



United States Department of Agriculture

Comparing NAWS to Other Sources of Farm Labor Data

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The findings and conclusions in this preliminary presentation have not been formally disseminated by the U.S. Department of Agriculture and should not be construed to represent any agency determination or policy. This research was supported by the intramural research program of the U.S. Department of Agriculture, Economic Research Service.



NAWS: On-farm survey of employees

➤ Coverage

- Field crops, specialty crops, horticulture; omits livestock.
- Includes farm labor contract employees (approx. 18% of total).
- *Excludes H-2A, and this exclusion is becoming more significant as H-2A grows.*
- Excludes Alaska & Hawaii.
- Basic occupations only: Excludes supervisors, managers, office support, etc.

➤ Content

- Not designed to yield overall employment estimates.
- Rich social and demographic data, including legal immigration status.
- Rich economic data, including wages, hours, farm and nonfarm income.

➤ Hourly wages

- Based on workers' reported wages and hours for recent pay period.
- Gross (pre-tax) wage; should not reflect employer costs (FICA, UI, Workers' Comp.)
- Includes overtime, piece rate, and team production components. Does it include bonuses/profit sharing? Hard to include end-of-year bonuses in hourly wage.
- Trimmed at \$2 and \$30 (nominal) in all years (revise thresholds?)
- Weight by *annual* hours worked for comparison to FLS, COA, QCEW.
- Weight by *weekly* hours worked for comparison to CPS (which lacks annual hours).



Current Population Survey (CPS): Household survey

➤ Coverage

- Monthly national household survey; farmworkers identified by occupation & industry.
- Includes farm labor contract employees (*only 10% of total, due to misclassification?*).
- Completeness of coverage of H-2A unclear: this is a “hard to enumerate” population, as are immigrant farmworkers in general, and unauthorized workers in particular.

➤ Content

- Can track overall farm (wage and salary) employment over time.
- Good data on wages, labor market status, and some demographics.
- To compare to NAWS: Limit to crops and support industries; Limit to Misc. Ag. Workers (includes Equip. Ops.), Graders & Sorters, and Packers; Drop DC, AK, HI.

➤ Hourly wages

- Use CEPR’s wage series: adjusts for changing topcoding and questionnaire design.
- Should be pre-tax wage; should not reflect employer costs (FICA, UI, Workers Comp).
- Includes overtime, tips, commissions. Other bonuses/profit sharing?
- Trimmed at about \$1 and \$350, based on *real wage* thresholds.
- Should weight by *annual* hours worked to compare to FLS, COA, QCEW, but annual hours are not recorded.



American Community Survey (ACS): Household survey

➤ Coverage

- Monthly national household survey; farmworkers identified by occupation & industry.
- Large sample size (more than 11,000 respondents in farm industries annually).
- Includes farm labor contract employees (*only 10% of total, due to misclassification?*)
- Completeness of coverage of H-2A unclear: this is a “hard to enumerate” population, as are immigrant farmworkers in general, and unauthorized workers in particular.

