CONNECTING AGRICULTURAL POLICY TO YOUR HEALTH

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When Lived Experience Meets the Census of Agriculture: Food Sovereignty Movement Reflections in USDA Data

Introduction—Lacey

Does the USDA's Census of Agriculture reflect broader food sovereignty and resilience movements happening within the United States? In my <u>last post</u>, I described some distinctions between the terms "agriculture" and "food production." In this post, I explore how food sovereignty and resilience movements are reflected in agricultural production trends for farmers of color.

To help me, I'm very honored to be joined on this post by my friend, colleague, and personal hero Melvin Leroy Arthur. Mel is an expert on Northern Arapaho foodways, a research scientist at the University of Wyoming, and the author of a <u>recent article</u> (Arthur & Porter, 2019) published in the Journal of Agriculture, Food Systems, and Community Development's issue on Indigenous <u>Food</u> <u>Sovereignty in North America</u>. He's also a member of the *Hinono'eiteen* nation, also known as the Northern Arapaho tribe. Below, Mel provides a valuable perspective on part of the background that influences how some of us who have worked and lived in communities fighting for food sovereignty interpret data from the USDA's Census of Agriculture.

Mel chose to contribute his expertise to this post through the lens of his work on <u>Growing Resilience</u>. Growing Resilience is an action and research project that brings home vegetable gardens to people living on the Wind River Indian Reservation in Wyoming, then works with these communities to measure the gardens' impacts. With acknowledgement that home gardens are distinct, in many regards, from the farms tracked in the United States Census of Agriculture, Mel's expertise and the insights he shares here speak to larger, cultural motivations for growing food.

Growing food on the Wind River Reservation—Melvin Leroy Arthur

My experience with food producers from my original home on the Wind River Indian Reservation spans close to ten years. My work and personal experience has shown me that Northern Arapaho and Eastern Shoshone tribal members relate their own personal gardening experience directly to health, and others have placed the importance of generational knowledge as a key factor when getting their kids involved. Tribal members who garden for health are usually motivated by the deteriorating health of a close family member who might be losing limbs to diabetes, or a child who has already been diagnosed with the disease at a young age. Community members have been desensitized to trauma, which makes realizations pertaining to their own health status, and that of their children and grandchildren, feel more desperate. As an oppressed, Indigenous community we have not found ways to heal ourselves under the Whiteman's health paradigm. As a result, when a better option comes along, we adopt it, especially if it makes our lives easier. Gardening gives tribal members an opportunity to put importance on eating healthy foods and creating a healthy foodway. Today, this makes life easier for us because we feel like we are improving our own community health.

Home gardening also gives tribal members opportunities to make their own connections to past generations including those of family and community. There is a long tradition of home gardening in the community that dates back to the introduction of the Arapaho people to the Wind River (for more information on historic Arapaho foodways, see my recent publication on the topic <u>here</u>). At that time our head men built home gardens as soon as they were imprisoned on the reservation, and this custom was further promoted through policy and World War II Victory Gardens. Self-sustainability was required for the Northern Arapaho people to survive because if they didn't they would not eat, despite promises made by the Whiteman to provide food for Indigenous people who agreed to settle on reservation lands. Northern Arapaho tribal members were expected to become farmers when they were imprisoned at the Wind River Indian Reservation. Policies and funds were available for this to become a reality, but all the officials of this time and place took the government payments and built an agriculture system for the people north of the Big Wind River, who are the white people. This left nothing for the Northern Arapaho people, and as a result they had no funding to build large scale agriculture.

Most of today's tribal food producers have been robbed of this history and they can only relate to a time when our grandparents all had gardens, and we remember what was produced as a result of the home gardens we seen as young people. I have heard tribal producers speak of the home-gardens they saw as children when they could just go out to the garden and get something to eat when they got hungry, or how they never went to the grocery stores in town when they were growing up. Through the Growing Resilience project, tribal members have reconnected to the collective memory of generations past. They want to pass that down to their children, no matter how it looks or what is grown; they just want to get outside and experience it for themselves.

