UF/IFAS Extension
The Journey to Sustainability Begins with Education
INVESTING IN THE ECONOMIC BENEFITS OF LOCAL FOODS

2011 Sustainable Communities Workshop
Sarasota, FL

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OUTLINE

- Review of Food System Concepts
- Foodshed Economy Background
- Examples and tools for local foodshed economic development
WHAT IS A FOODSHED?

• The Who, What, Where, When, Why & How of Food Getting From Farm to Our Plate

EarthFriends. 1995. The Whole Story of Food
FLORIDA FOOD VARIETY & ABUNDANCE

Beans
Blueberries
Broccoli
Cabbage
Celery
Citrus
Corn
Cotton
Ferns
Foliage plants
Grains
Grapes
Lettuce

Ornamentals
Palms
Peaches
Pecans
Peanuts
Peppers
Pine trees
Potatoes
Soybeans
Squash
Strawberries
Sucarcane
Sweet potatoes
Tobacco

Tomatoes
Tropical fruit
Tropical vegetables
Turfgrass
Watermelon
The Current Local Foodshed

“Agricultural Supplies”

Food production
(largely technological and removed from society)

Global Food Distribution
(nonrenewable energy)

System Is Not A Closed Loop or Locally Based!

“waste products”

Food Preparation and Consumption
(fast and cheap)
Goal: Sustainable Local Foodshed

Healthy Food Production

Integrated into Community

Local Food Distribution Channels

Compost and other products

Food Preparation and Consumption
(Nutritious and Healthy)

The Solutions: Close the Loop & Implement Sustainable Ag
“WHAT IS A LOCAL FOODSHED?”

- Foods from a determined food miles from your home (e.g., 100\(^1\), 250\(^2\) or 400\(^3\) miles) or

100 Mile Diet, http://100milediet.org/;
Food Routes, http://www.foodroutes.org/

- Within a day's leisurely drive of our homes or

Joan Dye Gussow. 2006. This Organic Life.

- Determined by the consumer with information about geographic origin of food.

Florida Association of Community Farmers’ Markets (FACFM)
SARASOTA LOCAL FOODSHED EXAMPLES

Farmers Markets

Brown’s Grove

On-Farm Sales & Community Supported Farms

Jessica’s Organic Farm

Backyard Gardens

Community & School Gardens
Community Foodshed Concept
COMMUNITY FOODSHED CONCEPT

- Includes expanded food-related issues
  - food security
  - agriculture profitability
  - diet-related diseases
  - hunger
  - farmland loss
  - lack of economic opportunity for rural and low-income communities
  - sustainability
  - poor access to healthy foods
ECONOMIC IMPACT CONCEPTS

- Economic activity or contributions
- Economic impact: net change in regional economic activity ("new money")
- Local vs nonlocal spending
- Economic benefits
- Value added
- Employment
- Taxes
- Non-market values
Example FL Dept. of Agriculture Statistics

**Aggregate Economic Output** of the following activities:

- Crop
- Livestock
- Forestry and fisheries production
- Mining
- Agricultural inputs and services
- Food and kindred products manufacturing
- Forest products manufacturing
- Food and kindred products distribution
- Nature-based recreation.

http://www.florida-agriculture.com/economic_impact.htm
Example FL Dept. of Agriculture Statistics
Multipliers capture the effect on overall economic activity in a specific region as the result of changes in sales, spending or employment in a given industry, or for a project or event.