➤ Content

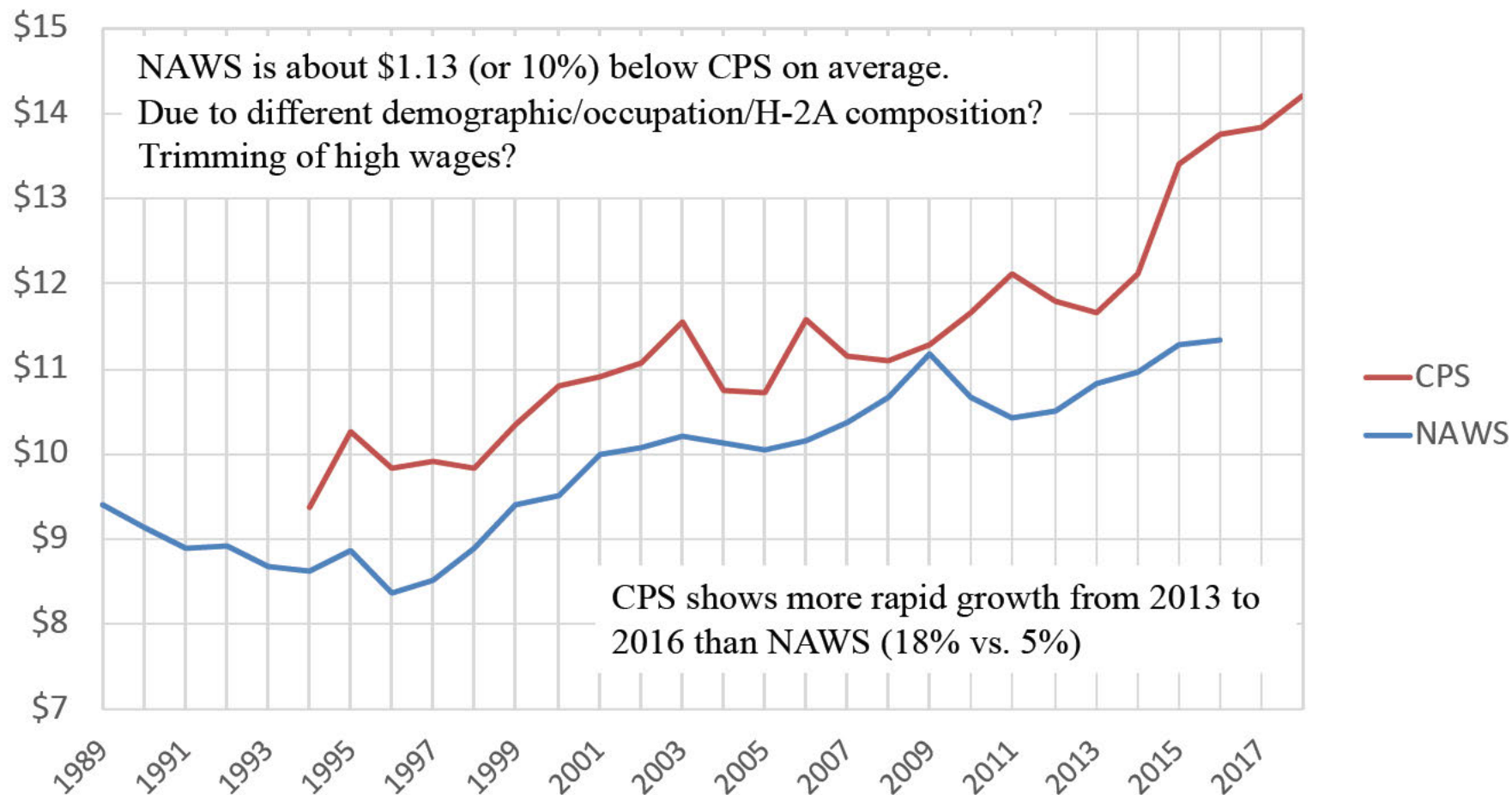
- Can track overall farm (wage and salary) employment over time.
 - ACS is not often used to measure state and national farm employment trends, but it is a source that deserves more attention for this purpose.
- Some demographic detail, and measures of poverty, disability, health insurance.

➤ Hourly wages

- Poor quality data on hourly wages: not reported here. Problems are:
- Farmworkers identified by current occupation, but their incomes are reported for all jobs (farm and nonfarm) held in past year.
- Reports only categorical data on weeks worked.
- Reports only “usual” number of hours worked per week.



Average Real Hourly Wages: NAWS vs. CPS (\$2018)

