



2017 Census of Agriculture

Native American Agriculture Fund Webinar

May 14, 2020

History of the Census of Agriculture

- The first Census of Agriculture was conducted in 1840 in 26 states and the District of Columbia
- 177 years later:
 - The 2017 Census of Agriculture is the 29th in the series, and the 5th conducted by NASS
 - In 1997 the Census was transferred from the Census Bureau to NASS
 - The Census encompasses 50 states, Puerto Rico, and outlying areas
- Data are available for:
 - National, state, and county levels
 - Congressional districts, watersheds, and zip codes

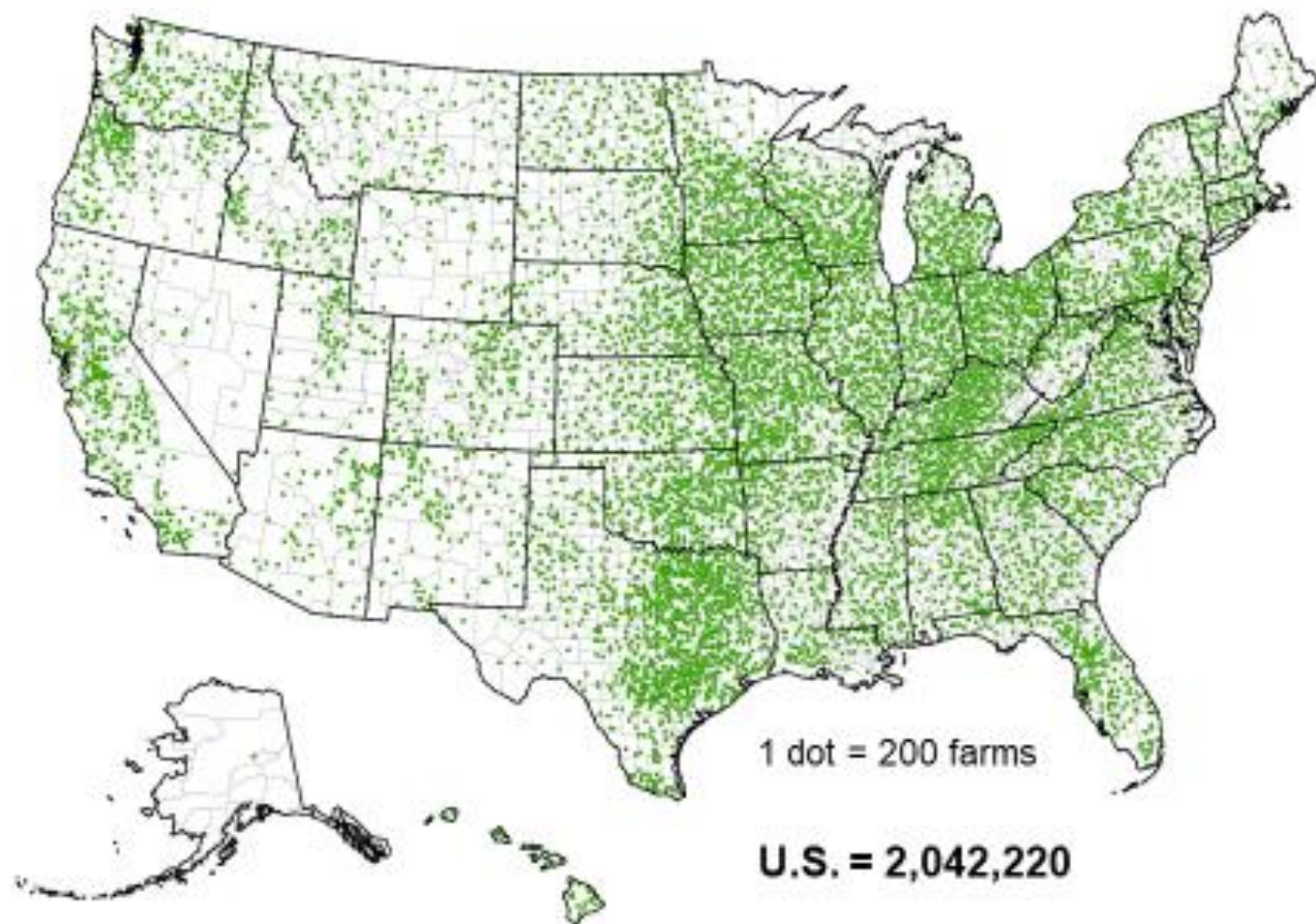
Farms and Land in Farms

Since 1974, the Census of Agriculture has defined a farm as

“any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.”

Number of Farms, 2017

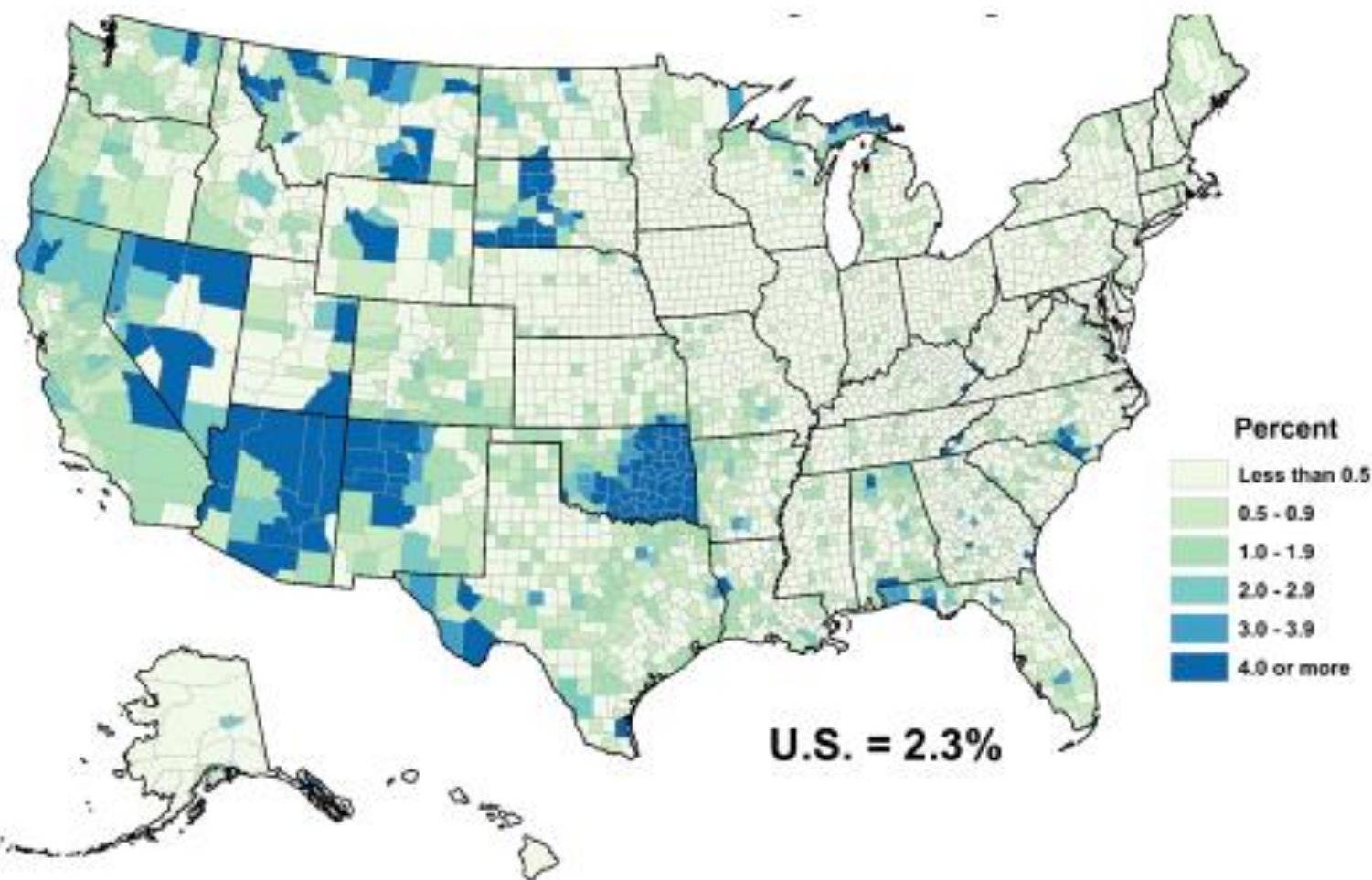
By County



Top 10 States	2017
Texas	248,416
Missouri	95,320
Iowa	86,104
Oklahoma	78,531
Ohio	77,805
Kentucky	75,966
Illinois	72,651
California	70,521
Tennessee	69,983
Minnesota	68,822

American Indian and Alaska Native Producers, 2017

American Indian Producers as a Percent of Total

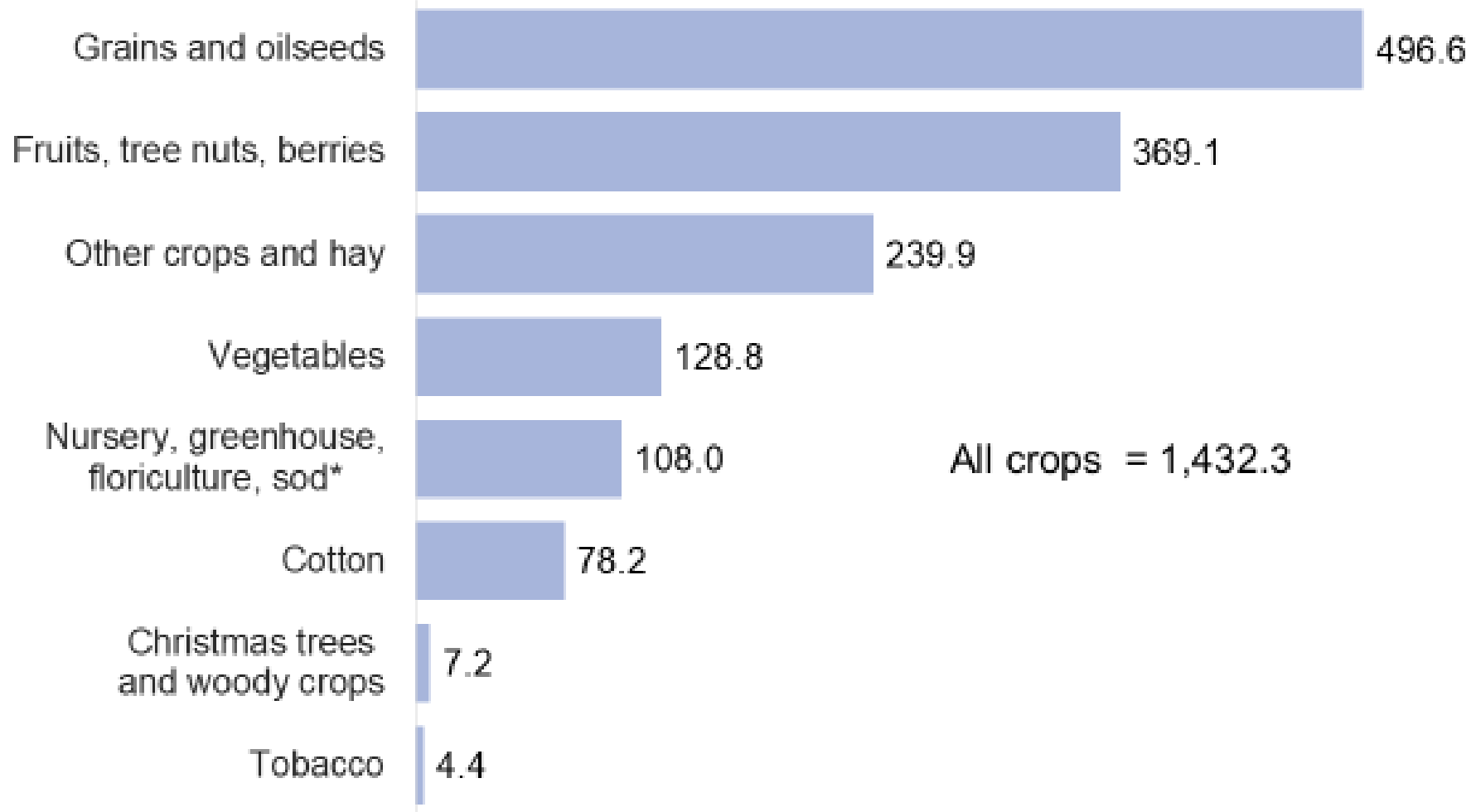


Top States Farms with American Indian Producers

Oklahoma	13,935
Arizona	11,729
New Mexico	6,211
Texas	4,883
California	2,153
Montana	1,696
Missouri	1,322
Oregon	1,104
Arkansas	1,098
Washington	1,049
Alabama	1,042

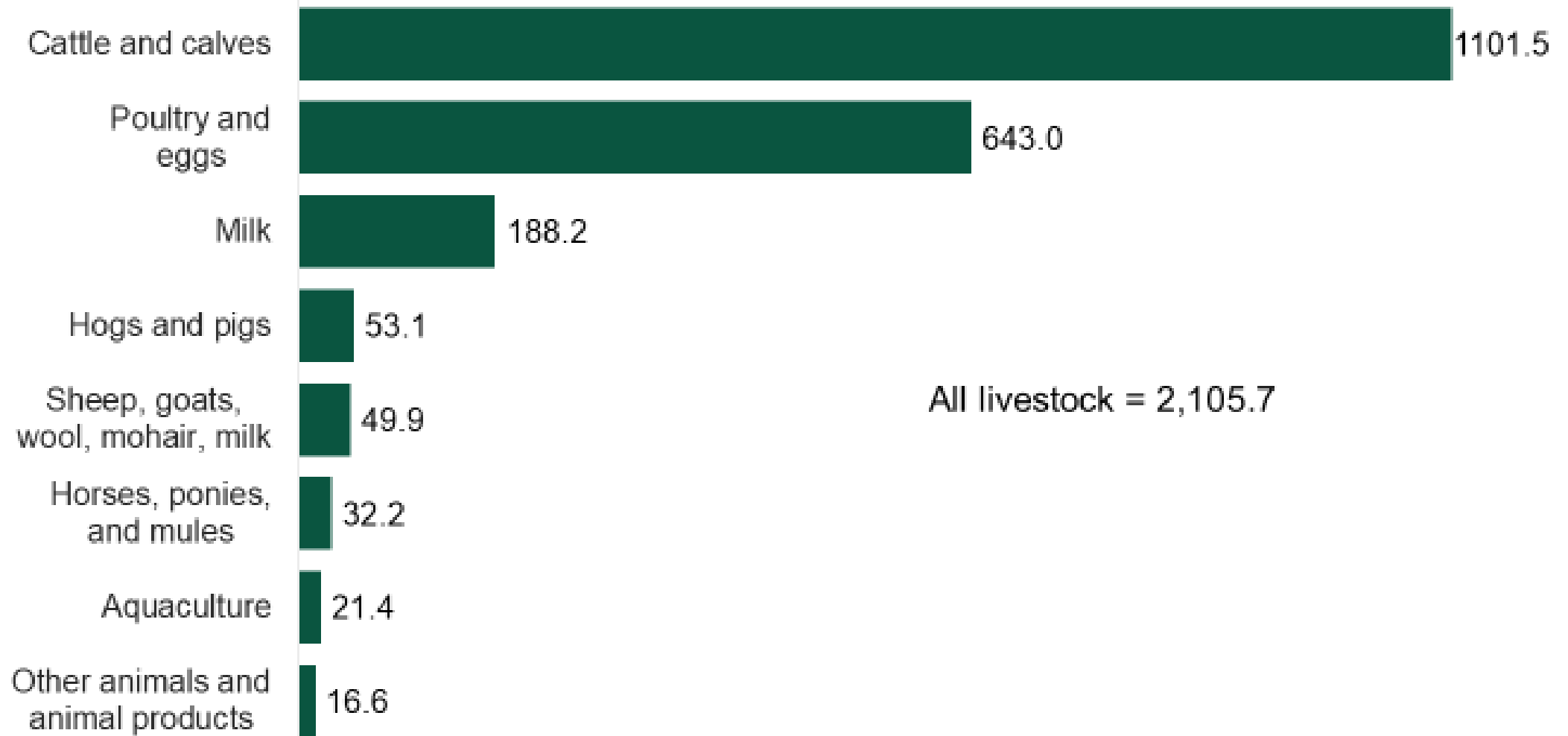
Value of Crop Production by Category, 2017

