Economics Characteristics of the New York Agriculture & Food Sector

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NY Farm Sector Indicators

• Farm income
• Farm wealth and land values
• Risk management

A Closer Look

• Beyond immigration: state labor laws and farm wages
• Would a large decline in exports trigger another farm crisis?

Looking Forward
Interest in ‘Farm Income’ is trending upwards

Google Trends: "Farm Income"

Interest peaks early in the year – vertical lines indicate March. The first farm income forecast for each year is released in late February.

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”
NY farm income at 10-year low, near 2009 levels

New York farm income
(Unit: $1,000,000)

Source: USDA Economic Research Service

Note: Government payments includes commodity programs, conservation payments, disaster payments, MILC, etc. and excludes Federal crop insurance premium subsidies
Farm income forecast for 2018 below average of past decade

Note: 1997-2006 average is reported in 2017 dollars (CPI). The 2007-16 average is not inflation-adjusted and would be higher in real terms.
Source: USDA Economic Research Service (Actual) and Authoritative Analytics (Forecast)
Farm income downturn or return to “normal”?  

Long-term trends in U.S. farm sector cash earnings

Interest in ‘Farm Loans’ is trending upwards

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”
Debt repayment continues to be problematic at national level

Note: Debt / Net cash farm income + interest
Recent revenue trends vary by specialization

![Graph showing cash receipts and expenses from 2007 to 2015](Image)

**Cash receipts and expenses**

(Unit: $1,000,000)

- **Cash expenses**
- **Feed crops**
- **Dairy products, milk**
- **Fruits and vegetables**

Source: USDA Economic Research Service
Interest in ‘Dairy Prices’ is trending upwards

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”
National Outlook-crop cash receipts

National Outlook- livestock cash receipts

Interest in ‘Farm Workers’ is relatively flat

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”

Interest peaks around April – vertical lines indicate April. This may coincide with planting time or H2A timing.
Inflation-adjusted wages continued to increase in 2017.

Note: Inflation adjusted using CPI based upon 2017.
Hired labor (crop & animal workers) wage rate, measured in $ / hour.
Source: USDA National Agricultural Statistics Service (downloaded from ag-analytics.org)
Farmworker wages vary by county

Average farmworker wages and number of hired farm workers by county

Little relief expected for farm expenses nationally

Interest in ‘Cash Rent’ has been increasing over time

Google Trends: "Cash Rent"

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”

No clear annual trend in interest in cash rents
Cash rental trends vary widely across New York

Change Cash-Rent Rate Non-Irrigated
2011-2017
-32.0% - -8.4%
-8.4% - 15.2%
15.2% - 38.8%
38.8% - 62.4%
62.4% - 86.0%

Source: USDA NASS data downloaded from ag-analytics.org
Cropland values flat since 2012, beginning to decline
Interest in ‘Farmland Values’ is volatile but little average change

No clear annual trend in interest in farmland values. Interest peaked mid-2007 and early 2013

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”
NY farmland wealth is beginning to decline

NY Farm Real Estate Asset Value

Billion dollars

Source: USDA National Agricultural Statistics Service (downloaded from ag-analytics.org)
Stable to increasing agricultural land use in recent years

Area Operated by Economic Class

Million acres

2007 to 2015

$1,000-$9,999
$10,000-$99,999
$100,000-$249,999
$250,000-$499,999
$500,000 or more

Source: USDA NASS (downloaded from ag-analytics.org)
2017 insurance payouts smaller except for field crops

Note: Loss ratio = 1 implies total premiums (including premium subsidy) are equivalent to indemnities; typically farm operations pay less than 40 percent of total premiums, with the remainder as premium subsidy

Source: USDA Risk Management Agency (downloaded from ag-analytics.org)
Interest in ‘Crop insurance’ usually peaks in March (major deadline)

Note: “Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means that the term is half as popular. Likewise a score of 0 means the term was less than 1% as popular as the peak.”