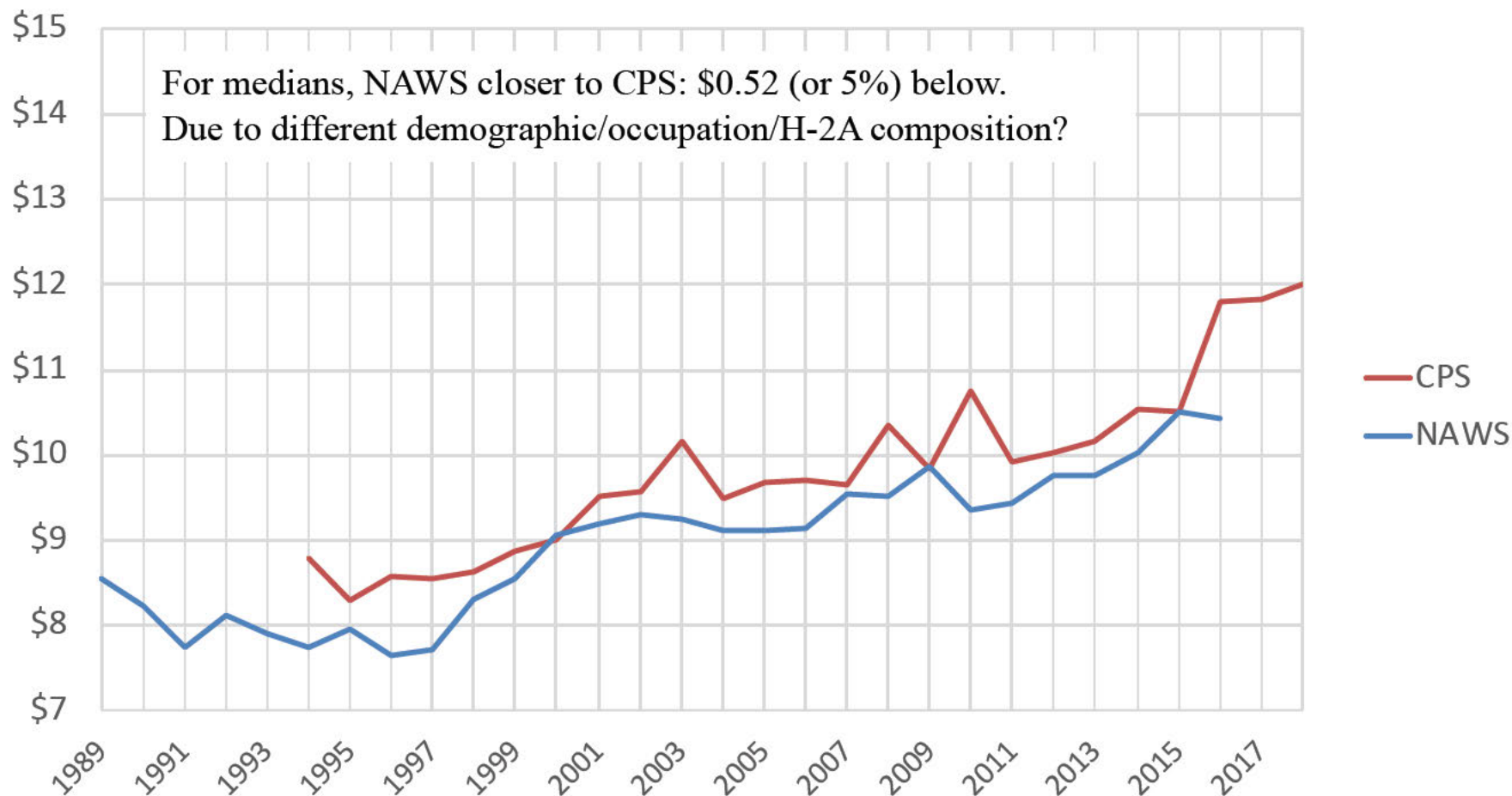


Source: USDA-ERS calculations using data from Census Bureau & CEPR (CPS) and USDOL (NAWS).

Note: Inflation-adjusted using Personal Consumption Expenditures price index (PCE). NAWS data are plotted by fiscal year, CPS data by calendar year.



Median Real Hourly Wages: NAWS vs CPS (\$2018)



Source: USDA-ERS calculations using data from Census Bureau & CEPR (CPS) and USDOL (NAWS).

Note: Inflation-adjusted using Personal Consumption Expenditures price index (PCE). NAWS data are plotted by fiscal year, CPS data by calendar year.