American Indian Operated Farms Value (\$ millions)



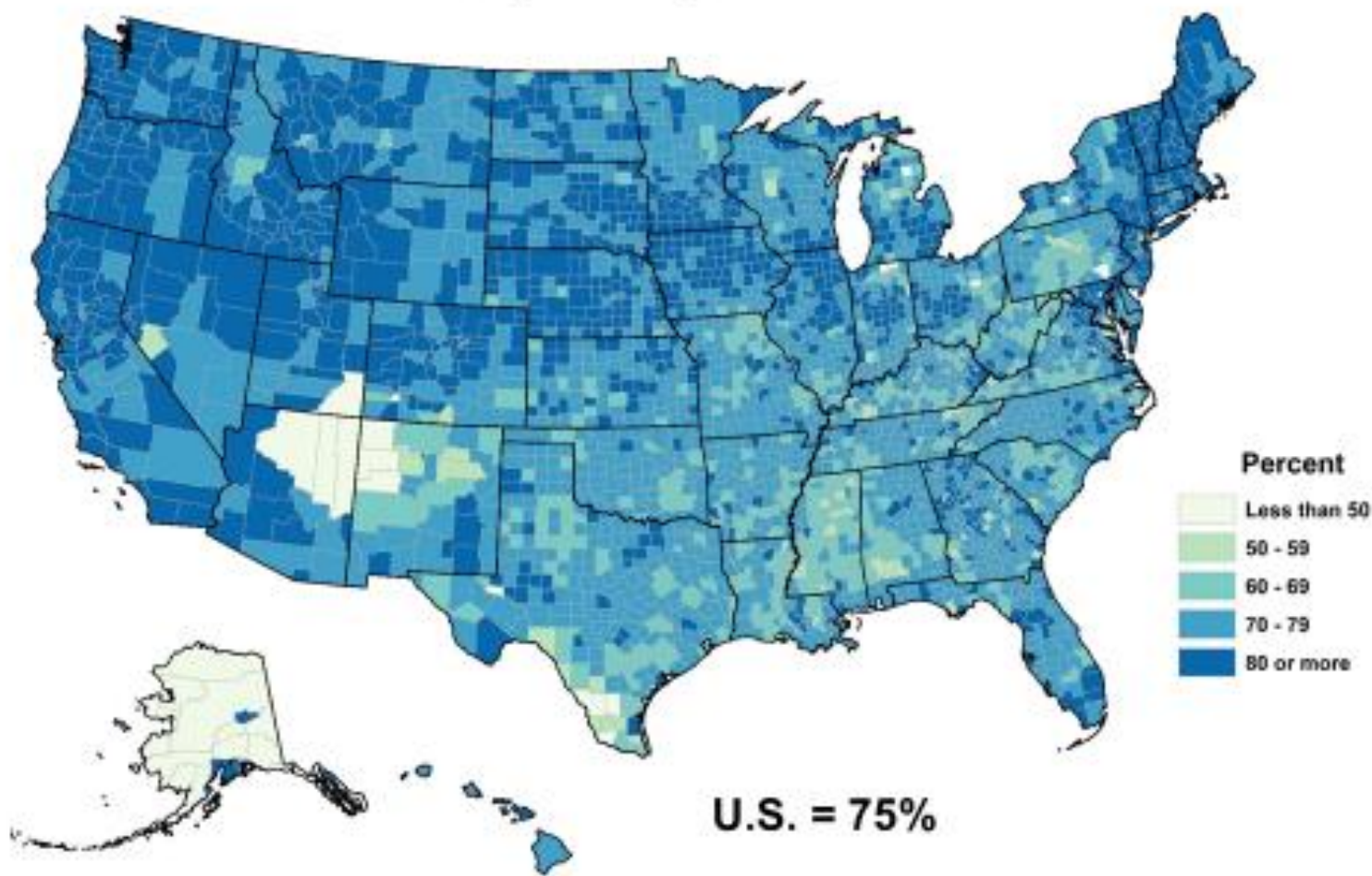
Value of Livestock Production by Category, 2017

American Indian Operated Farms Value (*\$ millions*)

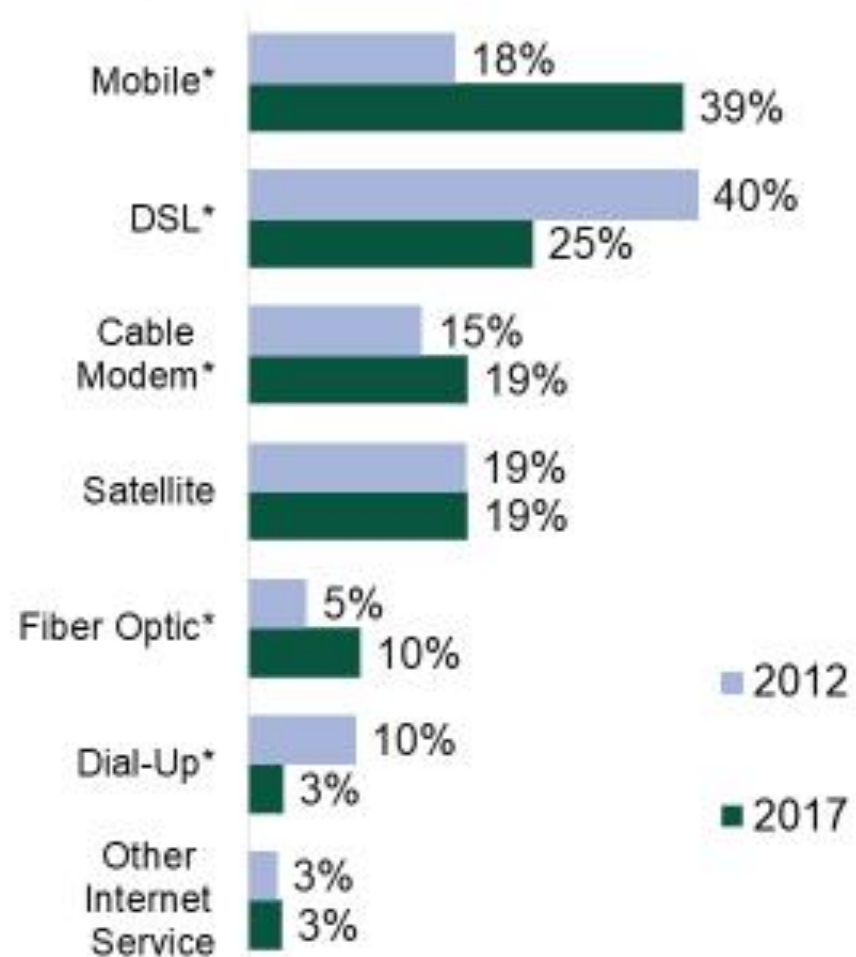


Farms with Internet Access

As a Percent of Total, by County, 2017



By Type, 2012 and 2017 (percent)



* Statistically significant difference from 2012

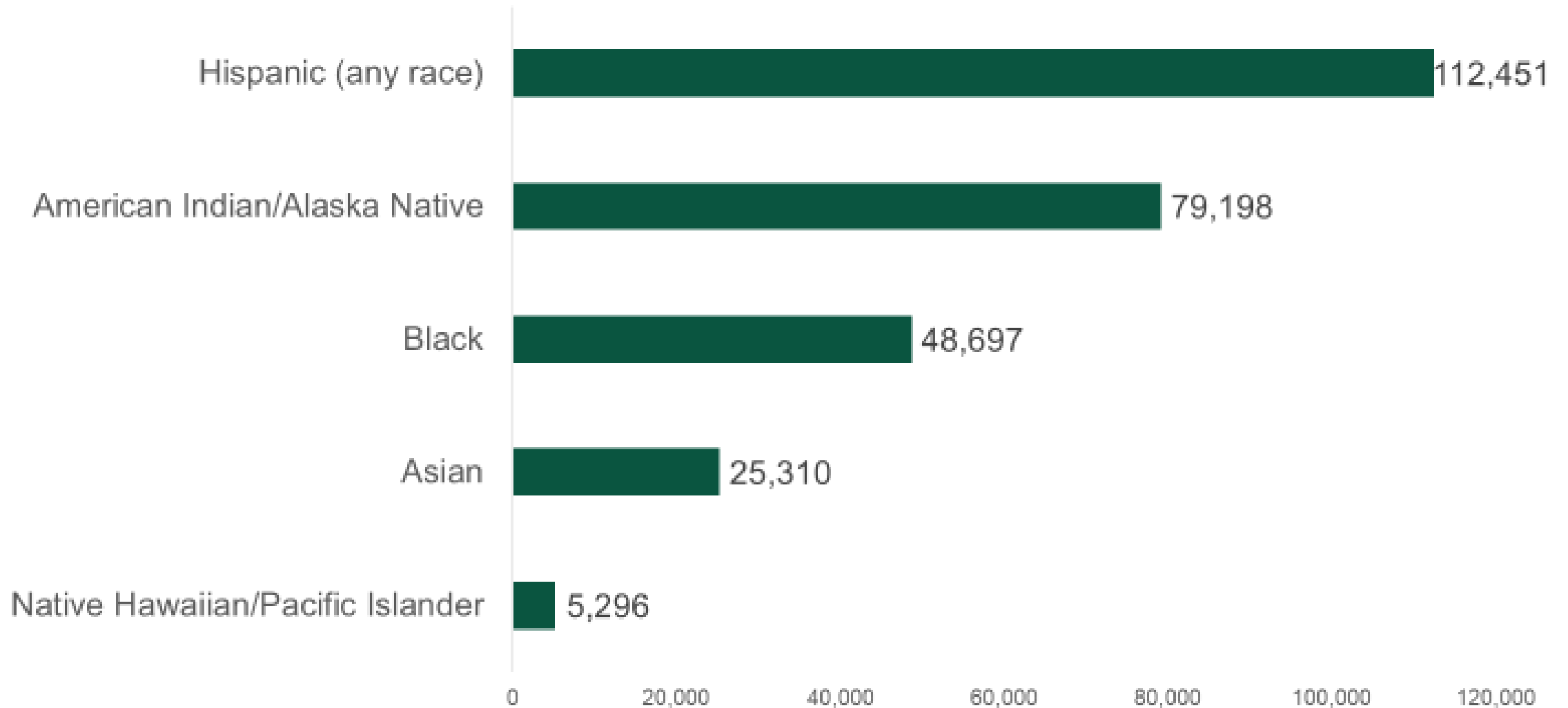
Demographics of Farm Producers

- Terms and Definitions
- Overview
- American Indian and Alaska Native Producers

Terms and Definitions

- Only source of demographic data down to the county level
- Detailed data for up to 4 persons per farm (up to 3 in 2012)
- Census of Agriculture uses OMB (Office of Management and Budget) race and ethnicity categories
- For data by race, an additional breakdown is available
 - Producers reporting specified race alone
 - Producers reporting specified race alone or in combination with other races

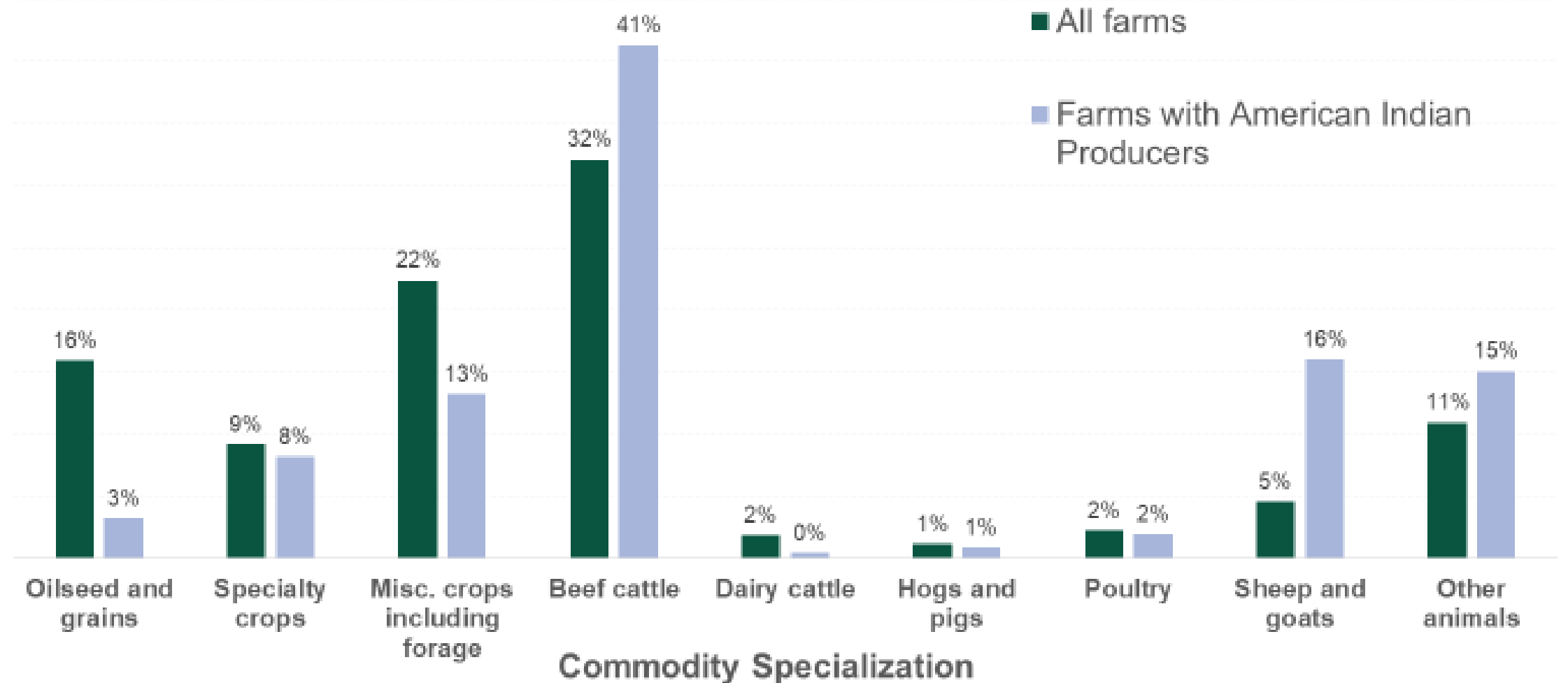
Producers by Race and Ethnicity



American Indian Producers: Changes from 2012 to 2017

	2012	2017	% change
Farms			
American Indian only	44,671	42,705	-4%
American Indian alone or in combination	56,092	60,083	7%
Producers			
American Indian only	58,475	58,199	0%
American Indian alone or in combination	71,947	79,198	10%

