EFSNE

Enhancing the Food Security of Underserved Populations in the Northeast U.S. through Sustainable Regional Food Systems (EFSNE)

Funded by USDA/NIFA (Global Food Security Program)

Prepared for the March 26, 2013 PD Meeting, Washington, DC

USDA United States Department of Agriculture | National Institute of Food and Agriculture

Grant No. 2011-68004-30057

Introduction

- **The Food Paradox**
  - 7+ million food insecure consumers in Northeast
  - Food-related health disparities in low income areas
  - Most food coming from outside the region
  - -- Continuing farmland loss
  - Growth in farm numbers (small, niche)
- **Interest in Local and Regional Foods**
  - Supply chain analyses, traceability
  - CSA, Farm to Fork, School, Institution, etc.
  - Economic development impacts
  - Dynamic changes in food retailing

http://www.usgcrp.gov/usgcrp/Library/nationalassessment/images/NE.jpg

Introduction

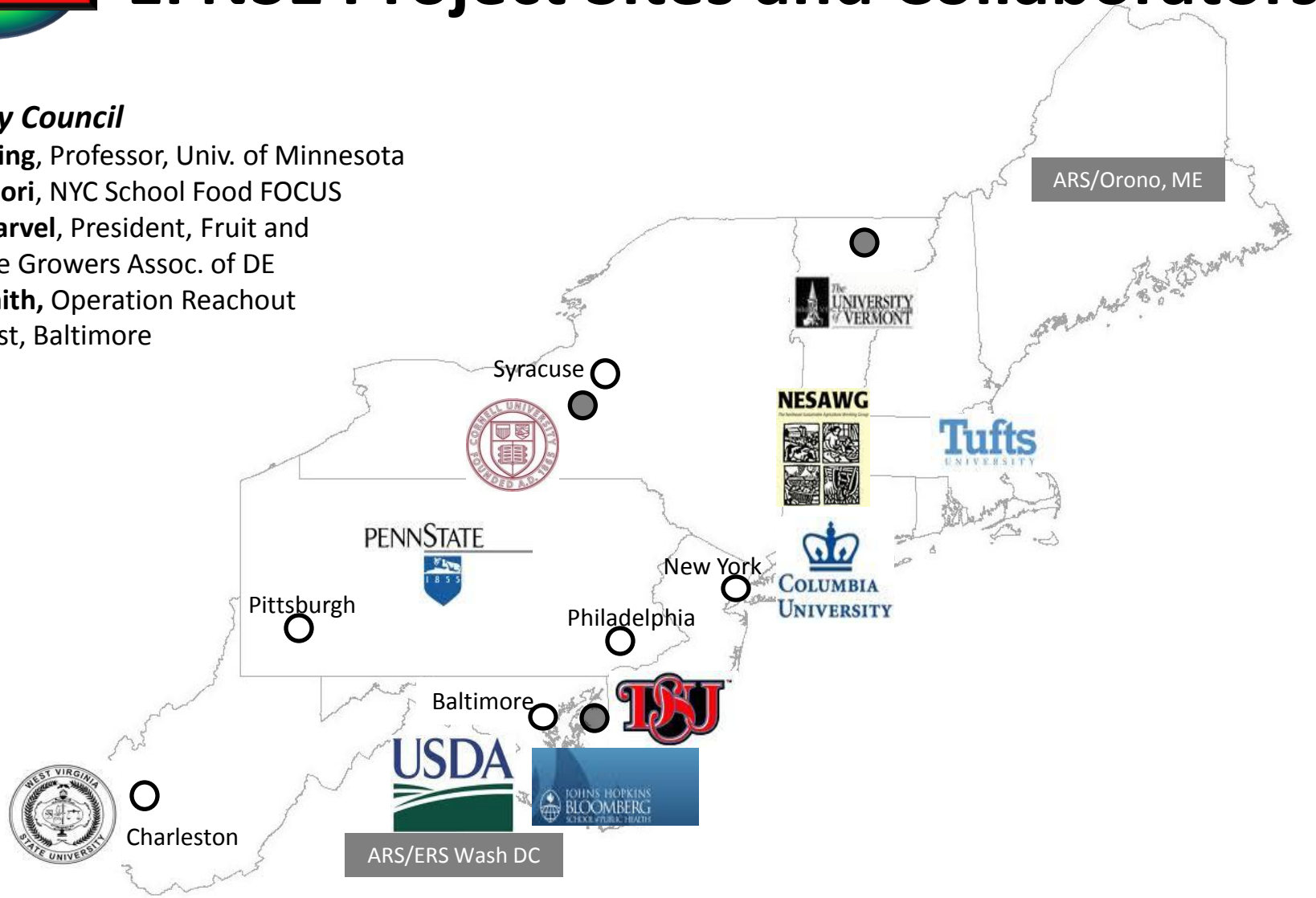
- **Basic question:** Can regional supply chains provide "healthy" foods to low-income consumers, at a price they can afford?
- Hypothesis of underlying *market failure*