Demographic Differences Between NAWS, CPS, ACS

		Percentages in category			T-test of Differences		
		NAWS 2013-14	ACS 2014	CPS 2013-14	NAWS-ACS	NAWS-CPS	ACS-CPS
Sex	Male	72.0	79.2	80.2	-2.73	-2.84	-0.66
	Female	28.0	20.8	19.8	2.73	2.84	0.66
Education	0-6th	39.6	35.1	30.0	2.11	3.07	1.92
	7-11th	28.3	27.1	26.1	0.59	0.93	0.55
	HS/GED	21.1	23.6	27.5	-1.32	-2.46	-1.90
	Tertiary	11.0	14.2	16.5	-1.31	-1.98	-1.40
Country of Birth*	US/PR	26.8	36.3	43.3	-3.47	-4.41	-2.43
	Mexico	68.4	56.0	48.5	4.54	5.09	2.39
	Cent/S Amer	4.5	6.3	6.7	-1.85	-1.03	-0.18
	Other	0.3	1.5	1.5	-3.52	-2.78	-0.15

Source: USDA-ERS calculations using data from Census Bureau & CEPR (CPS, ACS) and USDOL (NAWS).

Note: t-statistics in red are significant at the 10% threshold.

- Immigrant shares: NAWS > ACS > CPS [should tend to lower NAWS hourly wage]
 - This *despite* NAWS exclusion of H-2A. Likely due to under count of immigrants in HH surveys.
- Share with <7th grade education: NAWS > ACS > CPS.
 - Consistent with higher shares of immigrants.
- Share female: NAWS > (ACS & CPS) [should tend to lower NAWS hourly wage]
 - Consistent with H-2A exclusion from NAWS, but other factors may also contribute
- Similar age distribution; similar regional distribution.



Farm Labor Survey (FLS): Survey of Farm Employers

➤ Coverage

- Based on employer reports of total gross wages / total hours in reference week.
- Covers all field and livestock workers, including supervisors, managers, admin. For comparison with NAWS, drop the nonsupervisory workers, drop livestock.
- Excludes farm labor contractors (so we drop these from NAWS as well to compare.)
- *Includes H-2A if directly hired.*
- Excludes AK (includes HI)

➤ Content

- Can track employment, which shows *downward* trend recently, unlike other sources.
- Can only measure average wages, not medians; some occupational detail.
- Can measure weekly hours worked.

➤ Hourly Wages

- Should not reflect employer costs (FICA, UI, Workers Comp), but does it?
- Should include overtime, piece rate, and team production components. Other bonuses?
- Implicitly weighted by *annual* hours worked.
- No trimming of high hourly wages.



Quarterly Census of Employment and Wages (QCEW)

➤ Coverage

- Based on employer reports of total gross wages and employment in reference week.
- *Incomplete coverage of smaller employers and farm labor contractors in some states.*
- Covers all field and livestock workers, including supervisors, managers, admin. For comparison with NAWS, we omit livestock.
- Can track farm labor contractors (average 17% of total), but these are excluded for comparison with FLS.
- *Includes H-2A in CA, but this may vary by state.*
- *Includes AK and HI.*

➤ Content

- Can track employment (subject to coverage issues).
- Can only measure average weekly wages, not hourly wage, no occupational detail.

