The 7th District’s Hired Farm Workforce: Characteristics and Trends

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Sponsored by the Federal Reserve Bank of Chicago and the Upjohn Institute, Chicago, Illinois.
Motivating concern: “The end of farm labor abundance”?  
- End of an era of growth in unauthorized immigrant population, which makes up half of hired crop workforce nationwide, and a significant share of the livestock workforce
- Due to economic & demographic change in Mexico; recession; enforcement
- Lots of anecdotal evidence of labor shortages. Are wages/costs rising?

Focus on 5 States in 7th Federal Reserve District (IA, IL, IN, MI, WI):
- Employment of hired farm workers: conflicting estimates
- Demographics: Differences between 7th District and rest of U.S.
- Weekly and hourly wages
- Labor costs as share of value of production
- Unemployment
- Poverty of farmworker households

Farm Employment: QCEW

- **Quarterly Census of Employment and Wages (QCEW)**
  - Covers farm employers required to pay Unemployment Insurance: those with 10+ workers, or with a payroll of $20,000+ in at least one quarter (3-4 FTEs)
  - 86% of agricultural workers captured at national level, less in this 5-State region
  - Omits self-employed (farm operators) but includes unauthorized hired workers
  - Industries: Crops, Livestock, Support Services, all occupations
  - Between 2002 & 2014, QCEW employment in farm industries grew from 76,000 to 104,000 (+36%), driven by 70% growth in livestock (IA hogs, WI dairy)
  - Some of this growth may be an artifact of growth in farm size, leading to higher coverage rate. In livestock, workers/covered farm grew from 10.5 to 12.4
  - Support services including contract labor grew by 58% over this period, but only account for 15% of total in 2014

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Farm Employment: CPS

Current Population Survey (CPS)

- Household-based; may not capture all seasonal workers
- Permits selection of farm occupations as well: defined narrowly, yielding lower estimates of farm employment than other sources
- Self-employed are covered, but I omit them here; contract workers in support industries are included
- Between 2003-4 & 2013-4, hired farm employment grew from 73,000 to 96,000 (+30%) in the 5-State region
- But in this survey, employment growth is driven by growth in crop farming, not livestock!
Farm Employment: COA

Census of Agriculture (COA)

- Counts of workers cannot readily be converted to FTEs

- However, we can estimate total annual hours of work by dividing labor expenses (including contract labor) by hourly wages estimated from other sources (FLS):

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2007</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total labor expenses ($1000)</td>
<td>2,254,636</td>
<td>2,863,534</td>
<td>3,634,287</td>
</tr>
<tr>
<td>Average wage*</td>
<td>9.30</td>
<td>10.80</td>
<td>12.17</td>
</tr>
<tr>
<td>Employment (FTEs)</td>
<td>121,217</td>
<td>132,571</td>
<td>149,313</td>
</tr>
<tr>
<td>Growth since 2002</td>
<td>9%</td>
<td>23%</td>
<td></td>
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</tbody>
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* Based on average hourly wage for 8 States in Corn Belt 1, Corn Belt 2, and Lake Districts of NASS Farm Labor Survey (FLS)

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Farm Employment: FLS

- Farm Labor Survey
  - Not available at State level
  - 7th District contained in Corn Belt 1, Corn Belt 2, and Lake Districts, which also include OH, MO, MN
  - For directly hired farmworkers in crops and livestock (excluding contracted support services) in these eight States, employment grew by just 5% between 2002 and 2013, then fell by 18% in 2014
  - Are these numbers reliable? Discrepancy with other sources is not driven by declines in OH, MN, MO: crop and livestock employment in those states grew by 15% according to QCEW
  - Also cannot be explained by omission of contract labor
## Demographics of Hired Farm Laborforce: 2013-2014

### Note: Farm occupations include Managers, Supervisors, General Agricultural Workers, and Graders and Sorters. Small cells were combined as needed for reliability.
Real Average Weekly Earnings: QCEW At 2014 Prices

Real weekly earnings per worker up **11%** since 2002:
- Services: 17%
- Crops 12%
- Livestock 7%