http://washington.ifas.ufl.edu/images/ChipleyFarmersMarket2008005.jpg

EFNSE Project Sites and Collaborators

Advisory Council

Robert King, Professor, Univ. of Minnesota
Toni Liquori, NYC School Food FOCUS
David Marvel, President, Fruit and Vegetable Growers Assoc. of DE
Joyce Smith, Operation Reachout Southwest, Baltimore



Rural Study Sites (DE, NY and VT)
Metro Study Sites

Evaluation Design Consultant
Ed Wilson, The Headwaters Group

Objectives

1. Assess current and potential community-level constraints and opportunities for improving access to regionally produced food for people in urban and rural disadvantaged communities.
2. Identify and assess best food supply chain practices for some underserved areas of the Northeast, compare site-specific, regional and global chains, and identify policy interventions.

Objectives (cont.)

3. Quantify the current and potential capacity of the Northeast to produce a specific market basket of foods.

4. Disseminate knowledge and research insights to policy-makers, communities and others.

5. Work with community members to enhance knowledge of food sources.

6. Prepare students with the diverse skills needed to research and develop sustainable foods systems.

Materials and Methods

1. Consumer and store-level primary surveys; market baskets; focus groups
2. Supply-chain surveys (retailer, intermediary and producer)
3. Regional Simulation models (dairy, apples)
4. Consumer expenditure estimates (counties)
5. Econometric models of consumer behavior
6. Farm-/region-level productivity estimates
7. Regional self-reliance estimates
8. Whole system models and scenarios