Farms with American Indian Producers Compared to All Farms – Percent of Farms by Commodity Specialization (NAICS)



Agriculture on American Indian Reservations

Number of Farms

73 Published Reservations	All Producers	American Indian/Alaskan Native Producers
Number of Farms	25,271	19,435

Number of Farms		
Top 10 Reservations	All Producers	American Indian/Alaskan Native Producers
Navajo Nation	16,129	16,003
Flathead	1,057	218
Blackfeet	645	478
Nez Perce	500	6
Fort Peck	454	72
Cheyenne River	422	215
Pine Ridge	380	223
Standing Rock	373	80
Rosebud	354	107
Yakama	341	53

Reservation acres

Reservation acres on farms		
Top 10 Reservations*	All Producers	American Indian/Alaskan Native Producers
Navajo Nation	15,995,653	15,853,227
Tohono O'odham	2,592,708	(D)
Crow	2,124,704	1,289,422
San Carlos Apache	1,824,400	1,824,400
Hopi	1,622,514	1,622,514
Colville	1,470,410	(D)
Pine Ridge	1,416,104	1,090,221
Cheyenne River	1,299,303	665,030
Flathead	1,192,372	953,482
Fort Peck	1,118,004	337,846

*Among reservations that can be displayed



All Reports Available At
www.nass.usda.gov/AgCensus

For Questions
Virginia Harris
502-907-3211
virginia.harris@usda.gov





Native American Agriculture Fund (NAAF)

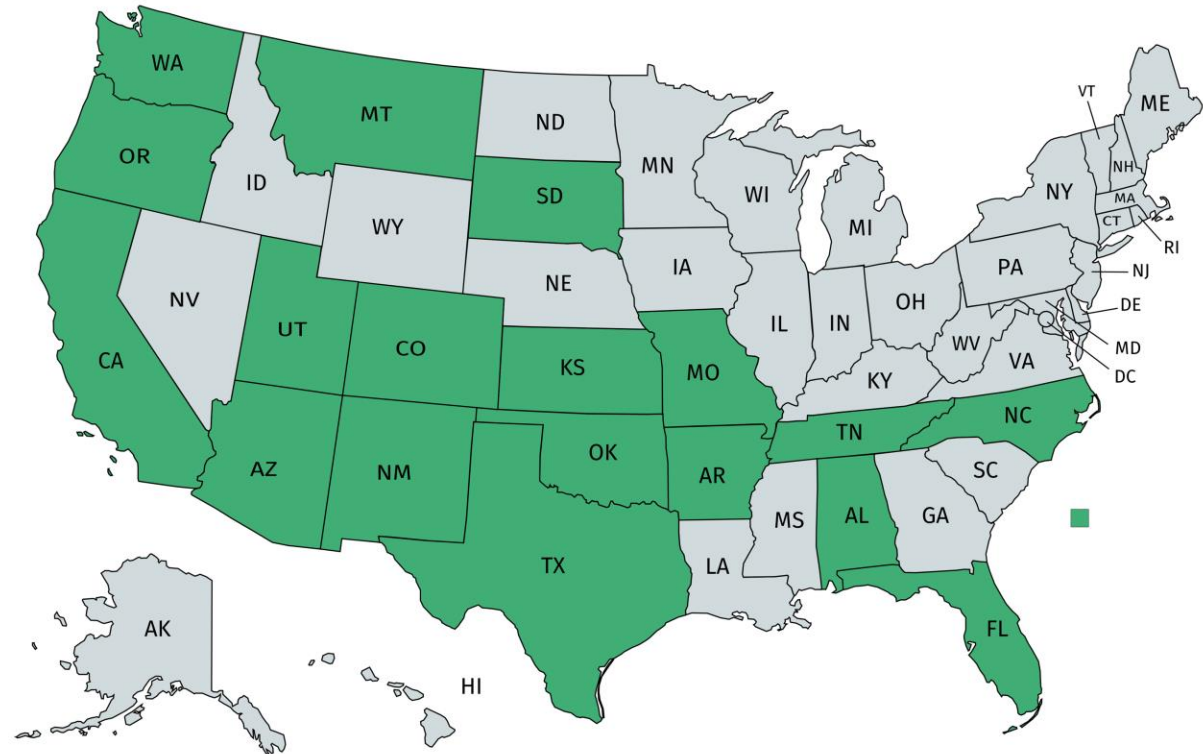
Agricultural Census Webinar



States of Interest

States with AI/AN populations over 1% of overall AI/AN population

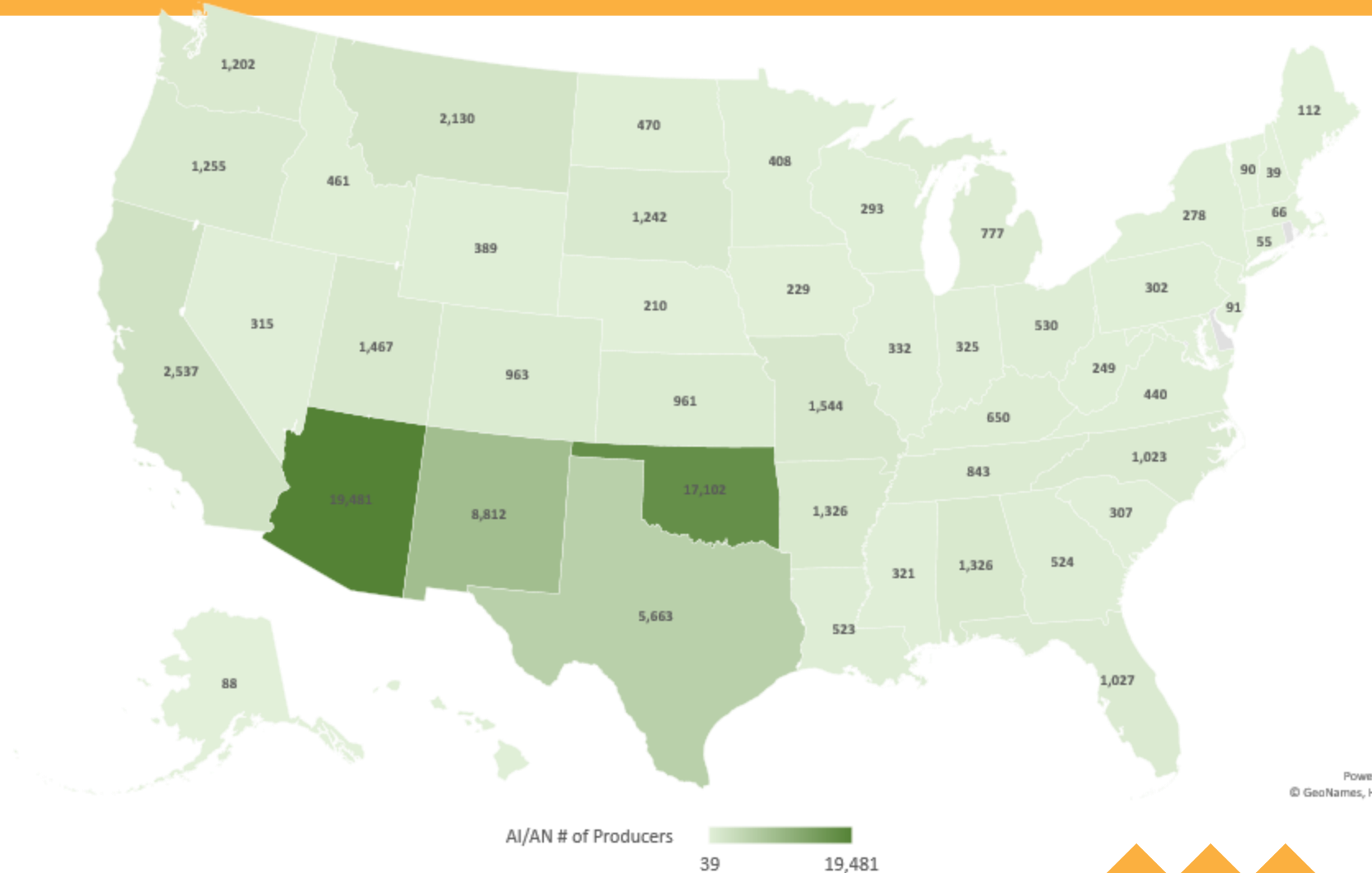
- Alabama
- Arizona
- Arkansas
- California
- Colorado
- Florida
- Kansas
- Missouri
- Montana
- New Mexico
- North Carolina
- Oklahoma
- Oregon
- South Dakota
- Tennessee
- Texas
- Utah
- Washington





Number of American Indian/ Alaskan Native Producers by State

- High concentration in 4 states
 - New Mexico*
 - Arizona*
 - Oklahoma*
 - Texas*





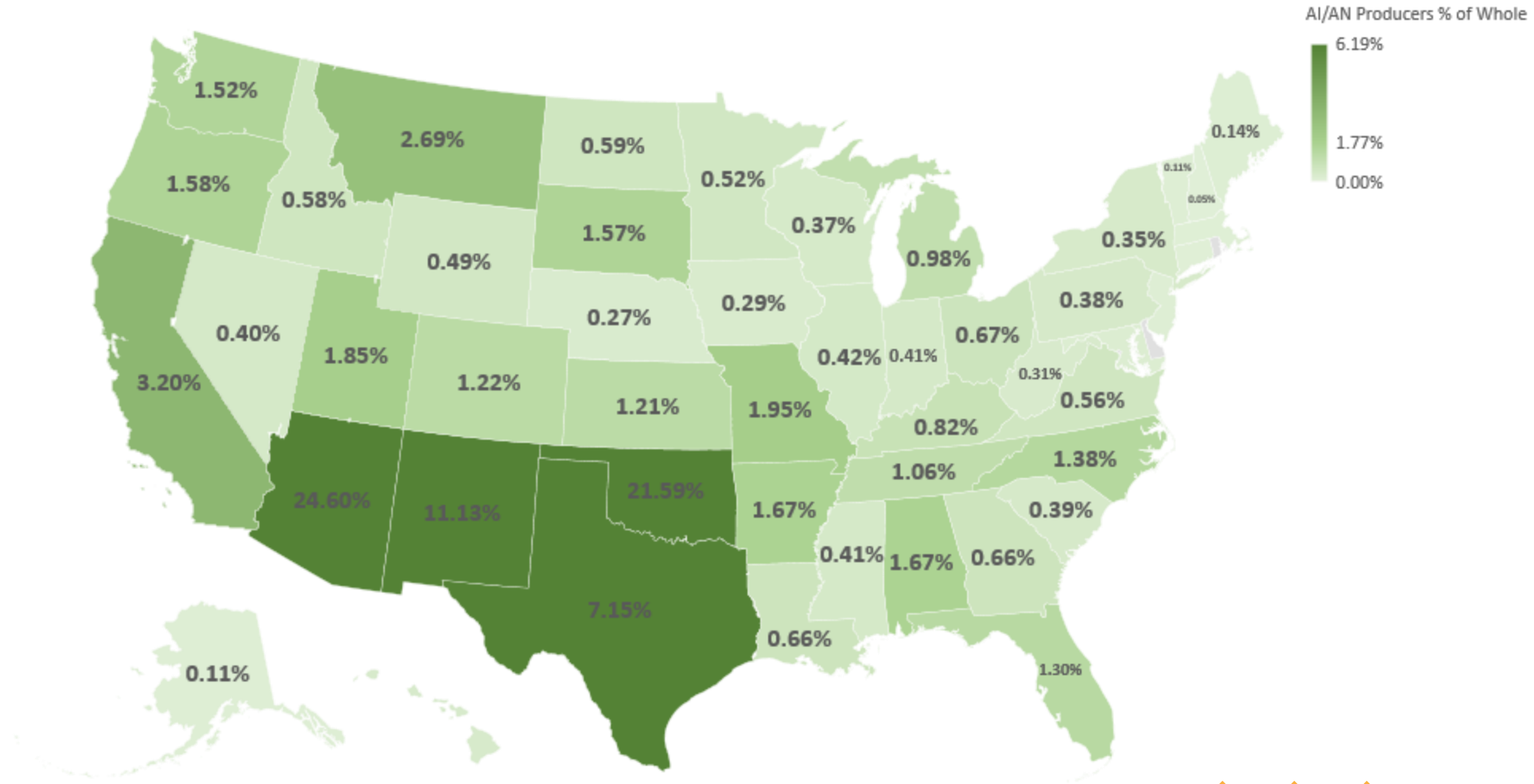
Percent of AI/AN Producers by State Relative to Overall Population of AI/AN Producers

■ Top 3 States

- Arizona*
- Oklahoma*
- New Mexico*

■ Bottom 3 States

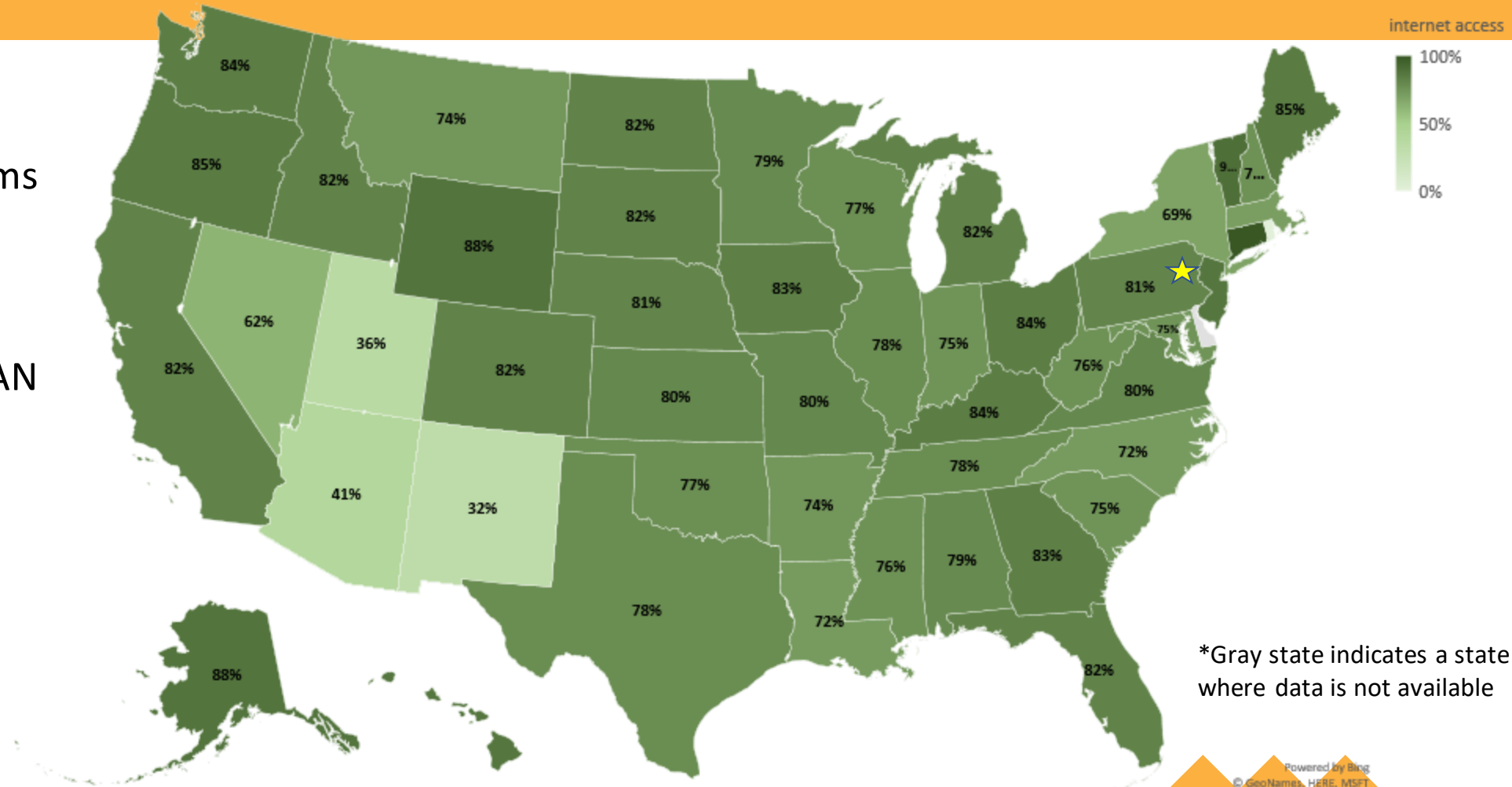
- New Hampshire
- Massachusetts
- Connecticut
- Tennessee*