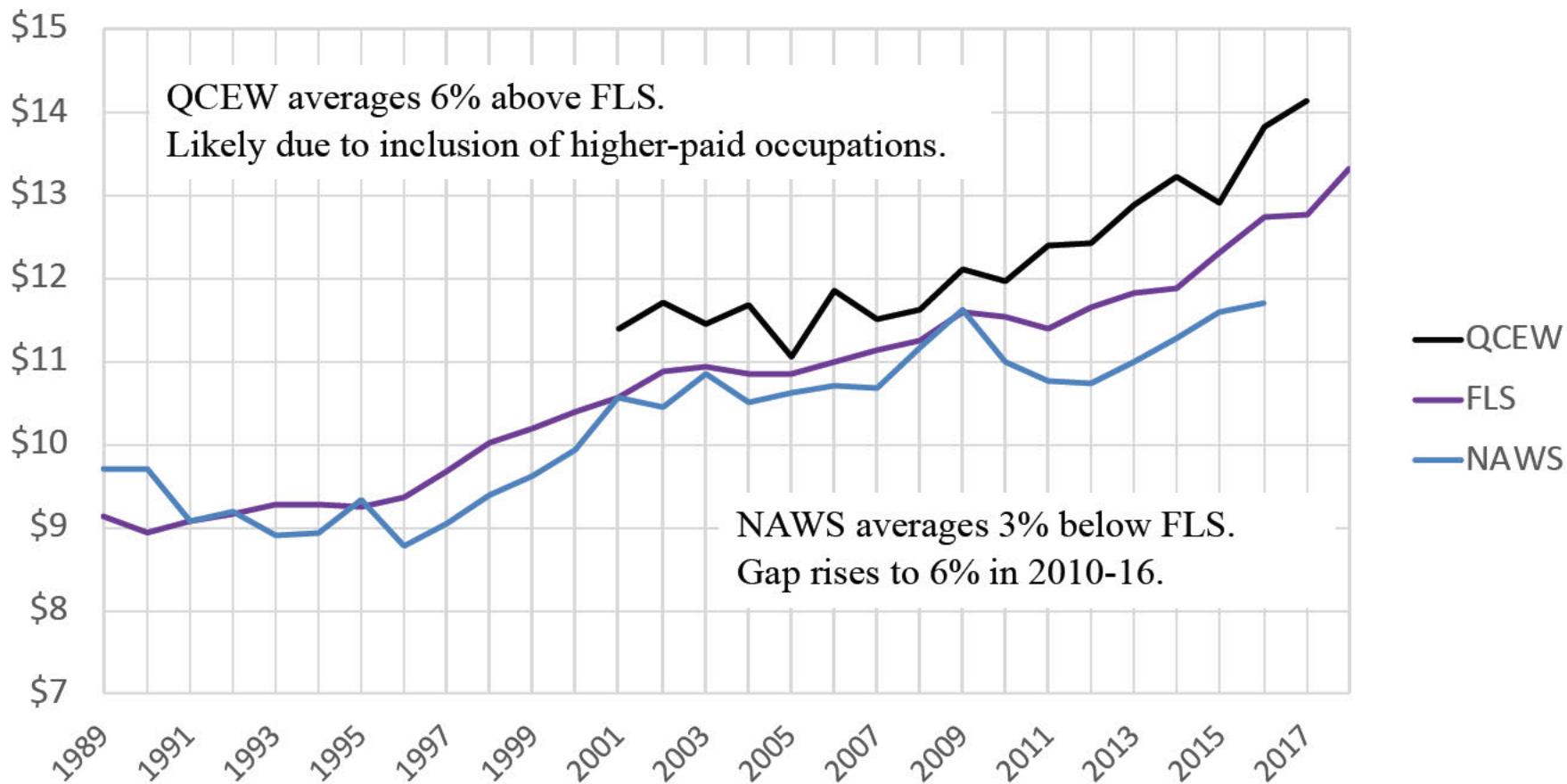
➤ Hourly Wages

- Average weekly wages converted to hourly wage using NAWS average hours/week. Results are sensitive to which measure of weekly hours one uses.
- Should not reflect employer costs (FICA, UI, Workers Comp), but does it?
- Should include overtime, piece rate, and team production components. Other bonuses?
- Implicitly weighted by *annual* hours worked.
- No trimming of high hourly wages.



Average Real Hourly Wages: NAWS, FLS, QCEW (\$2018)

