Agriculture Industry Clusters

1850 Production by Township

- 10-150 lbs
- 1501-1200 lbs.
- 1201-2400 lbs.
- 2401-4000 lbs.
- 4001-8500 lbs.
- 8501-21000 lbs.
- 21001-54000 lbs.
- 54000-105000 lbs.
- 105001-200000 lbs.
- 200000+ lbs.
Workshop Agenda

- Background
- Case Study of Concord Grape Belt
- Cluster Development strategies
- Small Farm Cluster Project
- Discussion
Industrial Cluster Theory

Alfred Marshall

Michael Porter
Clusters and Cluster Development

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a nation or region. Clusters arise because they increase the productivity with which companies can compete. The development and upgrading of clusters is an important agenda for governments, companies, and other institutions. Cluster development initiatives are an important new direction in economic policy, building on earlier efforts in macroeconomic stabilization, privatization, market opening, and reducing the costs of doing business.
Small Farm Cluster Project

- New York Certified Organic (NY)
- Chesapeake Fields (MD)
- Hmong Farmers (MA)
- Mushroom Cluster, Chester County (PA)
- New Farmer Development Project Participants (NY)
- North Country Dairy Viability Initiative (NY)
- Pennsylvania Women’s Ag Network (PA)
- Tuscarora Organic Growers (PA)

- Stephen Goetz, PSU
- InFlow 3.0 - Social Network Analysis software for mapping and measuring human networks of all types.
Workshop Objectives

By 10:30 YOU SHOULD...

...be familiar with AIC concepts (e.g., structures, strengths and weaknesses)

...understand the basics of “cluster analysis”

...be familiar with cluster development strategies
What is “Formal” Ag. Industry Cluster (AIC)?

A group of farms and/or allied food and agricultural enterprises, individuals, organizations, and agencies who work together on shared interests and toward a common goal.
Some New York State Agricultural Clusters

- Lake Ontario Apple Belt
- Lake Erie Concord Grape Belt
- Blue Point Oyster Cluster
- LI Duck Cluster
- Black Dirt Cluster
- Oswego Onion Cluster
- Batavia Agribusiness Cluster
- NY Cabbage Cluster
- FL American Viticultural Areas
- Wyoming Maple Sugar Cluster
- North Country Maple Sugar Cluster
- NYC Watershed Cayuga Co. Dairy Cluster
- Plain Sector Cluster
- Regional Farm and Food Project
- LI Potato Cluster
PRACTICAL

Benefits and Advantages of Cluster Development

- Credibility in Economic Development community
- Combining Resources/Economies of Scale
- Achieving as a group what is difficult to do as individuals
- Good PR
- Regional identity
- “Project packaging”
- Political Power
- Commiseration and mutual support
- Multiple points of view
- Larger scale networks
Possible Projects

- Joint R&D
- Joint labor programs
- Joint marketing initiatives
- Joint ventures, partnerships
- Joint lobbying
- Agricultural Impact studies
- Empire zone
- Celebration
“Growing Home” Agriculture Development Projects

- Heritage areas
- Farm and food trails
- Culinary Bounty Programs
- Shared-use kitchens
- Mobile processing units
- Buy-local programs
- Ag. Industry Park
- Ag Ambassador programs
- Bienvenido program
Cluster Organization Structures

- Informal Network
- Working group or task force
- Legislative committee or commission
- Non-profit Associations
- Cooperatives
- Legal partnerships
- For profit Corporations
CAUTION!

- Proprietary interests
- Organizational turf
- Competition
- Price-fixing
- Too many cooks spoil the broth
- Going it alone can be more efficient and effective in some cases
Why Are Agriculture Clusters Located Where They Are?
Geographic Determinants

Soil types

Bed Rocks of New York

- Dominant Sandstone
- Limestone & Shale
- Dominant Limestone
- Dominant Shale

Sandstone & Shale
Shale & Schist
Unconsolidated deposits
Geographic Determinants

% Soils in Hydrologic Groups A or B

- < 25.7
- 25.7 - 37.5
- 37.6 - 49.4
- 49.5 - 61.3
- 61.4 - 73.1
- 73.2 - 85.0
- >= 85.1

Percent
Geographic Determinants

Frost-Free Days

Map of New York showing the number of frost-free days, with different color codes indicating the number of days:
- < 163.4
- 163.4 - 169.8
- 169.9 - 176.2
- 176.3 - 182.6
- 182.7 - 189.0
- 189.1 - 195.5
- >= 195.6
Black Dirt Region

