Today’s Discussion

- Agricultural economic development – definitions & motivations
- Production sector trends
- Inter-industry linkages and impact assessment
- Related research activities in AED
- Set the stage for further discussions
Agricultural Economic Development

- **Some definitions:**
  - Agricultural strategies as a means to achieve the broad objectives of economic progress (Mellor, 1966).
  - Agricultural growth based on ecologically adapted and economically viable agricultural technologies that involve a continuous adaptation to available resources as well as responses by cultural, economic, and political forces (Hayami and Ruttan, 1971).
  - Adding economic vibrancy to the farm & food system (Bills, 2001).

- **Motivations:**
  - Performance (under) of state/local economies
  - Unexploited opportunities/competitive advantages
  - Removing barriers hindering growth and viability
  - Environmental considerations, externalities

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Important Linkages & Evolving Supply Chains

Important & Evolving Linkages

Globalization
Mergers
Acquisitions
Vertical Integration
Strategic Alliances


Cash receipts from farm marketings, New York State, 1990-2009

Source: US Sept. Commerce, Bureau of Economic Analysis
### Direct Farm Sales (D2C), New York State, 2007

**Agricultural products sold D2C versus all sales, NYS and US.**

<table>
<thead>
<tr>
<th>Area</th>
<th>Type</th>
<th>Farms (No.)</th>
<th>Sales ($ million)</th>
<th>Sales per Farm ($)</th>
<th>% Total Farms</th>
<th>% Total Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>D2C</td>
<td>5,338</td>
<td>14.8%</td>
<td>$ 77</td>
<td>29.7%</td>
<td>$ 14,512</td>
</tr>
<tr>
<td></td>
<td>All Ag</td>
<td>36,352</td>
<td>-2.4%</td>
<td>$ 4,419</td>
<td>41.7%</td>
<td>$ 121,551</td>
</tr>
<tr>
<td>US</td>
<td>D2C</td>
<td>136,817</td>
<td>17.2%</td>
<td>$ 1,211</td>
<td>49.1%</td>
<td>$ 8,853</td>
</tr>
<tr>
<td></td>
<td>All Ag</td>
<td>2,204,792</td>
<td>3.6%</td>
<td>$ 297,220</td>
<td>48.1%</td>
<td>$ 134,807</td>
</tr>
</tbody>
</table>


### Ag-Based Contributions to NYS Economy, $ Million, Value Added, 2009

- **Definition A**: $1,369
- **Definition B**:
- **Definition C**:
- **Definition D**:
- **Definition E**:
- **Definition F**:

Source: MIG 2009
Ag-Based Contributions to NYS Economy, $ Million, Value Added, 2009

Definition A $1,369
Definition B $2,374
Definition C $8,347
Definition D
Definition E
Definition F

Livestock/Crop Production
Food/Bev Ag/Chem Manufacturing
Food/Bev Retail Trade
Ag/Forestry/Vet Services
Ag/Food Wholesale Trade
Food Service/Drinking Places

Gross State Product = $1,090 billion.

Ag-Based = 4.5%

Source: MIG 2009
**Value Added Definition**

**Ag-Based Contributions to NYS Economy, $ Million, Value Added, 2009**

- **Definition A**: $1,369
- **Definition B**: $2,374
- **Definition C**: $8,347
- **Definition D**: $18,286
- **Definition E**
- **Definition F**

**Gross State Product = $1,090 billion.**

**Ag-Based = 4.5%**

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**Ag-Based Contributions to NYS Economy, $ Million, Value Added, 2009**

- **Definition A**: $1,369
- **Definition B**: $2,374
- **Definition C**: $8,347
- **Definition D**: $18,286
- **Definition E**: $28,163
- **Definition F**

**Source: MIG 2009**
### Ag-Based Contributions to NYS Economy, $ Million, Value Added, 2009

- **Definition A**: $1,369
- **Definition B**: $2,374
- **Definition C**: $8,347
- **Definition D**: $18,286
- **Definition E**: $28,163
- **Definition F**: $48,873

Gross State Product = $1,090 billion. Ag-Based = 4.5%

Source: MIG 2009

### Output and Employment Multipliers, New York State, 2009

<table>
<thead>
<tr>
<th>Sector</th>
<th>Output</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Production</td>
<td>2.01</td>
<td>1.54</td>
</tr>
<tr>
<td>Animal Production</td>
<td>1.65</td>
<td>1.36</td>
</tr>
<tr>
<td>Ag Support Services</td>
<td>1.92</td>
<td>1.32</td>
</tr>
<tr>
<td>Food Manufacturing</td>
<td>1.77</td>
<td>3.03</td>
</tr>
<tr>
<td>Beverage Manufacturing</td>
<td>1.57</td>
<td>3.34</td>
</tr>
<tr>
<td>Retail Food &amp; Beverage</td>
<td>1.70</td>
<td>1.25</td>
</tr>
<tr>
<td>Food Services &amp; Drinking Places</td>
<td>1.88</td>
<td>1.35</td>
</tr>
</tbody>
</table>

Source: MIG, 2009

Note: Multipliers are NOT additive across sectors!
### Economic Impact Estimates, New York State, 2009

#### Agricultural Production

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Employment (Number)</th>
<th>Labor Income ($ Million)</th>
<th>Value Added ($ Million)</th>
<th>Output ($ Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td>44,154</td>
<td>$1,194</td>
<td>$1,315</td>
<td>$3,747</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>12,308</td>
<td>$ 524</td>
<td>$ 952</td>
<td>$1,747</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>10,729</td>
<td>$ 565</td>
<td>$1,010</td>
<td>$1,603</td>
</tr>
<tr>
<td>Total Effect</td>
<td>67,191</td>
<td>$2,283</td>
<td>$3,277</td>
<td>$7,097</td>
</tr>
</tbody>
</table>

Source: MIG 2009

#### Food and Beverage Product Manufacturing*

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Employment (Number)</th>
<th>Labor Income ($ Million)</th>
<th>Value Added ($ Million)</th>
<th>Output ($ Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td>53,037</td>
<td>$2,825</td>
<td>$ 5,546</td>
<td>$26,223</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td>67,017</td>
<td>$4,230</td>
<td>$ 6,766</td>
<td>$13,237</td>
</tr>
<tr>
<td>Induced Effect</td>
<td>43,624</td>
<td>$2,304</td>
<td>$ 4,120</td>
<td>$ 6,539</td>
</tr>
<tr>
<td>Total Effect</td>
<td>163,678</td>
<td>$9,359</td>
<td>$16,432</td>
<td>$45,999</td>
</tr>
</tbody>
</table>

*Production and manufacturing effects are NOT additive. Backward linkages in food and beverage manufacturing INCLUDE farm production, as well as other industries.*

Source: MIG 2009
Related Research & Extension Activities

- Comprehensive impact assessment of ag-based (sub)sectors and inter-industry linkages
  - Better understanding of evolving industry dynamics to inform AED strategy
  - State, regional and inter-regional analyses

- Food manufacturing industry development
  - Implications of agglomeration economies of related/like industries
  - Development of public and private sector strategies
  - Growing milk processing demands

- Economic impacts of local/regional food system development
  - Regional food hubs - aggregation and distribution services
  - Rural food deserts and community development
  - Import substitution, related sector offsets

Thank You!

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