
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<td>The Northeast Regional Center for Rural Development - 2016 USDA National Institute of Food and Agriculture</td>
<td>$237,600</td>
<td>08/15/2016</td>
<td>08/14/2018</td>
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<td>Drivers of Rural Innovation and Implications for Community and Regional Economic Development, U.S. Department of Agriculture</td>
<td>$130,000</td>
<td>09/25/2015</td>
<td>09/30/2018</td>
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<td>Strengthening Economic Resilience in Appalachian Communities Downstream Strategies, LLC, ARC</td>
<td>$45,000</td>
<td>01/01/2017</td>
<td>12/31/2017</td>
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<td>Assessing the Supplier Role of Selected Fresh Produce Value Chains in the United States, USDA Agricultural Research Service</td>
<td>$44,788</td>
<td>08/24/2015</td>
<td>09/30/2017</td>
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<td>Michigan State University Community Assessment and Education to Promote Behavioral Health Planning and Evaluation (CAPE) II Tech</td>
<td>$36,387</td>
<td>1/1/2017</td>
<td>8/31/2017</td>
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<tr>
<td>Utah Rural Development</td>
<td>$10,000</td>
<td>9/1/2016</td>
<td>8/31/2017</td>
</tr>
<tr>
<td>Linking Health Care Reform and Economic Development in the Agriculture Sector, University of Vermont</td>
<td>$6,866</td>
<td>01/15/2015</td>
<td>01/14/2019</td>
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Putting It All Together

Three examples of how the Center’s research and programming are addressing emerging issues

Building capacity by breaking down boundaries:
Optimizing Extension CD resources through multi-state teams

What’s the issue?
Cooperative Extension teams dedicated to community and economic development (CED) work have shrunk in recent years due to budget cuts, leaving few CED educators in most Northeast states and none in others. Similarly, the land-grant universities in the region have few researchers who focus on community development. As such, sharing across state lines is essential for making optimal use of existing resources and for avoiding duplication of efforts, especially when states face similar challenges and needs. With greater collaboration, outreach efforts and engaged scholarship will show faster and deeper impacts. However, the State Cooperative Extension system lacks a formal mechanism for sharing programs across state lines.

How has NERCRD responded?
In 2015, the Northeast Center launched a small-grants program designed to facilitate Extension collaboration between states in the region. Grantees, comprising multi-state teams, would transfer or adapt successful CED programs between states in one of three ways: (a) by preparing for larger grants or alternative funding sources (b) by conducting a pilot program over multiple states, or (c) by delivering train-the-trainer sessions in other NE states. Two teams were selected to receive funding as well as technical support from NERCRD’s Special Programs Adviser, George Morse. The West Virginia University Extension Service received funding to expand the Community First Impressions Program into three Northeast states (CT, NH, and VT) and two North Central states (MI, MN). The University of Minnesota Extension Service received funding to conduct train-the-trainer sessions with five Northeast states (CT, NH, PA, VT, WV). By all accounts, the program sparked exceptional collaboration, stronger regional networks, and a tremendous amount of individual learning—all of which have resulted in rapid program implementation, community-level impacts, and greater capacity to carry out CED work in target states.

What opportunities are there for future impacts?
The Northeast Center is well-positioned to continue facilitating relationship-building between Extension staff across state lines. We plan to continue to provide structural support to the funded teams, so that they can grow their inter-state learning communities and engage in ongoing collaborations as new regional challenges emerge. We also will continue to explore creative ways of seeding such collaborations. For example, this year we launched a new funding opportunity that encourages multi-state collaboration while expanding on the Center’s earlier work of fostering an impact-data collection system in the region. We also are in discussions with the National Extension Tourism (NET) group about how the Regional Rural Development Centers can facilitate their national collaborative.
Capturing impacts of Extension programming in the Northeast

What’s the issue?
Extension Educators in all program areas are frequently asked to document the impacts of their programming in order to justify ongoing financial support. Community and Economic Development (CED) Extension professionals lack unified methods by which to measure their impacts and a consistent set of indicators. This problem is compounded in the Northeast by the small population of CED Extension staff in the region, and their lack of resources available to support the development of their own impact-reporting methods.