Types of Multipliers

- Direct Effects
- Indirect Effects
- Induced Effects

Watson et al., 2007
## Local Economy Multiplier Benefits

### Example Analysis

### Table 11B: Economic Impact of Iowa Farmers' Markets ($ Income)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>4,818,841.0</td>
<td>440,896.0</td>
<td>9,687.0</td>
<td>5,269,424.0</td>
</tr>
<tr>
<td>Mining</td>
<td>0.0</td>
<td>380.0</td>
<td>45.0</td>
<td>424.0</td>
</tr>
<tr>
<td>Utilities</td>
<td>0.0</td>
<td>45,008.0</td>
<td>37,071.0</td>
<td>82,079.0</td>
</tr>
<tr>
<td>Construction</td>
<td>0.0</td>
<td>37,899.0</td>
<td>20,147.0</td>
<td>58,046.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.0</td>
<td>153,209.0</td>
<td>115,550.0</td>
<td>268,759.0</td>
</tr>
<tr>
<td>Transportation &amp; warehousing</td>
<td>0.0</td>
<td>313,316.0</td>
<td>227,787.0</td>
<td>541,102.0</td>
</tr>
<tr>
<td>Retail trade</td>
<td>3,541,135.0</td>
<td>34,953.0</td>
<td>448,798.0</td>
<td>4,024,887.0</td>
</tr>
<tr>
<td>Information services</td>
<td>0.0</td>
<td>48,347.0</td>
<td>49,266.0</td>
<td>97,613.0</td>
</tr>
<tr>
<td>Finance, insurance &amp; real estate</td>
<td>0.0</td>
<td>179,169.0</td>
<td>246,167.0</td>
<td>425,337.0</td>
</tr>
<tr>
<td>Professional and technical services</td>
<td>0.0</td>
<td>217,708.0</td>
<td>854,906.0</td>
<td>1,072,614.0</td>
</tr>
<tr>
<td>Other services</td>
<td>0.0</td>
<td>42,476.0</td>
<td>281,736.0</td>
<td>324,212.0</td>
</tr>
<tr>
<td>Government</td>
<td>0.0</td>
<td>27,722.0</td>
<td>25,048.0</td>
<td>52,770.0</td>
</tr>
<tr>
<td>Total</td>
<td>8,359,975.0</td>
<td>1,541,084.0</td>
<td>2,316,207.0</td>
<td>12,217,266.0</td>
</tr>
</tbody>
</table>

Source: IMPLAN model for Iowa

Otto & Varner, 2005
**Agriculture Examples**

Florida Agriculture Multiplier Effects on Local Economy Exceed Standard Economic Development Industries

Clouser et al., 2009
**Florida Agriculture Multiplier Effects on Local Economy Exceed Standard Economic Development Industries**

