Patterns of Agricultural Adaptation at the Rural-Urban Interface (RUI)

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Challenges Faced by U.S. Farmers

- **COST-PRICE SQUEEZE**
  - Declining commodity prices
  - Rising input costs
  - Technological treadmill

- **DEMOGRAPHICS**
  - Aging population; declining rates of farm entry

- **POLICY SHIFTS**
  - Food safety & environmental regulations

- **CLIMATE CHANGE, WATER SHORTAGES**
Challenges of Farming at the RUI

- All of the mainstream ag challenges, plus...
- Added burden of competition from nonfarm sector for the use of farmland
  - Rising land prices
  - Nuisance conflicts
  - More restrictive land use regulations
- Generally, production agriculture seen as incompatible with urbanizing countryside
  - Farmer discussions
  - Scholars: ‘productivist’ → ‘post-productivist’ landscapes
  - Major political debate at local level in US: protect farms?
Why Does Ag Persist at RUI?

- Greater access to urban amenities and activities (farm family quality of life)
- Greater access to off-farm employment opportunities (farm household survival)
- Greater access to urban-oriented food markets (CSAs, Farmers Markets, Direct Sales, etc.)
Background on “Ag Adaptation at the RUI” Study

- Begun in 2004 with USDA/NRI funding
- Collaboration between social scientists at OSU & USU
- Goals:
  - Document trajectories of farm adaptation at RUI
  - “Can Communities make a Difference?”…what is impact of:
    - Population growth pressures
    - Quality of natural resources
    - Community social capital
    - Local land use policies
    - Local agricultural development programs
Methods

- Focus on specific subset of US counties
  - Agriculturally Important (AI)
  - Rural-Urban Interface (RUI)
- Two levels of analysis
  - ~600 US counties that are both AI and RUI
    - Analysis of ag census trends & other data
    - Survey of key informants
- 8 intensive case study counties
  - Field visits and interviews
  - Survey of farmland owners and commercial farmers
Ag. Important Counties at RUI

Agriculturally Important Counties at the Rural-Urban Interface
# Percent of US Total 2002

*by County Type*

<table>
<thead>
<tr>
<th></th>
<th>RURAL-URBAN INTERFACE (RUI) COUNTIES</th>
<th>NON-RUI COUNTIES</th>
<th>USA total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AI</td>
<td>Non-Al</td>
<td>AI</td>
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<tr>
<td>Counties</td>
<td>16.1</td>
<td>33.5</td>
<td>15.6</td>
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<tr>
<td>Population</td>
<td>36.3</td>
<td>52.6</td>
<td>4.0</td>
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<tr>
<td><strong>All Agriculture</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Farms</td>
<td>24.8</td>
<td>32.9</td>
<td>17.5</td>
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<tr>
<td>Farmland</td>
<td>15.4</td>
<td>22.2</td>
<td>22.3</td>
</tr>
<tr>
<td>Harvested Cropland</td>
<td>21.4</td>
<td>16.2</td>
<td>35.1</td>
</tr>
<tr>
<td>Sales</td>
<td>40.7</td>
<td>11.0</td>
<td>34.2</td>
</tr>
<tr>
<td><strong>Urban-Oriented Ag</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Sales ($)</td>
<td>48.6</td>
<td>29.2</td>
<td>9.7</td>
</tr>
<tr>
<td>Direct Sales (farms)</td>
<td>31.9</td>
<td>36.4</td>
<td>12.1</td>
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<tr>
<td>Organic Sales ($)</td>
<td>71.4</td>
<td>5.5</td>
<td>16.1</td>
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<tr>
<td>Organic Sales (farms)</td>
<td>41.7</td>
<td>24.9</td>
<td>16.8</td>
</tr>
</tbody>
</table>
### Agricultural Adaptations (1997-2007)
#### by County Type

**Percent of Counties**

<table>
<thead>
<tr>
<th>Category</th>
<th>RUI-Al</th>
<th>RUI-NonAl</th>
<th>NonRUI-Al</th>
<th>NonRUI-NonAl</th>
<th>All Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declining</td>
<td>8.3</td>
<td>24.6</td>
<td>3.8</td>
<td>13.4</td>
<td>14.7</td>
</tr>
<tr>
<td>Deintensifying</td>
<td>4.7</td>
<td>21.2</td>
<td>3.5</td>
<td>18.6</td>
<td>14.8</td>
</tr>
<tr>
<td>Stable</td>
<td>19.7</td>
<td>21.9</td>
<td>15.4</td>
<td>20.4</td>
<td>20.0</td>
</tr>
<tr>
<td>Intensifying</td>
<td>56.8</td>
<td>21.7</td>
<td>62.8</td>
<td>35.6</td>
<td>38.9</td>
</tr>
<tr>
<td>Growing</td>
<td>10.5</td>
<td>10.6</td>
<td>14.4</td>
<td>11.9</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Trajectories, 1987-1997
Decline
Deintensification
Persistence/Stable
Intensification
Growth

