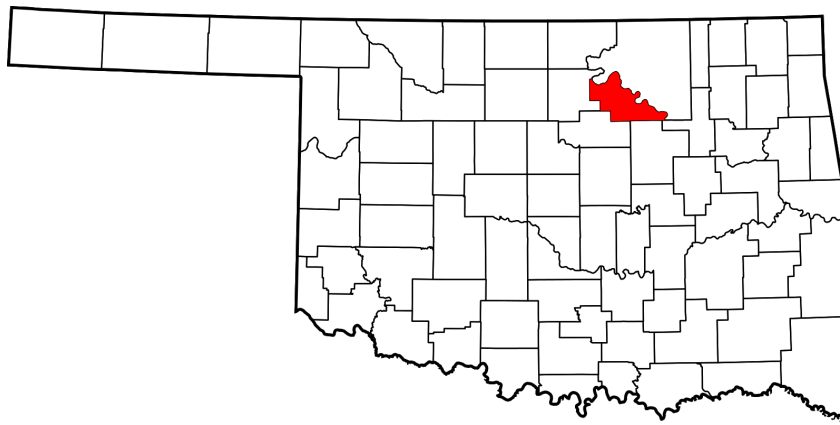


Pawnee Nation Food Sovereignty Assessment

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Introduction

As part of a grant from First Nations Development Institute, Pawnee Nation of Oklahoma partnered with Oklahoma Farm and Food Alliance to conduct a food sovereignty assessment for Pawnee Nation. Through primary and secondary data collection, the assessment seeks to understand Pawnee Nation's current food sovereignty, with a focus on Native and non-Native fresh food production and accessibility of these foods for tribal members. In the Summer 2017, project partners administered a survey to community members at in-person community events, as well as online via Survey Monkey. A total of 154 community members completed the survey. Of those that completed the survey, 62% were affiliated with the Pawnee tribe and the rest were from 21 different tribes. Over half (58%) of respondents live in the 74058 zip code (Pawnee County) and the rest live in surrounding areas. Respondents ranged in age, with 30% ages 18 to 35, 42% ages 36 to 59, and 28% age 60 or older. The following report shares key findings from the community survey, as well as information collected through various secondary data sources. The information can be used to ensure that future programming aligns with community needs and desires.

Demographics

In 2016, the total population of Pawnee County was 16,485.¹ Pawnee County has a higher proportion of Native American residents (13.3%) compared to Oklahoma (9.2%), and the United States (1.3%).² **Table 1** shows basic demographics, for Pawnee County, Oklahoma, and the United States (2015-2016), as well as for Pawnee tribal grouping along or in any combination (2011-2015).^{3, 4, 5}

Pawnee County has a **lower** median household income, a **higher** poverty rate, slightly **fewer** adults aged 25 or older that have graduated high school, and a **higher** unemployment rate than the rest of the Nation. Additionally, Pawnee tribal members have a **lower** median household income, a **higher** poverty rate, and a **higher** unemployment rate than Pawnee County overall.

Table 1: Basic Demographics

Category	Pawnee tribal grouping alone or in any combination	Pawnee County	Oklahoma	USA
Land Area (Sq. Miles)		567.96	-	-
Households	647	6,278	-	-
Median Household Income	\$36,563	\$45,184	\$48,595	\$56,516
Persons Below Poverty Level	22.3%	16%	16.3%	12.7%
Unemployment	6.9%	6.7%	4.9%	4.7%
High School Graduates	-	87.2%	86.9%	86.7%

Food Consumption and Public Health

The food system is a major factor affecting the health of individuals and communities. While a myriad of factors contribute to types and amounts of food consumed, the food environment, including limited access to healthy foods and high access to unhealthy foods, can influence food choices and impact diet-related health outcomes such as obesity, diabetes and cardiovascular disease. Food "access" can be divided into three main categories, including informational (nutrition and cooking knowledge, etc.), economic (poverty, food prices, etc.) and geographic (distance to healthy food retails, etc.).⁶ According to survey respondents who answered the question, the main barrier to eating more healthy foods, such as fruits and vegetables, was the price (52%), followed by time limitations to buy and prepare fresh food (9%), availability of fresh food (7%), the quality of fresh food (7%), and distance to a grocery store with fresh food (5%). Notably, 20% said that they do not face barriers to buying healthy fresh food. The following sections focus on the economic and geographic barriers to healthy food access in Pawnee County overall, as well as findings from the Pawnee Nation Food Sovereignty Survey.

