(Preserved) Farmland Affordability in New Jersey

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Lucas Marxen (Rutgers University)
What is “affordable” farmland?

According to one New Jersey farmer –

“…[New Jersey] farmland has never been affordable, I just don’t think I’ll see the mortgage buster years that my father or grandfather saw on occasion”
Why this issue matters…

• Farmland accounts for 82% of U.S. farm assets value (USDA)

• NJ farmland values historically among the highest in U.S.

• Farmland appreciation far outpaces growth in net farm income
Desired Industry Benefits of Farmland Preservation

• Permanently preserve farmland from development into non-farm uses
  – Create geographic blocks of land in which agriculture is a preferred, long-term use
  – Reduce psychological burden of development pressure
  – Limit negative externalities of urbanization
  – Agglomeration economies

• Provide capital influx into farm operation
  – Facilitates estate transfer
  – Encourages farm investment/modernization (reverses the “impermanence syndrome”)
  – Retire debt
  – Meets other farm household financial objectives

• Promote affordability of farmland
  – Farm succession/intergenerational transfer
  – Access to land for farm expansion/new industry entrants
NJ’s Farmland Preservation (PDR) Program

- Well supported public policy

- Since being established in 1983:
  - 2,233 preserved farms
  - 207,722 acres preserved (~29%)
  - Total expenditure: $1.6 billion

- 17 county farmland preservation plans
  - 4,629 targeted properties
  - 220,034 targeted acres
    - Plus, approx. 31,000 additional acres targeted across 46 municipal-level plans
  - Estimated cost = $2.9 billion (incl. municipality-targeted farms)
2010 Survey of PDR Program Administrators
New Jersey and Maryland

73% of New Jersey program administrators (and 33% of those in Maryland) agreed that “maintaining the affordability of farmland for agricultural production has been an important goal of [farmland preservation].”
Approximately 50% of administrators agreed that, in the decade leading up to the 2007 recession, the market value of preserved farmland rose to levels not affordable to the majority of commercial farmers.

The majority (55%) of program administrators agreed that, in the 10 years prior to the 2007 recession, farmers have often been out-bid in sales of preserved farms by individuals for whom farming is not a primary occupation.
Is Preserved NJ Farmland Affordable?  
(…and if it isn’t what should we do about it?)

• 2004: SADC Task Force formed to examine the issue

• 2007-2008: farmer listening sessions held in most NJ counties

• Policy discussions at New Jersey’s agricultural conventions
Some Policy Questions

• Should the appreciation of preserved land be capped?

• Should there be restrictions on buyers (e.g., limit bids at auctions to “bona fide” farmers)?
  – Related question of keeping land “in” agriculture, versus “available for” agriculture

• Should the state hold more land fee simple (e.g., lease land to new/beginning farmers)?

• Should easement holders limit housing (and other future development) opportunities?

• Should house size limitations be implemented?
Study 1 – Factors Affecting Preserved Farmland Values

• **Question:** What are the effects of housing and future development flexibilities (i.e., SADC policies on RDSO’s & exceptions) on preserved farm values?

• Hedonic pricing study (325 preserved farms sold in NJ between 1985 & early 2007)

• Parcel level data (SADC scoring sheets and appraisal records, local property tax record cards, GIS data layers, Census and other secondary sources

An Affordability Gap?

Sales of Preserved Farms in New Jersey

<table>
<thead>
<tr>
<th>Period</th>
<th>No. of sales</th>
<th>Acres</th>
<th>Avg. Price/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1989</td>
<td>9</td>
<td>1,070</td>
<td>$2,493</td>
</tr>
<tr>
<td>1990-1994</td>
<td>22</td>
<td>3,210</td>
<td>$3,113</td>
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<tr>
<td>1995-1999</td>
<td>89</td>
<td>10,891</td>
<td>$3,064</td>
</tr>
<tr>
<td>2000-2004</td>
<td>152</td>
<td>15,076</td>
<td>$5,857</td>
</tr>
<tr>
<td>2005 to 2/07</td>
<td>52</td>
<td>4,172</td>
<td>$10,111</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>325</strong></td>
<td><strong>34,419</strong></td>
<td></td>
</tr>
</tbody>
</table>

Avg. NJ NFI (2007)* = $342/ac

Assuming 8% discount rate, an average farmer could cash flow land valued at $4,288/ac

Between 2005 and early 2007, preserved farmland sold for nearly 2.5 x more...

*a Excluded from analysis.