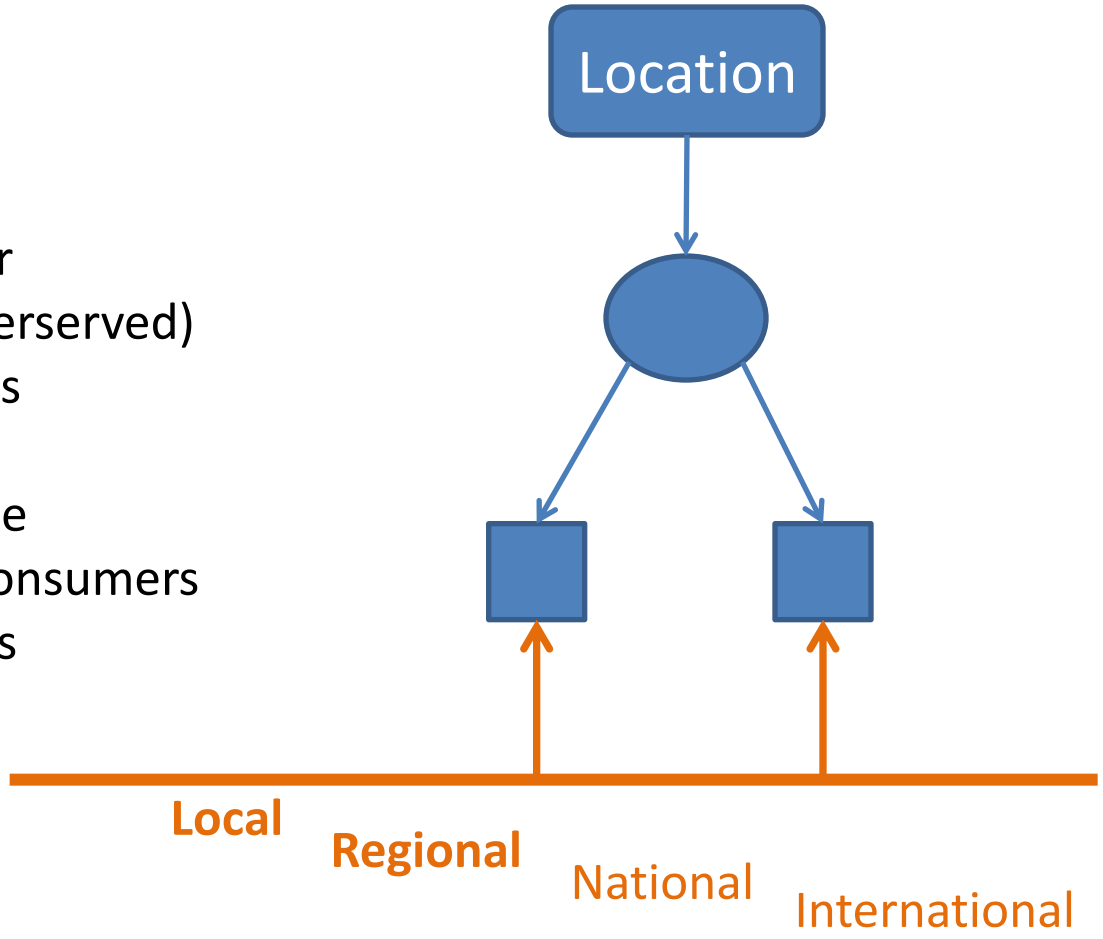
Survey/Modeling Strategy

One of 9 locations
(e.g., Baltimore)

One neighborhood or
community per (underserved)
location; focus groups

Two stores on average
per neighborhood; consumers
patronizing the stores

Supply chains,
business owners



Results: Consumption

1. Market baskets consisting of eight products have been defined
2. Intercept surveys and store inventories designed and administered
3. Preliminary results from the focus groups conducted with local community residents: *Challenges to buying more healthy and regional food…*

Affordability, availability, and quality are all inter-related challenges in target neighborhoods, but varies by site

Market Baskets

Conventional/Basic

- Whole milk
- Full fat ground beef
- White bread
- Fresh cabbage
- Fresh potatoes
- Frozen green beans in sauce
- Fresh apples
- Canned peaches in syrup

Healthy alternative

- 1% milk
- Low fat ground beef
- Whole grain bread
- Fresh cabbage
- Fresh potatoes
- Frozen green beans
- Fresh apples
- Canned peaches in juice

Results: Distribution

1. Opportunities to increase self reliance without increased cost to consumers may exist
2. The current regional milk distribution system is “efficient”

