



DISTRIBUTION OF FARM INCOME BY FARM SIZE AND TYPE

AAE 320

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Agricultural and Applied Economics

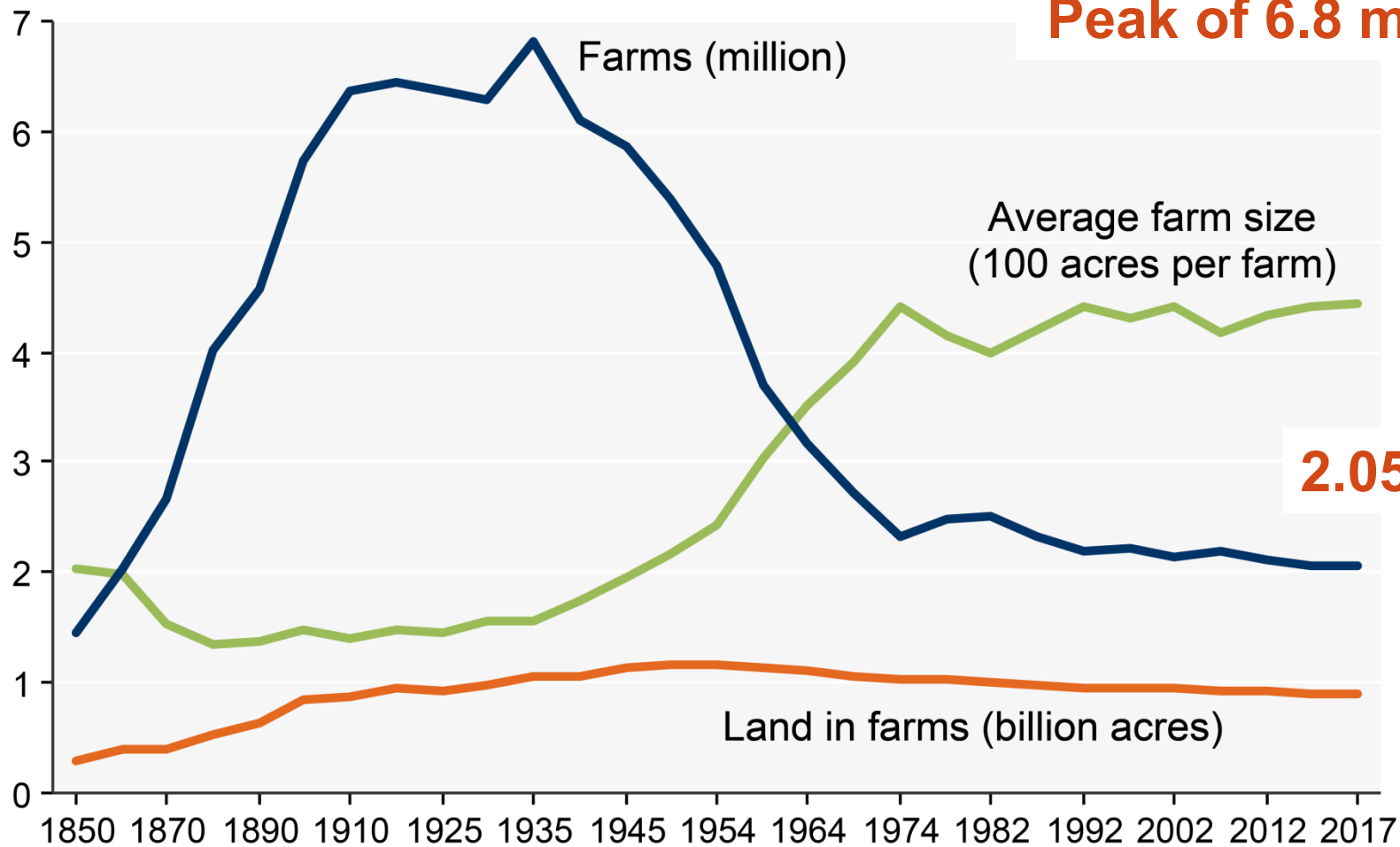


Learning Goal

- Most USDA data on farm income and the farm economy focuses on reporting the averages or totals
- Learning Goal: Look at the distribution around these averages
- Focus on how do “small” farms do relative to larger farms?
- See that rural poverty is a part of agriculture

Farms, land in farms, and average acres per farm, 1850-2017

Million farms, billion acres, or 100 acres per farm



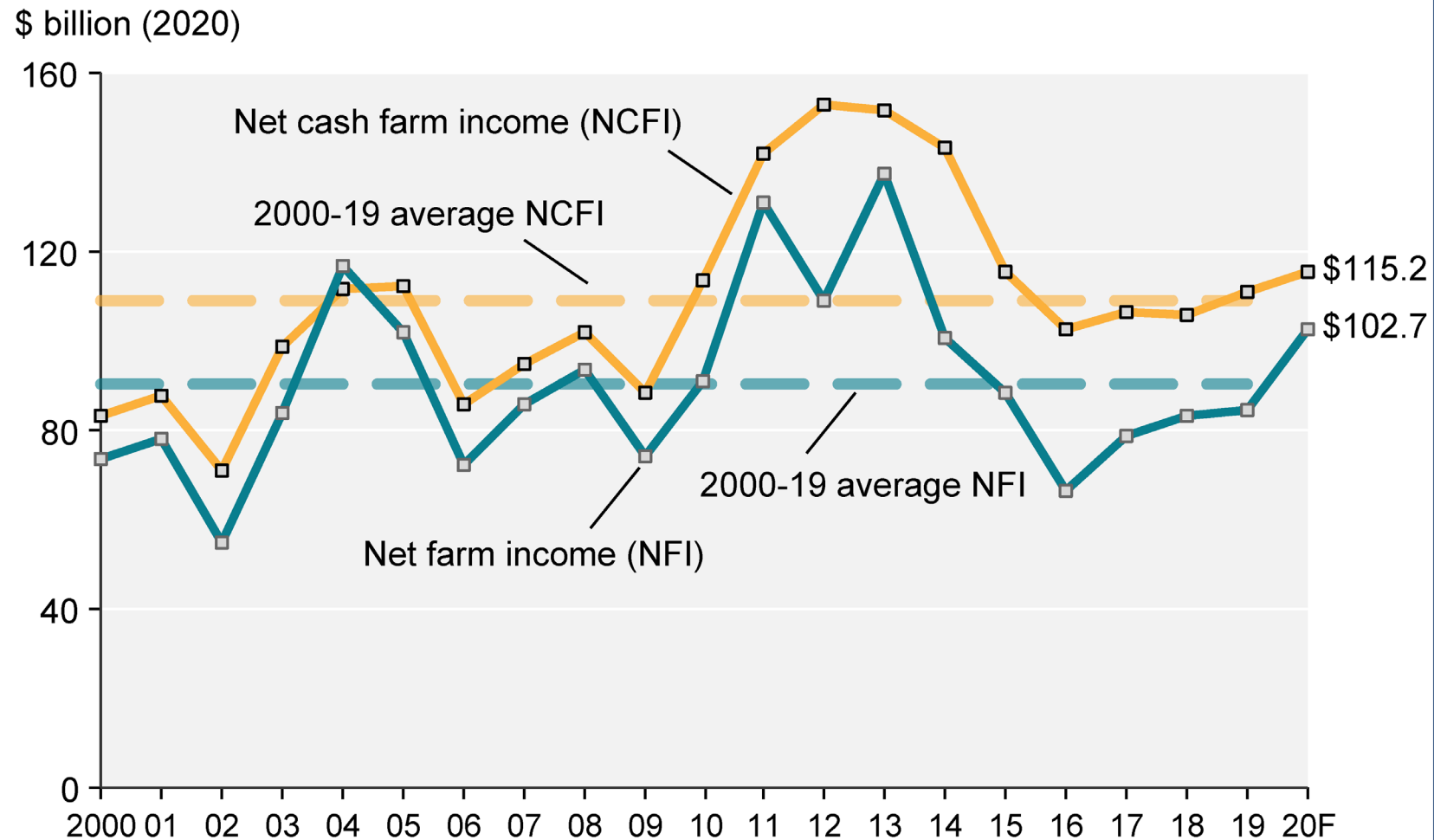
Peak of 6.8 million farms in 1935

2.05 million farms in 2017

Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Census of Agriculture (through 2012) and *Farms and Land in Farms: 2017 Summary*.