Source: SADC administrative records.

* Census of Agriculture.
Preserved Farmland Sales (Avg. Price per Acre) 1985-2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Avg. Price/Acre</th>
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<tr>
<td>1995-1999</td>
<td>$3,064</td>
<td>89</td>
</tr>
<tr>
<td>2000</td>
<td>$3,848</td>
<td>27</td>
</tr>
<tr>
<td>2001</td>
<td>$4,291</td>
<td>28</td>
</tr>
<tr>
<td>2002</td>
<td>$6,316</td>
<td>30</td>
</tr>
<tr>
<td>2003</td>
<td>$5,912</td>
<td>36</td>
</tr>
<tr>
<td>2004</td>
<td>$8,826</td>
<td>33</td>
</tr>
<tr>
<td>2005</td>
<td>$12,895</td>
<td>34</td>
</tr>
<tr>
<td>2006</td>
<td>$8,061</td>
<td>27</td>
</tr>
<tr>
<td>2007</td>
<td>$12,193</td>
<td>29</td>
</tr>
</tbody>
</table>
Most Significant Findings

Based on sales of preserved New Jersey farms from 1990-2007:

- Preserved farmland appreciated in value by 10.6% annually (all other factors considered)

- The presence of an existing residence increased the per acre price of a preserved farm by 31.5%
  - Each 1,000 sq. ft. of house size, increased the per acre price by 4.9%

- The existence of an exception or RDSO increased the per acre price of a preserved farm by 43.5%
Policy Implications – A Discussion of Tradeoffs

• Require houses to be subdivided off?
  – But….will this limit desirability of preserved farms for certain types of production?

• Limit exceptions?
  – But…what effects will this have on the economic viability of farms (e.g., use of barns for non-agricultural businesses)?
  – …or on farms’ efforts to avoid uncertainty over how deed of easement provisions may be interpreted in the future?
Study 2 – Farmland Preservation & Farm Profitability

**Question**: Does participation in a PDR program improve farm profitability?

- Comparison of preserved farms with “observationally equivalent” unpreserved farms
  - Propensity score matching technique to control for selection bias (e.g., do only the “best” (or “worst”) farms decide to enter farmland preservation?
  - We expected that “not all farms are the same” – hence, we looked at profit effects across different farm types/scales

- Respondent-level Census of Agriculture records & SADC administrative records, other secondary data sources

Sub-Samples Based on ERS Farm Types

Small Family Farms (<$250,000 gross sales)
- Operator’s primary occupation is not farming
  - Residential/Lifestyle Farms
  - Retirement Farms
- Operator’s primary occupation is farming
  - Low Sales (<$100,000 gross sales)
  - High Sales ($100,000 to $249,999 gross sales)

- “Rural Residence Farms”
- “Intermediate Farms”

Large-Scale Family Farms ($250,000 + gross sales)
- Large Farms ($250,000 to $499,999 gross sales)
- Very Large Farms ($500,000+ gross sales)
<table>
<thead>
<tr>
<th>Farm Type</th>
<th>Profit Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full Sample</strong></td>
<td>Not significant</td>
</tr>
<tr>
<td><strong>Rural Residence Farms</strong></td>
<td></td>
</tr>
<tr>
<td>Residential/lifestyle</td>
<td><em>Weak positive effects</em></td>
</tr>
<tr>
<td>Retirement</td>
<td>Not significant</td>
</tr>
<tr>
<td><strong>Intermediate</strong></td>
<td></td>
</tr>
<tr>
<td>Low sales</td>
<td><em>Positive</em> ($311-$568 more per acre)</td>
</tr>
<tr>
<td>High sales</td>
<td><em>Negative</em></td>
</tr>
<tr>
<td><strong>Large-Scale Family Farms</strong></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>Not significant</td>
</tr>
<tr>
<td>Very large</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

Not surprising - consistent with expectations

Surprising!

Expectations were ambiguous. Wrong metric??
Observations

• Likely mixed effects among residential/retirement scale farms?
  – For some, easement payments may dampen an already low profit motive
  – For others, PDR may enable scaling up
    • “Lifestyle” designation under ERS typology does not equate to the absence of a profit motive

• Exit strategy for retirement-age farmers?
  – Implications for planning for succession of preserved farmland

• Positive news regarding small “commercial” farm economic impacts

• Unexpected findings – intermediate “high sales”

• Wrong unit of analysis for large farms?
  – Expansion vs. intensification
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