Food Security and Sovereignty
IN ALASKA NATIVE COMMUNITIES

Recommendations for Improving Language and Inclusivity in Food and Agriculture Programming

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Executive Summary

The primary goal of this project was to better understand how agriculture fits into broader views of Tribal food sovereignty and security in Alaska.

ALASKA NATIVE COMMUNITIES PURSUE DIVERSE AVENUES FOR ACHIEVING FOOD SECURITY AND SOVEREIGNTY, and while they may qualify for relevant food and agriculture programs, labels like *farmer* or *rancher* may discourage them from applying.

In our experience, as Extension educators, working with Tribes to access these programs, this is often the case. To investigate the impact of language and inclusivity on food and agriculture programming, the authors of this report take the following approach:

- We first take a look at the historical context of agriculture and Indigenous communities in the U.S. and policies around agriculture.
- Then we explore Indigenous Food Sovereignty and Foodways in Alaska.
- Next we report on our findings from surveys and key informant interviews that were conducted across Alaska via a community based participatory research-informed approach with regional advisory committees.
- Throughout, we highlight Indigenous food stories which capture how Tribal communities are getting food from the land and growing it.
- Finally, we provide key recommendations to bolster food sovereignty and security in Alaska.

  Key Recommendation 1: Use Tribal priorities to guide USDA programs and grants for Tribes.

  Key Recommendation 2: When programs aim to improve food security and sovereignty, allow and support wild-harvest and non-economically driven activities with equal priority to agriculture.

  Key Recommendation 3: Promote food justice, food sovereignty, greater access, and cultural awareness of foodways and traditions.

  Key Recommendation 4: Use relevant food system indicators and evaluation metrics for Tribes in Alaska.

  Key Recommendation 5: Fully fund the Federally Recognized Tribes Extension Program with mandatory, non-competitive funds.

  Key Recommendation 6: Acknowledge that agriculture has been a source of trauma and associated with colonialism for Indigenous peoples and focus programmatic efforts around healing and resilience.

- We include appendices that provide an extensive look at Tribally driven food security assessments (Appendix A) as well as agricultural grants and programs that are supporting Tribally driven needs and goals around food sovereignty and security (Appendix B).

Our survey and interview numbers were small; this project should be seen as an demonstrative first step in what should be a more comprehensive approach to documenting Tribal food sovereignty and security in Alaska, especially as they relate to being able to access (agricultural) programs and funding designed to bolster food security. Furthermore, we endeavor to illustrate that by giving preference to traditional means of food production, rather than to a more Western-conceived agriculture—which has been one of the primary avenues of colonization and dispossessing Indigenous peoples from their land—real progress toward food security and sovereignty may be made for Alaska's Indigenous peoples.

Historical Context

Affecting Alaska, and all Indian Country, are policies that influence land ownership and the management of natural resources, including but not limited to water, fish, and game.

IN THE 2018 REPORT, "REGAINING OUR FUTURE: AN ASSESSMENT OF RISKS AND OPPORTUNITIES FOR NATIVE *Communities*," authors Jainie Hipp and Colby Duren discuss in detail how past and present agricultural programs and policies have impacted Native Americans (See Appendix C).[1] They describe how policies first laid out in the Homestead Act in 1862 and the Farm Bill in the 1930s effectively dispossessed Tribes of their traditional lands. Hipp and Duren explained that even though Indigenous peoples in North America have a rich agricultural heritage:

> *We, as Indigenous peoples, have been forced for centuries to endure the sidelining of our deep and complex food system knowledge in favor of supporting the food systems of those who claimed this continent as their new home. We were told to be "farmers" in our early treaties, yet forced to ignore the food systems that existed in this country for centuries in favor of establishing farming and ranching practices more familiar to the new settlers.*[2]

They go on to say:

> *What is clear from the language of many treaties is that the United States government explicitly intended for Indigenous peoples to become farmers, but ignored the basic premise: that we as Indigenous peoples had been feeding ourselves within sustainable food systems since time immemorial, and we were not dependent on anyone but ourselves to do so. When our lands were taken from us in exchange for peace and land for the rapidly escalating number of immigrants to this land, we were told to be "farmers." A "farmer" by any standard definition is one who cultivates the land to feed him or herself and others around him or her. Many of our ancestors had been "farming" for centuries. But in ways that were known to us and were in concert and harmony with the lands, water, plants, and animals. Many tribes had deep trade relationships with other tribes in the currency of food.*[3]