Ag Census Data—Lacey

In my <u>last post</u> about some of the differences between agriculture and food production specifically, I noted that most corn and soybeans – our nation's two largest crops (USDA, 2019) – are not raised to feed people but instead are used for ethanol and livestock feed. Of course, agricultural acreage dedicated to raising flowers, tobacco, dogs, cats, animals for fur coats, and thoroughbred horses, among other things, also does not contribute to our food supply for human consumption.

Examining the difference between agriculture and food production got me wondering about who grows what in the United States. One answer is that all farm types in the United States are predominantly run by white people (see Figure 1).

What Odds Ratios Tell Us

The vast majority of farms in the United States are run by people who identify as white and non-Hispanic (see Figure 1). White farmers also dominate across all the farm-type categories tracked in the USDA Census of Agriculture, representing 82% to 98% of farms in all categories (see Figure 2, which is an inversion of this perspective). To calculate the percentage of farms run by people who identify as white I took # of farms in each farm type run by white people / the total # of farms in each farm type*100, and this math gives us the 82%-98% results noted above.

These straightforward percentages reveal some interesting information, but they hide other trends. Since far fewer farms run by people of color are reported in the Census than farms run by white people, finding meaning in the data for farms run by people of color calls for a different approach to analysis. Enter the Odds Ratio (OR) (Celentano, 2018). To "zoom in" on farms run by people of color, I first calculated the "odds" that a farm would be of a certain type, given that it was run by someone of a given race or ethnicity.* Mathematically, this is # of farms of each farm type run by each racial or ethnic category/ the total # of all farms run by people of that racial or ethnic category. For example, 1,354 of the total 35,227 farms run by farmers who identify as American Indian or Alaska Native produce vegetables and melons (a USDA farm type). This means that farms run by American Indians or Alaska Natives have only about a 3.84% odds of growing vegetables and melons (1,354/35,227*100). But, the odds that a farm run by white people grows vegetables and melons is only about 2.60% (39,669 vegetable and melon farms run by white people/ 1,523,942 total farms run by white people *100). To get the odds ratio, I divided 3.84/2.60 = an OR of 1.48, which you can see reflected in Table 1. In this case, an OR of 1.48 indicates that farms run by American Indian and Alaska Native operators have a 48% higher odds of growing vegetables and melons compared to farms run by white people.

Basic statistics tell us that it is likely that a farm in any farm type is operated by people who identify as white. Furthermore, the percent of farms in any given type of production per the race or ethnicity of the producer(s) gives us some information (i.e. farms run by American Indians or Alaska Natives have only about a 3.84% odds of growing vegetables and melons). But to compare trends between the relatively small number of farms run by people of color and those run by white people, ORs illicit perhaps the most meaningful results (see Table 1). Within that context, however, it is noteworthy that the three agricultural sectors with the highest percentage of farms run by people of color are sectors that very dominantly directly produce food¹: Fruits and Tree Nuts (19.78%), Vegetables and Melons (19.40%), and Sheep and Goats (19.29%) (see Figure 2). In fact, a farm run by a person of color has 1.4 to 6 times the odds of growing vegetables and/ or melons than farms run by white people (see Table 1 and Box 1). The gardens that Mel helped people on the Wind River Indian Reservation grow would not be captured in the above census data because only agricultural operations that earns \$1,000 or more in annual revenue are counted (USDA, 2019). Thus, small per capita efforts like those of Growing Resilience and other community food sovereignty work do not even contribute to the trends that appear in USDA Census of Agriculture data.

¹ Exceptions to food production within the Fruits and Tree Nuts, Vegetables and Melons, and Sheep and Goat farm sectors include decorative foods like Halloween pumpkins and fiber from sheep and goats. About 68% of sheep farms do not produce wool, and those that produce wool may also sell their sheep for meat or use them for dairy (USDA, 2019, Table 27). Less than 10% of goat farms produce fiber (USDA, 2019, Table 28).