Results: Production

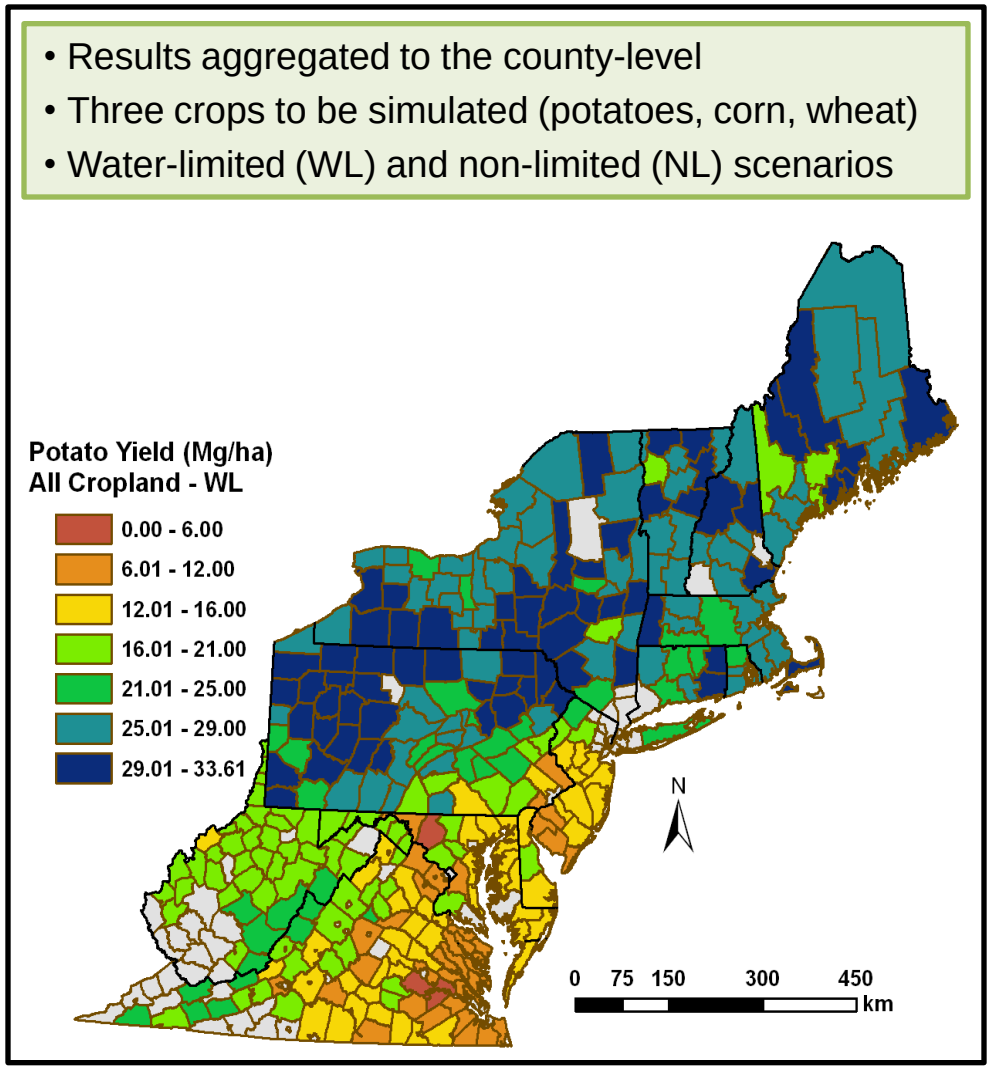
1. Regional self-reliance estimates for different foods vary widely (e.g., fluid milk)
2. Agricultural land use is dominated by crops associated with livestock production.
3. Baseline capacity for urban ag production potential of New York City published by UDL at Columbia*; urban and peri-urban land availability also assessed for the 6 urban centers.
4. Using geospatial crop modeling, the team discovered that annual potato yield in Maine could potentially be increased 4-fold if constraints related to suitable cropland and water availability were removed.

URL:http://www.urbandesignlab.columbia.edu/sitefiles/file/urban_agriculture_nyc.pdf

Geospatial Crop Modeling

- Current production
- Production Scenarios
  - Water use
  - Land use change
  - Climate change
- Questions:
  - How much land?
  - Highest potential yield?
  - Production constraints?
  - Resource needs?

- Results aggregated to the county-level
- Three crops to be simulated (potatoes, corn, wheat)
- Water-limited (WL) and non-limited (NL) scenarios



Scenarios and Models

1. Define scenarios and models for the project
2. Identify areas for trans-disciplinary work
3. Work at multiple scales with production, distribution, and consumption variables

Results: Outreach

1. CLRFS eXtension Community of Practice Formed ($50K) →Includes other grant recipients; 100+ members and growing
2. Private foundations have expressed interest in working with us
3. Community strategy is being developed by the Consumption and Outreach teams for the next years of the project

Results: Education

1. Food systems concepts introduced into existing courses at Tufts, DSU, JHU and PSU
2. Directed study opportunity provided at Tufts
3. Targeted review of community based experiential learning internship practices completed
4. Students attended EFNSE project meeting to observe and experience how large, interdisciplinary teams work together on complex problems
5. Cross institution collabs of grad students