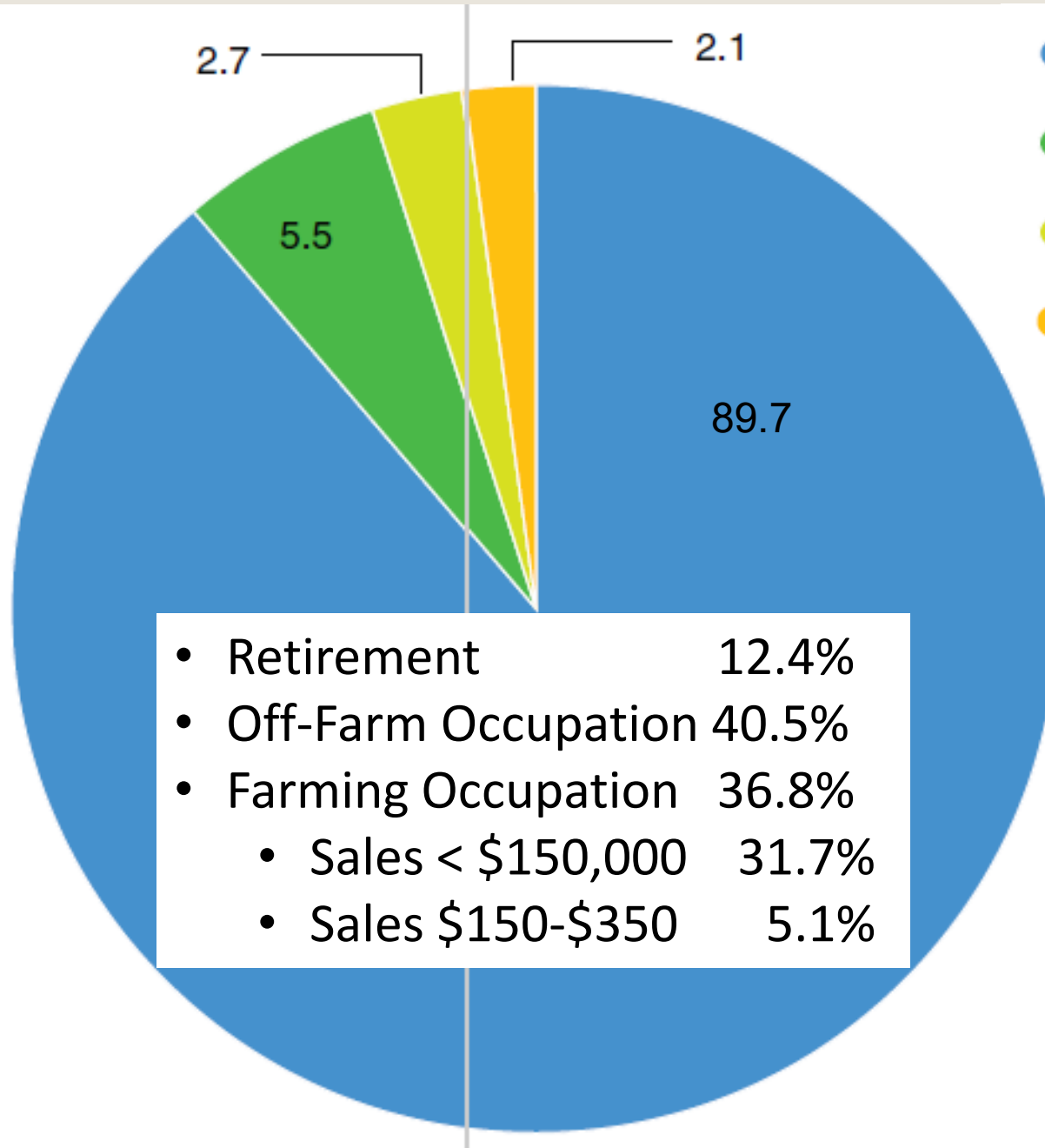
Source: <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/farming-and-farm-income/>

Net farm income and net cash farm income, 2000–20F



Note: F = forecast. Values are adjusted for inflation using the chain-type GDP deflator, 2020=100.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics.
Data as of September 2, 2020.



- Small family farms GCFI < \$350,000
- Midsize family farms GCFI ≥ \$350,000, <\$1 million
- Large-scale family farms GCFI ≥ \$1 million
- Nonfamily farms

- **Family farms accounted for 98% of all US farms**
- **Most are “small” farms**

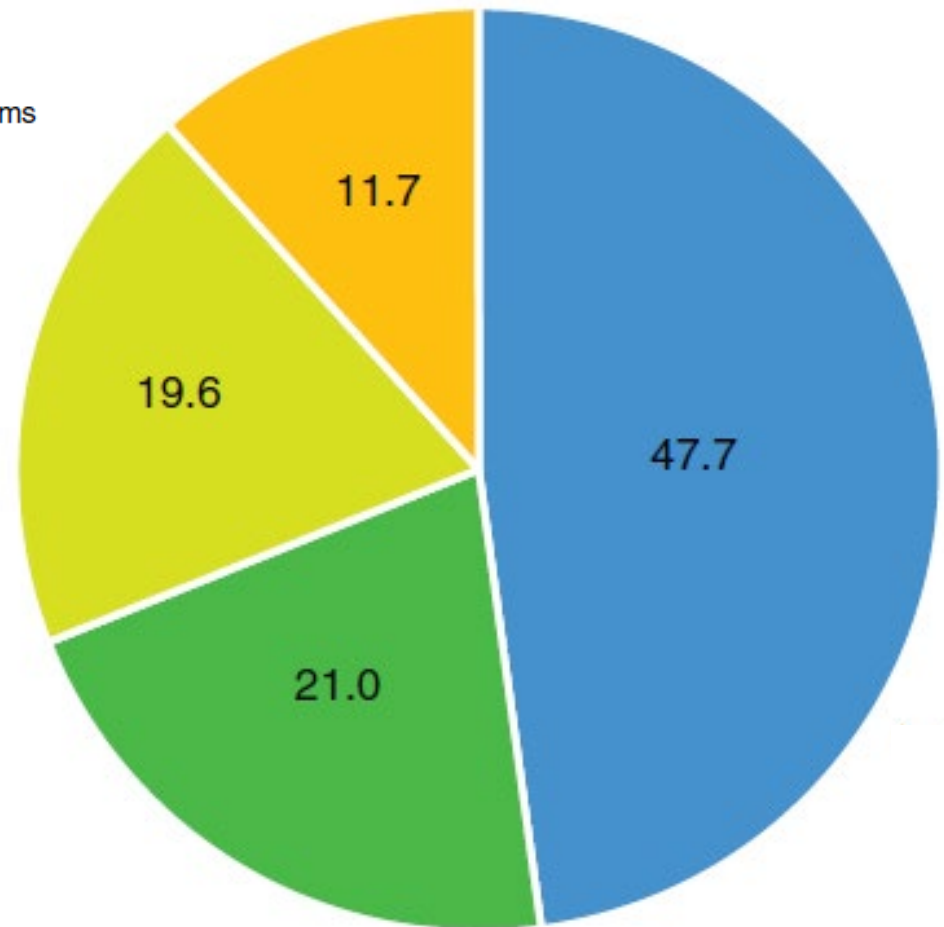
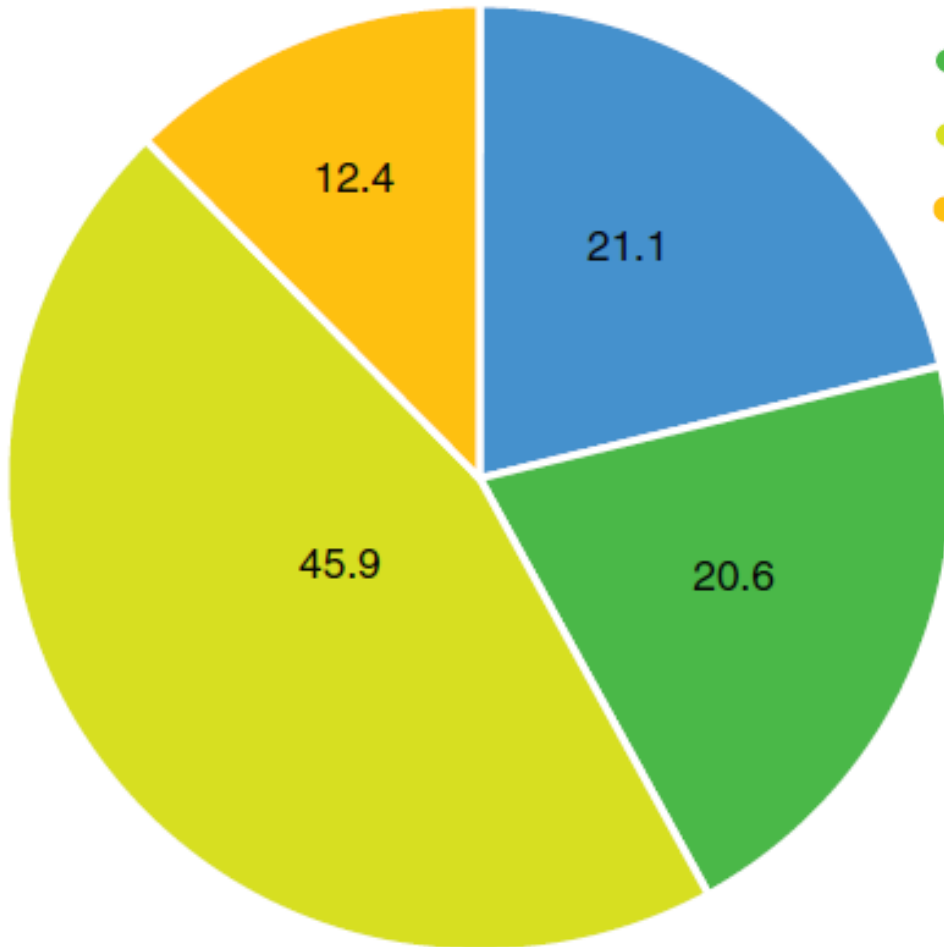
Non-Family Farms

