Purpose of Study

- Examine current economic characteristics of region’s agriculture industry
- Identify regional industry trends
- Measure economic footprint of the industry to illustrate its linkages with and continuing importance to the county economy
Agriculture in Fauquier County: Characteristics, Trends, and Economic Impacts

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Outline

* Agriculture Background
* Historical Trends
* Current Characteristics
* Economic Impact Analysis
  * Input–output and IMPLAN
* Data
* Results
Farm Employment, 1969–2012

Source: Bureau of Economic Analysis
Farm Acreage

Source: USDA, NASS
Land Preservation Stats

- **Land Use Taxation**—211,108 acres
- **Ag/Forestal Districts**—80,037 acres
- **Conservation easement**—88,042 acres
  - 1st in state
  - 21 percent of land area
  - County PDR nearly 10,000 acres

Source: Weldon Cooper Center, Virginia Local Tax Rates; Virginia Department of Conservation and Recreation
Fauquier County Farm Cash Receipts, 1969–2012

Source: Bureau of Economic Analysis
Number of Farms by NAICS, Fauquier Co., 1997–2007

Source: USDA, NASS
Fauquier Co. Farm Cash Receipts by Source, 1969–2012

Source: Bureau of Economic Analysis
Cattle and Calf inventory

Source: USDA, NASS
Cattle and Calf inventory

Source: USDA, NASS
Grains (Bushels)

Source: USDA, NASS
Average Age of Principal Operator

Source: USDA, NASS
ECONOMIC IMPACT ANALYSIS
Estimate the economic impact of agriculture in Fauquier County

Implement general approach of Virginia Beach (2012) and Pittsylvania County (2013) studies

Estimate impact of:
- Production agriculture (farming, timber tracts and agriculture services)
- Estimate impact of closely connected value-added processing (i.e., animal slaughtering and processing, wineries)
- Estimate impact of horse industry expenditures
- Estimate impact of agritourism
  - Farm tourism, wine tourism, equine tourism
An input–output table provides a picture of an economy. It shows flows of goods and services among industries, households, and government.

The table can be manipulated to show aggregated effects of change in one industry on other supplier industries.
For a one dollar change in final demand for hay, the total direct, indirect and induced impact is $1.46

- **Direct effect.** Initial injection of new economic activity or expenditure
- **Indirect effect.** Change in input purchases due to direct effect.
- **Induced effect.** Change in employee household expenditures due to direct and indirect effect.
**IMPLAN**

- IMPLAN (IMpact analysis for PLANning).
- Software that implements regional input output (state and county level).
- National input output table is “regionalized” using regional data and estimates.
- Agriculture-related industry sales and employment are mapped onto IMPLAN final demand sectors.
<table>
<thead>
<tr>
<th>Category</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture Production</td>
<td>National Agricultural Statistics Service, IMPLAN, Virginia Employment Commission</td>
</tr>
<tr>
<td>Wineries and Vineyards</td>
<td>National Agricultural Statistics Service, IMPLAN, Virginia Employment Commission</td>
</tr>
<tr>
<td>Animal Slaughtering and Processing</td>
<td>Virginia Employment Commission</td>
</tr>
<tr>
<td>Horse Industry</td>
<td>2006 NASS Virginia Equine Survey (inventory and price adjusted expenditures)</td>
</tr>
<tr>
<td>Agritourism</td>
<td></td>
</tr>
<tr>
<td>Farm-based tourism</td>
<td>Fauquier Agricultural Survey</td>
</tr>
<tr>
<td>Wineries</td>
<td>Virginia Wine Study (Frank, Rimerman &amp; Co.)</td>
</tr>
<tr>
<td>Equine events</td>
<td>Horse Industry Economic Impact Study and visitation estimates from venues</td>
</tr>
</tbody>
</table>
- Farm 102,735
- Wine 112,398
- Horse competitions 107,194 spectators and 3,652 participants
- Total 325,979 visitors
- Assume approximately 80% who attended for purpose of agritourism
## Fauquier County Economic Impacts