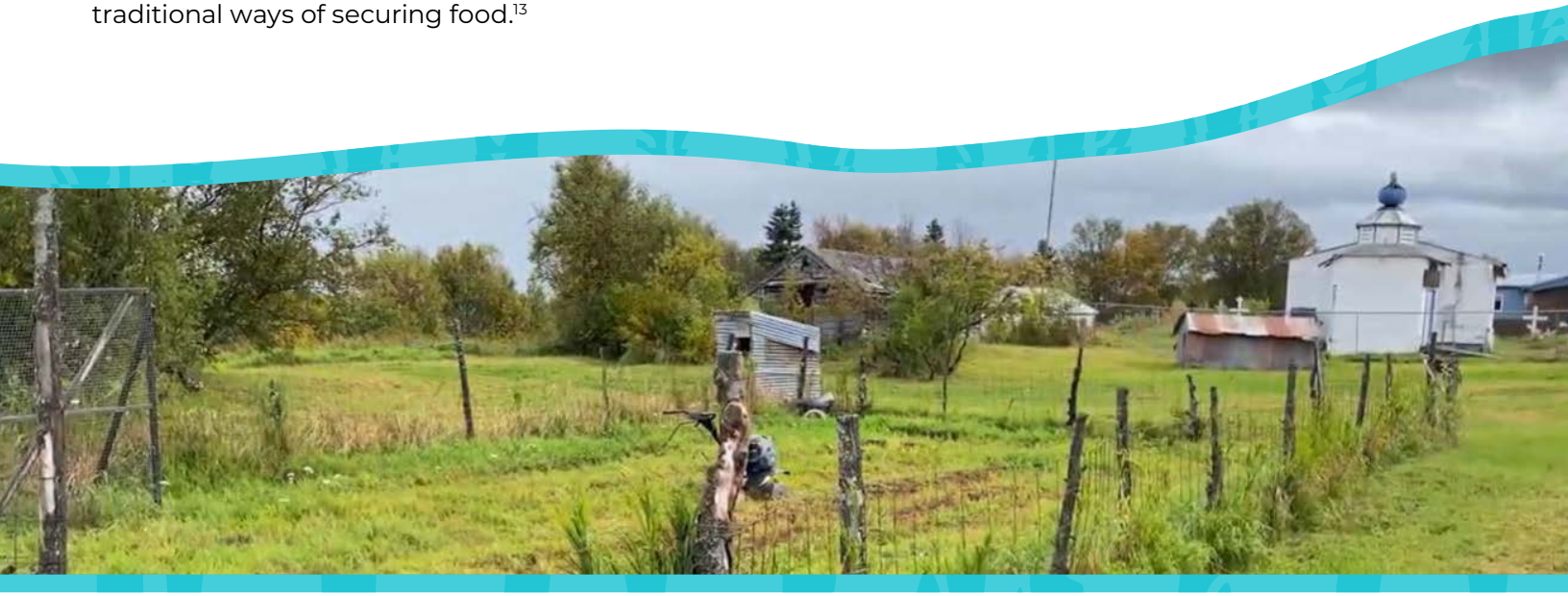
Hipp and Duren point out that, despite its name, the Farm Bill actually extends far beyond just farming and ranching and pertains to many natural resources and access to food, and as such, it is important that the voices of Alaska Natives and Native Americans are heard in this important piece of legislation.

The historic Keepseagle Settlement provided $680 million in compensation for discrimination against Native American farmers and ranchers by the United States Department of Agriculture (USDA),[4] but it did not compensate Indigenous peoples for the discrimination against their way of securing food. And, as with many USDA programs, inherent in the goals of the Keepseagle settlement is the promotion of farming and ranching, which can indirectly or directly conflict with Indigenous foodways. This focus on agricultural strategies trends with the colonial expectation that Indigenous communities will progressively transition toward a settled, agrarian lifestyle as a primary subsistence strategy once introduced. However, in Alaska, the reality is that for older generations, their primary experience of gardening and/or farming may be associated with trauma experienced at boarding schools, through mission-, or government-based programs.[5] It is true that many

Alaska Native people have, at different times, used Indigenous agricultural techniques to grow or steward different food crops, such as the famous Tlingit and Haida potatoes, which pre-date European contact. Interior Alaska communities have a 200+ year tradition of growing crops in a fashion that has been termed "outpost agriculture," in which tribes experimented with gardening vegetables such as potatoes, rutabagas, and turnips to complement their wild food harvests.[6] The fact that these outpost gardens have been effectively used to fill an important niche in local foodways demonstrates how certain recognizably agricultural strategies can contribute economic diversity, food security and resilience to Indigenous communities. Notably, these strategies have not ever been a replacement for wild foods, nor should they be thought of as a means to supplant wild foods in Indigenous diets and culture. Often they are not-for-profit.