Lachy Sacz, 1999 - Folkdance from Poland's southern Sacz region  
Photo: Phil Benenati
Geographic Determinants

History, culture, traditions and other human activities
What Are the Geographical Determinants of the Following Agricultural Clusters?
Geographic Determinants

History, culture, traditions and other human activities

Elberta Peach
(Samuel Henry Rumph)
Cherries on Their Way to Market.
Some of the Million Trees that Abound in the Grand Traverse Region, Traverse City, Mich.
New Mexico Red Chile
A BUSY DAY IN MAINE

PICKING POTATOES IN AROOSTOOK
Great Lakes Wild Rice
Smithfield Ham
Pennsylvania Dutch
Finger Lakes AVAs

See winery list
Long Island Duck
Lake Ontario
Apple Belt
Croghan Maple Syrup District
Cabbage/Sauerkraut Cluster
Hops Region

Hops Production in New York State - 1850

Hops produced by town (in lbs.):
- 10-150 lbs
- 1501-1200 lbs.
- 1201-2400 lbs.
- 2401-4000 lbs.
- 4001-8500 lbs.
- 8501-21000 lbs.
- 21001-54000 lbs.
- 54000-105000 lbs.
- 1050001-200000 lbs.
- 200000+ lbs.
A Functional Agricultural Cluster Has...

...a vision and mission
...an organizational framework
...strong leadership
...broad representation of stakeholders
...regular meetings
...identified and prioritized issues
...productive project collaboration
...no fear in addressing differences
A Functional Cluster is NOT...

- One large vertically or horizontally integrated business
  - **Vertical** integration: when you own/control all your suppliers
  - **Horizontal** integration: when you own/control all your competitors
Cluster Members Commonly have:

- Generally close geographic proximity
- Shared interests
- Shared Sense of fate
- Significant employment
- Respect of community and economic development community
- Political power (clout)
Concord Grape Belt Agribusinesses

- Vineyard inputs supply retailers (18)
- Farm Equipment (6)
- Vineyard equipment manufacturers (1)
- Agricultural services (15)
- Agricultural agencies/programs (6)
- Trucking services (5)
- Non-Co-op Processors (4)
- Cooperative Processors (3)
- Wineries (14)
- Food distributors (1)
- Other Partners (including government, tourism) (8)
Anatomy of a Failed Cluster

- Mission not well defined
- Turf issues not worked out
- Poorly conceived projects
- Weak leadership
- Lack of resources
- Cluster based on artificial boundaries
- Personalities, egos
- Environmental impact ignored
# Typology of Agricultural Industry Clusters

## Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Functional Formal</th>
<th>Functional Informal</th>
<th>Dysfunctional</th>
<th>Failed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oswego Onion Cluster (NY Bold), Concord Grape Belt</td>
<td>Black Dirt Onion Region</td>
<td>Cape Cod Cranberries, ME Blueberry Barrens</td>
<td>Long Island Duck</td>
<td></td>
</tr>
<tr>
<td>Finger Lake Culinary Bounty</td>
<td>Batavia, NY</td>
<td>Hudson Valley Harvest?</td>
<td>Sonoma Select</td>
<td></td>
</tr>
<tr>
<td>NY Cheese Guild</td>
<td>IPM</td>
<td>Small-Scale Food Processors</td>
<td>NEFFFCo</td>
<td></td>
</tr>
<tr>
<td>NY Wine Industry</td>
<td>Maple Sugar</td>
<td>Dairy Industry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Economic Impact of CGB

- Jobs Supported: 1,923
- Total Economic Impact: $349 million*
- Wages Paid: $54 million
- Number of Producers: 800
- Bearing Acres: 30,000+
- Retail Value of Juice Sales: $208 million
- Retail Value of Wine Sales: $17.5 million
- Wine-Related Tourist Visits: 35,000

* Total Economic Impact is the total value of sales generated by juice processors, growers and other businesses from whom they purchase.
Case Study of the Concord Grape Belt
Lake Erie Concord Grape Belt Heritage Development Project: A Case Study in Agriculture Cluster Development

New York Agricultural Society
Duncan Hilchey
Community, Food, and Agriculture Program
Department of Development Sociology
College of Agriculture and Life Sciences
Cornell University
Lake Erie Concord Grape Belt
Township of Westfield

