Historical Developments in U.S. Agriculture

Future of Contracts in Agriculture Conference
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Background

- Current structural developments not new
- Part of progressive trend toward industrial and globalization
- Supported by technology policy, trade policy, and farm policy
- Inherent in capitalistic system
Objectives

- Trace structural developments in agriculture
- Draw conclusions
- Draw implications for future structure and issues
Lack of coordination of production with market is a major historic problem

- Resulted in chronically low farm prices and incomes
- Led to counter-productive price supports and production controls
- These policies discouraged development of export markets
- These policies were not effective maintaining farm numbers
Trend toward fewer U.S. farms

Source: NASS
Sectors absent price and income supports have experienced integration

- Contract integration provides means to share risk
- Means to coordinate production with market needs
### Percent of value of production under production contracts and vertical integration

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Production contracts</th>
<th>Vertical integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1960</td>
<td>1970</td>
</tr>
<tr>
<td>Broilers</td>
<td>93</td>
<td>90</td>
</tr>
<tr>
<td>Turkeys</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>Eggs</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Pork</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fed cattle</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>Milk</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

Sources: Mighell and Hoofnagle; Martinez
Number of U.S. broiler integrators
Number of U.S. broiler producers, census years, 1954-97

- **1954**: 49,999
- **1959**: 44,999
- **1964**: 32,999
- **1974**: 21,999
- **1978**: 20,000
- **1982**: 14,999
- **1987**: 12,999
- **1992**: 9,999
- **1997**: 5,999

**Broiler Sales (head)**
- **1 to 1999**
- **2000 to 59999**
- **60000 to 99999**
- **100000 to 199999**
- **200000 to 499999**
- **500000 +**
Broiler structure conclusions

- Primary reliance on contract growers for production
- Decline in number of growers and integrators despite rapid consumption growth
- All grower size categories decreasing except those having over 500,000 broilers sold.
- Shift in production from Northeast and Midwest to Southeast and Southwest
- Cooperative involvement severely challenged
- Spot market for live broilers largely disappeared
Number of U.S. layer/egg producers, census years, 1954-97

Number of Producers


0 500,000 1,000,000 1,500,000 2,000,000 2,500,000 3,000,000

Chicken Inventory (head)

- 1 to 99
- 100 to 399
- 400 to 3199
- 3200 to 9999
- 10000 to 19999
- 20000 to 49999
- 100000 or more
Layer/egg structure conclusions

- Phenomenal decrease in number of producers
- Combination of contract grower production and large independent farms
- All grower size categories decreasing except those having over 100,000 layers
- Regional production related to population shifts
- Cooperative involvement challenged
- Primary spot market for eggs largely disappeared
Number of U.S. pork producers, census years, 1964-1997

Hog and Pig Inventory (head)

- 1 to 99
- 100 to 199
- 200 to 499
- 500 to 999
- 1000 or more
Pork Structure conclusions

- Large decline in number of producers
- Rapid structural transition to contracting and integrator production
- Imports of feeder pigs from Canada important
- All grower size categories decreasing except with over 1,000 hogs
- Region shift unclear
- Cooperative involvement severely challenged
- Primary spot market for hogs declining and likely to disappear
Number of U.S. cow/calf producers, census years, 1950-97

- 1950: 5,000,000
- 1954: 3,000,000
- 1959: 2,000,000
- 1964: 1,000,000
- 1974: 500,000
- 1978: 250,000
- 1982: 125,000
- 1987: 62,500
- 1992: 31,250
- 1997: 15,625

Legend:
- Blue: 1 to 9
- Purple: 10 to 19
- Green: 20 to 49
- Pink: 50 to 99
- Yellow: 100 to 199
- Orange: 200 to 499
- Red: 500 or more
Number of U.S. beef feedlots (23 States), census years, 1965-97

Feedlot Inventory (head)

- <1000
- 1000 to 1999
- 2000 to 3999
- 4000 to 7999
- 8000 to 15999
- 16000 to 31999
- 32000 or more
Number of U.S. beef feedlots (23 States), census years, 1965-97

Without <1000 category

<table>
<thead>
<tr>
<th>Year</th>
<th>1000 to 1999</th>
<th>4000 to 7999</th>
<th>16000 to 31999</th>
<th>32000 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td></td>
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<td>1982</td>
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<td>1987</td>
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<tr>
<td>1992</td>
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<td></td>
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<tr>
<td>1997</td>
<td></td>
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</tbody>
</table>
Beef structure conclusion

- Decline in cow/calf producer numbers but still many small producers
- Only discernable increase in cow/calf producers having over 500 cows in Great Plains and West
- Contract production of calves more talk than action
- Large decline in number of feedlots and larger decline in number of feeders
- Contract feeding extensive with diverse ownership
- Focal point of concern on packer concentration and ownership of feeders/feedlots
- Little cooperative feeding
Number of U.S. dairy farms, census years, 1950-97

- 1950: 3,000,000 producers
- 1954: 2,000,000 producers
- 1959: 1,000,000 producers
- 1964: 500,000 producers
- 1974: 500,000 producers
- 1978: 500,000 producers
- 1982: 500,000 producers
- 1987: 500,000 producers
- 1992: 500,000 producers
- 1997: 500,000 producers

Milk Cow Inventory (head):
- 1 to 9
- 10 to 19
- 20 to 99
- 100 to 199
- 500 or more
- 200 to 499
Percentage of milk production by dairy size category, 1997-2002

Milk Cows

- 1 to 29
- 30 to 49
- 50 to 99
- 100 to 199
- 200 to 499
- 500 or more

Percentage of milk production by dairy size category, 1997-2002
Dairy structure conclusions

- Pervasive decline in dairy farm numbers
- Large increases in dairy farms milking over 500 cows
- Shift in production to West and Southwest, out of Southeast
- Cooperative market over 80% of milk under contract
- Minimum milk prices set by the government
Conclusions

- Trend toward fewer and larger farms pervasive
- Trend toward integration more pervasive in enterprises where government has not been protecting farm prices and income
- Contract production dominant in livestock and poultry, although integrator production expanding
- Region production shifts particularly significant in broilers and dairy
Implications

• Progressive trend toward integration extending to crops
• Progressive trend toward freer trade and globalization meaning potential for production moving out of United States
• Primary commodity spot market obsolete trading system
# Extent of Integration in Agriculture

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Production Contracts</th>
<th>Ownership</th>
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<tbody>
<tr>
<td></td>
<td>1987</td>
<td>Latest</td>
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<tr>
<td>Broilers</td>
<td>77</td>
<td>85</td>
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<tr>
<td>Turkey</td>
<td>54</td>
<td>56</td>
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<tr>
<td>Eggs</td>
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<td>33</td>
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<tr>
<td>Hogs*</td>
<td>8</td>
<td>40</td>
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<tr>
<td>Fed Beef</td>
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<tr>
<td>Processing Vegetables</td>
<td>65</td>
<td>70</td>
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<tr>
<td>Citrus</td>
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</tr>
<tr>
<td>All vegetables/fruit/nursery</td>
<td>57</td>
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</table>

* In 2001 it has been estimated that an additional 30 percent of the hogs are sold under a marketing contract.