One of the United States Department of Agriculture's four priorities is to support "food and nutrition security."[7] In Alaska, hunting, fishing, and gathering contributes more to food security than local agriculture does in most small, rural Tribal communities; ideally, USDA and others would support those efforts on par with the importance of those activities. As of the 2017 Agriculture Census, there were 65 Alaska Native or American Indian Farmers in Alaska[8] while the population of Alaska Natives (not including those of two or more races) is over 115,000.[9] This statistic alone suggests that promoting farming and standard approaches to Western agriculture does not adequately support Tribal food sovereignty and security in Alaska. According to the Census of Agriculture, which plays a pivotal role in driving funding allocations, "a farm is 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."[10] Some Indigenous producers may not qualify under the federal definition if they choose not to sell their product in traditional monetary markets. In some cases it may be true that Indigenous producers do not want to be defined as a farmer. Subsistence and/or community-minded producers (i.e. fisher, hunter, gatherer) may not be profit-driven, as participating in and distribution of traditional harvests are often weaved into cooperative social networks that include sharing expenses, supplies and labor.[11] However, when USDA programs expand the definition to include commodities that are grown in cooperative, community, or subsistence-trade operations, more Indigenous producers around the country would be able to access relevant programs designed to support their farms and community food security and sovereignty, more broadly. Being eligible for a program is one piece of the puzzle. The other piece is being eligible for programs that meet the needs and goals of the applicants.

This tension is seen playing out today in Alaska where on the one hand Tribes are embracing agriculture and gardening as a positive contribution to their food sovereignty and security, yet on the other hand, protesting large-scale agricultural developments that threaten their ability to access and obtain traditional foods. The state-sponsored Nenana-Totchaket Agricultural project near the Native Village of Nenana is a good example of this tension.[12] In this instance, there is both a desire to use sustainable agricultural practices to improve food security and sovereignty, and opposition toward large-scale agricultural activities that will likely threaten traditional ways of securing food.[13]



Acknowledgements

We acknowledge the 229 federally recognized Alaska Native Tribes, those Tribes still seeking recognition, and Indigenous peoples who have been stewards of the land on which we work and reside since time immemorial, and we are grateful for that stewardship.

WE RECOGNIZE THE SERIES OF UNJUST ACTIONS THAT DISPOSSESSED AND REMOVED INDIGENOUS PEOPLES from their lands, and we honor the sovereign relationships that exist between Alaska Native peoples to their lands, their languages, their ancestors, and future generations. We also honor the government-to-government relationship between Tribes, state, and federal governments. While we the authors are non-Indigenous, we aspire to work collaboratively toward healing and liberation, recognizing our paths are intertwined in the complex histories of colonization in Alaska. We acknowledge that we arrived here through deep listening and will continue to do so as we work together toward a healthier world for future generations.

Report Reviewers

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Indigenous Food Stories

IT IS WITH GREAT RESPECT AND GRATITUDE to those who shared their stories with us for this report. We are honored to be able to highlight the multitude of ways that Indigenous food sovereignty is being enacted in Alaska.

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Project Partners

THIS ASSESSMENT AND REPORT were carried out through the development of partnerships and collaboration between the authors, Alaska Food Policy Council's Indigenous Foods Working Group, and steering committees with members from each region. Steering committees were made up of individuals from different Tribal and Tribally Serving Organizations. The Alaska Food Policy Council provided permission to use several success stories as well as appendices from their 2022 Food System Action Plan.[14]

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Project Background

In 2020, funding was received from the Native American Agriculture Fund for this project.

THE PROPOSAL WAS WRITTEN AT THE OUTSET OF THE COVID-19 PANDEMIC AND FUNDING WAS AWARDED when travel, in particular to remote communities in Alaska, was still quite limited. The overarching goal of this project was to better understand the needs and goals of Alaska Native farmers, ranchers, food nonprofits and procurers. A secondary goal was to address the ways in which the USDA and other agricultural service providers are, and are not, meeting the needs and goals of Alaska's Indigenous food producers.