Figure 1 Data taken from Table 59 and Table 62 of the 2017 Census of Agriculture (USDA, 2019). To determine whether a farmer was a "principal producer," the USDA Census of Agriculture survey asked about each respondent's level of decision-making on the farm (USDA,



Figure 2 Data taken from Table 59 and Table 62 of the 2017 Census of Agriculture (USDA, 2019). This data is aggregated for all races other than white (American Indian or Alaska Native only, Asian only, Black or African American only, Native Hawaiian or Other Pacific Islander only, and More than one race reported) and for the ethnicity of Hispanic, Latino, or Spanish origin.

Meaning Behind the Data? — Lacey

There are admittedly many reasons that the numbers pan out this way. For example, people of color have been systematically denied resources like land and investment capital that are needed to run large operations, including grain and oilseed farms (Agyeman & Alkon (Eds.), 2011; Horst & Marion, 2019; see also the <u>USDA's own summary</u> of court findings that farmers of color and women farmers have been discriminatorily denied loans). As Mel notes, "In relation to the numbers from the Census of Agriculture, we on the reservation would be the outliers hinging on the fringes of funding, but we have created an infrastructure that will hopefully carry the work on for future generations." People of color also often have to reconcile histories and current realities in which agriculture was/is used as a tool of oppression against them (Penniman, 2018).

Furthermore, farmers who both do and do not identify as white undoubtedly participate in agriculture for a variety of reasons. At the same time, people of color have identified growing their own food as a form of protest against a history of colonialism and oppression by improving their own and their community's health, achieving community food sovereignty, and reemphasizing traditional foods (see for example the Journal of Agriculture, Food Systems, and Community Development's issue on Indigenous Food Sovereignty in North America; Agyeman & Alkon (Eds.), 2011; Penniman, 2018; White,

2018; a variety of data sources available from <u>the Food Dignity Project</u>; and additional data generated by the <u>Growing Resilience Project</u>).

Access to healthy foods and the lands where those foods are produced are also concepts long intertwined with movements of sovereignty and against oppression. This connection in the African American community is well outlined in the 2018 book by Monica M. White, Freedom Farmers: Agricultural Resistance and the Black Freedom Movement. White (2018) begins her exploration by highlighting the importance of slave gardens to not only the survival of first-generation enslaved Africans brought to the "New World," but also to their resistance of cultural genocide. She then follows the centrality of food and land for food production in the famous efforts of Booker T. Washington, George Washington Carver, W.E.B. Du Bois, Martin Luther King Junior, Fannie Lou Hamer, and Malcolm X and the Black Power movement (White, 2018).

Similar histories of resistance to oppression through healthy food cultivation have played out in most communities of color in the United States. This is true of people of Asian and Latinx descent (Agyeman & Alkon (Eds.), 2011) – whose labor has been and is disproportionately exploited to produce the foods that fill the shelves of grocery stores they often cannot themselves access (Agyeman & Alkon (Eds.), 2011; Minkoff-Zern, 2014; Hill et al., 2011; Borre, Ertle & Graff, 2010). It is also certainly true of American Indian communities as described above in this post and in scientific literature, especially recently in the Journal of Agriculture, Food Systems, and Community Development's issue on Indigenous Food Sovereignty in North America.

Thus it may be the case that the numbers in our most recent Census of Agriculture speak to a larger truth about underlying trends in motivations for farming. Perhaps this interest is even statistically stronger among farmers of color than among white farmers. As both scientists and advocates, it is meaningful for Mel and me to see our lived experiences and expertise in social sciences reflected in the hard numbers collected in our country's Census of Agriculture.