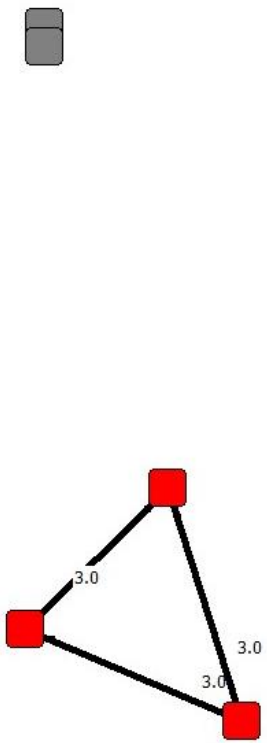
Conclusions

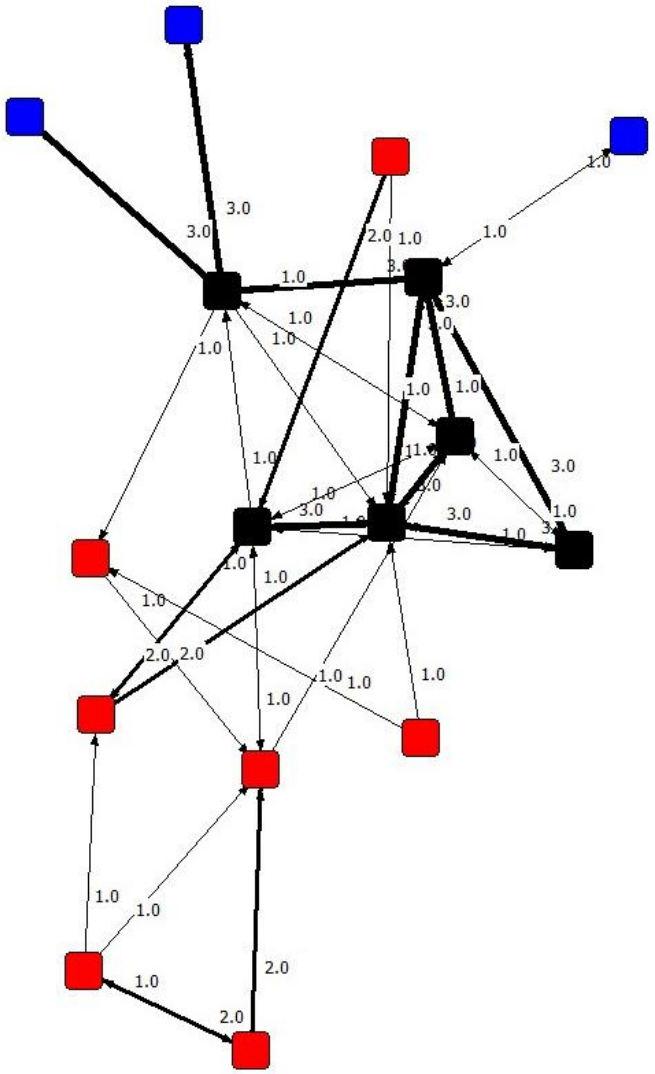
1. Student interest and engagement greater than anticipated
2. Work at community level requires substantial effort-uneven results
3. Technical work such as data-sharing is challenging
4. Adaptive management is key to daily problem solving
5. Ability to meet face-to-face is essential

Impacts/Lessons, etc.

1. Full integration of students into all parts of project
2. Teams learning to utilize new methods from unrelated disciplines
3. Project members learning to think conceptually and working at multiple scales in their teams
4. Project functioning as an emergent learning community