The project objectives were to:

1. Understand the barriers, needs and goals of Alaska's Indigenous food producers;
2. Identify which programs and/or agencies are best serving the needs of Tribal food producers, and;
3. Identify where improvements may be made to better meet the needs of Tribal food producers

With the outcomes of this work we intend to:

1. Support the development of Federally Recognized Tribes Extension grant proposals for regions around the state that lacked them;
2. Guide and be guided by the Alaska Food Policy Council's Indigenous Foods Working Group;
3. Inform the work of the Native Farm Bill Coalition with regard to Alaska Native needs; and
4. Inform future research at the UAF Institute of Agriculture, Natural Resources and Extension and in particular at the Fairbanks Experiment Farm.

With travel restricted during the funding period, the project team was unable to conduct surveys and interviews as originally intended. Alternatively, we shifted to a blended approach of using both primary and secondary data to document current needs surrounding Tribal food sovereignty in Alaska. In addition to the literary review, from which we have included summaries/excerpts from relevant reports by Tribal organizations pertaining to Tribal food sovereignty needs, we used online survey software to collect surveys on Tribal food needs. We've also included highlights that demonstrate Indigenous food producer success stories from around Alaska.

Since this project began in 2020, a handful of relevant and comprehensive reports have been published by the following organizations: Alaska Food Policy Council, State of Alaska Governor's Food Security Task Force, Native American Agriculture Fund, USDA Equity Commission, Native Farm Bill Coalition, and Indian Land Tenure Foundation.

The scope of these reports is inclusive of the current food system as a whole in Alaska, which includes inequities in agriculture programs for Alaska Natives and Native American farmers. We dovetail our findings with the findings and recommendations from these reports, where applicable, and as they pertain to Alaska Natives.

Additionally, as a means to consolidate resources for ease of reference, we have compiled numerous Tribal or Indigenous-produced reports, videos, and publications pertaining to food security and food sovereignty in Alaska. Those resources can be found here: https://www.uaf.edu/ces/districts/tribes/tribal-food-sovereignty-security.php

Indigenous Food Sovereignty and Foodways in Alaska

FOOD SOVEREIGNTY AND SECURITY IN ALASKA WAS OUTLINED IN A CONCEPTUAL FRAMEWORK BY THE Inuit Circumpolar Council-Alaska in 2015.[15] This is the most often cited report describing what Tribal food sovereignty looks like in Alaska**.** In Alaska, Indigenous food sovereignty is largely centered around wild foods including: fish and game; clean water and environments; and the cultural knowledge and lifeways that keep these species and systems intact and healthy. In their conceptual framework on food sovereignty, the Inuit Circumpolar Council-Alaska states, "gathering, processing, storing, sharing, consuming food is our religion. We have to do it. We must continue. It is a culture we have to pass from generation to generation."[16] A widely cited definition of food sovereignty comes from the Declaration of Nyéléni (2007):

> *Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.*[17]

In Alaska, Tribes and Alaska Natives rely heavily on traditional ways of securing food to ensure their caloric and nutritional needs are being met. At a Community Feast in the fall of 2022 in Juneau celebrating food sovereignty, wellness, and healing, Forest Haven, an Alaska Native studies professor at the University of Alaska Southeast explained:

> *Gathering traditional foods is actually a really dynamic, beautiful, loving practice. It's not just about these foods that we consume to provide nutrients to our body, it's not just about the economic need of living in a rural area. It's very much about these connections that we have to the land and each other—which happens through sharing … what it comes down to is Native people do not have food sovereignty here—that is not something that exists for us because it was taken from us … We can create our own kind of food sovereignty, and it's really through fostering these connections with our rural brothers and sisters … You have to get out there, you have to be on the land and learn these practices … It's also the most rewarding type of work that you'll do in your life.*[18]

The remoteness of many communities, economic and cultural disruptions due to the COVID-19 pandemic, climate change, inflation, and certain natural resource policies challenge Indigenous foodways and the ability of Alaska's Indigenous people to achieve food sovereignty. Alaska is home to 115,000 Alaska Natives[19] and 229 Federally Recognized Tribes.[20] More than 60% of Tribes/villages are disconnected from the road system and reached only by air or boat.[21] Some communities only have seasonal road access and others are hours away from hub communities, which include the only full-service grocery stores available in the region. In the report, *Building Food Security in Alaska*, it was stated that, "The main source of local food in the state of Alaska today is subsistence and personal use gathering."[22]