<table>
<thead>
<tr>
<th>Commodity Group (Other Industry and Commodity Group Sectors)</th>
<th>Industry Output ($M)</th>
<th>Output Impacts ($M)</th>
<th>Total Output Impacts / Industry Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>2,594.03</td>
<td>2,753.79</td>
<td>1.06</td>
</tr>
<tr>
<td>Construct other new nonresidential structures</td>
<td>472.90</td>
<td>468.11</td>
<td>1.09</td>
</tr>
<tr>
<td>Maintenance &amp; repair construct of nonresident structure</td>
<td>267.50</td>
<td>468.11</td>
<td>1.36</td>
</tr>
<tr>
<td>Consumer Services</td>
<td>805.16</td>
<td>909.40</td>
<td>1.13</td>
</tr>
<tr>
<td>Personal and household goods repair and maintenance</td>
<td>84.06</td>
<td>106.22</td>
<td>1.26</td>
</tr>
<tr>
<td>Health Care</td>
<td>2,259.32</td>
<td>2,579.54</td>
<td>1.14</td>
</tr>
<tr>
<td>Nursing and residential care facilities</td>
<td>185.71</td>
<td>202.57</td>
<td>1.09</td>
</tr>
<tr>
<td>Offices – physicians, dentists, other health practitioners</td>
<td>1,091.63</td>
<td>1,394.82</td>
<td>1.28</td>
</tr>
<tr>
<td>Information and Communications</td>
<td>792.08</td>
<td>950.53</td>
<td>1.20</td>
</tr>
<tr>
<td>Data processing, hosting, and related services</td>
<td>106.42</td>
<td>191.16</td>
<td>1.80</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6,909.73</td>
<td>11,501.77</td>
<td>1.66</td>
</tr>
<tr>
<td>Aircraft manufacturing</td>
<td>108.87</td>
<td>167.57</td>
<td>1.54</td>
</tr>
<tr>
<td>Bare printed circuit board manufacturing</td>
<td>499.12</td>
<td>913.97</td>
<td>1.83</td>
</tr>
<tr>
<td>Broadcast and wireless communications equipment</td>
<td>158.32</td>
<td>214.61</td>
<td>1.36</td>
</tr>
<tr>
<td>Guided missile and space vehicle manufacturing</td>
<td>1,328.36</td>
<td>2,421.67</td>
<td>1.82</td>
</tr>
<tr>
<td>Ready-mix concrete manufacturing</td>
<td>74.48</td>
<td>123.91</td>
<td>1.66</td>
</tr>
<tr>
<td>Semiconductor and related device manufacturing</td>
<td>1,504.99</td>
<td>2,650.81</td>
<td>1.76</td>
</tr>
<tr>
<td>Professional and Technical Services</td>
<td>4,489.56</td>
<td>6,443.90</td>
<td>1.44</td>
</tr>
<tr>
<td>Architectural, engineering, and related services</td>
<td>567.92</td>
<td>770.92</td>
<td>1.36</td>
</tr>
<tr>
<td>Custom computer programming services</td>
<td>395.19</td>
<td>480.39</td>
<td>1.22</td>
</tr>
<tr>
<td>Real Estate and Financial Services</td>
<td>2,775.43</td>
<td>3,280.31</td>
<td>1.18</td>
</tr>
<tr>
<td>Insurance agencies, brokerages, and related activities</td>
<td>322.44</td>
<td>562.20</td>
<td>1.74</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>1,607.13</td>
<td>1,766.73</td>
<td>1.09</td>
</tr>
<tr>
<td>Retail stores – electronics and appliances</td>
<td>90.68</td>
<td>102.56</td>
<td>1.13</td>
</tr>
<tr>
<td>Retail stores – general merchandise</td>
<td>312.61</td>
<td>367.40</td>
<td>1.18</td>
</tr>
<tr>
<td>Retail stores – health and personal care</td>
<td>150.57</td>
<td>171.09</td>
<td>1.14</td>
</tr>
<tr>
<td>Transportation</td>
<td>462.00</td>
<td>551.21</td>
<td>1.19</td>
</tr>
<tr>
<td>Transport by rail</td>
<td>7.73</td>
<td>8.26</td>
<td>1.07</td>
</tr>
<tr>
<td>Transport by truck</td>
<td>139.85</td>
<td>147.59</td>
<td>1.06</td>
</tr>
<tr>
<td>Transport by water</td>
<td>31.38</td>
<td>41.12</td>
<td>1.31</td>
</tr>
<tr>
<td>Travel and Entertainment Services</td>
<td>394.48</td>
<td>473.74</td>
<td>1.20</td>
</tr>
<tr>
<td>Amusement parks, arcades, and gambling industry</td>
<td>145.85</td>
<td>188.51</td>
<td>1.29</td>
</tr>
<tr>
<td>Other amusement and recreation industries</td>
<td>33.30</td>
<td>52.93</td>
<td>1.59</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>769.16</td>
<td>837.50</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Source: MIG, Inc. (2008)
SARASOTA FOOD ECONOMY IMPACTS

Example FL Dept. of Agriculture Statistics

Output (Revenue) Impacts of Agriculture, Natural Resources, Food & Kindred Product Manufacturing, Distribution and Service Industry Groups in Sarasota County in 2008

Compiled by Alan W. Hodges, University of Florida, May 20, 2008
Source: I-Plan Professional, data for Florida Counties (MIG, Inc., Stillwater, MN)

Values expressed in millions dollars using GDP implicit price deflator (U.S. Commerce Dept.)