Farms With Internet Access Among AI/AN Producers by State

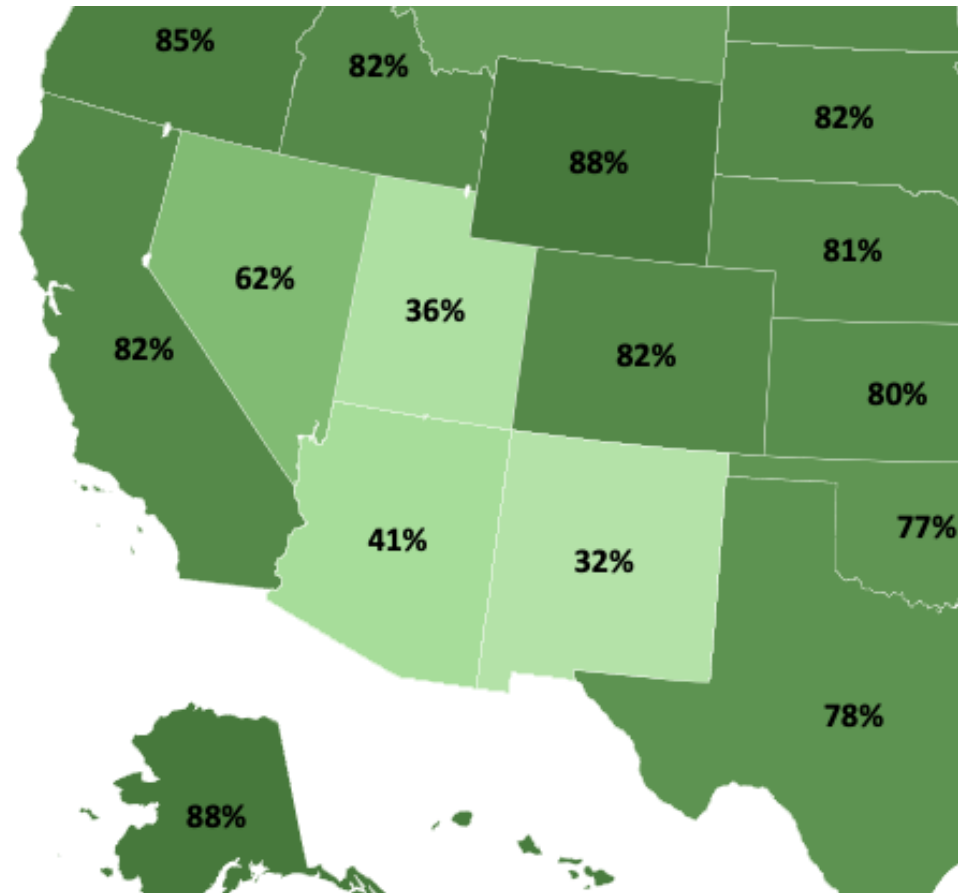
- On average 66% of farms in US have internet access
- States with largest AI/AN producer populations, have least amount of internet access





Farms With Internet Access Among AI/AN Producers in the Southwest Region

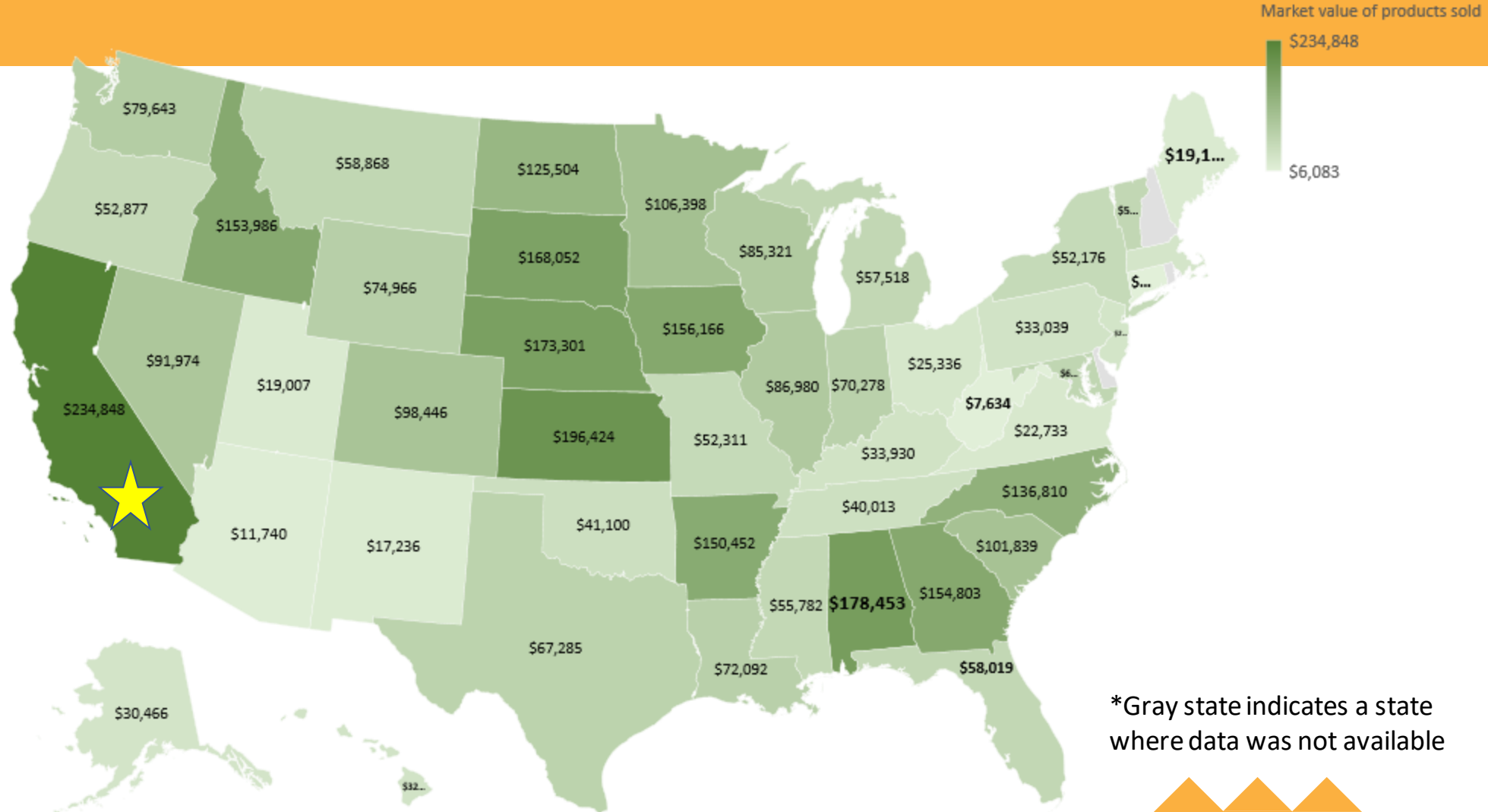
- Southwest region farms have very low internet access
- Important to have internet access for gathering information, looking for jobs or employees, and to participate in the world's changing economy





Average Market Value of Products Sold Per Farm With AI/AN Producers by State

- California* has the highest average market value
- States of interest with high numbers of AI/AN producers have lowest average market values

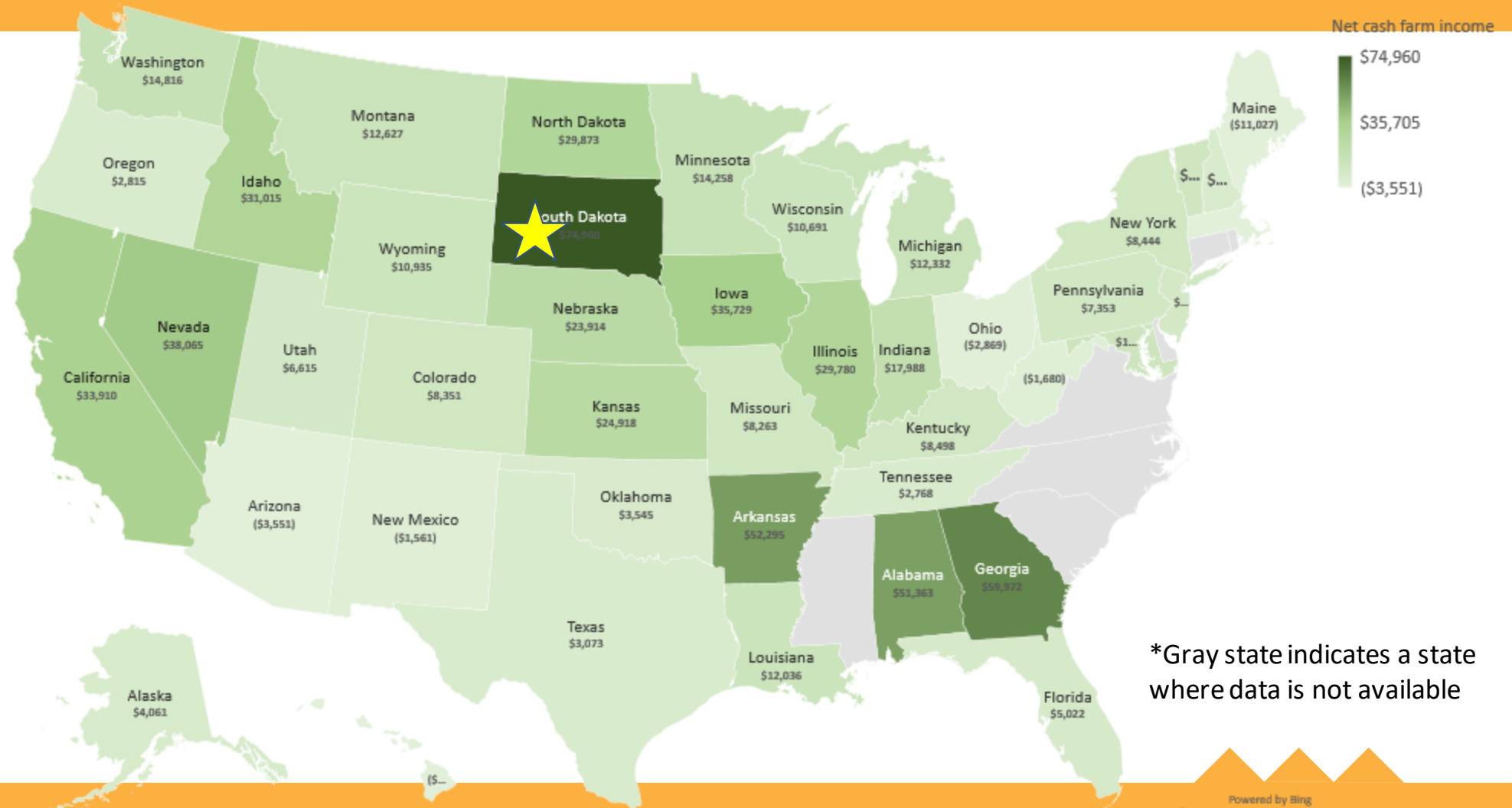




Average Net Cash Farm Income Per Farm with AI/AN Producers by State

NFI= Cash Receipts From Farming and Farm-Related Income + Government Payments - Cash Expenses

- South Dakota* has the top net cash income
- Many interest states have negative net cash income

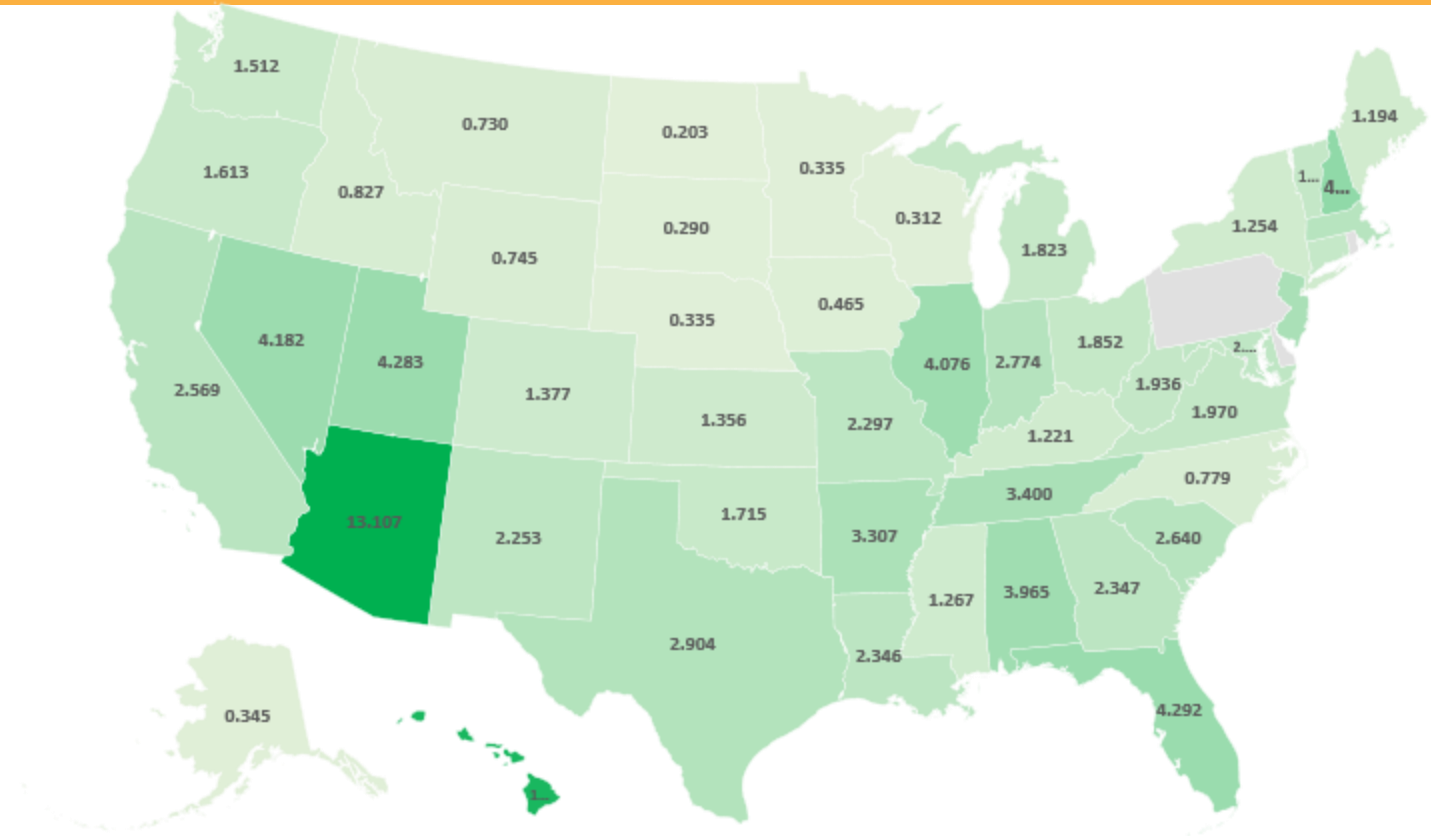




AI/AN Odds Ratio by State

Odds Ratio= % of AI/AN Producer Population by State / % of Overall AI/AN Population by State