In Alaska Native villages wild foods are integral to both food security and traditional ways of life. In rural Alaska wild food harvests provide up to 92-259% of daily protein and 13-36% of total caloric requirements for both Native and non-Native residents in various regions of Alaska.[21] Research shows that people who consume higher amounts of traditional foods have higher intakes of protein, vitamin D, iron, omega-3 fatty acids and other vitamins and minerals.[23] Wild harvests vary by region, but overall composition of harvest in rural Alaska equates to: 31.8% salmon, 21.4% other fish, 22.3% land mammals, 14.2% marine mammals, 2.9% birds, 3.2% shellfish, and 4.2% wild plants. In 2019, approximately 15.7% of all children in Alaska were food insecure, while the overall U.S. rate was close to 12%.[24] Food security surveys done by the Alaska Department of Fish and Game (ADF&G) in rural villages in Alaska found that in some communities, as much as 46% of households were food insecure, while in other communities, all of the households reported being food secure.[25]

The wild foods harvest in Alaska can be viewed by community through this interactive map.

Despite the abundance of wild foods harvested by Alaska Natives annually, a food system report from 2014 estimated that approximately 95 percent of the food Alaskans purchase is imported, and costs Alaskans roughly $2 billion annually.[26] Due to the challenge of delivering fresh food to communities not on the road system, many market foods sold in rural communities are shelf-stable, highly processed, and less-nutrient dense than traditional foods. To varying degrees, these types of market foods have begun to replace traditional food intake. In 2019, a study estimated that only 10% of energy intake among adolescents could be attributed to traditional food intake, compared to the 40% consumed by adults in the same communities.[S] Alaska Native communities are experiencing disparities in diet-related health problems consistent with increases in market food consumption. These include, but are not limited to, higher incidences of diabetes, early childhood dental caries, colorectal cancer, as well as psychological impacts.[27] Furthermore, costs of market foods may be 2-3 times higher in rural Alaska and Indian Country stores compared to national averages.[28] Rural Alaska's market foods availability was further limited during the COVID-19 pandemic, in which global food supply chains were stressed to the point of extreme disruption,[29] especially for Alaska Natives.[30] In addition to these economic barriers to food security in rural Alaska, the impacts of climate change, and dramatic population changes among wild food species have caused extreme stress to Indigenous food systems. For instance, a decades-long decline in salmon populations resulted in a near-total collapse of salmon numbers on the Yukon River in 2021. This collapse represents the loss of one of the single most important sources of traditional foods for communities along the Yukon River, spanning all the way to interior Canada, and has prompted Tribes in both Alaska and Canada to declare a state of emergency.[31,32]

All of the above factors have served to highlight the importance of wild or "subsistence" foods for Indigenous Alaskans and has also been a catalyst for Tribes to think differently about how they secure food for themselves in a way that keeps them from being as reliant on imported (and often less healthy) foods. These challenges and the decreasing availability of wild foods, like salmon, are driving Tribes to look at alternative sources of food—which includes the use of agricultural means to produce more locally—not necessarily out of desire, but out of necessity.