Non-family members in partnerships
 Private, non-family corporations
 Farms hiring unrelated manager
 Publicly held corporations

Value of Production

Land Operated

- Small family farms
- Midsize family farms
- Large-scale family farms
- Nonfamily farms

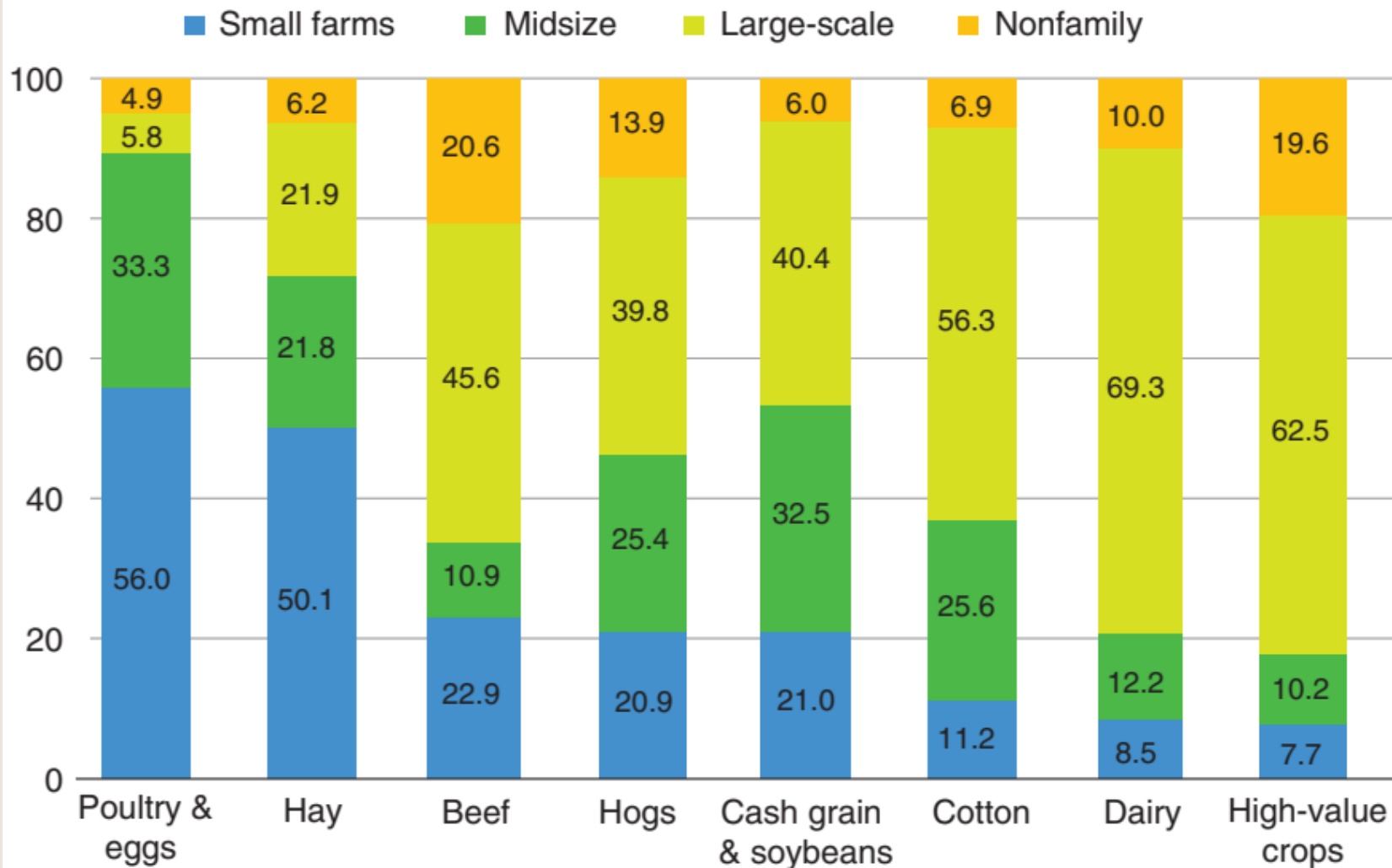


Summary of Productivity

- Small Farms 90%: produce 21% of all production using 48% of the land
 - Retirement Farms 12.4% (250,289 farms)
 - Off-Farm Occupation 40.5% (819,208 farms)
 - Farming Occupation, Sales < \$150,000: 31.7% (640,223 farms)
 - Farming Occupation, Sales \$150,000-\$350,000: 5.1% (102,708 farms)
- Midsized Family Farms: 5.5% (111,486 farms), produce 21% of all production using 21% of the land
- Non-Family Farms: 2.1% (41,550 farms) produce 12% of all production using 12% of the land
- Large-Scale Family Farms: 2.7% (55,454 farms) produce 46% of all production using less than 20% of the land (where the productivity occurs)