Legend
- InterState 90
- RT 20
- RT 5
- Vineyards
- Cities
- Townships

Elevation
- High: 527 ft
- Low: 172 ft

Lake Erie Concord Grape Belt Association
Commodity Agricultural Region with Interesting Mix of Challenges and Opportunities
Strong Social Capital
A Unique Landscape
History, Culture, and Tradition
Economic Development Opportunities
CGB Cluster Evolution

- Elija Fay: wine
- Table grapes
- Welch Family
- Numerous businesses locate in the CGB
- Other growing areas come on line
- Wineries
- Agritourism study
Concord Grape Belt Challenges

- Fastest shrinking county population in NYS
- Welch’s headquarters closes (2000)
- Grape prices erratic
- Weather has hurt harvests
- Competition from Washington State
- Consumption of Concord may slide...
- Vineyard consolidation (1,000 and shrinking)
Project Objectives

- Work with a community with untapped agricultural heritage.
- Develop strategies, techniques and approaches to food and ag-related heritage and regional identity.
- Conduct Extension and Outreach
- Encourage the state or federal government to recognize “Agricultural Heritage Areas” and provide them with resources and incentives which support their integrity and sustainability.
A Place at the Table
Nomination Process

Criteria
- Palpable identity
- No previous activities
- Organizational capability

Solicited nominations
Selected two finalist communities
Finalist site visits
Chose Concord Grape Belt
Members of the Team: Partners and Stakeholders

- CCE Chautauqua County
- Lake Erie Regional Grape Program
- Community, Food, and Agricultural Program, Department of Development Sociology and AEM at Cornell University
- Chadwick Bay Regional Development Corporation
- Chautauqua County Agritourism Committee
- Seaway Trail, Inc.
- Westfield Development Corporation
- North East, PA, Chamber of Commerce
- Fredonia Chamber of Commerce
- Silver Creek/Irving Chamber of Commerce
- Chautauqua County Chamber of Commerce
- Days Inn, Fredonia
- National Grape Cooperative Growers Cooperative Grape Juice Co., Inc.
- Cliffstar Corporation
- Canandaigua Wine Corporation
- Arrowhead Wine Cellars
- Baran Vineyards
- Westfield Historical Society
- Presque Isle Winery
- Chautauqua County Planning Department
CGB Heritage Area Process

- Core group formed
- Stakeholders identified
- Visioning and strategizing
- Mission statement
- Committee development
- Project implementation
- Formalization (Incorporation)
- Evaluation
- Growth and sustainability

The Community Agriculture Development Process

1. Gather a core group
2. Engage diverse stakeholders
3. Create a Shared Vision
4. Analyze the situation
5. Define desired outcomes
6. Set priorities
7. Define short-term objectives
8. Plan and implement project activities
9. Evaluate results, learn as you go, adjust plans
America’s First Product-Specific Agricultural Heritage Area
MISSION: A dynamic and expanding region built upon its Concord grape heritage and embracing all facets of the region’s grape and tourism industries to collectively improve the opportunities and quality of life for all its citizens.

— Tom Davenport, National Grape Coop
CGB Heritage Project Committees

- Heritage Committee
- Museum Committee
- Tourism/Promotion Committee
- Culinary Bounty Committee
- Inter-industry Committee
Lake Erie Concord Grape Belt Heritage Association, Inc.

Potential benefits:
– Preservation grants
– Vineyard preservation
– Greater local appreciation
– Industry unity
– Tourism development
Community and Economic Development Projects

- CGB Heritage Center
- Interpretive trail and DVD
- Culinary Bounty program
- Economic impact study
- Certified labeling
- Farm-to-school
- Microenterprise development

Welch’s Building
CGB Cluster Opportunities

- Packaging
- Agritourism cluster development
- Microenterprise development
- New Vineyard lab
- Heritage area
- Certified heritage products
- Wineries
- Organic grapes
- Empire Zone
- Expand cluster to include non-grape food processing?
Farm Signs

Lake Erie Concord Grape Belt

Heritage Association Member

The Oldest & Largest Concord Grape Region
Heritage Projects

- Photo collections
- “Foxfire” interviews
- Farm implement collections
New Businesses

- Juiceries; stained T-shirts
- Wineries
- Diversification opportunities
- Recreation and entertainment
Cuisine and Value-added Possibilities