Interest was highest in July 2012, at the onset on a major drought.
Record “excess moisture” losses in 2017 follow record drought losses

Crop Insurance Payouts

$1,000,000

Note: Cause of Loss (for crop insurance indemnities), 2017 indemnities as reported on 1/18/18
Source: USDA Risk Management Agency (downloaded from ag-analytics.org)
Largest losses in Western NY; some counties had large hail claims

"Note: Cause of Loss (for crop insurance indemnities), 2017 indemnities as reported on 1/18/18
Source: USDA Risk Management Agency (downloaded from ag-analytics.org)"
Public discourse has focused on the impact of immigration restrictions. However, other factors have also contributed to farmworker shortages and increasing labor costs.

**Farms face shrinking immigrant labor pool**

*Los Angeles Times, January 10, 2018*

'They’re Scared': Immigration Fears Exacerbate Migrant Farmworker Shortage

*National Public Radio, September 27, 2017*

**NY Farm Bureau calls for immigration reform**

*Times Herald-Record, January 20, 2018*
Strong domestic economy, tightening labor market

• By the end of December 2017, the national unemployment rate was 4.1%. In New York, it was 4.4%.

• At or near full employment, more competition for workers
2/3 of all U.S.-grown produce from states with increasing minimum wage

1. Percentage of cash receipts of “fruits and nuts” and “vegetables and melons” reported by ERS for 2015.
2. Within the top 10 fruit- and vegetable-producing states, **high-wage** states are Arizona, New York, Oregon, and Washington, all of which have current minimum wages at or above $9 and fixed plans to raise minimum wage to at least $12 per hour. California will raise its minimum wage to $15 per hour, but is shown separately due to its dominant market share. **Low-wage** states are Florida, Georgia, Idaho, Michigan, and Wisconsin.
Minimum wages and rural cost of living, 2012 - 2016

- Graphs to the right compare minimum wage (as applied to agricultural workers) to the average wage for farm laborers and a “rural living wage”
- Minimum wage increases associated with average wage increases
- Rural cost of living rising as well
- Farmworker wage growth considerably faster than other U.S. workers without higher education

Figure 2. Average, minimum, and rural living wage

Notes: (1) Average hourly wage for SOC 45-2092: Farmworkers and Laborers, Crop Nursery, and Greenhouse, weighted by average number of farmworkers employed in the selected states.
(2) Rural living wage drawn from county-level estimates, weighted by county crop sales.
Source: MIT Living Wage Calculator, 2012 Census of Agriculture
(3) Texas living wage estimates not available before 2014.
Average NY farm wages above minimum wage and rural cost of living

New York farmworkers: average, minimum, and rural living wage

**Notes:**
(1) Average wage for SOC 45-2092: Farmworkers and Laborers, Crop Nursery, and Greenhouse, as reported by BLS Occupational Employment Statistics
(2) Rural living wage drawn from county-level estimates, weighted by county crop sales. Data from MIT Living Wage Calculator and the 2012 Census of Agriculture.
Minimum wages and rural cost of living, 2012 - 2022

- Significant minimum wage increases planned or implemented in several important agricultural states
- Two-thirds of fruits and vegetables produced in states with substantial increases in minimum wage levels
- Planned minimum wages in some states exceed current average wage for farmworkers

Scheduled minimum wage and projected rural living wage

Notes: (1) Rural living wage drawn from county-level estimates, weighted by number of hired farmworkers by county.
Source: MTF Living Wage Calculator, 2012 Census of Agriculture
(2) Projected RLW is based on linear extrapolation from 2014-2016 trend.
(3) Texas living wage estimates not available prior to 2014.
Selected states by average crop worker wage and rural cost of living

Figure 1. Selected states grouped by average crop worker wage and rural cost of living, 2016

(1) "High-wage" states are those with an average hourly wage above $11. Source: May 2016 Bureau of Labor Statistics National Occupational Employment and Wage Estimates