Value of production for selected commodities by farm type, 2018

Percent of value of production

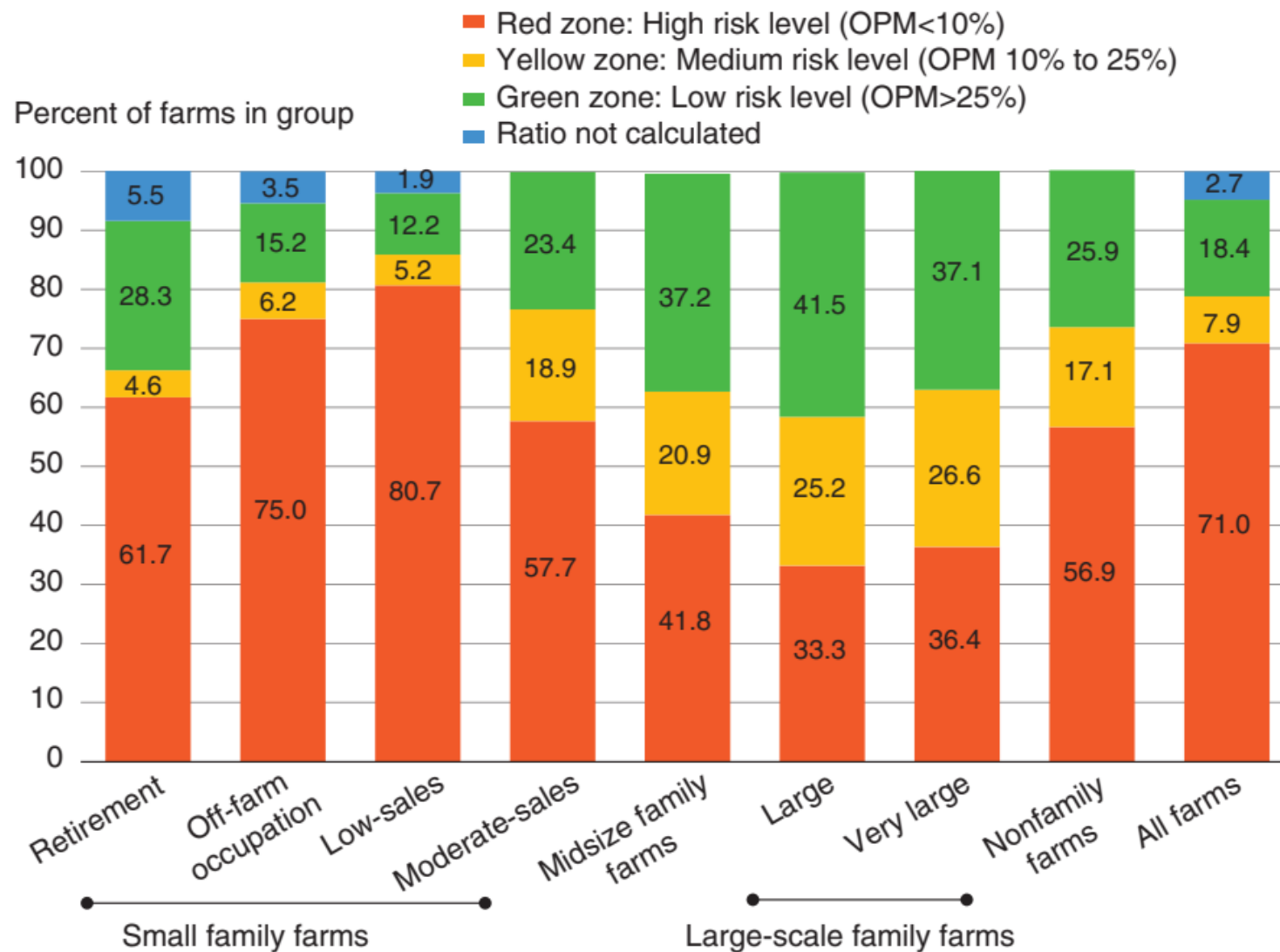


Note: High-value crops include fruits, vegetables, tree nuts, and nursery/greenhouse crops.

Due to rounding, numbers may not add to 100.

<https://www.ers.usda.gov/webdocs/publications/95547/eib-214.pdf>

Farms by operating profit margin (OPM) and farm type, 2018



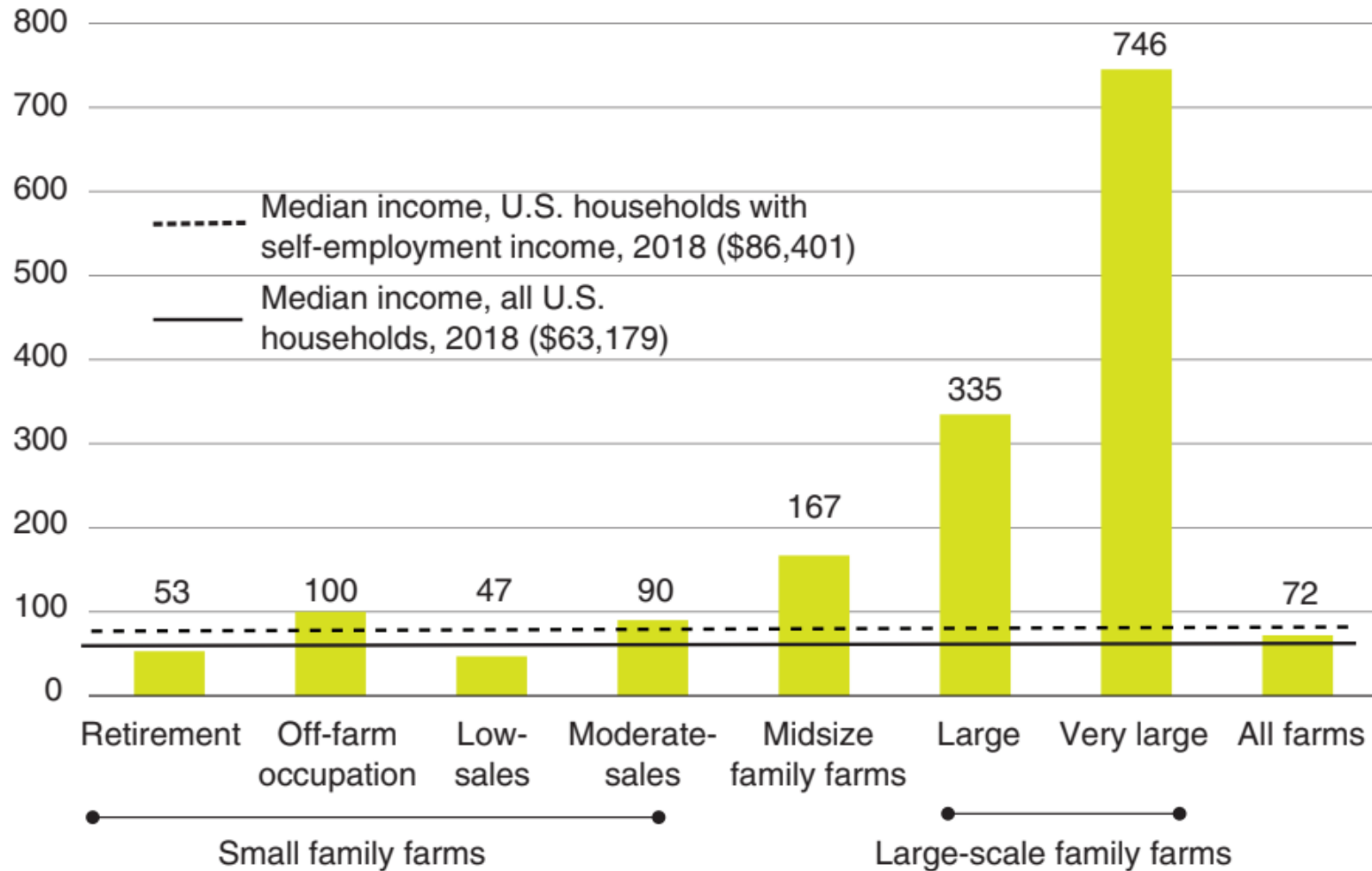
OPM = operating profit margin

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Notes: Due to rounding, sums may not add to 100 percent. Operating profit margin (OPM)=100 X (net farm income + interest paid - charges for unpaid labor and management)/gross farm income.