<table>
<thead>
<tr>
<th></th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>2,253</td>
<td>199</td>
<td>201</td>
<td>2,653</td>
</tr>
<tr>
<td>Value-added</td>
<td>$61,403,653</td>
<td>$16,776,486</td>
<td>$14,897,054</td>
<td>$93,077,193</td>
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<tr>
<td>Output</td>
<td>$162,452,780</td>
<td>$28,156,647</td>
<td>$24,475,524</td>
<td>$215,084,950</td>
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</table>
## Employment Impacts by Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Farm production</td>
<td>1,232</td>
<td>60</td>
<td>78</td>
<td>1,370</td>
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<tr>
<td>Animal slaughtering</td>
<td>23</td>
<td>6</td>
<td>4</td>
<td>33</td>
</tr>
<tr>
<td>Vineyards &amp; wineries</td>
<td>126</td>
<td>41</td>
<td>19</td>
<td>186</td>
</tr>
<tr>
<td>Equine</td>
<td>593</td>
<td>45</td>
<td>73</td>
<td>711</td>
</tr>
<tr>
<td>Agritourism</td>
<td>279</td>
<td>47</td>
<td>28</td>
<td>354</td>
</tr>
<tr>
<td>Wine tourism</td>
<td>54</td>
<td>7</td>
<td>5</td>
<td>66</td>
</tr>
<tr>
<td>Horse competitions</td>
<td>188</td>
<td>35</td>
<td>20</td>
<td>243</td>
</tr>
<tr>
<td>Farm tourism</td>
<td>36</td>
<td>5</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,253</strong></td>
<td><strong>199</strong></td>
<td><strong>201</strong></td>
<td><strong>2,653</strong></td>
</tr>
</tbody>
</table>
Component Percentage of Total Impact

- Traditional farm production accounts for:
  - 52% of the total employment impact
  - 41 percent of value-added
  - 39 percent of total industry output
## Wine Industry

<table>
<thead>
<tr>
<th></th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
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<tbody>
<tr>
<td>Employment</td>
<td>180</td>
<td>48</td>
<td>24</td>
<td>252</td>
</tr>
<tr>
<td>Value Added</td>
<td>$6,923,316</td>
<td>$3,968,737</td>
<td>$1,767,635</td>
<td>$12,660,688</td>
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<tr>
<td>Output</td>
<td>$43,836,191</td>
<td>$6,665,133</td>
<td>$2,904,105</td>
<td>$53,405,429</td>
</tr>
</tbody>
</table>
## Equine Industry

<table>
<thead>
<tr>
<th></th>
<th>Direct</th>
<th>Indirect</th>
<th>Induced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>781</td>
<td>81</td>
<td>93</td>
<td>954</td>
</tr>
<tr>
<td>Value Added</td>
<td>$26,575,591</td>
<td>$5,743,297</td>
<td>$6,856,241</td>
<td>$39,175,130</td>
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<tr>
<td>Output</td>
<td>$45,827,265</td>
<td>$9,548,152</td>
<td>$11,265,671</td>
<td>$66,641,087</td>
</tr>
</tbody>
</table>
Impacts by Industry

* Every county industry is affected directly or indirectly
* Agritourism accounts for 45 jobs in the hotel and motel industry (approximately 16% of employment in the industry)
Other Benefits

* Economic diversification
* Environment
* Health
* Education
* Quality of Life
Summary and Conclusions
Farm employment and acreage has stabilized.
Composition of farm income is shifting to more crop sales and miscellaneous income (e.g., home consumption, agritourism, value-added, customwork).

Agriculture accounts for 2,653 jobs (6.8% of total local employment).
Nearly half of agriculture-related employment and over half of value-added and output come from non-traditional agriculture activities (i.e., equine, wine, agritourism).