Small Farms: Characteristics and Production

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Farm Structure: The Big Picture

• Total farm numbers: quite stable
  – Over 25 years
  – NASS (Census): 2.0 - 2.2 million farms
  – Slow decline in total farmland

• But big changes within the aggregate
  – More large farms
  – Fewer small commercial farms
  – More very small farms
We Will Use ARMS Data

• **Agricultural Resource Management Survey**
  – A large annual survey, run by NASS & ERS
  – Representative and comprehensive

• **Links** farm structure, farm and household finances, and farm management decisions

• **Timing:** 1991 and 2007
Some Measurement…

• “Sales” = gross cash farm income
  – Cash receipts from commodity sales, fees from production contracts, government payments, and other farm-related income
  – Cash revenue to the farm business

• Comparisons are in 2007 dollars
  – Adjusted for inflation
  – Using Producer Price Index for Farm Products
Distribution of Farms by Sales Class, 1991 and 2007: A Shrinking Middle?

Distribution of Production by Sales Class, 1991 and 2007: A Major Shift

Percent of value of production

- Less than $10,000
- $10,000 to $49,999
- $50,000 to $99,999
- $100,000 to $249,999
- $250,000 to $499,999
- $500,000 to $999,999
- $1,000,000 or more

Very small  Small commercial  Large  Very Large

Two Measures of Farm Financial Performance

*Net Farm Income and Operating Profits show different patterns*

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Less than $10,000</td>
<td>25</td>
<td>Small commercial</td>
</tr>
<tr>
<td>$10,000 to $49,999</td>
<td>31</td>
<td>Very small</td>
</tr>
<tr>
<td>$50,000 to $99,999</td>
<td>47</td>
<td>Small commercial</td>
</tr>
<tr>
<td>$100,000 to $249,999</td>
<td>60</td>
<td>Large</td>
</tr>
<tr>
<td>$250,000 to $499,999</td>
<td>74</td>
<td>Very large</td>
</tr>
<tr>
<td>$500,000 to $999,999</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>$1,000,000 or more</td>
<td>84</td>
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What’s the Difference?

• The major factors:
  – Net Farm Income subtracts cash expenses and depreciation from gross farm income
  – Operating profit subtracts a charge for operators’ labor and management from Net Farm Income
Unpaid Labor and Farm Sales, 2007

*Unpaid hours are a major implicit expense for small farms*

ERS Calculates an Implicit Charge for Unpaid Labor

- We use the average wage for hired labor in a state

- For many operators, true opportunity cost is likely higher
Range of operating profit, by sales class, 2007

Percent of farms

Principal operators aged 65 or more, 1991-2007

Older operators a growing presence among small commercial farms

Percent of operators, age 65 or more

<table>
<thead>
<tr>
<th>Income Range</th>
<th>1991</th>
<th>2007</th>
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</thead>
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<tr>
<td>Less than $10,000</td>
<td>30</td>
<td>27</td>
</tr>
<tr>
<td>$10,000 to $49,999</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>$50,000 to $99,999</td>
<td>32</td>
<td>37</td>
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<td>$100,000 to $249,999</td>
<td>22</td>
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<tr>
<td>$250,000 to $499,999</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>$500,000 to $999,999</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>$1,000,000 or more</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Very small    Small commercial    Large    Very large

The Message So Far…

• Production shift has been large, and is likely to continue
  – Finances and demographics suggest that small commercial farms remain under pressure
  – The financial patterns have persisted

• But, many small farms are financially viable
Small Farms Are Important for Some Commodities

Percent of 2007 commodity value of production

Gross cash farm income class:
- Less than $10,000
- $10,000 to $249,999

Small-Farms and Crop Production, 1991-2007

Percent of 1991 or 2007 commodity value of production

<table>
<thead>
<tr>
<th>Year</th>
<th>All crops</th>
<th>Grains/soybeans</th>
<th>Hay</th>
<th>Cotton</th>
<th>Tobacco</th>
<th>High-Value crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>38</td>
<td>55</td>
<td>9</td>
<td>0</td>
<td>62</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>18</td>
<td>24</td>
<td>40</td>
<td>8</td>
<td>30</td>
<td>2</td>
</tr>
</tbody>
</table>

Gross cash farm income class:
- Less than $10,000
- $10,000 to $249,999

Note: “High value crops” include fruits, vegetables, tree nuts, and greenhouse crops


Percent of 1991 or 2007 commodity value of production

Gross cash farm income class:
- Less than $10,000
- $10,000 to $249,999

Small Farms Now Have a Concentrated Mix of Commodities

- Poultry, cash grains & soybeans, & beef are 74 percent of small commercial farm production

- Hay and beef are 68 percent of very small farm production

- Why? consider labor requirements and flexibility
ARMS Also Tracks Household Incomes for Principal Operators

- Small farm household incomes look like U.S., on average
  - Large farms are much higher
- Small farm households rely on off-farm income
  - Farm provides most income for large farm households
Household income by source and sales class, 2007

Median U.S. household income for:
- All households—$47,300
- Households with a self-employed head—$75,700

Conclusions

• Farm structure
  – Major shift away from small commercial farms
  – Continuing financial and demographic pressures on those farms
  – Consolidation likely to continue

• But some remain financially viable
  – A wide range of financial performance
  – And, time is not an expense for some

• Flexible and focused operator labor matters
  – Off-farm employment, commodity choices, attention to value of time