- Restaurant agriculture
- Buy-local campaign
- Co-packing
- Shared-use kitchens
- Farm-to-school
- Institutional purchasing

- Grape chutney
- Grape catsup
- Jams, jellies
- Grape pies
- Pork loin in grape sauce
Coordinated Grape Festivals
Public Education Campaign
Concord Grape Belt Museum
Tourism Projects

- Roadside info kiosks
- Maps
- Brochures
- Signage
- Trails
- Vineyard and processing plant tours
- Pull-over vistas
Label of Controlled Origin (LCO) (proposed)

- Agricultural Heritage Area owns the license.
  - Lake Erie Concord Grape Belt Heritage Area Label of Controlled Origin. This label certifies that the producer of this product has met all heritage area qualifications and standards, and that 100% of the key ingredients were produced in the heritage area.

- Producer must be a member in good standing of the AHA; producer applies to use the label and pays an annual fee.

- AHA designates how the label is used.

- AHA can revoke the license if abuse is discovered.
CGB Farm-to-School Program
Increased Sales and Profit?

Welch's products

Concord Grape Juice Concentrate

Increased Sales and Profit?
How Are We Doing?

Figure 1. Concentration on process versus Concentration on results
N=18
Keys to Success

- Shared sense of fate
- Shared vision
- Strong local organizations and leaders
- Passionate belief that they can affect their future
- Checked egos at the door
- Strong sense of inclusiveness:
  - Stakeholders included competitors
  - Pennsylvania
- Industrial cluster approach (growers, processors, tourism)
- Infectious enthusiasm
New York State
“Heritage Area” Designation

- Formerly called “Urban Parks.”
- Certified local government may make a nomination.
- Legislation must be passed.
- Management plan must be produced.
- Finally, the heritage area may apply for certain preservation-related grants.
Agricultural Heritage Areas...

...recognize a *place-based* product.

...are geographically bounded.

...celebrate the communities that have evolved with the product.

...protect unique agricultural landscapes.

...reward traditional production practices.

...encourage stewardship of local resources.
Potential Benefits of an Agricultural Heritage Area

What We Hope For…

- Tax incentives and grants from state and federal government
- New dollars coming in from outside the community
- Plugging of economic leakages
- Greater sense of community pride
- Protection of natural and cultural resources
Cluster Development Strategies
Conventional Industrial Cluster Development Approach

Business Gap Analysis

Business recruitment/development

Job training
Cluster Analysis

- What cluster(s) *presently* exist in my region?
- How big are they?
- What cluster(s) are emerging?
- What cluster(s) *potentially* exist?

PROCESS

- Quantitative (location quotients, shift-share analysis, input-output analysis)
- Qualitative (key-informant interviews, focus groups)
SWOT Analysis

- Informs vision, mission, and project planning

ESSENTIALS:
- Representative participation
- Interviews, focus groups or both
- Facilitation is critical
- Some people will complain about how obvious some comments are…that’s OKAY
What Are Some Ways to Help?

- **Leadership**
  - Hosting meetings
  - Establishing core group
  - Stakeholder analysis and Forcefield analysis
  - Lead visioning session and SWOT analysis
  - Key informant interviews
  - Chairing a committee

- **Organizational Support**
  - Newsletter, mailings, meeting space
  - Serve as a funding “pass-through” agency

- **Project Development and Implementation**
  - Grant writing
  - Report writing
  - Evaluation
Annual Evaluation

- **Quantitative**
  - Annual survey of cluster stakeholders
  - Cluster sustainability indicators
    - Examples: # of farm foreclosures, loan defaults, changes in processing employment, ag parcel counts, CAFO violations

- **Qualitative**
  - Focus groups
  - Cluster Panel Technique
Resources

- Industrial cluster literature review
  [http://www.planning.unc.edu/courses/261/leveen/litrev.htm](http://www.planning.unc.edu/courses/261/leveen/litrev.htm)

- Location Quotients, Shift-Share Analysis
  [http://www.epa.gov/greenkit/pdfs/howto.pdf](http://www.epa.gov/greenkit/pdfs/howto.pdf)

- 2002 Census of Agriculture

- County Business Patterns
Duncan Hilchey

New Leaf Publishing and Consulting
Ithaca, NY
duncan@newleafnet.com
607.342.0259