					OR		
		OR			Native		
		American		OR Black	Hawaiian	OR	
Any principal		Indian or	-	or	or Other	Hispanic,	OR More
producer	OR	Alaska	OR	African	Pacific	Latino, or	than one
reporting race	White	Native	Asian	American	Islander	Spanish	race
as -	only	only	only	only	only	origin	reported
Oilseed and							
grain	1.00	0.13	0.12	0.41	0.15	0.21	0.30
Vegetable and							
melon	1.00	1.48	5.81	3.07	3.80	1.44	1.69
Fruit and tree							
nut	1.00	0.53	6.38	0.56	3.80	2.67	1.63
Greenhouse,							
nursery, and							
floriculture	4 00			0.50	~ ~ ~		4.00
production	1.00	0.34	4.07	0.52	3.44	1.43	1.33
Tobacco	1.00	0.07	0.20	1.22	-	0.20	0.10
Cotton	1.00	0.22	0.18	0.84	0.49	0.77	0.39
Beef cattle	1.00	1.18	0.33	1.51	0.73	1.08	1.10
Cattle feedlots	1.00	0.18	0.07	0.06	0.19	0.25	0.29
Dairy cattle and milk							
production	1.00	0.12	0.08	0.10	0.27	0.37	0.33
Hog and pig	1.00	0.57	0.38	1.02	1.02	0.65	1.06
Poultry and egg	1.00	0.63	3.67	0.55	0.90	0.94	1.27
Sheep and goat	1.00	4.08	0.77	0.84	1.61	1.91	1.44
Aquaculture							
and other							
animai	1 00	1 20	0.20	0.74	0.07	0.07	4 07
production	1.00	1.20	0.39	0.71	0.87	0.97	1.27

Table 1 Data taken from Table 59 and Table 62 of the 2017 Census of Agriculture (USDA, 2019). OR = Odds ratio, in this case, the odds of your farm growing products from each sector, given that you are a certain race or ethnicity (farms in sector/ total farms by race or ethnicity) compared to the odds of your farm growing products from each sector, given that you are white. The OR of 0.13, for example indicates the odds of American Indian or Alaska Native producers growing Oilseed and Grains is only 13% compared to the odds for white producers. The odds of American Indian or Alaska Native producers growing Vegetables and Melons, though, is 48% greater than the odds for white producers. I have highlighted in blue the sectors where the OR is consistently below 1 for all people of color and in green the only sector for which OR is consistently above 1.

This post is the seventh in a series—Connecting Agriculture Policy to Your Health by Johns Hopkins DrPH student Lacey Gaechter and special guest contributor Melvin Leroy Arthur, MS.

References

Agyeman, J., & Alkon, A. H. (Eds.). (2011). *Cultivating food justice: Race, class, and sustainability*. Cambridge: MIT Press.

Arthur, M., & Porter, C. (2019). Restorying Northern Arapaho food sovereignty. *Journal of Agriculture, Food Systems, and Community Development, 9*(B), 1-16.

Borre, K., Ertle, L., & Graff, M. (2010). Working to eat: Vulnerability, food insecurity, and obesity among migrant and seasonal farmworker families. *American Journal of Industrial Medicine*, *53*(4), 443-462.

Celentano, D. D., & Mhs, S. (2018). Gordis Epidemiology. Elsevier.

Hill, B. G., Moloney, A. G., Mize, T., Himelick, T., & Guest, J. L. (2011). Prevalence and predictors of food insecurity in migrant farmworkers in Georgia. *American journal of public health*, *101*(5), 831-833.

Horst, M., & Marion, A. (2019). Racial, ethnic and gender inequities in farmland ownership and farming in the US. *Agriculture and Human Values*, *36*(1), 1-16.

Minkoff-Zern, L. A. (2014). Hunger amidst plenty: Farmworker food insecurity and coping strategies in California. *Local Environment*, *19*(2), 204-219.

Penniman, L. (2018). *Farming while black: Soul Fire Farm's practical guide to liberation on the land*. White River Junction, Vermont: Chelsea Green Publishing.

USDA. (2019). 2017 Census of agriculture: United States summary and state data,

volume 1, geographic area series, Part 51, AC-17-A-51. Retrieved from https://www.nass.usda.gov/AgCensus/

White, M. M. (2018). *Freedom farmers: agricultural resistance and the Black freedom movement*. UNC Press Books.