How has NERCRD responded?
In 2010, twelve North Central states successfully attempted to collect CED impact data and report it in a way that was verified by stakeholders to be an accurate reflection of their programs’ impacts. Using the North Central region’s process as a basis for going forward, the Northeast Center launched a Learning Circle whereby Northeast Extension staff could learn from the North Central staff. Under the leadership of Special Projects Advisor George Morse, the group explored practical ways in which they can collect credible data to evaluate the impact of Northeast CED programs. The Learning Circle team, which engaged 19 individuals, applied what they learned to analyze five Northeast Extension programs. They distilled their learnings from this year-long effort into a 40-page booklet which is freely available on the Northeast Center website. The booklet, titled The Impact Indicators Tips Booklet, provides practical and credible methods for using the “but for” rule to document CED programming impacts. Available online at aese.psu.edu/nercrd/impacts.

What opportunities are there for future impacts?
In order to explore the feasibility of implementing the impact reporting system outlined in the Impact Indicators Tips Booklet, the Northeast members of the Learning Circle and other early adopters will need leadership and funding to support their efforts going forward. To that end, the Northeast Center is funding three teams of Extension staff to develop impact indicators of their successful Extension programs. These grants cover travel and meeting costs for the project teams, and a Project Coordinator will provide technical assistance to the teams as needed. Each funded team is expected to measure the impact of at least one program on at least four indicators, and provide examples of how the indicators are used to demonstrate the value of the Extension program.

The Impact Indicators Tips Booklet was recognized by the National Association of Community Development Extension Professionals (NACDEP), taking first place in the Northeast for Excellence in Educational Materials: Team category this year.
Economic resilience (or community vitality)

What is the issue?
Resilience or vitality can be defined as the ability of a community or system to rebound from an external shock. The subject has gained prominence with growing national awareness of the economic decline of rural communities that is manifest, in part, in the expanding opioids crisis.

How has NERCRD responded?

- The Center was invited to join an Appalachian Regional Commission competitive grant on “Economic Resilience in Appalachia,” with West Virginia University, Downstream Strategies (WV) and Design and Dialogue (VA). The project will produce a research-based guidebook on how communities can become more resilient, along with a major report on the determinants of resilience targeted at practitioners, community leaders, policy makers and scientists.
- The Center was invited to join a $1.4 million Economic Development Administration (EDA) grant led by Indiana University (IU) on “Regional Economic Development,” which examines regional development using Big Data and principles from Complex Adaptive Systems analysis. Center Board member Dr. Wojan is also a member of this project. Research consortium members include the USDA’s Economic Research Service, IU’s School of Informatics and Computing and the Business Research Center and School of Public and Environmental Affairs, Ohio State University, University of California San Diego, and EDA. Other partners include the Kauffman Foundation, US Bureau of Economic Analysis, University of Maryland, George Washington University, Towson University, National Academies of Science Board on Science, Technology, and Economic Policy, the Center for Regional Economic Competitiveness, and the National Science Foundation.
- A Ph.D. student at West Virginia University is examining the spatial determinants of resilience in one of her thesis chapters (TAC member Dr. Stephens is a committee member, and Goetz is an external member of the examination committee); the expected degree date is Summer 2018.
- With AMS funding, we are examining how to build more resilient and robust regional food systems (also in the EFSNE project), by better connecting consumers and producers of food.
- Ge, H., Canning, P., Goetz, S.J. and Perez, A. (2018), “Effects of Scale Economies and Production Seasonality on Optimal Hub Locations: The Case of Regional Fresh Produce Aggregation.” Agricultural Economics. Accepted.

What opportunities are there for future impacts?

- Understanding the role of innovation in achieving resilience objectives.
- Understanding the role of infrastructure in achieving resilience objectives.
- Understanding resilience in agriculture, as well as in other sectors.
- Examining whether different policies and strategies are needed in different communities, depending on local conditions.
- Understanding how local economic conditions and resilience relate to problems such as opioid overdoses, and conversely.
2017 Publications, Presentations, and Meetings

Peer-reviewed research:


Outreach publications:

**Adding grads and going green can brighten economic outlook**

**By Matt Swayne**

Attracting college graduates and boosting natural amenities may give communities a double shot of economic growth potential, according to economists.

In a study, the share of college graduates — often referred to as human capital — and the quality of life in a community were found to significantly contribute to economic growth, said Stephan Goetz, professor of agricultural and regional economics, Penn State and director of the Northeast Regional Center for Rural Development.

“We’ve always known that human capital is important for economic growth and we are also learning that counties that have good amenities and quality of life factors — mountain views, lakes, shores, and clean environment, for example — are doing quite well, but we haven’t looked at having both of these together in a county at the same time and what the policy implications might be,” said Goetz. “It turns out they are mutually reinforcing. If you have more human capital in an area with better amenities that gives growth an additional boost.”