Crops only, omit Farm Labor Contractors

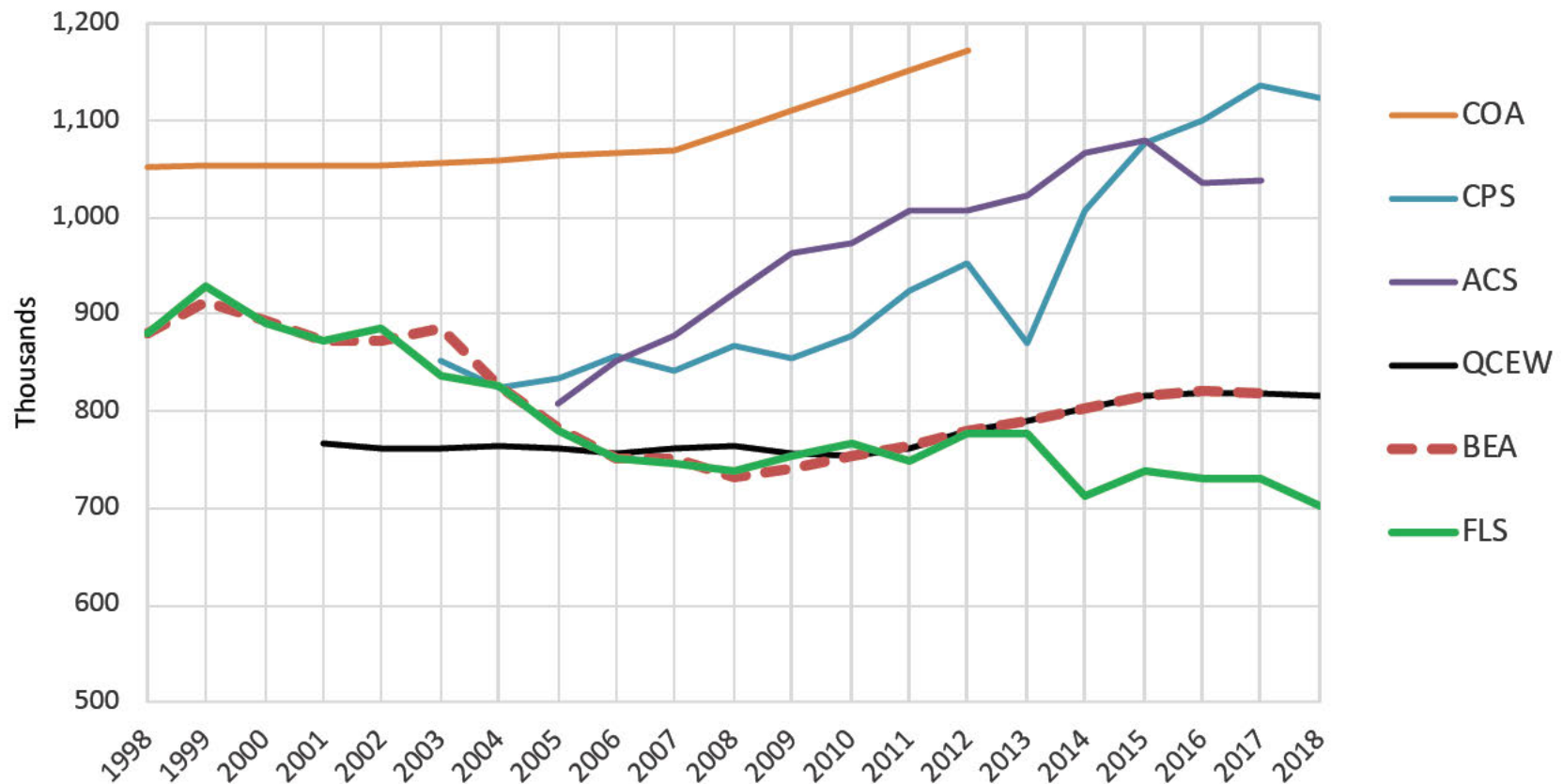


Source: USDA-ERS calculations using data from USDOL (NAWS, QCEW) and USDA-NASS (FLS).

Note: Inflation-adjusted using Personal Consumption Expenditures price index (PCE). NAWS data are plotted by fiscal year, FLS and QCEW by calendar year. QCEW weekly wages converted to hourly by dividing by NAWS hours/week (omitting FLCs).