- The odds ratio tells how likely or unlikely it is that you are AI/AN if you are a producer
- The U.S. has an overall odds ratio of 1.12
- 38 states rank above 1.12



*Gray state indicates a state where data is not available

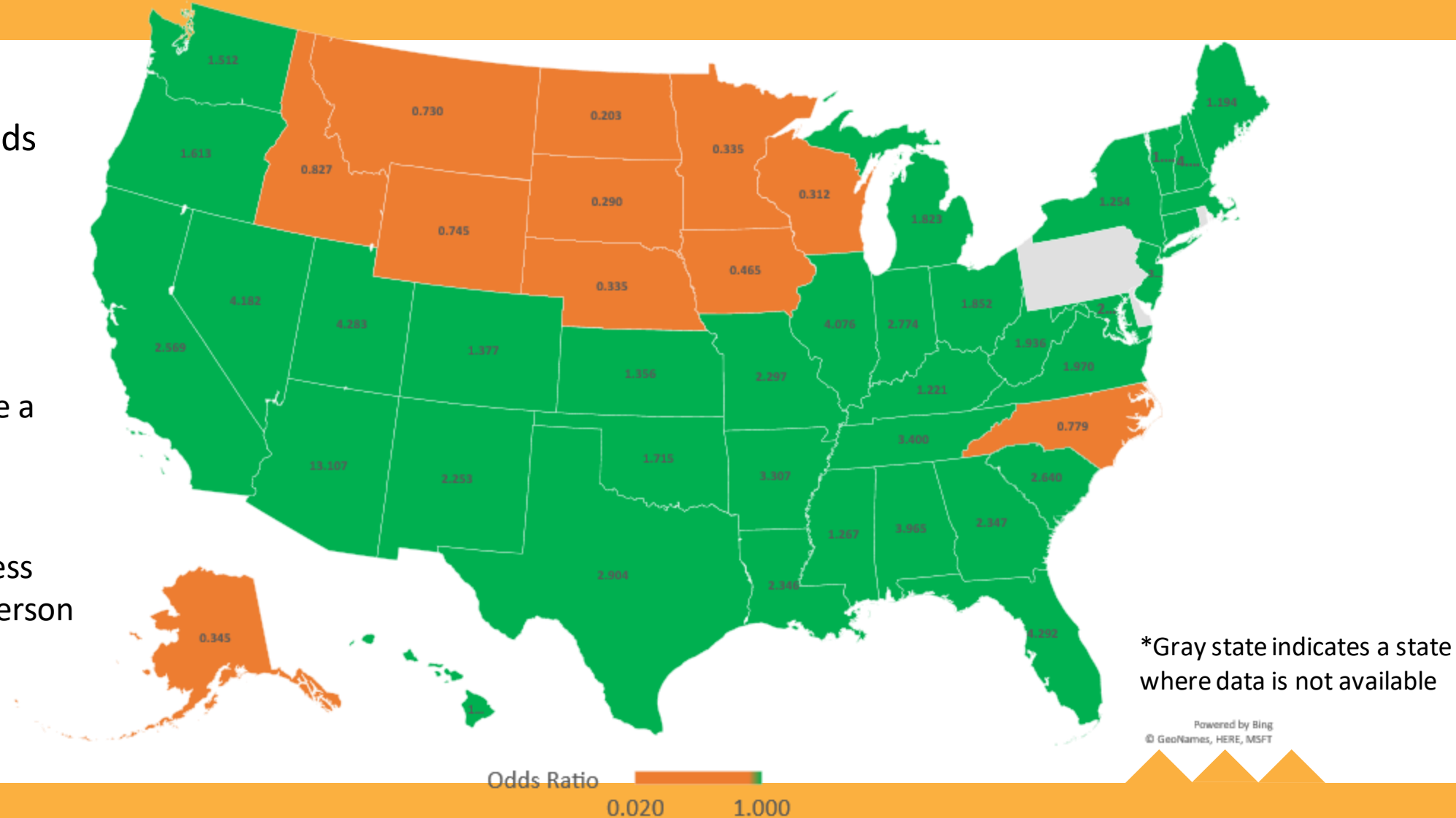
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Odds Ratio 
0.203 13.107



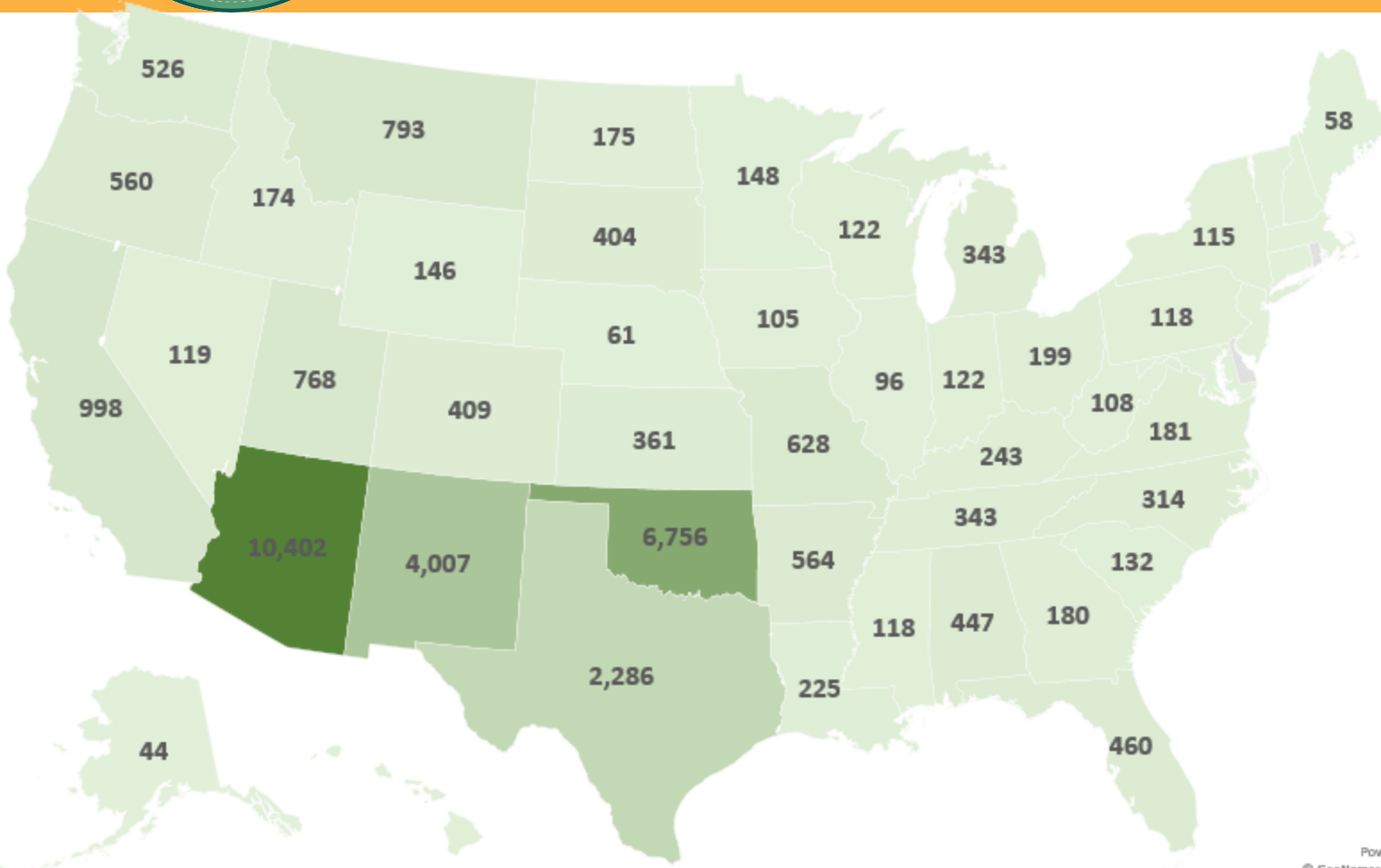
AI/AN Odds Ratio Above or Below 1 by State

- 39 states have an odds ratio above 1
- Odds Ratio Above 1= more likely to be an AI/AN person if you are a producer
- Odds Ratio Below 1= less likely to be an AI/AN person if you are a producer





Number of AI/AN Female Producers by State



- Arizona* has the largest number of female AI/AN producers

AI/AN # of Female Producers

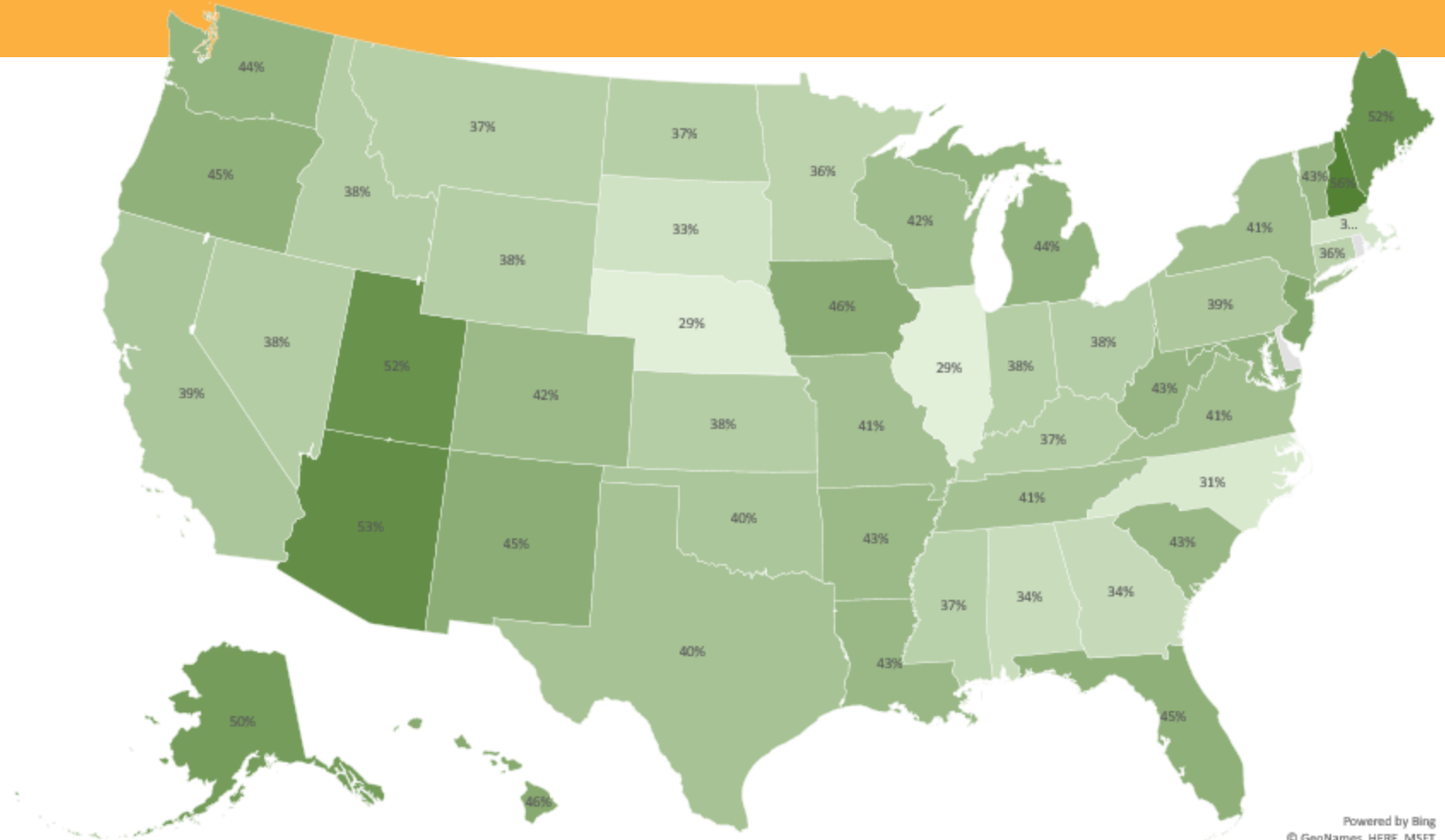
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Percent of AI/AN Female Producers by State

- Female AI/AN producers are underrepresented in Illinois and the US plains region