Median operator household income by farm type, 2018

\$1,000 per household

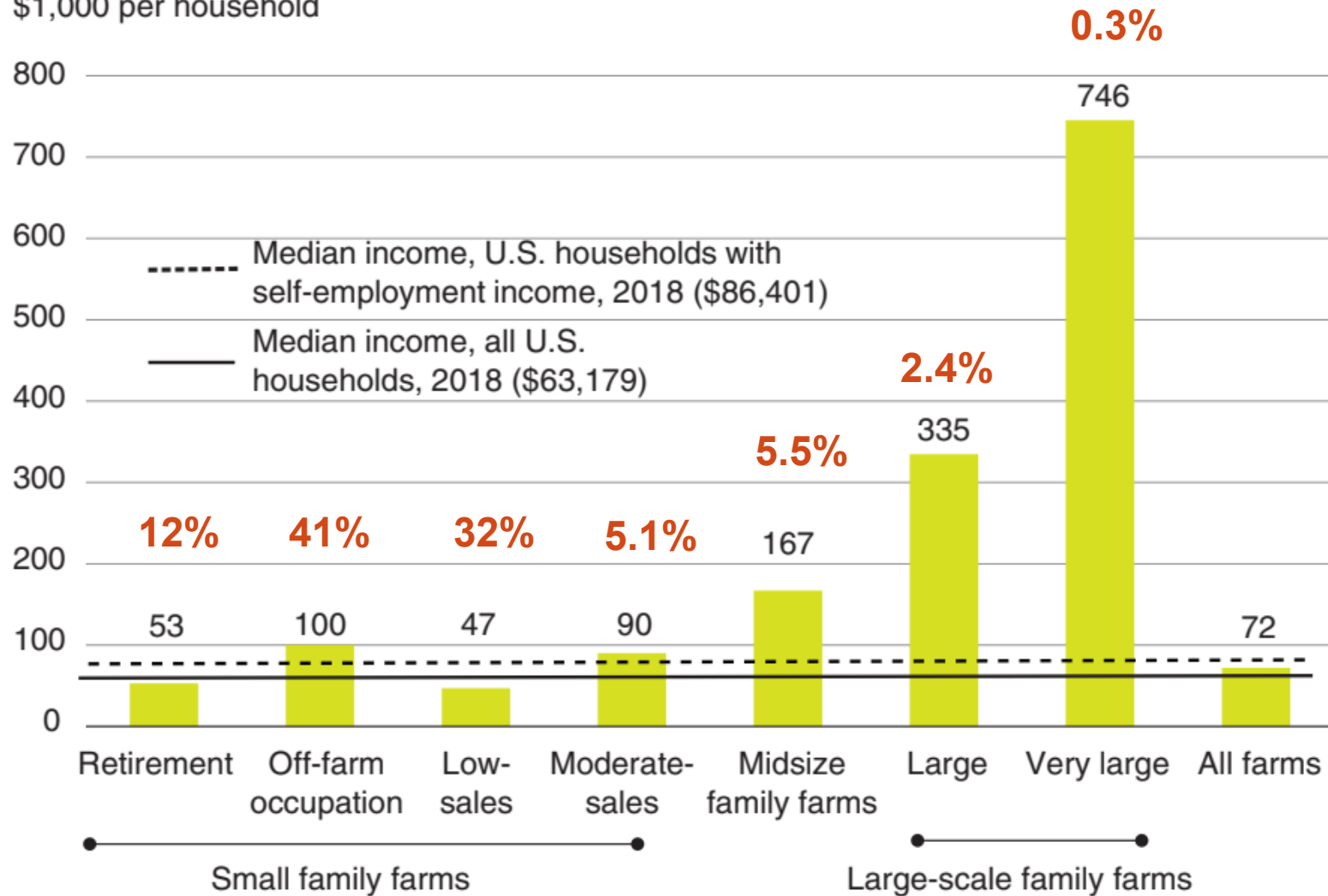


Notes: Operator household income includes both farm and off-farm income received by household members. Half of all households have incomes above the median, and half have incomes below the median.

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Farm households with income or wealth below the median for all U.S. households, 2018

Farm households with...		
	Income below U.S. median (\$63,179)	Wealth below U.S. median (\$99,352)
	Percent of farm households	
Small family farms		
Retirement	58.0	0.3
Off-farm occupation	25.0	3.2
Low-sales	65.0	4.3
Moderate sales	37.7	4.3
Midsized family farms	25.4	3.0
Large-scale family farms		
Large	20.0	2.8
Very large	21.9	4.1
All family farms	42.6	3.2

Farm operator household income by source and farm type, 2018						
Farm type	Mean total income	Income from farming		Mean income from off-farm sources		
		Mean amount	Is negative	Total	Earned	Unearned
	Dollars per household		Percent of households	Dollars per household		
Small family farms						
Retirement	67,144	2,865	56.1	64,279	29,818	34,461
Off-farm occupation	131,126	-4,392	70.9	135,518	113,406	22,112
Low-sales	57,626	-4,205	61.9	61,830	28,685	33,146
Moderate sales	108,053	40,057	23.9	67,995	34,090	33,905
Midsize family farms	197,016	118,024	18.4	78,992	50,381	28,611
Large-scale family farms						
Large	413,485	355,269	14.2	58,216	37,480	20,735
Very large	1,335,135	1,290,377	16.1	44,758	21,004	23,753
All family farms	112,210	18,425	59.1	93,786	65,596	28,190

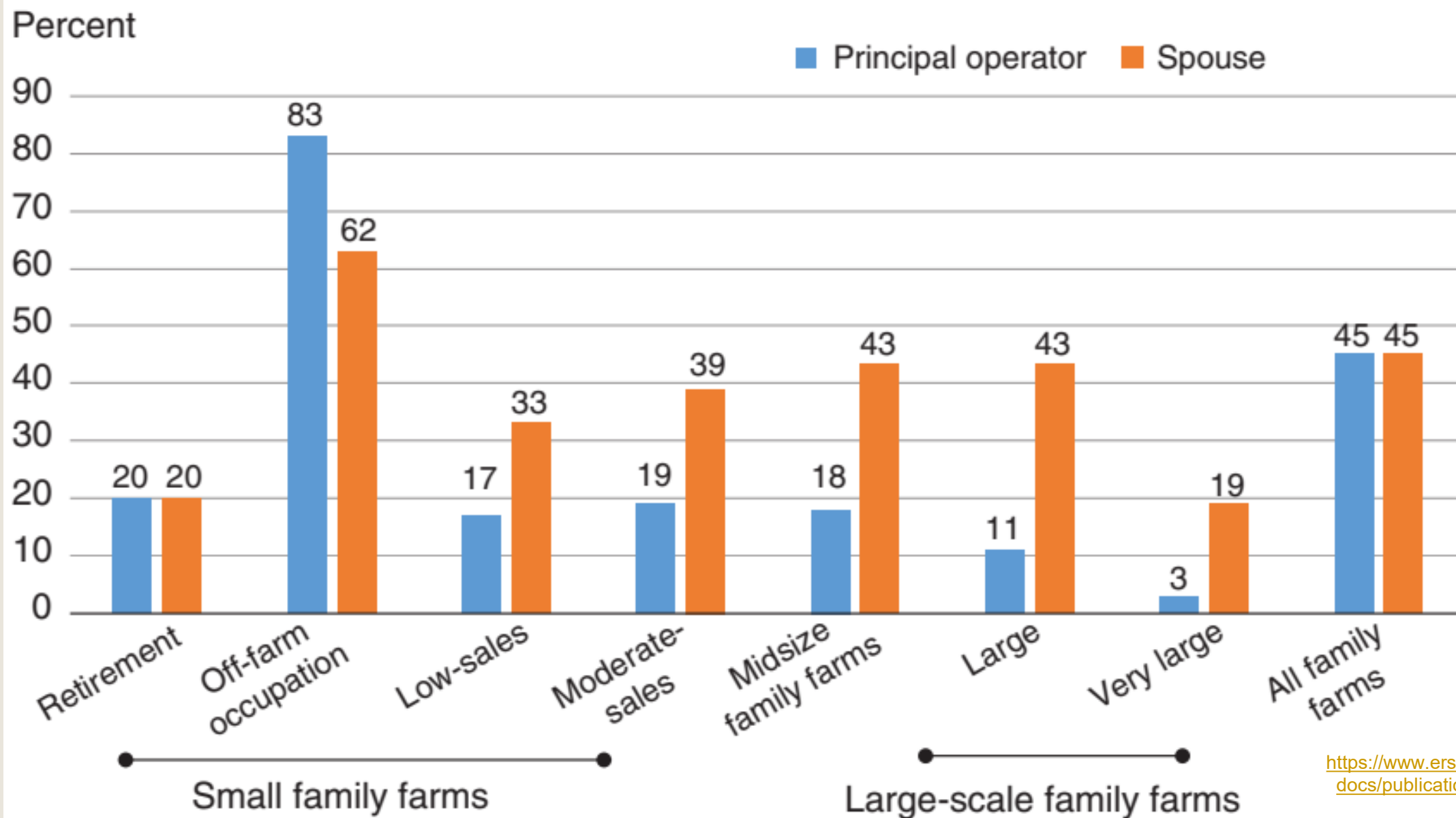
Unearned income:
interest, dividends,
Social Security, other
govt payments,
alimony, annuities,
private pensions,
estates, ...