(2) "High-cost" states are those with a rural living wage above $10.50/hour. Source: MIT living wage calculator
Rising nonwage labor costs

- Agricultural workers comp insurance premiums vary widely between states, reflecting likelihood and costs of claims.
- Every state has unique worker safety laws that affect employers’ responsibilities for safety, circumstances in which workers are entitled to compensation, limits to covered medical expenses, and even the injuries that are covered by workers compensation laws.
- Costs of state regulations can be indirectly observed through premiums paid for workers compensation insurance by employers.
Looking forward: adjusting to a higher wages and fewer workers

• Tight labor markets and growing wages will persist even with regulatory relief or improved access to migrant labor
• More than ever, farms using hired labor will need to pay competitive wages and invest in human resource management
• Accelerating wage growth will force farmers to adopt new strategies:
  • Business models that support higher wages (e.g., local foods, organic, fair wage, and premium products)
  • Creative labor recruitment strategies (e.g., working with refugee communities or other under-tapped labor pools)
  • Switching to less labor-intensive crops (e.g., from fresh blueberries to processing blueberries)
  • Investing in robotics or other labor-saving equipment
  • Increasing farm size to achieve economies of scale
  • Exiting or avoiding full-time farming
We all agree that trade is important to U.S. and NY Agriculture

• “Trump NAFTA threat endangers Wisconsin farmers”
  • Wisconsin State Farmer Jan 21, 2018

• “U.S. agriculture unwavering in support for NAFTA”
  • www.mysteinbach.ca Jan 17, 2018

• “Agriculture Secretary Sonny Perdue seeks to ease farmers' anxiety about international trade”
  • USA Today Jan 8, 2018

• “Farmers want a better deal — but can't afford to lose NAFTA”
  • The Hil Jan 16, 2018

• “Trump loves farmers but keeps them guessing on NAFTA strategy”
  • Politico Jan 8 2018

• Broad Coalitions
  • Farmers for Free Trade
    • “…led by former Senators Max Baucus and Richard Lugar, is a bipartisan, non-profit organization that informs, mobilizes and amplifies the voice of U.S. farmers and ranchers who depend on worldwide markets... (Farm Futures Oct 17 2017)
    • “A broad-based group of over 30 organizations representing growers, refiners, producers, transporters, retailers and consumers today announced the formation of Americans for Farmers & Families (AFF), a coalition that will work to ensure President Donald Trump and Congressional leaders understand the importance of preserving and modernizing the North American Free Trade Agreement (NAFTA) to America's agricultural and retail economies.”
      • PR Newswire Jan 17, 2018
We all agree that many farms face are in a difficult financial situation

• “Farmers struggling with low milk prices find little help from safety net”
  • MPR News Jan 18 2018

• “While Stock Market Soars, US Farmers Struggle”
  • VOA News Sept 12, 2017

• “A Looming Crisis on American Farms”
  • Farm Aid April 13, 2017

• “How bad is this farm slump?”
  • “This boom was not as strong and we don’t anticipate this crisis to be as severe as in the 1980s,” says Christopher Hurt at Indiana’s Purdue University. Even so, farmers have reason to be anxious. The two things that matter to them, weather and government policy, are unpredictable.”
  • The Economist March 30 2017
Bankruptcy rates low, but NY at a relatively high level

Total Farm Bankruptcies Filed
From January 2006 through September 2017: 5,500

Source: U.S. Courts, Table F-2, Compiled by Robert Dinterman and Ani Kathchova, Ohio State University
Bankruptcy rates low, but NY at a relatively high level

Source: U.S. Courts, Table F-2, Compiled by Robert Dinterman and Ani Kathchova, Ohio State University
NY Commercial Bank Loan Delinquencies around 3%

Commercial Agricultural Banking Performance since 2016-12-31
Average Total Loan Value of $176,475,713,500 with Delinquency Rate of 1.77%