*Gray state indicates a state where data is not available

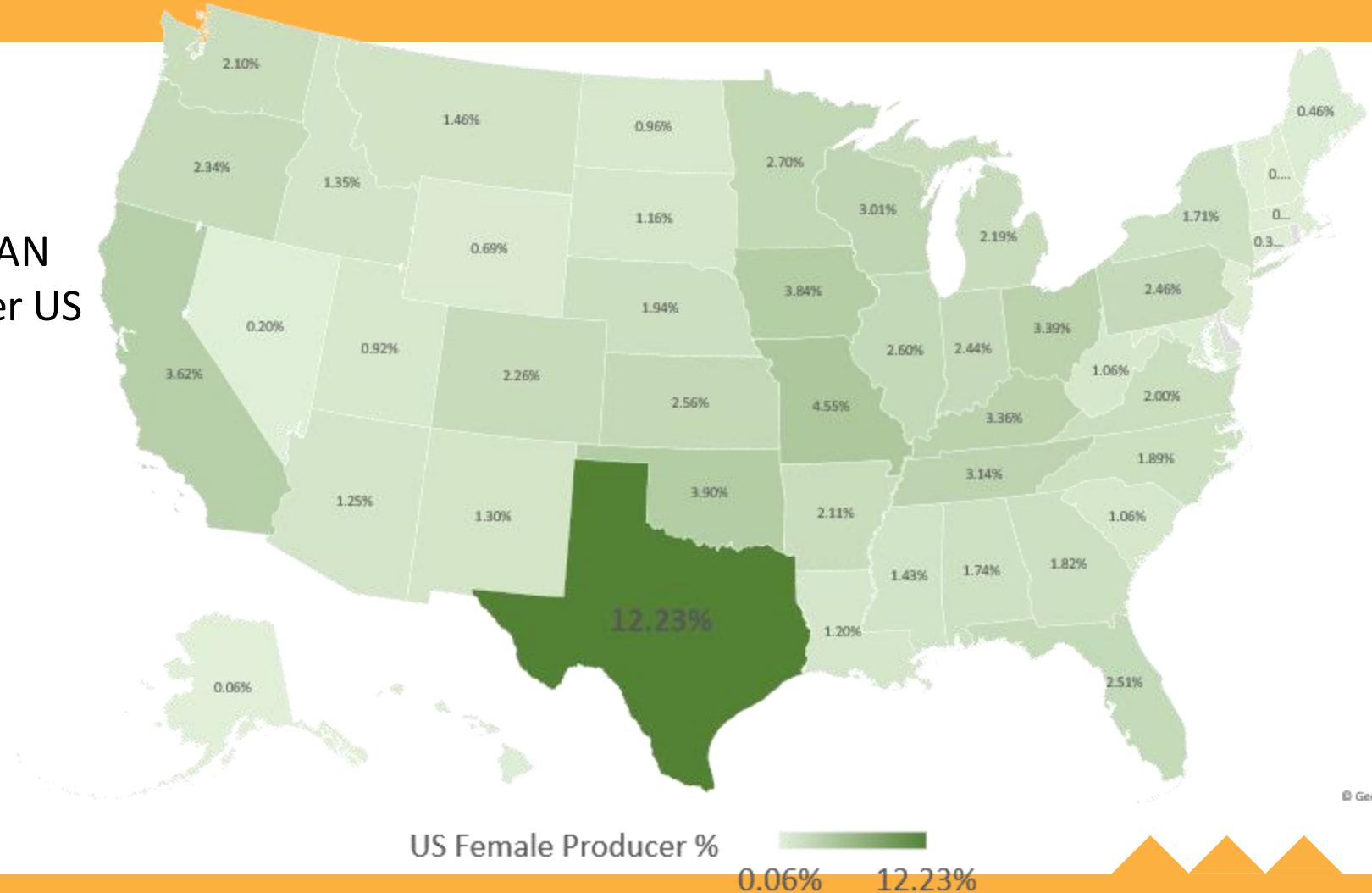
AI/AN Female Producer %





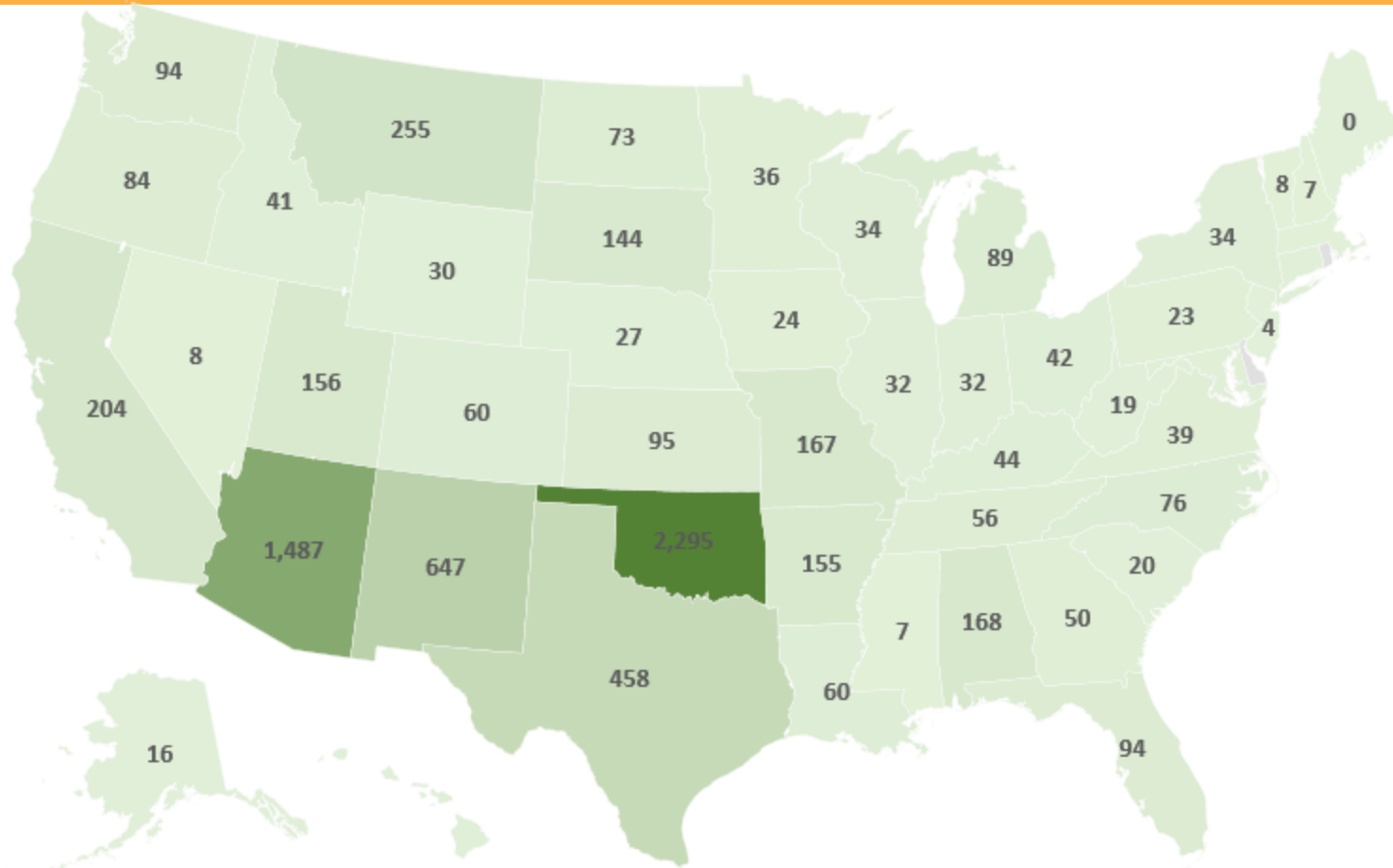
Percent of All US Female Producers by State

- Higher representation of AI/AN females in farming than other US female producers





Number of AI/AN Producers Under 35 Years of Age by State



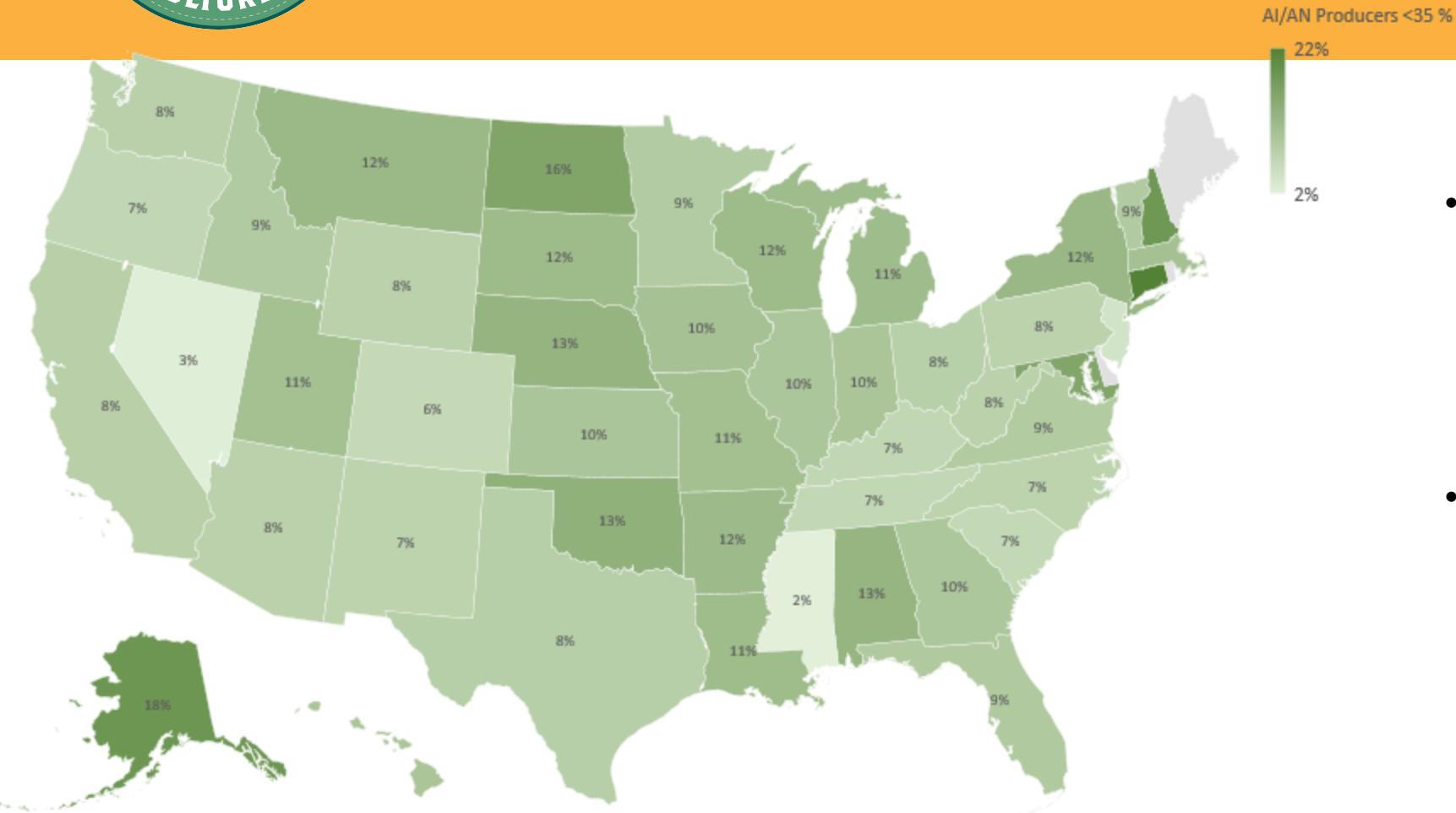
- Top 3 States
 - Oklahoma*
 - Arizona*
 - New Mexico*

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AI/AN # of Producers < 35
0 2,295



Percent of AI/AN Producers Under the Age of 35 by State



- Top States of Interest

- Oklahoma
- Alabama

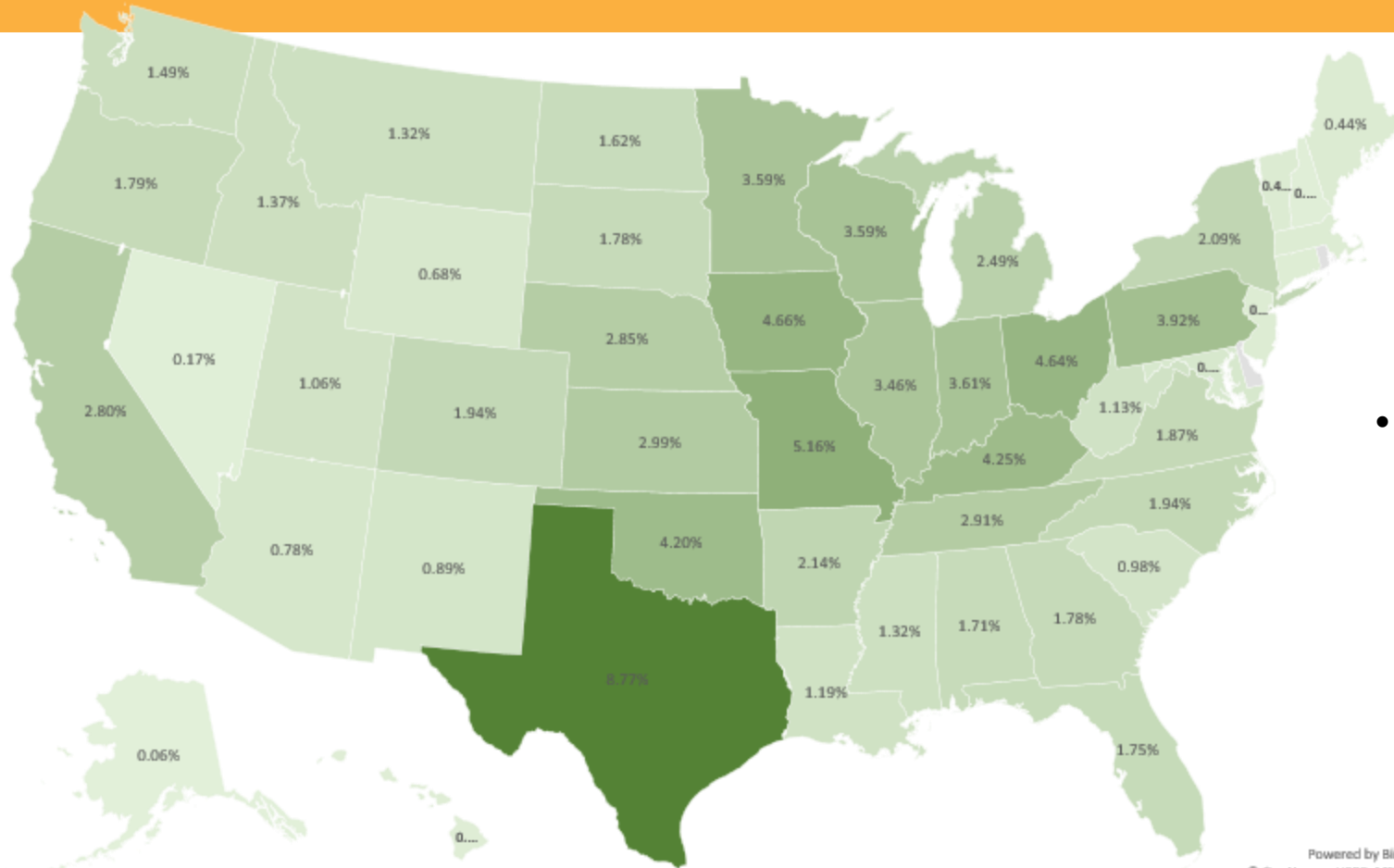
- Bottom States of Interest

- Oregon
- New Mexico
- North Carolina
- Tennessee

*Gray state indicates a state where data is not available



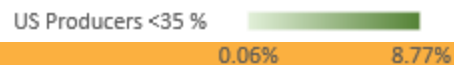
Percent of All US Producers Under 35 Years Old by State



- Young AI/AN producers represent a more equitable spread across the nation.