Farm operator household income by source and farm type, 2018

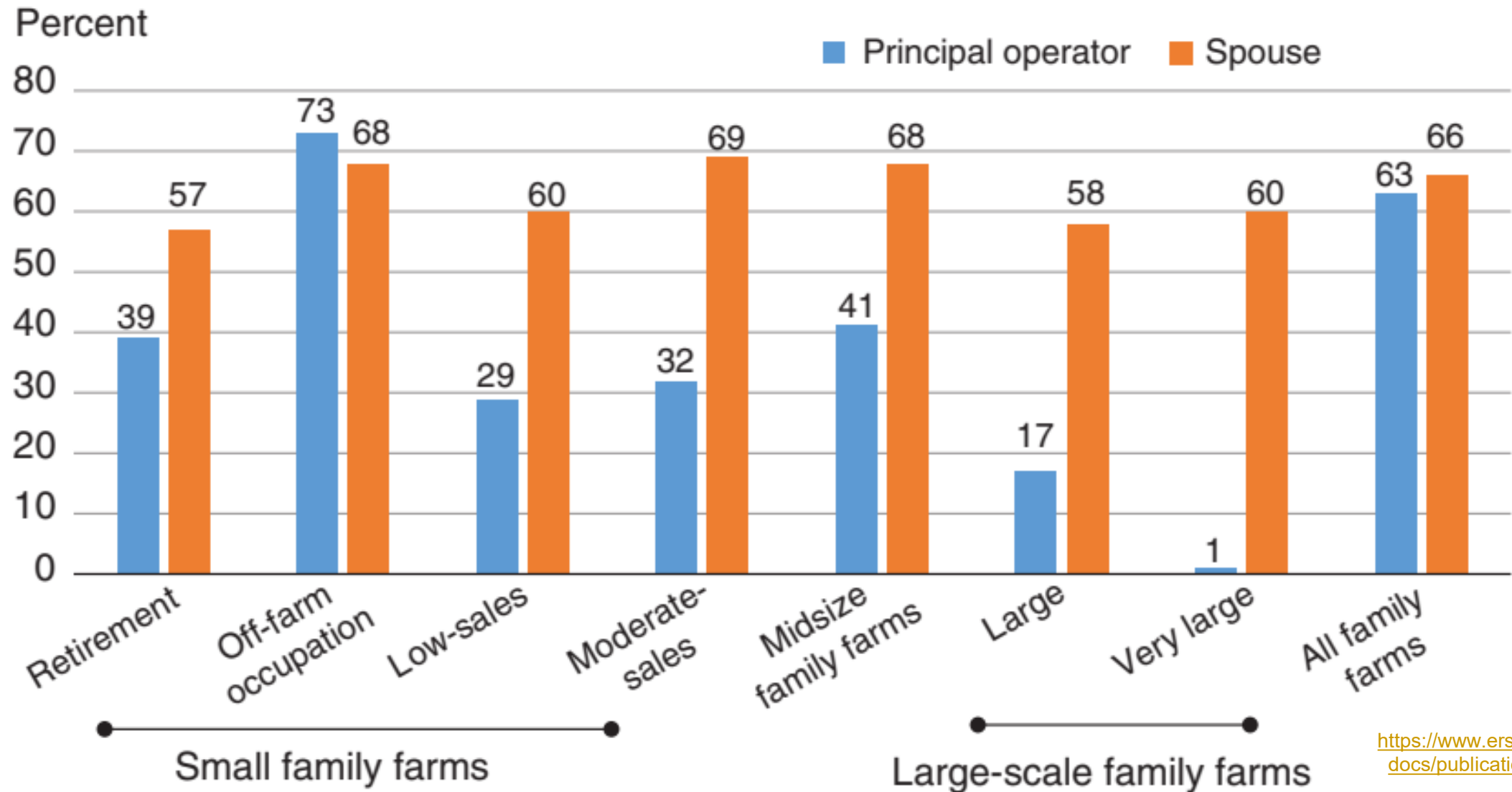
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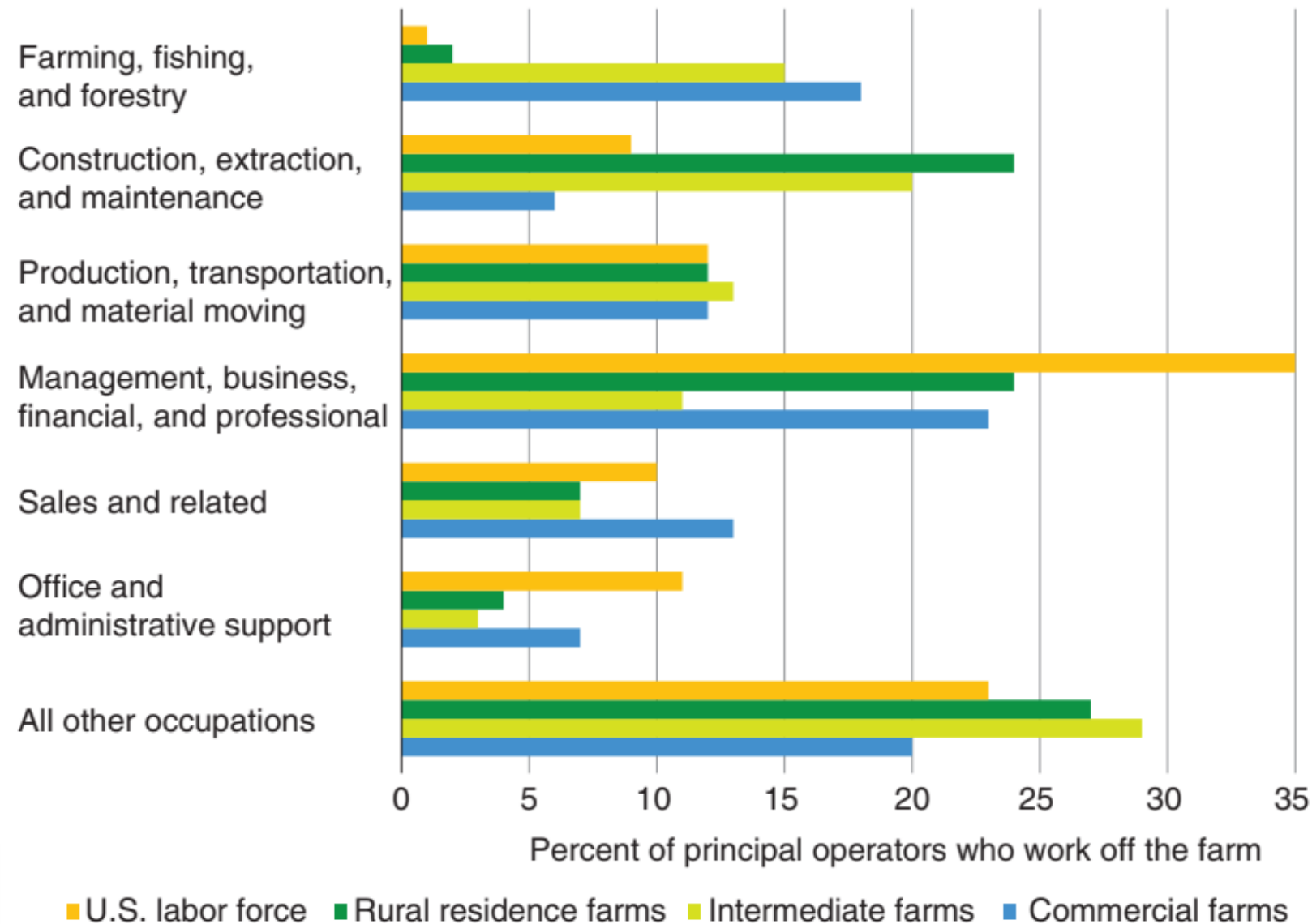
Percent of principal operators and spouses who work off the farm, 2018



Share of farm households who work off-farm that do so for health care benefits, by farm type, 2018