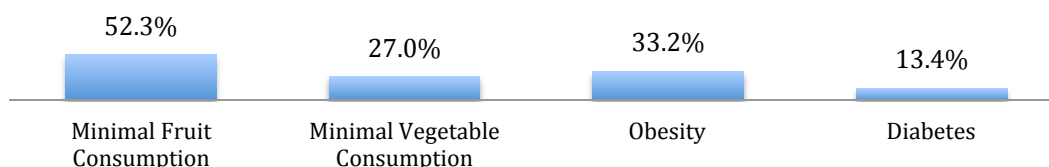
Risk Factors and Disease Prevalence

According to the Bureau of Labor Statistics, households in the Southern Region of the United States (including Oklahoma) spent an average of \$6,671 on food across 2015-2016.⁷ Less than half (\$2,894) was spent on food away from home and more than half (\$3,776) was spent on groceries at home. Of groceries purchased, **only 18.5%** (\$700) was spent on fruits and vegetables (including fresh, canned, and frozen). **Table 2** shows estimated expenditures for Pawnee County, calculated by multiplying regional average expenditures with number of households in the county. Though these figures are calculated using regional averages and do not accurately reflect consumption patterns, they do suggest that families are spending a small proportion of their food budget on fruits and vegetables. **Figure 1** shows that 52.3% of adults eat less than one fruit per day and 27% eat less than one vegetable per day (far below the recommended daily intake).⁸ **Figure 1** also shows the obesity rate and diabetes prevalence among adults in Pawnee County.^{9,10} The obesity rate for Oklahoma is 32.2% and the rate for the United States is 27.6%. Diabetes prevalence in Oklahoma is 11.5%¹¹ and in the United States is 9.7%.¹²

Table 2: Household Food Expenditures (\$/HH)

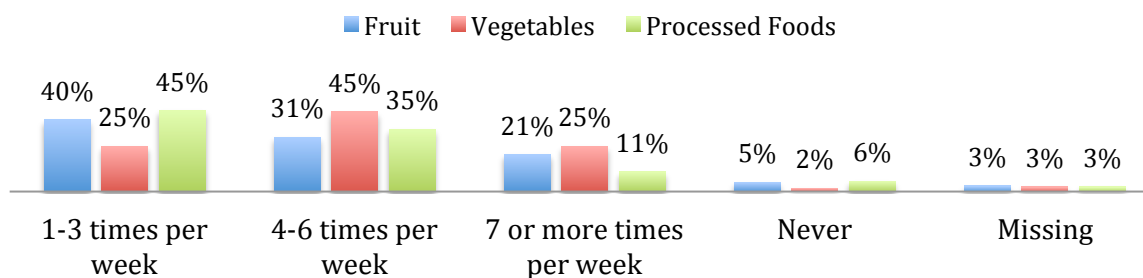
Total Food	\$41,880,538
Food Away From Home	\$18,168,532
Food at Home	\$23,705,728
Fruits and Vegetables	\$4,394,600

**Figure 1: Risk Factors and Health Outcomes
Pawnee County 2014**



Among community members who participated in the Pawnee Food Sovereignty Survey, 72% said that diabetes is a health concern for them or their family. **Figure 2** shows reported weekly consumption of fruit, vegetables, and processed foods among survey respondents. Notably, only 21% of respondents reported eating fruit seven or more times per week and only 25% reported eating vegetables seven or more times per week. In comparing to **Figure 1** above, this means that 79% of respondents eat less than one fruit per day and 75% of respondents eat less than one vegetable per day, compared to 52.3% and 27%, respectively, for Pawnee Nation overall. It should be noted that the United States dietary guidelines recommend filling your plate half-full of fruits and vegetables at each meal, or roughly 3-4 servings of fruits and 4-5 servings of vegetables per day.¹³ Additionally, **Figure 2** shows that processed food consumption is often equal to or higher than fruit or vegetable consumption. However, only 11% of respondents reported eating processed foods seven or more times per week.