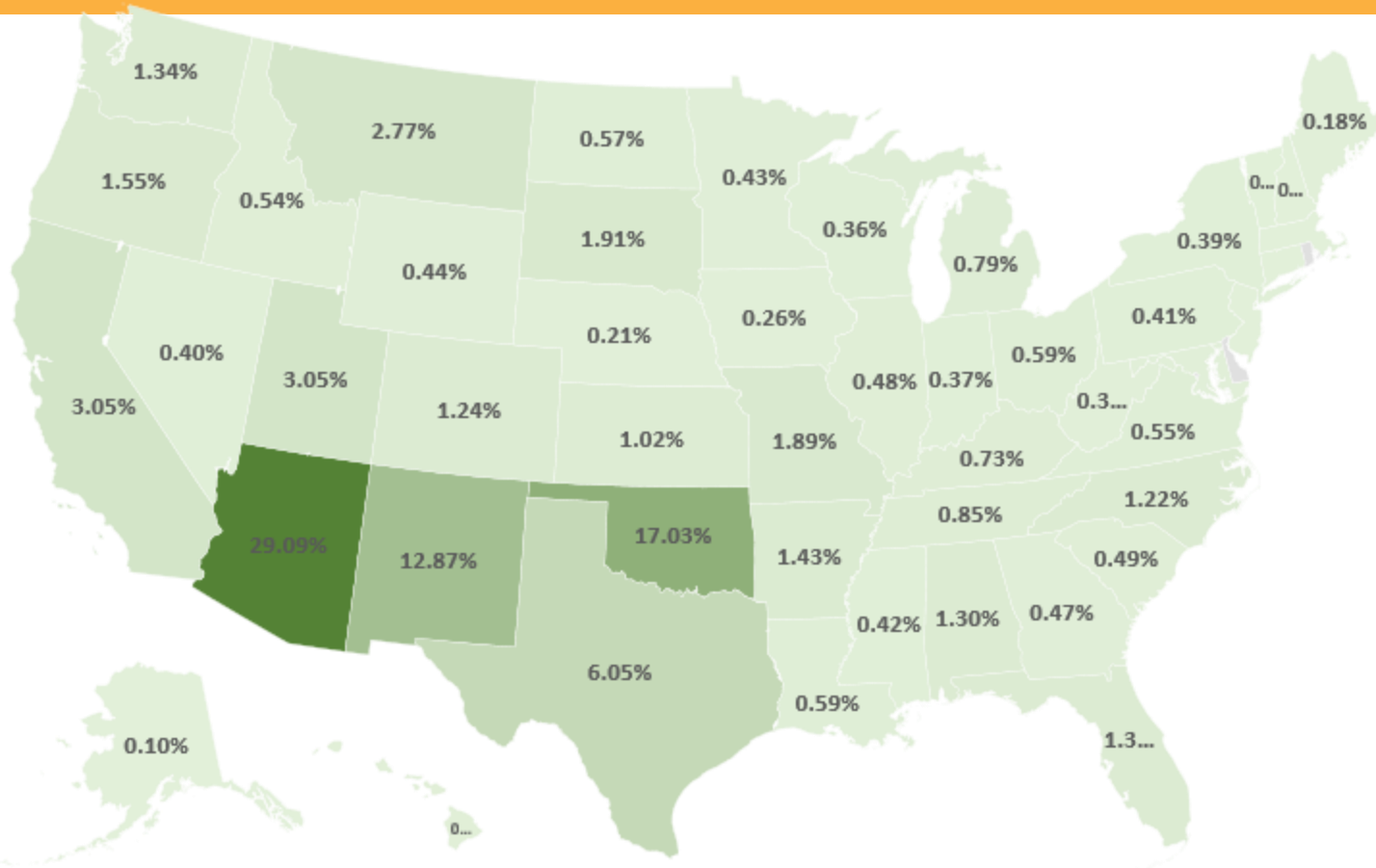
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*Gray state indicates a state where data is not available





Percent of AI/AN Producers That Worked No Days Off Farm



- Top 3 States
 - Arizona*
 - Oklahoma*
 - New Mexico*

- Top Bottom State
 - Tennessee*

% of AI/AN Producers Working No Days Off Farm



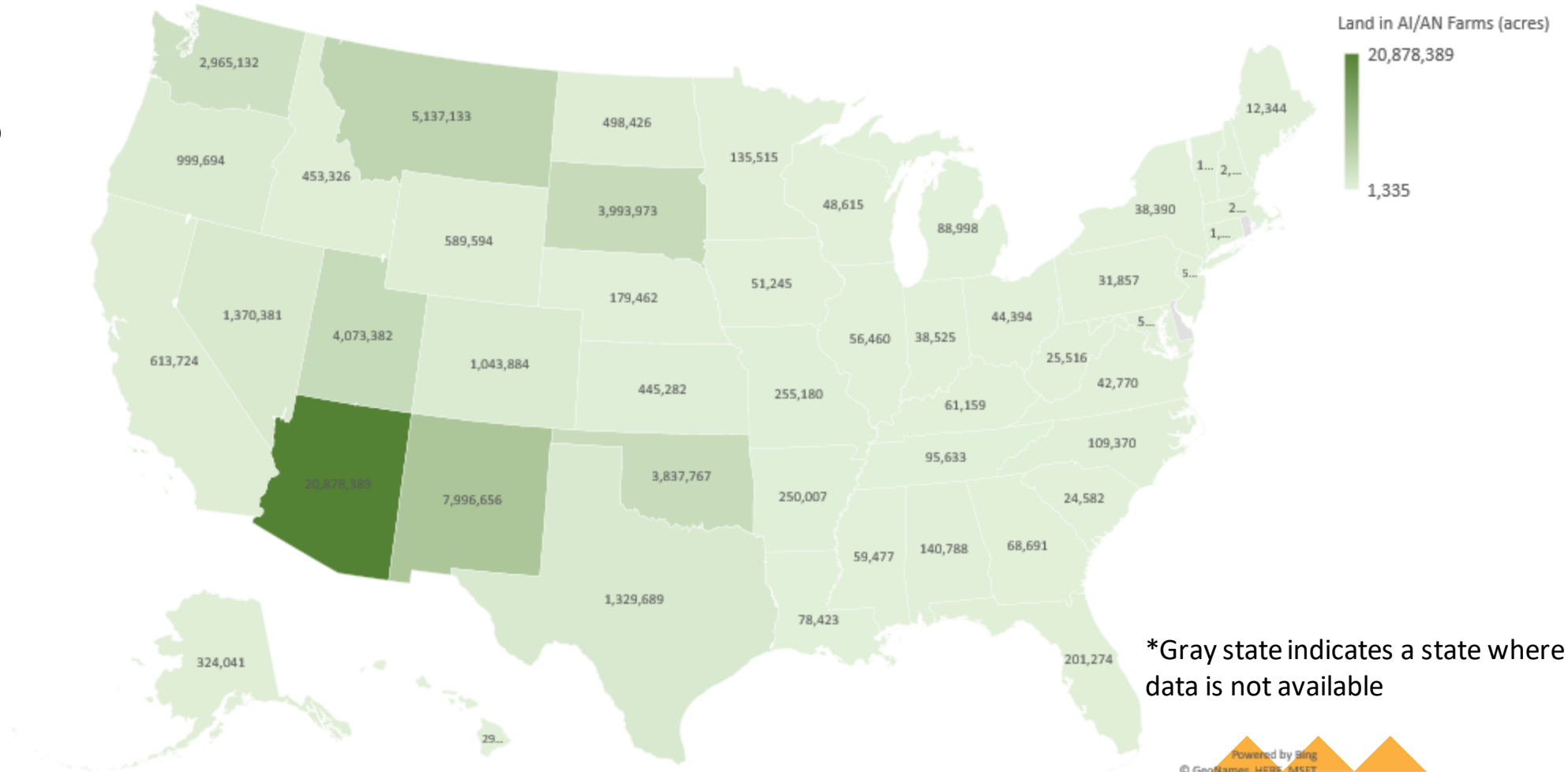
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Land in Farms with AI/AN Producers (acres)

- Farmland specific to AI/AN producers is concentrated in 7 states

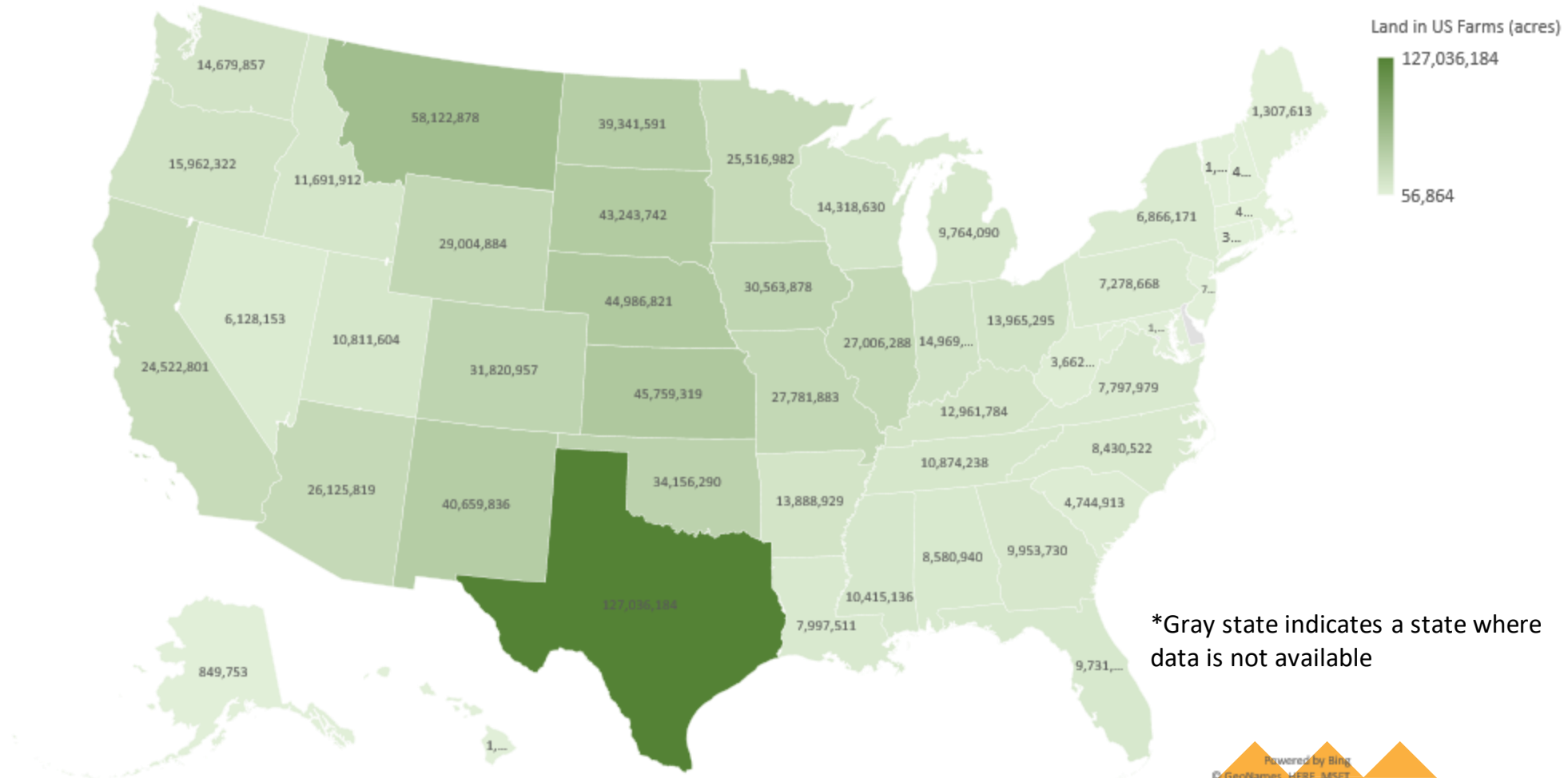
- Arizona
- New Mexico
- Montana
- Utah
- South Dakota
- Oklahoma
- Washington





Land in All US Farms (acres)

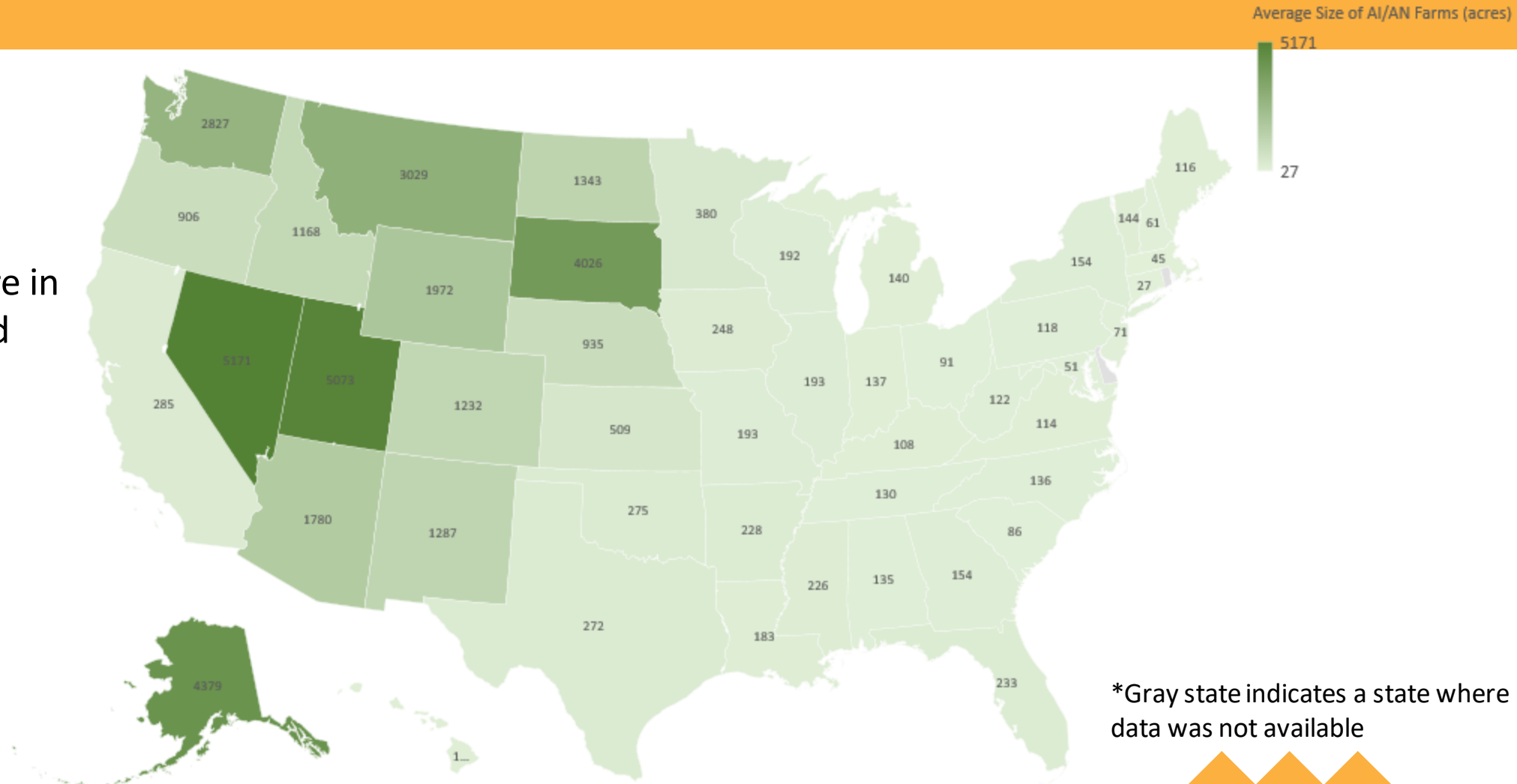
- Even distribution of land across the US with exception of Texas