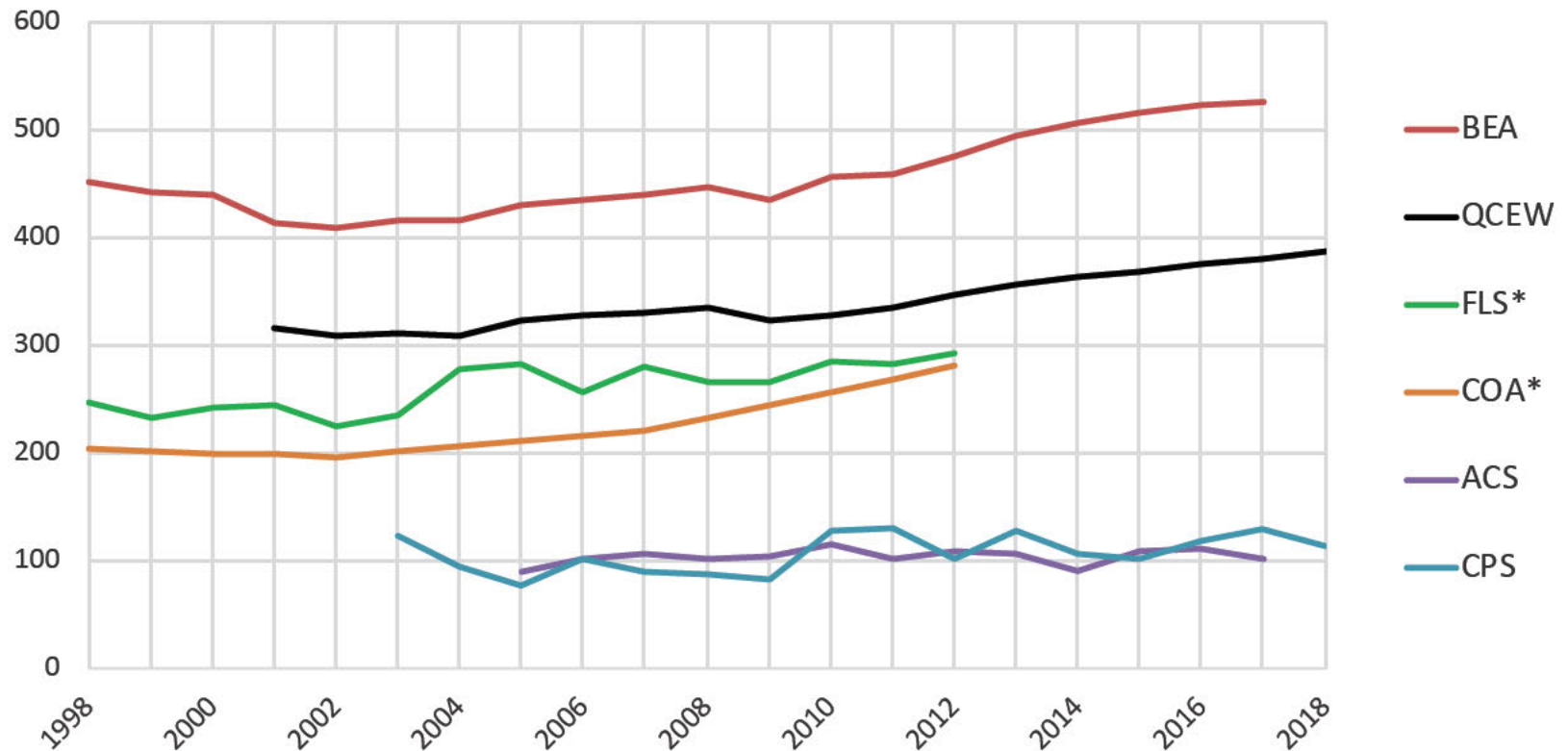
Conflicting Estimates of Total Direct Employment (Crops and Livestock)



Source: USDA-ERS calculations using data from USDOL (CPS, QCEW), Census (ACS), BEA, and USDA-NASS (FLS, COA).
Note: Employment for Census of Agriculture estimated from wage expenses / FLS average hourly wage / 2040 hours per year.



Conflicting Estimates of Support Industry Employment (All Support Industries, except * = Farm Contract Labor Only)



Source: USDA-ERS calculations using data from USDOL (CPS, QCEW), Census (ACS), BEA, and USDA-NASS (FLS, COA).
Note: Employment for Census of Agriculture estimated from wage expenses / FLS average hourly wage / 2040 hours per year.



Thank you

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Farm Labor Topic Page: <http://www.ers.usda.gov/topics/farm-economy/farm-labor.aspx>



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