Figure 2: Weekly Consumption of F&V and Processed Foods (n=154)



Shopping Patterns Among Pawnee Nation Community Members

In the Pawnee Nation Food Sovereignty Survey, community members were also asked about the types of food they typically buy when they go food shopping. Table 3 shows that 2%-Fat milk is the most popular type of milk, followed by whole milk. In terms of other dairy products, the majority of respondents buy cheese (85%), flavored yogurt (42%), and plain yogurt (18%). Beef and chicken are the most popular meat items, followed by pork. In terms of other types of protein, 68% of respondents report buying eggs, and 37% report buying nuts/seeds. More respondents buy fresh, whole fruit (64%) than canned (36%), frozen (22%), or fresh, chopped (13%). Similarly, more respondents buy fresh, whole vegetables (56%) than canned (43%), frozen (42%), or fresh, chopped (14%). For corn specifically, 47% buy fresh, whole corn, followed by canned (49%), frozen (32%), and fresh, chopped (8%). More respondents buy whole wheat bread (54%) than white bread (31%). However, for tortillas, more respondents buy white (44%) than whole wheat (18%). Similarly, white rice is more popular than brown or wild rice. Respondents also prefer dried beans to canned beans.

Table 3: Reported Food Shopping Patterns Among Survey Respondents (n=154*)

Item	Product Type (Percent of survey respondents)					Don't Buy
Milk	Nonfat/ Skim (3%)	1% Fat (10%)	2% Fat (32%)	Whole (18%)	Other (soy, almond, etc.) (10%)	8%
Meat/Protein	Beef (58%)	Chicken (58%)	Pork (47%)	Fish (21%)	Meat pie (8%)	1%
Other/Protein	Soy Products (6%)	Nuts/Seeds (37%)	Eggs (68%)			1%
Vegetables	Fresh, whole (56%)	Fresh, chopped (14%)	Frozen (42%)	Canned (43%)		1%
Fruits	Fresh, whole (64%)	Fresh, chopped (13%)	Frozen (22%)	Canned (36%)		3%
Breads	White (31%)	Whole Wheat (54%)				3%
Tortillas	White (44%)	Whole Wheat (18%)				19%
Rice	White (45%)	Brown (29%)	Wild (18%)			12%
Cheese	Yes (85%)					N/A
Yogurt	Plain (18%)	Flavored (42%)				31%
Beans (pinto, black, kidney, lentil, etc.)	Dried (51%)	Canned (29%)				15%
Corn	Fresh, whole (47%)	Fresh, chopped (8%)	Frozen (32%)	Canned (49%)		5%

*Percentages are based on n=154; however, some respondents did not answer all the questions and therefore the percentage shown may underrepresent the number of people who buy a particular item.

When prompted, 82% of respondents said that they would like to have fruits and vegetables everyday in meals or for snacks. The text box to the right shows the types of foods that respondents would like to eat, but are difficult to get or are not available in the community. When asked what the main barriers to eating more healthy foods, such as fruits and vegetables, 52% said the cost of fresh foods is too high. Other barriers mentioned include lack of time to shop and/or cook fresh healthy meals (9%), lack of availability (7%), poor quality (7%), and distance to stores with fresh food (5%). Other responses included personal reasons, such as laziness, not having social support, not having a habit of eating healthfully, not liking vegetables, not having access to a cooking stove, or lack of shelf life of fresh food. Notably 20% of survey respondents said that they don't have any barriers to eating more healthy foods.

Types of foods people would like to buy but that are not easily available in the community:

- Fresh fruits, including wild plums, figs
- Fresh vegetables, including kale, olives, bean sprouts
- Sunflower
- Choke cherries
- Native corn, blue corn, dried Pawnee corn
- Bison
- Bulk dry items
- Different kinds of rice, including wild rice
- Beans
- Dried fruit
- Fresh fish and seafood, including salmon
- Tamales
- Fresh dairy
- Mixed nuts, including pine
- Local, organic, fresh and quality foods

Traditional Foods

Survey takers were also asked to list the types of traditional foods that they eat regularly. **Figure 3** shows the types

of food respondents reported eating most, where the biggest words represent the types of foods that people mentioned most often. The most common type of traditional food that community members regularly eat is corn, frybread, corn soup, and beans. Other types of food mentioned include morel mushrooms, asparagus, nuts, oatmeal, rice, potatoes, pumpkin, watermelon, corn mash/mush, blueberries, grape dumplings, and chicken dumplings. About 5% of respondents mentioned that they do not eat traditional foods or that they eat them rarely, only at special occasions/ceremonies. When asked what types of food they would like to eat more often, community members often listed the foods shown in **Figure 3**, as well as some they hadn't mentioned such as heirloom fruits and vegetables, wojapee, Pawnee-grown, fresh berries, wild rice, apples, pears, elk, and moose. The Food Production

Figure 3: Types of Traditional Foods People Eat Most Often



Section below explores community member support for local and traditional foods in more depth.