Note: Compiled by Robert Dinterman and Ani Kathchova, Ohio State University
Commercial Bank ag loan delinquencies higher in eastern NY

New York Agricultural Performance
Branch Location Data from June 30, 2017. Loan Values Averaged from 2016-12-31 to 2017-09-30

Note: Compiled by Robert Dinterman and Ani Kathchova, Ohio State University

Sources: FDIC Call Reports and Summary of Deposits
Analysis of farm liquidity – key terms and definitions

• Intermediate Farm:
  • < 350,000 gross cash farm income, primary farm operation

• Commercial Farm:
  • >350,000 gross cash farm income or nonfamily farm

• Focus on measures of liquidity: general consensus that today liquidity/debt repayment is a bigger concern than solvency

All analysis is for farms in the “Northern Crescent”

Note: ERS Farm Resource Regions
Liquidity is at a 20 year low for intermediate farms

Key Financial Ratios - Intermediate Farms

Note: Current Ratio = current assets/current liabilities. Term debt coverage ratio measures the farm business’ ability to repay both interest and principal: (Net farm income + depreciation expenses + INTTERM)/(INTTERM + PRINCIPAL)

Source: USDA ARMS data
Liquidity is relatively low for commercial farms

Key Financial Ratios - Commercial Farms

Note: Current Ratio = \( \frac{\text{current assets}}{\text{current liabilities}} \). Term debt coverage ratio measures the farm business’ ability to repay both interest and principal: 
\[
\frac{(\text{Net farm income} + \text{depreciation expenses} + \text{INTTERM})}{(\text{INTTERM} + \text{PRINCIPAL})}
\]
Source: USDA ARMS data
Fruit and vegetable farms steady

Key Financial Ratios - Fruit and Vegetable Farms

Note: Current Ratio = current assets/current liabilities. Term debt coverage ratio measures the farm business’ ability to repay both interest and principal: (Net farm income + depreciation expenses + INTTERM)/(INTTERM + PRINCIPAL)

Source: USDA ARMS data
Dairy farms near 20-year lows

**Key Financial Ratios - Dairy Farms**

- **Current Ratio**
- **Term Debt Coverage Ratio**

**Note:** Current Ratio = current assets/current liabilities. Term debt coverage ratio measures the farm business’ ability to repay both interest and principal: (Net farm income + depreciation expenses + INTTERM)/(INTTERM + PRINCIPAL)

**Source:** USDA ARMS data
Youngest operators have lowest liquidity

Note: Current Ratio = current assets/current liabilities.
Source: USDA ARMS data
Farmers with younger operators more likely to face repayment issues

Term Debt Coverage Ratio

Note: Term debt coverage ratio measures the farm business’ ability to repay both interest and principal: (INFI + ENDEPR + INTTERM)/(INTTERM + PRINCIPAL)
Source: USDA ARMS data
Looking forward

- The current 2018 outlook is “steady” at relatively low income levels, more or less the same as 2017
  - Dairy receipts are predicted to decrease slightly
  - Not much relief on expenses
    - Interest and labor expected to increase
- Labor access and costs are a national issue that will persist under many potential political outcomes
- Many farms are vulnerable and operating at liquidity levels near/at a 20-year low
  - U.S. and NY agriculture is vulnerable to any further negative shocks, include a significant decline in exports
2017 Census of Agriculture

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COMING THIS DECEMBER!

www.agcensus.usda.gov
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Current income below 10-year average

Farm liquidity becoming more problematic at national level

![Graph showing working capital / total cash expenses (U.S.)](source: Morehart 2018, http://authoritative-analytics.com)
Recent and Planned Minimum Wages Changes

1. Top 10 fruit and vegetable producers drawn from 2015 ERS data on production value for “vegetables and melons” and “fruits and nuts.”
2. Florida (currently) and Michigan (after 2018) will adjust minimum wage annually to account for inflation.
3. Several states have exempt family members of the farm operator, local short-term laborers, or hired employees at farms with very low production from minimum wage laws.