RUI-AI Counties
(and location of case study counties)
### Agricultural Trajectories in Case Study Sites, 1987-2002

<table>
<thead>
<tr>
<th>County</th>
<th>Farm Sales Trends</th>
<th>Farmland Trends</th>
<th>Farm Number Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yamhill, OR</td>
<td>GROWTH</td>
<td>GROWTH</td>
<td>GROWTH</td>
</tr>
<tr>
<td>Kent, MI</td>
<td>GROWTH</td>
<td>DECLINE</td>
<td>DECLINE</td>
</tr>
<tr>
<td>Shelby, KY</td>
<td>DECLINE</td>
<td>STABLE</td>
<td>STABLE</td>
</tr>
<tr>
<td>Hall, GA</td>
<td>STABLE</td>
<td>STABLE</td>
<td>STABLE</td>
</tr>
<tr>
<td>Spencer, KY</td>
<td>DECLINE</td>
<td>STABLE</td>
<td>DECLINE</td>
</tr>
<tr>
<td>Cache, UT</td>
<td>STABLE</td>
<td>DECLINE</td>
<td>DECLINE</td>
</tr>
<tr>
<td>Frederick, MD</td>
<td>DECLINE</td>
<td>DECLINE</td>
<td>STABLE</td>
</tr>
<tr>
<td>Forsyth, GA</td>
<td>DECLINE</td>
<td>DECLINE</td>
<td>DECLINE</td>
</tr>
</tbody>
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# Agricultural Trajectories (cont.)

<table>
<thead>
<tr>
<th>County</th>
<th>Intensification</th>
<th>Urban Agriculture</th>
<th>Deintensification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache</td>
<td>HIGH</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Frederick</td>
<td>MEDIUM</td>
<td>HIGH</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Yamhill</td>
<td>HIGH</td>
<td>HIGH</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Kent</td>
<td>HIGH</td>
<td>HIGH</td>
<td>MEDIUM</td>
</tr>
<tr>
<td>Hall</td>
<td>MEDIUM</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>Shelby</td>
<td>LOW</td>
<td>MEDIUM</td>
<td>HIGH</td>
</tr>
<tr>
<td>Forsyth</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW</td>
</tr>
<tr>
<td>Spencer</td>
<td>LOW</td>
<td>LOW</td>
<td>LOW</td>
</tr>
</tbody>
</table>
Results of Farmer & Landowner Surveys
(random sample of 372 farms across the 8 sites)
Profile of Landowners (5+ acres)

- **HIGHLIGHTS ROLE OF NON-FARMERS AT RUI**
  - 44 % currently farm any land in county
    - 21 % currently operate “commercial farm” (about ½ who farm)
    - 14 % say principal occupation = farmer
    - 54 % ever operated commercial farm – means there is a sizeable group without farming experience at all
  - 27 % rent land out to another farmer
    - Many don’t
  - 52 % currently live on their farmland parcels
Profile of Farming Landowners

- **FARM SIZE**
  - 28% operate < 40 acres  44% > 160 acres

- **ANNUAL FARM SALES**
  - 30% sold < $10,000  36% > $100,000

- Reliance on farm income – wide range
  - 42% “very little income from farming”
  - 34% most household income from farming

- About half had someone working off-farm
- About a third hired Latino workers
"VALUE-CHAIN" MARKETING ACTIVITIES

- Sold as 'locally grown': 17%
- Sold as 'family-farm raised': 11%
- Sold as 'fresh-in-season': 7%
- Sold as 'Natural': 6%
- Sold as "STATE Product": 4%
- Sold as 'Organic': 3%
- Any type of special attribute marketing: 24%
Involvement in Direct Marketing

- Direct sales to consumers from farm
- Direct sales to consumers at farmers market/CSA
- Sales to local institutions or businesses

Gross Farm Sales Class

- Sales < $10,000
- Sales $10,000-$99,999
- Sales > $100,000
- TOTAL

Percent of Farms
Planned Changes on Farms Over Next 5 Years

- **Gross Farm Sales**: 44% decrease a lot (-2), 10% decrease (-1), 36% remain the same (0), 5% increase (+1), 7% increase a lot (+2)