Geographic Access: Food Distribution

Part of what determines the types of food people buy is their geographic access to stores or markets that contain those foods. Geographic access to healthy food includes distance to healthy food retail and mode and availability of transportation. Currently, the most commonly used measure of healthy food access is distance from a grocery store. Pawnee County has a **Food Environment Index¹⁴ of 7.6** and **5.6% of the population has low food access.¹⁵**

The **food environment index** is a measure ranging from 0 (worst) to 10 (best) which equally weights two indicators of the food environment: Limited access to healthy foods, which estimates the proportion of the population who are low income and do not live close to a grocery store; and food insecurity estimates, which is the percentage of the population who did not have access to a reliable source of food during the past year.

Low food access captures the proportion of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and nonrural areas; in rural areas, it means living less than 10 miles from a grocery store whereas in nonrural areas, it means less than 1 mile. Low income is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size.

Food Retail

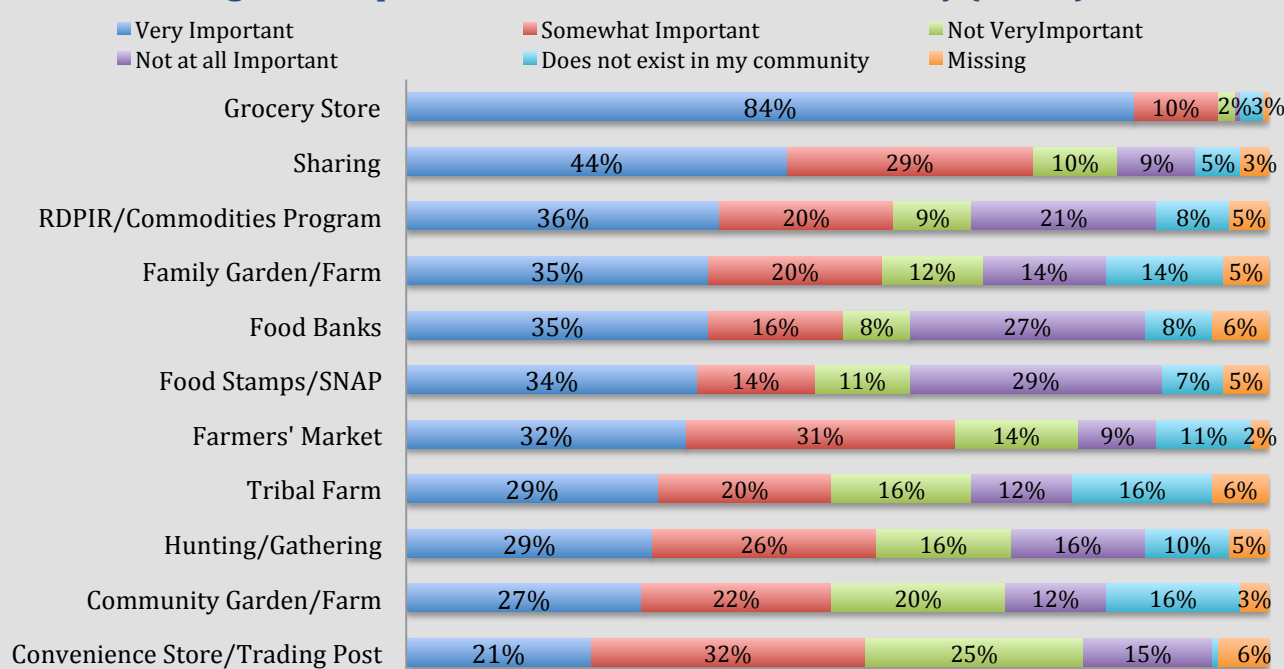
A major component of the food environment is the availability of different types of food stores in a community. **Table 4** shows the number of food stores, restaurants and markets in the Pawnee County.¹⁶ Notably, there are more convenient stores than grocery stores or supercenters. Convenient stores are often known to have fewer healthy options, such as fresh fruits and vegetables, than grocery stores or supercenters. Current programs, such as the Healthy Corner Store Initiative, seek to increase availability of healthy foods through small stores in underserved communities.¹⁷ There are a high number of stores accepting SNAP (14) and some accepting WIC (3). According to USDA data, there is no farmers' market in Pawnee County. However, based on conversations with local people, there are three small farmers' markets in the area during the summer located in Pawnee, Cleveland, and Hominy.