Average Size of Farms with AI/AN Producers (acres) by State

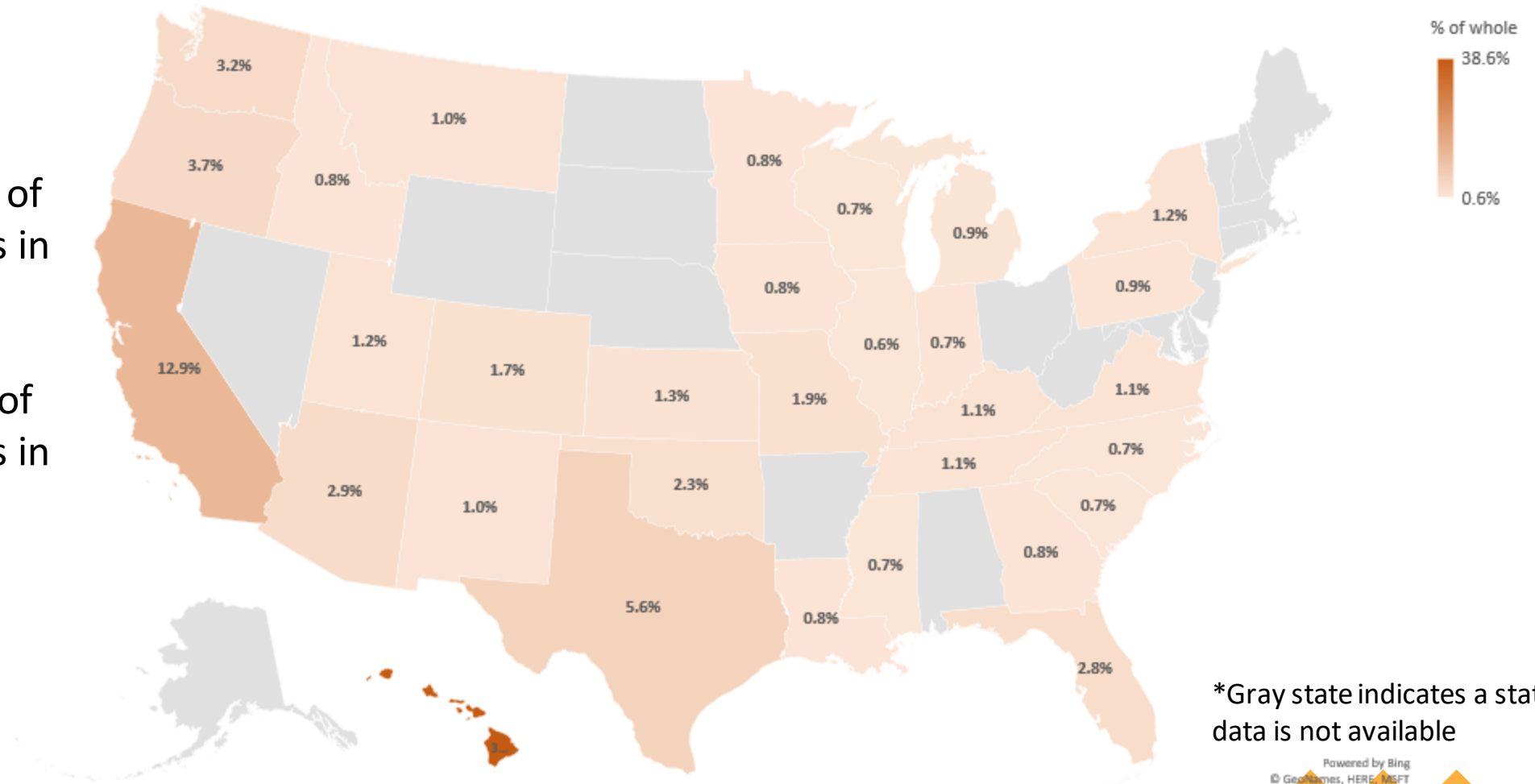
- Largest farms with AI/AN producers are in the western US and Alaska





Percent of Native Hawaiian/ Pacific Islander Producers by State

- Highest amount of NH/PI producers in Hawaii
- Lowest amount of NH/PI producers in Illinois



*Gray state indicates a state where data is not available





Ag Census 101: Accessing Ag Data from USDA



Karli's Steps to Utilizing Ag Data

1



Define your study area

2



Identify your study parameters

3



Choose your study timespan



Karli's Steps to Utilizing Ag Data

4



Gather the data

5



Interpret the findings

6



How will you better serve the Native producer above?

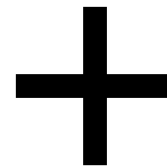


1

Robeson County, NC



Home of the Lumbee Tribe of NC



Home of the Moore family





2

AI/AN Tobacco Farmers



Parameters of Interest:

- American Indian / Alaska Native producers
- Tobacco industry

I selected these parameters because I'm interested in data related to this specific group.

Left: A picture of tobacco farming in Robeson County, NC reminiscent of the Depression era that hangs over my family's couch at home.



3

Last Ten Years: 2007 - 2017



Factors:

- What do you want to know?
 - I wanted to look at the changes related to the tobacco buyout (2004) ...
- What information is available?
 - ... but I could only find county race and ethnicity data starting in 2007.



4

Decade of Change

	2007	2012	2017	Ten Year Change
Farms	13	8	3	77% decrease
MVPS (\$1,000) nominal	2,989	2,591	2,887	
MVPS (\$1,000) real	3,534	2,766	2,887	18% decrease
MVPS (\$1,000) real per farm	272	346	962	254% increase

MVPS: Market Value of Products Sold | Real prices shown in 2017 currency



5

Story of Consolidation

- Pull in additional information to give context
 - Built the same table for White tobacco farmers in Robeson County
- Talk to experts, do a Google search for articles, think about major market/world events
 - Producers are one of the best resources

	2007	2012	2017	Ten Year Change
Farms	57	17	14	75% decrease
MVPS (\$1,000) nominal	17,382	7,101	8,936	
MVPS (\$1,000) real	20,549	7,581	8,936	57% decrease
MVPS (\$1,000) real per farm	361	446	638	77% increase



6

Impact to People You Serve

At the end of the day, the biggest part of your data utilization will be **how it impacts your work.**







Case Study: Cheyenne River Indian Reservation, South Dakota



- Headquarters: Eagle Butte, South Dakota
- Reservation size (in acres): 2,730,880
- Estimated population: 12,000



Farms & Acreage 2012-2017

Farms and Land in Farms	Farms operated by AI/AN (2012)	All Farms (2012)	Farms operated by AI/AN (2017)	All Farms (2017)	AI/AN Farm Change (5 years)	All Farm Change (5 years)
Farms (number)	224	470	215	422	-4%	-10%
Land in Farms (acres)	931,870	2,193,055	1,051,480	2,098,142	+13%	-4%
Average size of farm (acres)	4,160	4,666	4,891	4,972	+18%	+7%

- Number of farms with AI/AN producers decreased, but not as much as farms overall
- Acreage under production by AI/AN producers increased even as total acreage decreased
- Average size of farms with AI/AN producers increased more than farm size overall



Share of Ag Production 2012-2017

Farms and Land in Farms	Percent of All Farms operated by AI/AN (2012)	Percent of All Farms operated by AI/AN (2017)	Change in Percent of All Farms operated by AI/AN (5 years)
Farms (number)	48%	51%	+3 percentage points
Land in Farms (acres)	42%	50%	+8 percentage points

- In both number of farms and land in farms, Native producers have increased their share of the total in the last 5 years
 - This increase means that Native producers make up **at least half** of all farms and land in farms on the Cheyenne River Indian Reservation



Tenure Type Definitions

- **Full Owner:** operated only land they owned
- **Part Owner:** operated land they owned and land they rented from others
- **Tenant:** operated only land they rented from others or worked on shares for others.

Operations are classified as tenant farms when the only land they operate is permit land on the reservations



Farms by Tenure Type 2012-2017

Tenure	Farms Operated by AI/AN (2012)	All Farms (2012)	Farms Operated by AI/AN (2017)	All Farms (2017)	AI/AN Farm Change (5 years)	All Farm Change (5 years)
Full Owners	92	177	64	136	-30%	-23%
Part Owners	90	230	120	242	+33%	+5%
Tenants	42	63	31	44	-26%	-30%

- Number of farms operating only on land they own decreased overall, and more so for AI/AN farms
- Number of farms operating on land both owned and leased increased overall, and more so for AI/AN farms
- There are more mixed ownership AI/AN farms than full or tenant



Share of Farms by Tenure Type 2012-2017

Tenure	Percent of Farms Operated by AI/AN (2012)	Percent of Farms Operated by AI/AN (2017)	Change in Percent of All Farms operated by AI/AN (5 years)
Full Owners	52%	47%	-5 percentage points
Part Owners	39%	50%	+11 percentage points
Tenants	67%	70%	+3 percentage points

- More AI/AN farms are now operating a mix of owned and leased land, up by 11 percentage points in 5 years
- AI/AN farms make up the vast majority of leased only operations



Acres by Tenure Type 2012-2017

Tenure	Acres: Farms operated by AI/AN (2012)	Acres: All Farms (2012)	Acres: Farms Operated by AI/AN (2017)	Acres: All Farms (2017)	AI/AN Farm Change (5 years)	All Farm Change (5 years)
Full Owners	152,600	538,345	297,477	451,311	+95%	-16%
Part Owners	552,750	1,353,080	624,967	1,462,339	+13%	+8%
Tenants	226,520	301,630	129,036	184,492	-43%	-39%

- AI/AN farms operating only on land they own have increased their acreage by 95%
- AI/AN farms with a mix of owned and leased land have increased acreage, too



Share of Acres by Tenure Type 2012-2017

Tenure	Percentage of Acres in Farms operated by AI/AN (2012)	Percentage of Acres in Farms Operated by AI/AN (2017)	Change in Percentage of Acres in Farms Operated by AI/AN (5 years)
Full Owners	28%	66%	+38 percentage points
Part Owners	41%	43%	+2 percentage points
Tenants	75%	70%	-5 percentage points

- AI/AN producers have a significant share of the tenant land, even though that share when down in the last 5 years
- AI/AN producers have greatly increased their share of the overall on owned land operation



Market Value of Agricultural Products Sold 2012-2017

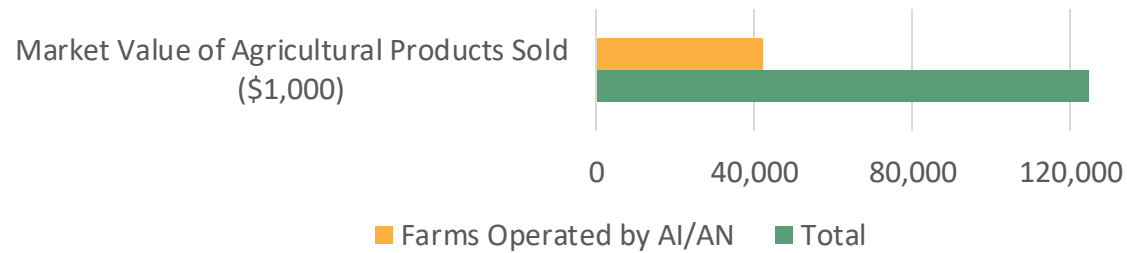
Market Value of Products Sold	Farms operated by AI/AN (2012)	Total (2012)	Farms operated by AI/AN (2017)	Total (2017)	AI/AN Farm Change (5 years)	All Farm Change (5 years)
MVPS (\$1,000)	32,277	138,148	42,196	124,704	+31%	-10%
Average per farm (\$1,000)	144	294	196	296	+36%	+1%
Crops, nursery & greenhouse (\$1,000)	4,201	63,004	4,499	38,042	+7%	-40%
Livestock, poultry, and their products (\$1,000)	28,076	75,144	37,697	86,662	+34%	+15%

- MVPS for AI/AN farms increased while MVPS for all farms decreased
- A greater share of the total MVPS is now claimed by AI/AN farms
 - 2012 – 23%
 - 2017 – 34%

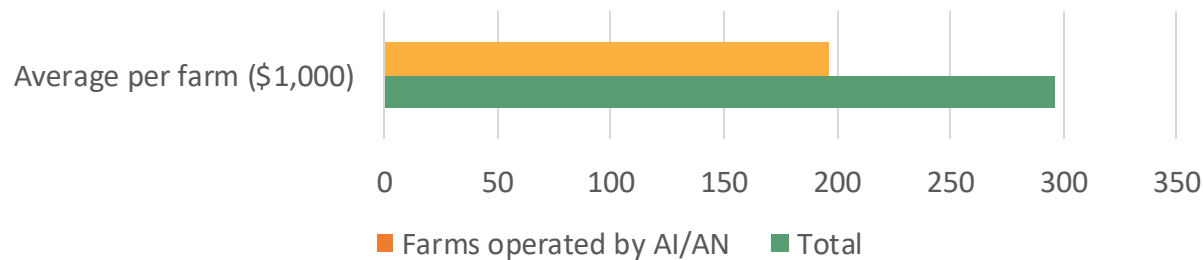


Market Value of Agricultural Products Sold 2012-2017

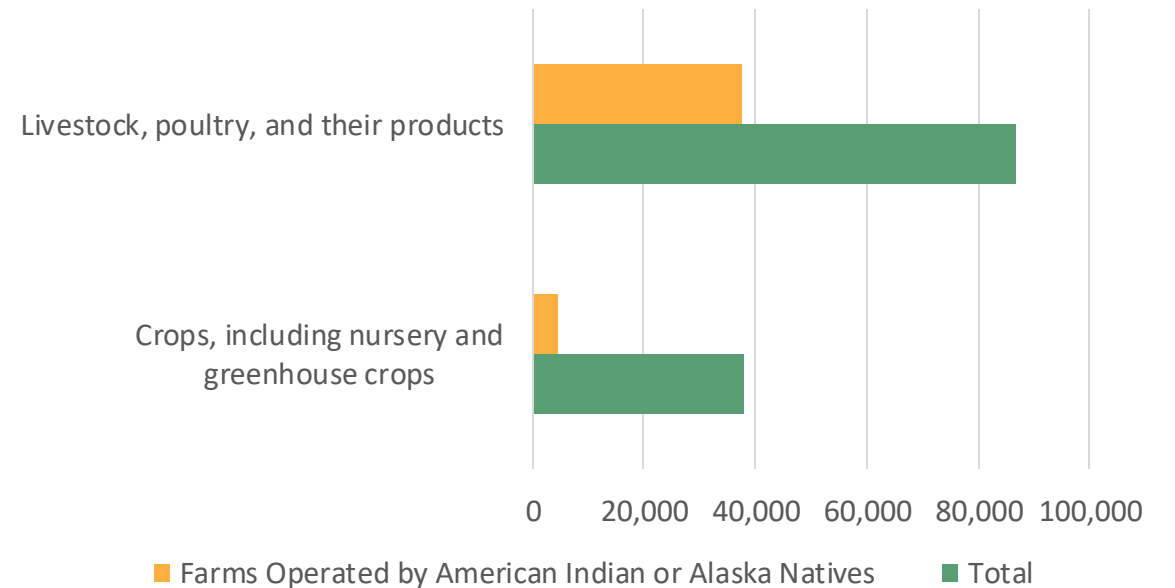
Market Value of Agricultural Products Sold (2017)



Market Value of Agricultural Products Sold (2017)



Market Value of Agricultural Products Sold (\$1,000) (2017)





Select Characteristics 2012-2017

Characteristics	Farms operated by AI/AN (2012)	All Farms (2012)	Farms operated by AI/AN (2017)	All Farms (2017)	AI/AN Farm Change (5 years)	All Farm Change (5 years)
Producers/O perators	298	759	284	732	-5%	-4%
Male Producers/O perators	194	511	192	485	-1%	-5%
Female Producers/O perators	104	248	92	247	-12%	--
Average Age	51	51	53.3	54.1	+5%	+6%

- Number of Producers/Operators has decreased in both AI/AN operated farms and total farms on the Cheyenne River Reservation
- The average age also increased for both AI/AN Producers/Operators, as well as overall.



New Categories from 2017

Category	Farms Operated by AI/AN	Total	Percent of AI/AN Farms
Young Producers	32	76	42%
Military Service (served)	22	55	40%

- Young Producers are important to highlight because with the average age of farmers going up, it is good to see that there are those stepping up to fill their shoes
- AI/AN serve in the armed forces at a higher rate than any other race, so it is important to acknowledge as well that half of the veteran farmers on Cheyenne River are also AI/AN