According to the researchers, both quality of life — including amenities such as clean air, hiking trails, beaches and a temperate climate — and the number of college-educated citizens can positively affect wage growth. The growth effect from quality of life and human capital is more pronounced in rural — nonmetro — counties, the researchers said, and quality of life and human capital can be interrelated and mutually supporting in communities.

“If you attract educated individuals they may want to influence environmental policy, or find ways to improve the local quality of life, thus reinforcing the effects of quality of life on economic growth,” said Goetz. “Likewise, you may see that places with improving quality of life may attract educated people.”

Communities may want to take advantage of the combined effect of human capital and natural amenities to create programs that attract and retain college graduates and improve the environment, said study co-author Qin Fan, assistant professor of economics, California State University, Fresno.

“Our study suggests that the effect of human capital on economic growth is larger in high-quality-of-life counties — natural amenities such as clean air and temperate climate, could potentially attract human capital and perhaps increase labor productivity, thus boosting the effect of human capital on growth,” said Fan. “Our results provide empirical support for community development strategies through preserving or promoting natural amenities that improve quality of life and retain human capital.”

The researchers, who reported their findings in a recent issue of *Applied Economics*, also said that a temperate climate is better for wage growth, which suggests that climate change may have an economic spillover effect.

Extreme weather conditions can affect wage growth, which is the increase in average county wages. As the mean temperature rises, for instance, wage growth is significantly suppressed, said Goetz, who also worked with Jiaochen Liang, assistant professor of agricultural business, California State University, Fresno.

While communities often use tax breaks to attract business, the researchers suggest that instead reinvesting some of that money into infrastructure and natural enhancements may attract entrepreneurs and business owners.

The Craig School of Business, California State University, Fresno supported this work.
Outreach publications (continued)


The Regional Rural Development Centers: Connecting the Nationwide Network of Land-Grant Colleges and Universities

The Northeast Regional Center for Rural Development is one of four USDA-funded Regional Development Centers (RRDCs). The RRDCs are a trusted source of economic and community development data, decision tools, education, and guidance in our nation’s rural communities.

The RRDCs link research with outreach in the areas of rural economic development. Each Center serves a region of the U.S. and uses its regional network of land-grant universities to conduct research and develop Extension education and outreach programs for the benefit of communities.

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Presentations


- Ge, H. Optimal Locations of Fresh Produce Aggregation Facilities in the United States with Scale Economies. Presented at University of Lethbridge, Canada, March 27, 2017.


- The Center sponsored four presentations at the North American Meetings of the Regional Science Association, Vancouver, BC, November 8-11, 2017. (See page 9.)

* travel paid for with non-federal funds
Other meetings, workshops, and conferences not reported elsewhere:

- National Association of Community Development Extension Professionals and Community Development Society joint annual meeting, Bozeman, MT, June 10-12, 2017.
- LFRM Focus Group meeting, Phoenix, AZ, June 12-16, 2017.
- RRDC Directors’ meeting, Washington, DC, October 16-17, 2017.
* travel paid for with non-federal funds

Other services performed by Center Director Stephan J. Goetz:

- Appointed as the representative of the Agricultural and Applied Economics Association to the Council of Professional Associations on Federal Statistics (COPAFS). COPAFS is devoted to educational activities and to preserving the public good represented by federal statistical collections. Since 1980, COPAFS has provided an open dialog between those who use federal statistics in professional contexts and the Federal statistical agencies that produce those statistics for the public good. Supporting organizations include professional associations, businesses, research institutes, and others that help to produce and/or use federal statistics. COPAFS’ goal is to link organizations and the public to a thriving statistical system.
- Named vice-chair of The Council on Food, Agricultural and Resource Economics (C-FARE) Board of Directors
  » Has served on the Board since 2014, and on the organization’s Blue Ribbon Experts Panel since 2011.
  » Was also appointed C-FARE Chairman of the Programs Committee.
- Continues to serve on the Board of Directors of the Center for Rural Pennsylvania, a bicameral agency of the state, since 1999.
- Lead organizer of the Northeast Agriculture and Resource Economics Association (NAREA) Workshop on Advances in the Economic Analysis of Food System Drivers and Effects
  » The conference is organized by agricultural economists and seeks to bring together policy makers, practitioners as well as scientists working on various aspects of the food system, with the goal of understanding outcomes produced by the current system, and the factors or drivers causing these outcomes as well as how they in turn affect the food system over time.