Table 4: Access to Food Stores, Restaurants and Markets (2014)

Category	Total Number
Convenience Stores	7
Grocery Stores	2
SNAP-authorized stores (2016)	14
WIC-authorized stores (2012)	3
Supercenters and club stores	1
Specialized food stores	0
Full-service restaurants	8
Fast-food restaurants	7
Farmers' markets (2016)*	0
SNAP-authorized farmers' markets	-
WIC-authorized farmers' markets	-

According to Pawnee Nation Food Sovereignty survey respondents, the most important sources of food in the community are grocery stores. A majority of community members who took the survey also get food from sharing (73% said it's very important or somewhat important). **Figure 4** shows how important various sources of food are for community members and **Figure 5** shows how often community members go food shopping.

Figure 4: Important Food Sources in the Community (n=154)



Frequency	Percentage
Monthly	4%
2-3 times per month	14%
Weekly	51%
2-3 times per week	21%
Daily	6%

Figure 6: Types of Food People Would Like to Buy at a Pawnee Farmers' Market



Food insecurity refers to a lack of access to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods. It's important to note that food insecure households are not necessarily food insecure at all times.^{18,19} In Pawnee County, 15.2% of the population is considered food insecure and 52% are below the SNAP threshold 130% poverty line.

- 1) **Low Food Security:** households report reduced quality, variety, or desirability of diet with little or no indication of reduced food intake.
- 2) **Very Low Food Security:** households report multiple indications of disrupted eating patterns and reduced food intake, such as the need to make trade-offs between important basic needs and purchasing nutritionally adequate foods.

SNAP eligibility: at or below 130% of the poverty level (individual states can increase thresholds up to 200%; Oklahoma follows Federal guidelines).

Food insecurity and poverty are related, though not synonymous. In fact, 26% of food insecure households live above 185% of the poverty line.²⁰ Still, eligibility for Federal food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP) and Women, Infants, and Children (WIC) special supplemental nutrition program are based partly on income as it relates to the poverty level.

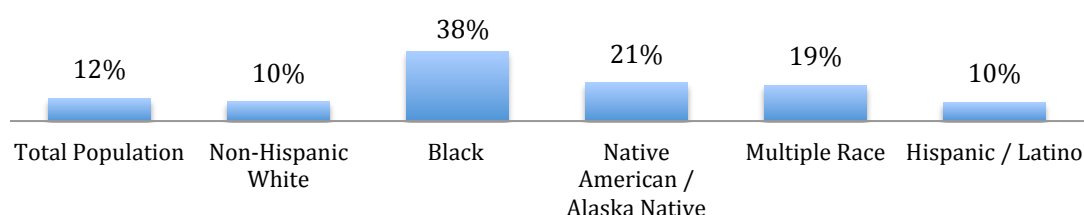
Table 5 shows SNAP and WIC assistance for Pawnee County for 2014, as well as the number of people who participated in the Food Distribution Program on Indian Reservations (FDPIR) in October 2017. Racial and ethnic disparities exist among SNAP recipients. As shown in **Figure 7**, almost twice

as many Native American and Alaska Native households receive SNAP benefits in Pawnee County compared to the total population or any other racial or ethnic group, except for Black Americans, who have the highest rate. Overall, 17.36% of Native Americans or Alaska Natives live in poverty, compared to 13.1% of White Americans and 24.36% of Black or African Americans living in Pawnee County.²¹ Notably, a household can only be on FDP or SNAP, but not on both programs during the same month. This dual participation by any household member in the FDP and SNAP is prohibited. If they are found to have been on both programs during same month, they will either have to pay back SNAP or FDP for food they received.^{22, 23}

Table 5: SNAP and WIC Assistance, 2014

Category	Value
Households Receiving SNAP (%)	12.12%
Households Receiving SNAP (#)	761
Number of WIC Participants	4,296
FDPIR Recipients (October 2017)	282

**Figure 7: Households Receiving SNAP Benefits by Race/Ethnicity
Pawnee County (ACS 2011-2015)**



Food Production

An often over-looked component of the food system is the level and type of agricultural activity in a county. Agricultural land use and food production can influence food prices and availability of healthy produce and meats. A major focus of the Pawnee Nation is to increase food sovereignty by increasing local tribal food production, as well as education for tribal members. The Pawnee Nation is practicing their sovereignty and developing an agricultural entity to establish a sustainable and nutritious food system for their people and the community. The Pawnee Nation agriculture program is addressing several concerns that the Nation endures. Currently, the Pawnee Nation is conducting a feasibility study with H.L. Goodwin @ TEAM Solutions, LLC. The purpose of this study is to improve food self-sufficiency rate, ensure food security, reduce the number of undernourished people and decrease poverty through a sustainable agricultural production. Addressing these factors, it will increase the health qualities of everyone within the tribe and the community. In addition, the Nation is developing ways on expanding agricultural production to cope with the increasing population and utilize all our lands economically. Specifically, Pawnee Nation is focused on the following goals:

1. Generate positive economic impact on communities in the Pawnee Nation through non-gaming enterprises;
2. Provide sustainable and nutritious food options for Pawnee citizenry;
3. Establish an additional mechanism for Pawnee cultural preservation initiatives by providing traditional foods for Tribal ceremonies, dances and celebrations;
4. Create and sustain provision of ample, nutritious food for youth, elders, disabled, and the poor; and
5. Create a food and agriculture workforce that can ensure future viability of the Pawnee food system.

Additionally, the tribe has the following future goals for programs and projects:

- **Horticulture classes at Pawnee Nation College:** Pawnee Nation College will be offering horticulture classes, and has signed a 4-year MOU with OSU. These will include greenhouse production, irrigation, raised beds, soils, and fruit and vegetable production. Certifications on Pollinators and Bees are also being explored.
- **Sustainability Conference Earth Day 2018:** Partners include Pawnee Seed Preservation Project, Pawnee Nation College, OSU, Central Community College, University of Lincoln Nebraska, Nebraska Tourism Department
- **Pawnee Seed Preservation Project (PSPP) 2018:**
 - **Protein analysis of Pawnee corn varieties:** Three labs are offering to test: ULN, OSU, and AI Toop, Director of Specialty Agriculture Business Development at Waypoint Analytical. This company can do soil samples too, including 12 minerals, much more than NPK.
 - **Internship Development Ongoing:** Electa Redcorn Fellows Program, University of Arkansas Indigenous Food and Agriculture; Mee Kai Clark graduates with Bachelors Native American Studies, with Food Sovereignty emphasis; Kahheetah Branoskie and her family continue to grow corn and garden in Pawnee; two high school interns assisted with surveys, Osheana Aguilera and Victoria Ramirez, both active in FFA, attended Youth Indigenous Agriculture Summer Program in Arkansas; Sisters, Krystal and Amy Ceasar, language teachers, jewelry/bead artists, sorted and cleaned the corn kernels with precision, as if working with gems. A most impressive turnout of 79 volunteer tribal and non tribal Community members to assist in growing, documenting, harvesting, sorting, braiding, shelling, cleaning, storing, bagging—twice, 120 bushels delivery, and CCC 17 gardens harvested yield.
 - **Farmer Del Ficke**, soil master, farm located in Nebraska homeland, will plant Pawnee corn varieties again. Methods include cover cropping, no till, no chemicals, and bees. Reciprocity with 3rd generation farmer.
 - **Ronnie O 'Brien**, 15 years with PSPP, and **Deb Echo Hawk**, over 20 years as Pawnee Nation Keeper of the Seed, will continue documentation and research, planting the tan kernel that Mother Corn revealed as the long missing sweet corn variety. Pawnee Nation now have the return of their 5 corn varieties: flint, flour, dent, popcorn, and now sweet!
- **Pawnee Nation USDA Community Food Project Grant** submitted Dec.4th.
- **Natural Resource Conservation Service (NRCS)** continues assisting with prescribed burns and native grass seed selection.
- **Land Use** in Nations, and Land in Trust, when gifted, is being examined.
- **OSU USDA Specialty Crop Grant:** This will include, Pawnee Nation, Pawnee Nation College, Creek Nation, Muscogee Nation College and OSU. With focus on beans, squash, pumpkin, ancestral varieties. Awards notified September 2018.

Local and Traditional Foods

In 2012, there were 30 farms (3.69%) in Pawnee County that sold directly to consumers, totaling \$37,000 in direct sales (0.14% of total sales). There has been a dramatic decrease since the 2007 USDA Agricultural Census, which showed that 39 farms sold directly to consumers for a total of \$71,000 in direct sales. There are no farmers' markets or Farm to School programs in the county. Overall, there is a lot of interest in locally grown and/or traditional foods among community members who responded to the survey. **Table 6** shows community member responses to several questions related to local and traditional foods. The majority (88%) would like to see more traditional corn grown in Pawnee Nation and 66% are interested in learning more about Pawnee Nation's ancestral Seed Preservation effort. Most respondents (74%) are also interested in learning more about traditional foods more broadly and 86% think that the tribe should focus on growing it's own food.

