Enhancing Food Security in the Northeast through Regional Food Systems
USDA Grant # 2011-68004-30057
Context: Two Versions of Food Security

The ability of a country or region to continually produce a significant portion of its staple foods

- Continuing loss of farmland
- Increased reliance on food outside of region
- Growth in farm numbers (mainly small)

Adequate access to an affordable food supply in low-income communities

- 7+ million food insecure, and rate increasing
- Problem with healthy food access in low-income areas
- Growing diet-related disease
Regional Approach

• 12 states from Maine to West Virginia and DC
• Why regional?
  – More variety in foods that can be grown = more likely to meet population’s food needs
  – Efficiencies can be gained at regional scale
  – Economic development – more market opportunities for farms and supply chain members of various sizes
Project Goals

• Can greater reliance on regionally produced foods improve food access for low-income communities, while also benefiting farmers, food supply chain firms, and others in the food system?
Sectoral Research Teams

- Consumption
- Distribution
- Production
- Outreach
- Education
Organizational Chart

**Advisory Board:** Robert King, Toni Liquori, David Marvel, Joyce Smith

**Stephan J. Goetz**
Project Director

---

**Obj. 1: Consumption**
Anne Palmer
Linda Berlin
A. Bonanno
Anita Bono
Kate Clancy
Kathy Dischner
Bonnie Dunn
Carol Giesecke
Clare Hinrichs
Heather Mikulas

---

**Obj. 2: Distribution**
Miguel Gomez
Patrick Canning
Kate Clancy
Oliver Gao
Frank Ge
Elaine Hill
Kris Parks

---

**Obj. 3: Production**
T. Griffin/C. Peters
Michael Conard
David Fleisher

---

**Obj. 4: Outreach**
Kathryn Ruhf
Linda Berlin
Michael Conard
Kristen Devlin
Deno DeCiantis

---

**Obj. 5: Education**
C. Peters
Linda Berlin
Carol Giesecke
Tim Griffin
Clare Hinrichs

---

**Scenarios & Modeling**
C. Peters
Alessandro Bonanno
Patrick Canning
Kate Clancy
Michael Conard

---

Dave Fleisher
Frank Ge
Miguel Gomez
Market Basket

- milk
- bread
- ground beef
- potatoes
- apples
- cabbage
- canned peaches
- frozen broccoli

• Construction through iterative process
  – CONS (store inventory, intercept surveys)
  – DIST (local foods in supply chains)
  – PROD (baseline for all products and capacity)
  – SCEMO (starting point for scenarios and models)
Consumption Objectives

Examine current and potential community-level constraints and opportunities for improving access to regionally produced healthy food for people in low-income communities.

At eight locations in the Northeast:

– Assess food access
  • Consumer intercept surveys
  • Focus groups
  • Market basket inventories
  • Store owner interviews

– Examine structural factors
  • Consumer behavior
  • County-level statistical modeling

**Locations:**
- New York City, NY
- Onondaga County, NY
- Baltimore, MD
- Pittsburgh, PA
- Charleston, WV
- Essex Co., VT
- Southern DE
- Madison Co., NY
Distribution Objectives

• Identify and assess food supply chains for low-income areas of the Northeast
• compare site-specific, regional and global chains
• identify policy interventions
Production Objectives

Quantify the current and potential capacity of the urban and rural Northeast to produce food that meets consumer needs.

For 300 Northeast counties:
- Baseline production data
- Capacity (GIS and modeling)
- Where future production could occur
- Climate change impact and land use changes
- Dietary and demographic change
Any questions about project background or research objectives?
# Supply Chain Case Studies

## Focal Products Chosen

<table>
<thead>
<tr>
<th>Location</th>
<th>Store 1</th>
<th>Store 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City, NY</td>
<td>N/A*</td>
<td>Frozen broccoli</td>
</tr>
<tr>
<td>Syracuse, NY</td>
<td>Canned Peaches</td>
<td>Frozen Broccoli</td>
</tr>
<tr>
<td>Madison County, NY</td>
<td>Milk</td>
<td>Ground Beef</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>Bread</td>
<td>Potatoes</td>
</tr>
<tr>
<td>Pittsburgh, PA</td>
<td>Frozen Broccoli</td>
<td>Cabbage</td>
</tr>
<tr>
<td>Charleston, WV</td>
<td>Ground Beef</td>
<td>Apples</td>
</tr>
<tr>
<td>Essex County, VT</td>
<td>Frozen Broccoli</td>
<td>Ground Beef</td>
</tr>
<tr>
<td>Sussex County, DE</td>
<td>Milk</td>
<td>Frozen Broccoli</td>
</tr>
</tbody>
</table>

N/A: store dropped from the study
Supply Chain for Potatoes, Madison Co., NY

- Potatoes purchased from other potato packer-shippers: 40%
- Potatoes grown by Country Potatoes: 60%
  - National Potatoes (Idaho): 20%
  - Country Potatoes Farm: 80%
- City Produce Wholesaler: 100%
- Sunnyside Gas and Groceries Case Study Store
  - Consumer
# Supply Chain Case Studies

## Focal Products Chosen

<table>
<thead>
<tr>
<th>Location</th>
<th>Store 1</th>
<th>Store 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York City, NY</td>
<td>N/A*</td>
<td>Frozen broccoli</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td>Syracuse, NY</td>
<td>Canned Peaches</td>
<td>Frozen Broccoli</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cabbage</td>
</tr>
<tr>
<td>Madison County, NY</td>
<td>Milk</td>
<td>Ground Beef</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cabbage</td>
</tr>
<tr>
<td>Baltimore, MD</td>
<td>Bread</td>
<td>Potatoes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canned Peaches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Frozen Broccoli</td>
</tr>
<tr>
<td>Pittsburgh, PA</td>
<td>Frozen Broccoli</td>
<td>Cabbage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Charleston, WV</td>
<td>Ground Beef</td>
<td>Apples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bread</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td>Essex County, VT</td>
<td>Frozen Broccoli</td>
<td>Ground Beef</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Milk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potatoes</td>
</tr>
<tr>
<td>Sussex County, DE</td>
<td>Milk</td>
<td>Frozen Broccoli</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Apples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ground Beef</td>
</tr>
</tbody>
</table>

**N/A**: store dropped from the study
“Regional Self Reliance”

Establish the baseline current production of healthy foods in the Northeast.

- Baseline production of all foods
### Baseline Balance (Regional)

<table>
<thead>
<tr>
<th>Vegetable Group</th>
<th>Regional Self-Reliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark Green</td>
<td>12%</td>
</tr>
<tr>
<td>Starchy</td>
<td>33%</td>
</tr>
<tr>
<td>Red and Orange</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>34%</td>
</tr>
</tbody>
</table>
eXtension Community of Practice

• Community, Local and Regional Food Systems eCoP
  – Webinars, articles, ask-an-expert
  – CLRFS eCoP sponsored a national conference, September 2014

• Over 300 colleagues have joined from across the US
• http://www.extension.org/community_and_regional_food_systems
http://agsci.psu.edu/research/food-security
A story about the roles and challenges of independent food retailers in the Northeast

Composed of multiple elements of the project, for example:

• Store owner in-depth interviews and case studies
• Focus-group and intercept survey reports back to store owners
• Satisfaction levels of shoppers as to prices, quality, and availability
• Prices of MB foods ↔ sites of production/processing