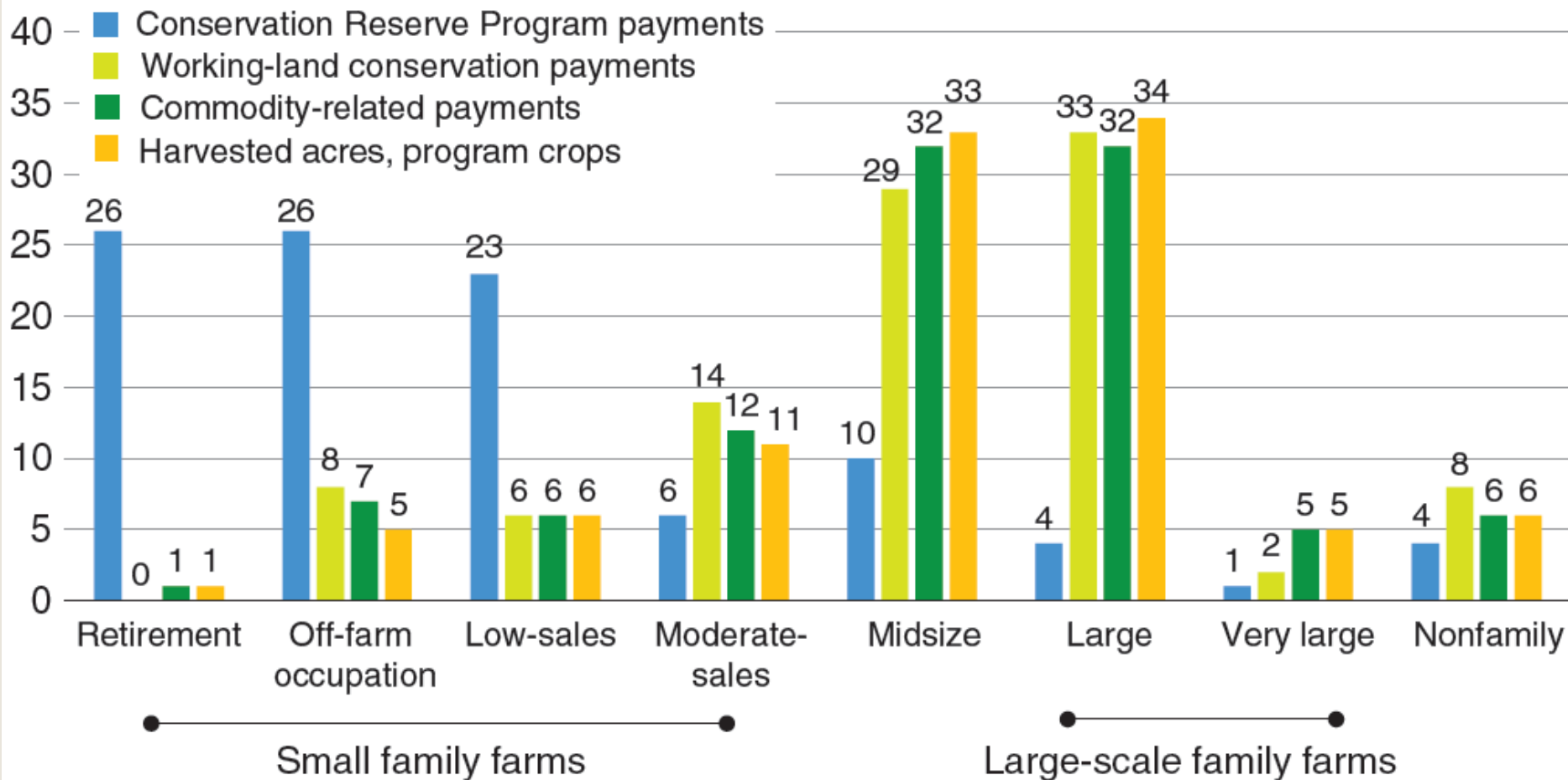


Off-farm occupational choices of principal farm operators who work off the farm, 2018



Distribution of government agricultural program payments, and harvested acres of program crops, 2018

Percent of U.S. payments or acres of program crops



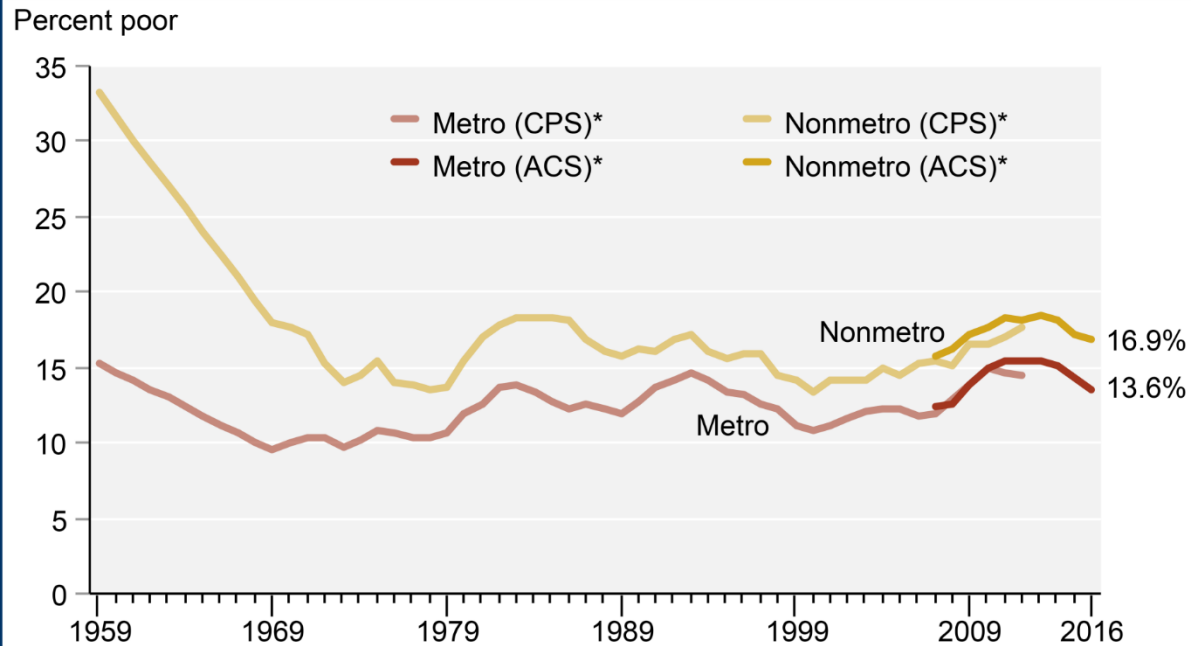
Note: Program crops include barley, corn, dry edible beans/peas/lentils, oats, peanuts, rice, sorghum (grain), soybeans and other oilseeds, canola, and wheat.

How much is \$57,626?

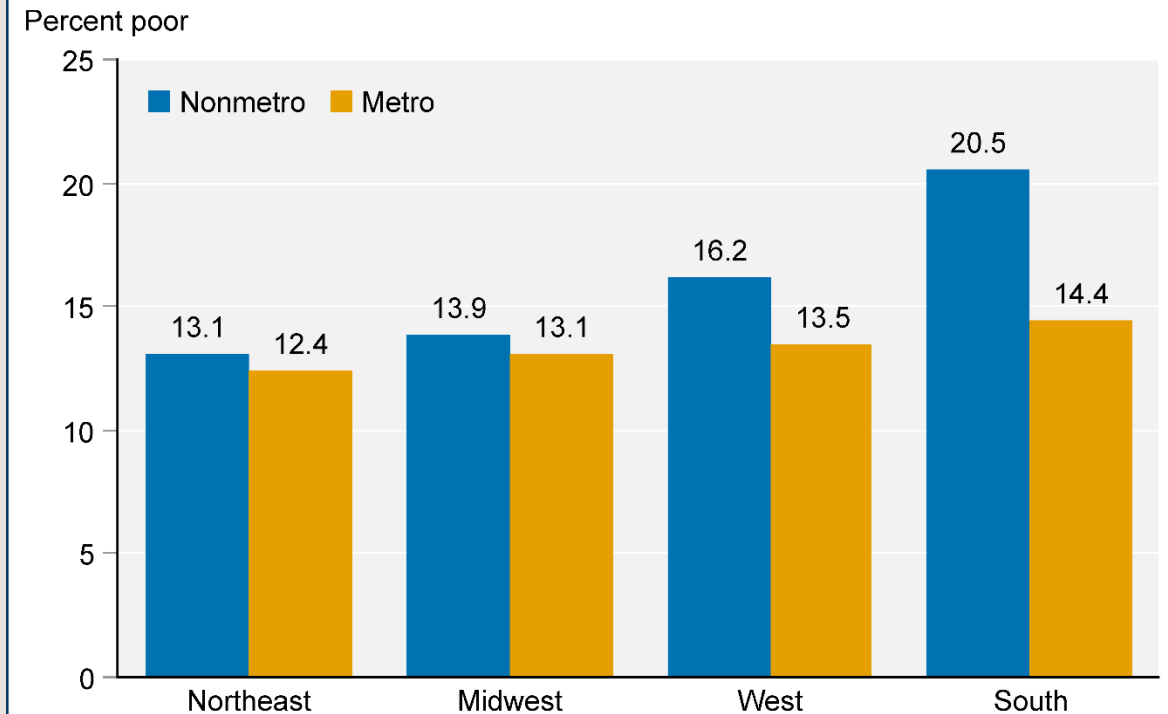
- Assume a family of four: Ma, Pa, Boy, and Girl
- US poverty threshold in 2020: **\$26,200**
- <https://aspe.hhs.gov/poverty-guidelines>
- Eligible for SNAP (food stamps) and free school lunches if less than 130% of poverty level = **\$34,060**
- Eligible for Reduced Cost school lunches if less than 185% of poverty = **\$48,470**
- <https://aspe.hhs.gov/system/files/aspe-files/107166/2020-percentage-poverty-tool.xlsx>
- Main point: many kids from small farms qualify for free or reduced school lunches and/or food stamps