- **Capital Investment in Buildings**: 63% decrease a lot (-2), 4% decrease (-1), 26% remain the same (0), 3% increase (+1), 7% increase a lot (+2)

- **Farm Commodity Diversification**: 77% decrease a lot (-2), 4% decrease (-1), 13% remain the same (0), 5% increase (+1), 3% increase a lot (+2)

- **Direct Sales to Consumers**: 74% decrease a lot (-2), 3% decrease (-1), 17% remain the same (0), 3% increase (+1), 4% increase a lot (+2)
How many more years do you expect to keep farming?

- 3 years or less: 30%
- 4 to 9 years: 6%
- 10 to 19 years: 13%
- 20 or more years: 5%
- Indefinitely: 41%
- Not sure: 5%
How many years do you expect the farm enterprise to be in business?

- 3 years or less: 40%
- 4 to 9 years: 7%
- 10 to 19 years: 9%
- 20 or more years: 2%
- Indefinitely: 4%
- Not sure: 7%
- Not sure: 38%
What are your plans for passing on your farm?

- I have identified a successor, 36%
- There is a potential successor, 33%
- There is no successor available, 5%
- Not applicable; too early to tell, 15%
- No obvious person; plans are uncertain, 11%
- Not applicable; too early to tell, 15%
What will probably happen to this farm when you retire?

- Too early to tell: 24%
- Don't know: 20%
- Relative will take over: 16%
- Keep land but idle it or rent to farmer: 19%
- Sell to another farmer (not a relative): 7%
- I will sell to a developer: 4%
- Other: 11%
Initial Observations

- Farming at RUI not as bleak as one might have thought
  - Much growth & innovation occurring – 2 PATHS
    - Expanding & Intensifying CONVENTIONAL
    - Innovative URBAN-ALTERNATIVE
  - Major group of “Persisters” – both hobby & commercial scale
    - Most farms expect to continue for long time
    - Many have (tentative) succession plans
- Considerable uncertainty about farm transitions remains
FACTORS AFFECTING FARM TRAJECTORIES AT RUI

- Qualitative & Quantitative Analysis (not shown)
- What predicts overall county-level farm growth, intensification, innovation?
- Less important factors:
  - Population pressure (density, growth rate)
  - Natural resource quality (soils, climate)
  - Local incentive policies (easements, tax credits, RTF)
  - Local land use regulations (planning, zoning, etc.)
FACTORS (continued)

- More important factors
  - Strict state-level land use rules (Oregon)
  - Ag Econ development staff and programs
  - Positive farming ‘discourse’ or ‘culture of expectations’
  - Existence of public debate to help farms
Qualitative Study of Farm Succession and Transition Planning

- PhD Dissertation by Shoshanah Inwood (OSU)
- Distinguished sub-groups of farms
  - Rural Residential Farms
  - Traditional Commodity Enterprises
  - Alternative Food and Agricultural Enterprises (AFAEs)
    - First generation AFAEs
    - Multi-generation AFAEs
  - Mixed Farms (Commodity + AFAEs)
Succession Plans & Adaptation

- Availability of heirs is major determinant of enterprise adaptation & succession path
  - No plans → uncertainty
  - If plans known, but no heir → 2 paths
    - Decline & Disinvestment
    - Put land in conservation easement
Positive Succession Plans

- If plans known, and heir is present → 4 succession paths
  - Expanders (increase scale and footprint) – mainly CEs
  - Intensifiers (increase value on same land) MG-AFAEs
  - Stackers (extend to direct marketing) – Mixed Farms
  - Entrepreneurial Stackers (add enterprises w/ synergies) – FG-AFAEs, MG-AFAEs, Mixed Farms
Type of Farm Matters

- Rural Residential Farms ride above the storm
- Commodity Enterprises most pessimistic about future
- First generation AFAEs are innovative, but may be at risk – few have successors in mind
- Multi-generation AFAEs and Mixed Farms are most innovative & robust
Family Dynamics = Key at RUI

“Development pressure at RUI does not necessarily have the biggest impact on enterprise persistence and adaptation. Household dynamics including presence or absence of an heir, family values and motivations for land use, size and type of enterprise all affect the diversity and persistence of agriculture at the RUI.”
QUESTIONS?

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Also visit our website:
http://exurban.osu.edu/agadapt.htm