Overall, most respondents are very interested (30%) or somewhat interested (32%) in farming and agriculture. More than half (58%) are interested in growing their own food and 11% already do grow their own food. More than half of community members surveyed are interested in taking gardening classes (61%) and/or cooking classes (55%). There is also moderate interest in nutrition classes (42%), food safety/food handling classes (31%) and hunting field-dressing classes (27%).

A key ingredient to growing food is water. Survey participants were asked whether they have any issues with the water quality, including streams, springs, ponds, or wells. Almost a third (27%) of respondents said yes, 41% said no, and 32% did not answer the question. The majority of concerns people gave about their water source were centered on poor city water quality and surface/groundwater contamination due to pollution from oil and gas producers and fracking. One respondent also noted pollution due to ranching activity and another noted high levels of E. coli bacteria levels. People observed that the water is hard with deposits, is discolored yellow, and smells. Many noted that they do not drink the tap water (they drink bottled water instead) and that it needs more inspection and regulation to ensure it is clean, safe, and tastes good. One respondent noted that the city has issued warnings about the water and another noted that the tribe does not have its own water treatment plant or sewer systems. Another respondent noted that wells are not accessible with programs and is forced to use rural water with lots of chemicals. While one respondent mentioned that they do have a well and prefer it to the city water and another respondent noted that they do not have water issues because they use rural water, several others noted that the rural and/or well water that they use is poor quality. Aside from quality of water, one

Table 6: Community Member Interest in Local & Traditional Foods

Would you like to see more traditional corn grown here?	#	%
Yes	135	88%
No	12	8%
Pawnee has an ancestral Seed Preservation effort. Are you interested in learning more?		
Yes	101	66%
No	42	27%
Are you interested in learning more about traditional foods?		
Yes	114	74%
No	29	19%
Do you think the tribe should focus on growing it's own food?		
Yes	133	86%
No	13	8%
How interested are you in farming and agriculture?		
Very interested	46	30%
Somewhat interested	49	32%
Neutral	34	22%
Not Very interested	13	8%
Not at all interested	5	3%
Missing	7	5%
Are you interested in growing your own food?		
Yes	90	58%
No	39	25%
I already grow my own food	17	11%
Missing	8	5%
What kind of supports are you interested in related to food and nutrition? (Select all that apply)		
Gardening Classes	94	61%
Cooking Classes	84	55%
Nutrition Classes	65	42%
Food Safety/Food Handling Classes	48	31%
Hunting field-dressing Classes	42	27%

respondent noted that the cost of city water is expensive and another noted that they spend more money on water than they do on soda. One respondent also mentioned that they live in a drought area.

Agriculture Overview and Farm Statistics

According to the USDA 2012 Census of Agriculture,²⁴ there are 813 farms in Pawnee County, totaling 285,982 acres (446.85 square miles) or 79% of the county's land area. The average age of principal farm operators in the county is 58 years and only 31.5% of those principal operators name farming as their primary occupation. The majority of farmers in the county are White/Caucasian (92.3%), followed by American Indian or Alaskan Native (4.7%). Crop sales, livestock sales and government payments for these farms are shown in **Figure 8**.

**Figure 8: Farm Sales and Government Payments
Pawnee County 2012**



The top crop items for Pawnee County are forage-land (used for all hay and haylage, grass silage, and greenchop), wheat for grain, winter wheat for grain, soybeans for beans, and corn for silage.²⁵

Table 7 shows the State rank in sales by crop category (there are 77 counties in Oklahoma). Pawnee County ranks 7th in the State for corn for silage and 21st for soybeans for beans.²⁶

Table 7: State Rank in Sales by Crop Category

Crop Category	State Rank
Fruits, tree nuts and berries	44
Grains, oilseeds, dry beans and peas	51
Vegetables, melons, potatoes, and sweet potatoes	58
Other Crops and Hay	71
Nursery, greenhouse, floriculture, and sod	(D)*
Cut Christmas trees and short rotation woody crops	-