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Output Revenue ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops, Livestock, Forestry &amp; Fisheries Production</td>
<td>049.5</td>
</tr>
<tr>
<td>Livestock Production and Animal Products</td>
<td>17.5</td>
</tr>
<tr>
<td>Agricultural Inputs &amp; Services</td>
<td>239.9</td>
</tr>
<tr>
<td>Mining</td>
<td>48.4</td>
</tr>
<tr>
<td>Food &amp; Kindred Products Distribution</td>
<td>1,356.2</td>
</tr>
<tr>
<td>Nature-based Recreation</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,870.3</strong></td>
</tr>
</tbody>
</table>
# Economic Contributions of Production Agriculture in Sarasota County in 2008

Compiled by Alan W. Hodges, University of Florida, May 19, 2008

Source: Implan Professional, data for Florida Counties (MIG, Inc., Stillwater, MN)

**Values expressed in millions dollars** using GDP implicit price deflator, mid year (US Commerce Dept.)

<table>
<thead>
<tr>
<th>Ag Production</th>
<th>Output Revenues</th>
<th>Output Impacts</th>
<th>Employment (full &amp; part-time jobs)</th>
<th>Value Added Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetable and melon farming</td>
<td>7.1</td>
<td>7.9</td>
<td>33</td>
<td>5.2</td>
</tr>
<tr>
<td>Fruit farming</td>
<td>6.0</td>
<td>6.9</td>
<td>90</td>
<td>4.4</td>
</tr>
<tr>
<td>Greenhouse/nursery</td>
<td>6.0</td>
<td>7.7</td>
<td>51</td>
<td>6.1</td>
</tr>
<tr>
<td>Poultry/egg</td>
<td>4.4</td>
<td>4.9</td>
<td>9</td>
<td>1.1</td>
</tr>
<tr>
<td>Cattle</td>
<td>3.4</td>
<td>4.2</td>
<td>35</td>
<td>1.0</td>
</tr>
<tr>
<td>All other animals</td>
<td>0.7</td>
<td>0.7</td>
<td>18</td>
<td>0.4</td>
</tr>
<tr>
<td>Commercial fishing</td>
<td>1.2</td>
<td>1.4</td>
<td>37</td>
<td>0.3</td>
</tr>
<tr>
<td>Support activities</td>
<td>6.1</td>
<td>11.1</td>
<td>164</td>
<td>8.1</td>
</tr>
</tbody>
</table>
STRATEGY EXAMPLE OF LOCAL FOODSHED DEVELOPMENT IN SARASOTA

Partnership Between Sarasota County School Board and Sarasota County Extension

2010-2011 School Year

- 50% of Produce Purchased from Local Sources
- Value of Local Food Purchases:
  - Produce - $107,000
  - Dairy - $500,000
WHAT ARE ASSETS FOR INVESTING IN SARASPTA FOODSHED ECONOMY?

- Inventory of Our Local Food Producers, Purveyors & Suppliers Is a Beginning

http://eatlocalguide.com/sarasota/

http://sarasota.ifas.ufl.edu/AG/localfood.shtml

http://ags.scgov.net/GreenMapFl/ex/bin-release/index.html
WHERE IS OUR LOCAL FOODSHED ACTIVE FARM LAND?

2010 Inventory of Ag Classified Lands (108,787 ac or 30% land mass)
WHERE ARE OUR LOCAL FOODSHED POTENTIAL LANDS?

2010 Inventory of Vacant Lands (Open Use Zoning)
WHERE ARE OUR LOCAL FOODSHED POTENTIAL LANDS?

2010 Inventory of Vacant Lands (Residential Zoning)
WHERE ARE OUR LOCAL FOODSHED POTENTIAL LANDS?

2010 Inventory of Vacant Lands (Commercial Zoning)
WHERE ARE OUR LOCAL FOODSHED RESOURCES?

2009 Inventory of Licensed Commercial Kitchens
BENEFITS OF INVESTING IN LOCAL/REGIONAL FOODSHED ECONOMY

- improve economic viability of farming community
- create jobs and local economic growth
- build public support for agriculture
- bring culturally appropriate foods to customers
- help kids and adults understand where their food comes from and how it’s raised
- improve public health and nutrition
- promote greater security and less vulnerability to disruption in food supplies