Evolution of the AFRI GFS Network: 2006



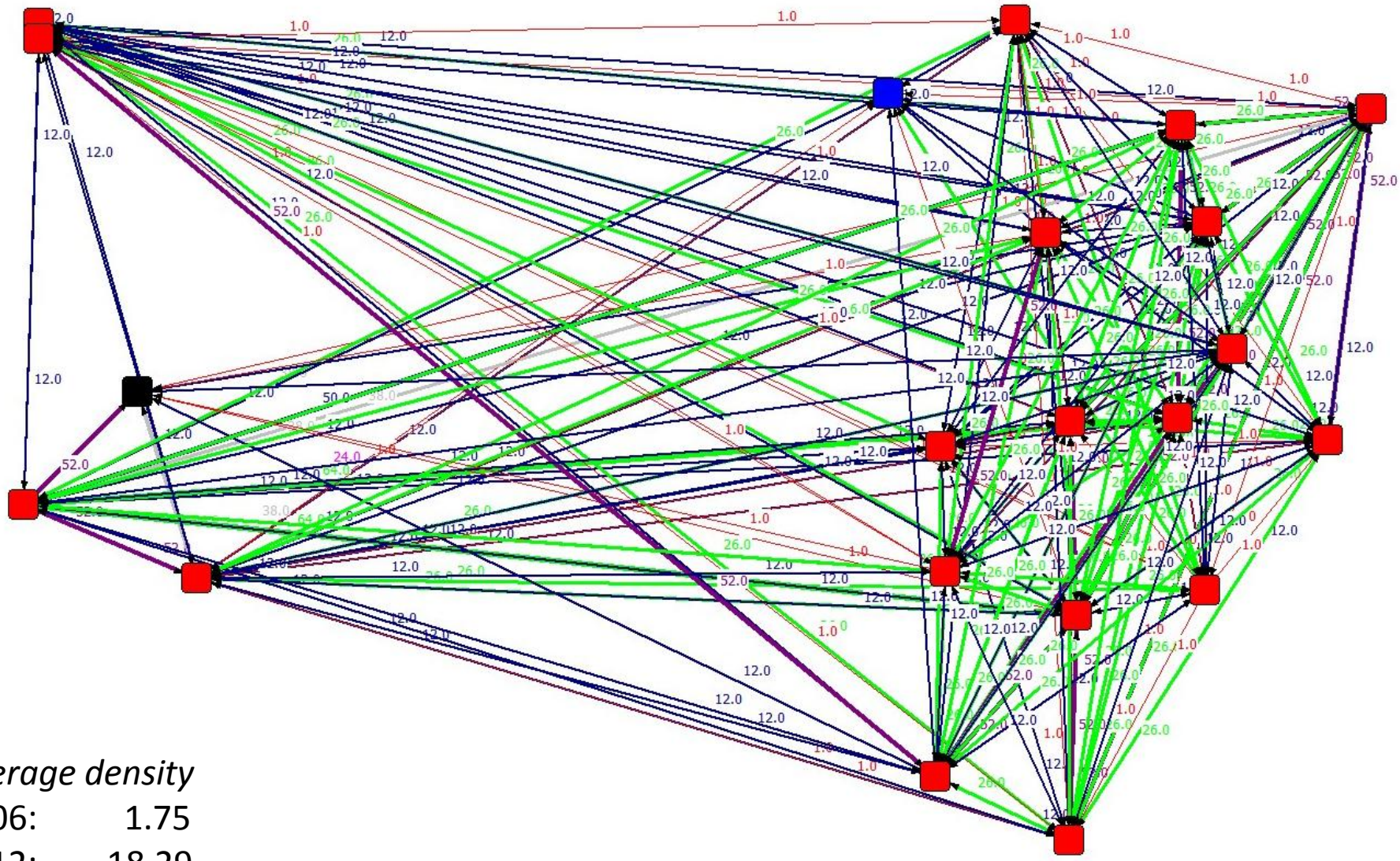


Average density
2006: 1.75

Legend
1: if knew of this individual in 2006
2: if ever cited this person's published work
3: if had worked relationship with (in local or regional foods)

Colors represent *k*-cores

Evolution of the AFRI GFS Network: 2012



Average density

2006:	1.75
2012:	18.29
t-stat:	(9.92)

Legend

Line colors show intensity of interaction

Colors represent *k*-cores

NE NIFA-GFS Project Launch Meeting:
Beltsville, MD, March 21-22, 2011

Pictured from left to right: Linda Berlin, David Marvel, Carol Giesecke, Alessandro Bonanno, Jonathan Resop, Mia Cellucci, Dave Fleisher, Clare Hinrichs, Tim Griffin, Deno De Ciantes, Joyce Smith, Christian Peters, Kate Clancy, Michael Conard, Juli Obudzinski, Kate Alie, Pat Canning, Kathy Ruhf, Miguel Gomez, Stephan Goetz; Kneeling: Anne Palmer and Toni Liquori

Not pictured: Kubi Ackerman, Amanda Behrens, Oliver Gao, Robert Larkin, Sherri DeFauw, Richard Plunz, Angel Park, Ben Walsh, Pam Hearn, Pam Hileman