Source: QCEW public use data
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Wage data rather noisy

5 States since 2002:
  o Mean up by 13%
  o Median up by 1%

Faster growth since 2010:
  o Mean up by 25%
  o Median up by 11%

US since 2002:
  o Mean up by 9%
  o Median up by 1%

Source: Author’s analysis of CPS Monthly Outgoing Rotation Group microdata, compiled by Center for Economic Policy Research
Real Hourly Wages: FLS
At 2014 Prices

- Real wage growth of 21% since 2002:
  - IL, IN, OH: 20%
  - IA, MO: 33%
  - MI, MN, WI: 16%

Source: NASS Farm Labor Survey

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Yet Hired+Contract Labor Costs Have *Fallen* as Share of Value of Production

Source: USDA, ERS, Farm Income and Wealth Statistics.

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Unemployment Rates: 2013-2014

- Seasonality of crop farm work means that unemployment rates remain high on average; not an issue for livestock

<table>
<thead>
<tr>
<th>Unemployment Rates By Sector (%)</th>
<th>5 States</th>
<th>Rest of US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crops</td>
<td>12.9</td>
<td>14.6</td>
</tr>
<tr>
<td>Livestock</td>
<td>6.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Support Services</td>
<td>15.4</td>
<td>15.7</td>
</tr>
<tr>
<td>Total</td>
<td>10.3</td>
<td>11.2</td>
</tr>
</tbody>
</table>

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<tr>
<th>Unemployment Rates By Occupation (%)</th>
<th>5 States</th>
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<tbody>
<tr>
<td>Managers</td>
<td>3.9</td>
<td>4.3</td>
</tr>
<tr>
<td>Supervisors</td>
<td>na</td>
<td>1.4</td>
</tr>
<tr>
<td>Graders and Sorters</td>
<td>na</td>
<td>21.4</td>
</tr>
<tr>
<td>General Workers</td>
<td>12.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Total</td>
<td>10.3</td>
<td>11.2</td>
</tr>
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Source: Author’s analysis of 2013 and 2014 Monthly CPS microdata
“na”: Sample size too small for reliable estimation

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Poverty Rates for All Members of Farm vs. Nonfarm Households, 7th District vs. Rest of U.S.

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<thead>
<tr>
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<th>District 7: Percent Poor</th>
<th>Rest of U.S.: Percent Poor</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Hired Farmworker Families</td>
<td>Nonfarm Families</td>
</tr>
<tr>
<td>2003 &amp; 2007</td>
<td>7.6</td>
<td>10.9</td>
</tr>
<tr>
<td>2010, 2012, &amp; 2014</td>
<td>19.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Change (% Points)</td>
<td>12.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: Author’s analysis of CPS-ASEC microdata, selected years (pre-recession versus post-recession)
Note: Families with both hired and self-employed farm workers were classified as self-employed.
Percentage point changes over time in **bold face** are statistically significant at 90% confidence level.

- Poverty among hired farmworker families in 7th District more than doubled after 2007, from an unusually low base.
- Hired farmworker families have higher-than-average poverty rates, while self-employed farm families are less poor than average, as in rest of U.S.
- Farm family poverty rates in 7th District are not statistically significantly lower than in rest of U.S. Nonfarm family poverty (13.5%) is significantly lower than rest of U.S.
Summary: 5 State Results

- **Employment**: Up by 23–36% since 2002/3. FLS an outlier (declines)
- **Real wages/earnings**: Up by 11–21% since 2002. FLS is the high estimate
- **Labor costs** as share of value of output have fallen from 6% to 4% since 2002, despite hourly/weekly wage increases
- **Median hourly wages** growing more slowly than means in CPS data
- **Hired farmworker unemployment** was 10% in 2013-14. Lowest for livestock (6%) and managers (4%)
- **Poverty**: 20% of people living in families with at least one hired farmworker (and no self-employed farmworkers) were poor in 2010-14, compared to 14% for nonfarm families and 7% for self-employed farm families