Poverty in the USA

Poverty rates by metro/nonmetro residence, 1959-2016



Poverty rates by region and metro/nonmetro status, 2014-18 average



Source: USDA, Economic Research Service using U.S. Census Bureau, American Community Survey 5-year average county-level data for 2014-18 and 2018 Office of Management and Budget nonmetro/metro county designations.

County-Level Poverty Rates in Rural Counties

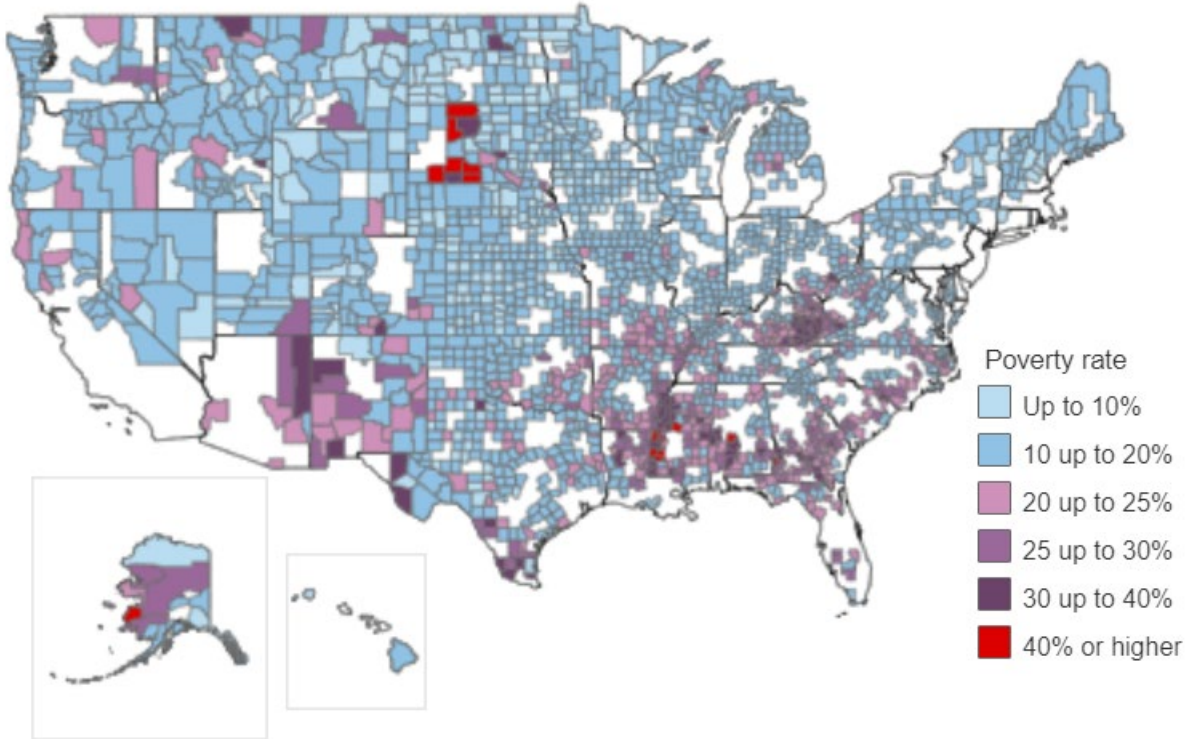
U.S. county poverty rates, 2014-18 average

Choose measure to map:

- ☒ Poverty rate (all)
- ☐ Child poverty rate

Choose counties to view:

- ☐ (All)
- ☒ Nonmetro counties
- ☐ Metro counties



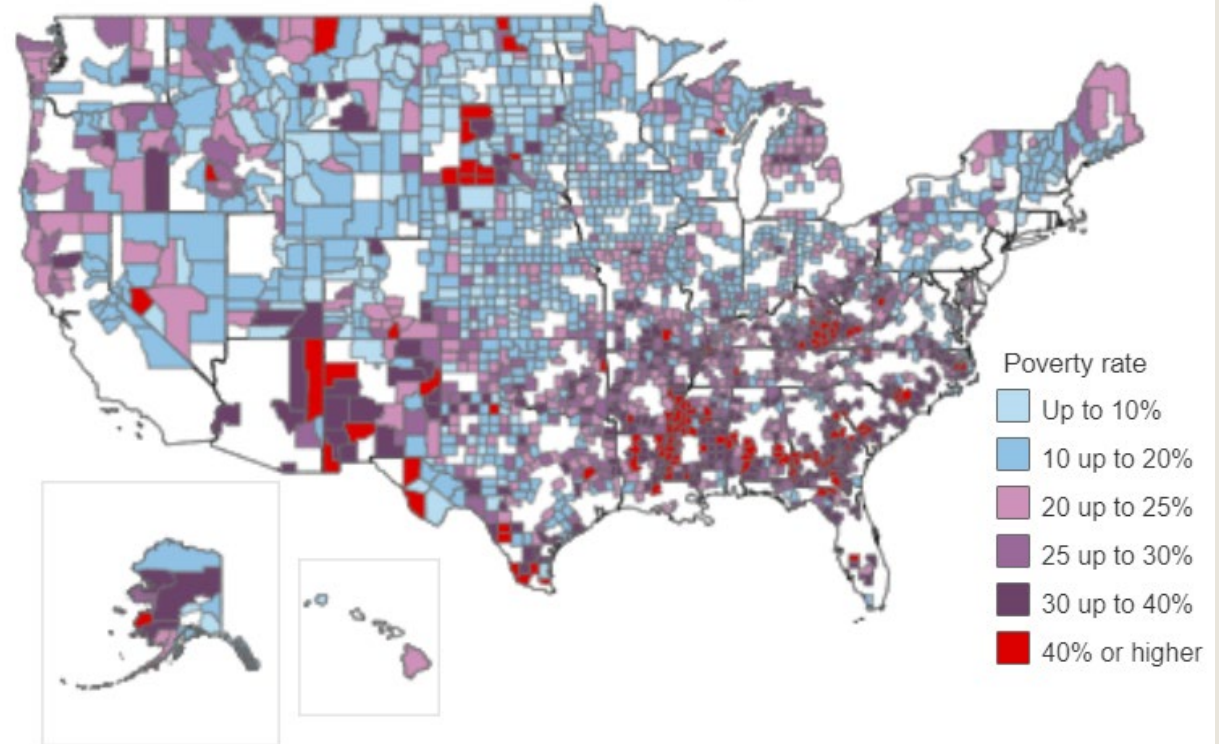
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Summary

- Most of the focus is on averages for farm income
- The reality is that there is a lot of variation around the average and median
 - Many farmers do better and many do worse and it varies from year to year
- Rural poverty rates are worse than non-rural poverty rates
- Rural poverty is a reality for many in agriculture