*(D) = Withheld to avoid disclosing data for individual operations

Table 8: State Rank in Sales by Livestock Category

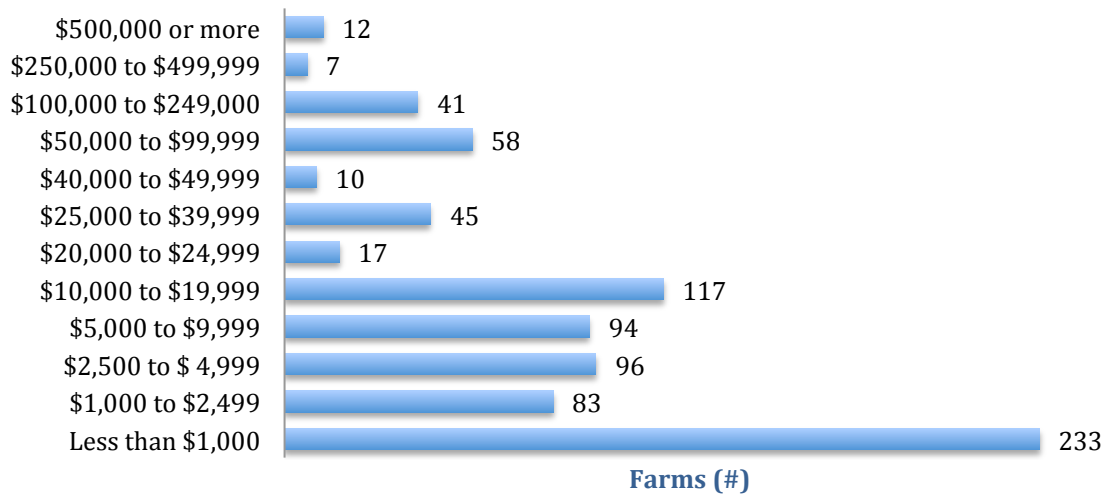
Livestock Category	State Rank
Horses, Ponies, Mules, Burros, and Donkeys	31
Other Animals and Other Animal Products	32
Sheep, Goats, and their Products	43
Cattle and Calves	47
Poultry and Eggs	51
Hogs and Pigs	62
Milk and Other Dairy Products from Cows	-

The top livestock items for Pawnee County is cattle and calves, goats, horses and ponies, layers, and sheep and lambs.²⁷ **Table 8** shows the State rank in sales by livestock category. Pawnee County ranks 8th in the State for goats.²⁸

As shown in **Figure 9**, a majority of the farms in Pawnee County (623 or 77%) each make less than \$20,000 annually. Total farm production

expenses for 2012 were approximately \$32.86 million with an average of \$39,184 per farm. Total net cash income of operation was **-\$2 million** with an average loss of **-\$2,488** per farm.

**Figure 9: Number of Farms by Value of Annual Sales
Pawnee County 2012**



Summary

Overall, great need and opportunity exists to increase food sovereignty in Pawnee Nation. Over time, the number of farms in Pawnee County has decreased and very few of those remaining grow produce for retail sales. Survey results show lower than optimal consumption of fresh fruits and vegetables among community members, as well as a desire to increase healthy food consumption. Although grocery stores are where most people buy their food, the next most popular places include food sharing, food programs, and family gardens indicating a strong foundation of community resources exists. Main barriers to eating more healthfully include lack of access to certain types of healthy food in the community, the price of healthy foods, and time to shop for and/or prepare healthy meals. These barriers can be addressed by leveraging community assets and creating a more robust local food system. Furthermore, a larger percentage of survey takers indicated interest in taking classes related to gardening, cooking, and nutrition; as well as interest in the Pawnee Seed Preservation Project (PSPP). As encouraging as it is having 88% of survey takers expressing an interest in the Pawnee Seed Preservation Project (PSPP) in hopes that the ancestral crops may be grown for the nutritional benefit in our diets, it has become an opportunity to enhance this project toward sustainable and marketable outcomes and therefore needs time and resources. In this duration of this Pawnee County Food System Assessment grant period we have made some strides to set up a foundation for utilizing the PSPP by recognizing the need to obtain seed security, establish nutritional value and look at a scenario for analyzing crop yields. Soon we will be utilizing an AmeriCorp person from the Spirit of the Sun organization and a Visa volunteer to keep strengthening the PSPP to continue conducting seed security measures and work on crop yield projections. This assessment shows that the Pawnee Nation is committed to increasing food sovereignty and is primed to leverage future resources that may be invested toward this effort.

Limitations

This food system assessment used secondary data from a variety of State and National sources. As a result, some data may be outdated and misrepresentative of the current local environment. The primary data collected through the Pawnee Nation Food Sovereignty Survey was self-reported. As a result, information may not be accurate due to possible response bias of the survey-taker.

References

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