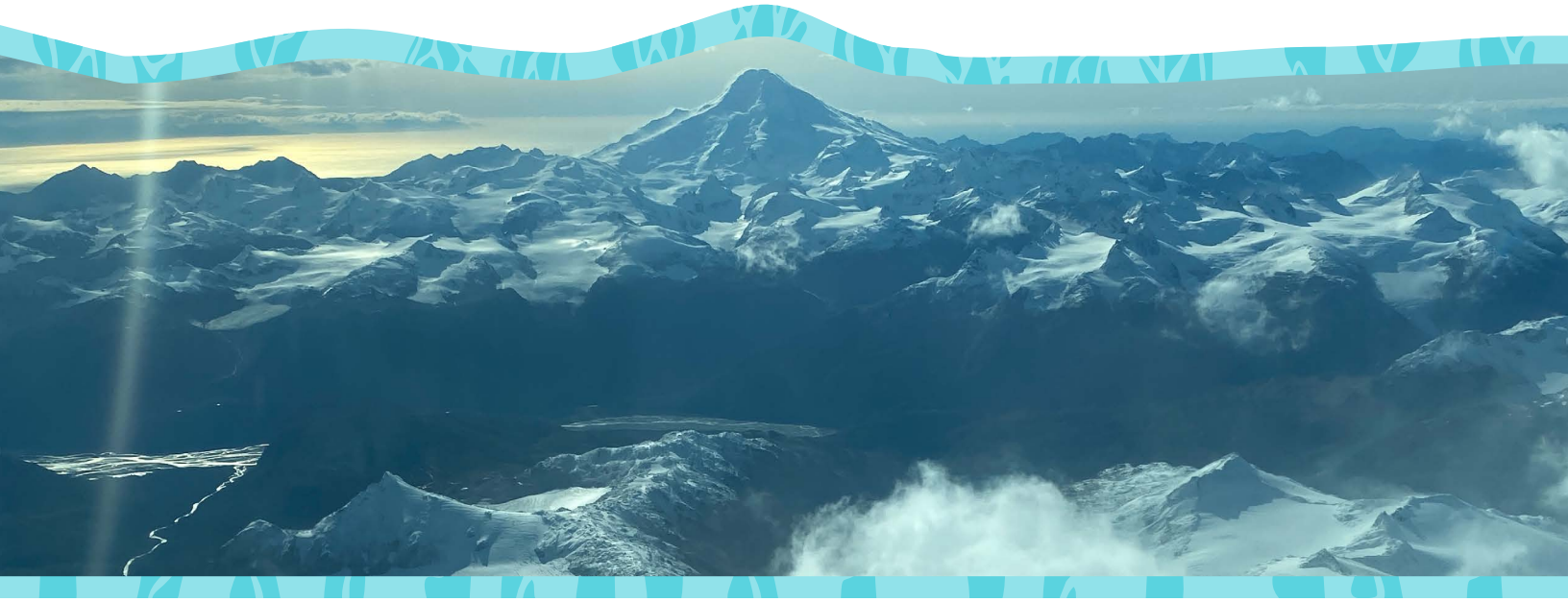
Project Challenges and Limitations

Given the vast remoteness of most of the 229 Tribes in Alaska, and the frequent challenges associated with food security, developing a comprehensive understanding of the strengths and barriers related to food security and programs intended to support food systems is vital.

IN THIS WORK AND REPORT WE SHARE CONTEMPORARY ALASKA NATIVE VIEWS ON FARMING AND RANCHING; and the cultural relevance of, and how these activities do and don't support Tribal goals for food sovereignty and security. We strive to tell a more complete story of how policies that promote farming in Alaska have the potential for both positive and negative impacts on Tribes and Alaska Natives.

Tribal food sovereignty and security in Alaska is a complex and nuanced issue. The scope of this report is limited by the positionality of the authors (non-Indigenous, living in urban Alaska) and the limitations to collecting first-hand information from individuals and Tribes around the state during the COVID-19 pandemic. Additionally, we were not able to secure adequate partnerships to form steering committees in the Western (often referred to as the Yukon-Kuskokwim Delta) or the North Slope regions of the state at the time this project was active. Therefore, surveys and interviews were not conducted in those regions. However, when available, we did cite other assessments pertaining to Tribal food system needs in this report.

Relatedly, we would like to stress that what is reflected in this report should not be misconstrued as a comprehensive document that represents all Alaska Native Tribes or peoples. While we have endeavored to include perspectives and stories from communities and individuals from most regions of Alaska, there is no way for one document to capture the multitude of unique histories, cultures and traditions of all Alaska's Indigenous peoples. Finally, with regard to our data collection, it should be noted that survey responses were limited in each region in part due to the need to close the surveys early as a result of fraudulent entries, which corrupted survey data collected beyond July 24, 2022.



Project Methodology

The needs assessment portion of this project was conducted to identify food and agriculture needs and goals of Tribes and Alaska Natives, particularly as they relate to the Federally Recognized Tribes Extension Program, and better understand the use of agricultural practices by Alaska Native and Tribal communities.

WE WORKED WITH TRIBAL, OR TRIBALLY-SERVING ORGANIZATIONS TO DEVELOP REGIONAL STEERING COMMITTEES, which served to guide the research and survey tool development for each region in order to increase cultural and regional relevance of the assessment. We also consulted with and presented updates on our work regularly to the Alaska Food Policy Council's Indigenous Foods Working Group—a multi-regional, multicultural group of predominantly Alaska Native individuals whose respective roles focus on Tribal food security, sovereignty, health and well-being for different Tribal organizations. The following is a detailed description of methods used to collect primary data for this needs assessment organized into four phases, which were more or less conducted chronologically.

Overview

THIS PROJECT WAS PHASED TO ALLOW TIME FOR RELATIONSHIP-BUILDING BETWEEN AUTHORS and research participants.

Phase 1 of this work was to convene regional steering committees to help develop a network of project collaborators and survey methodologies. We formed steering committees in the following regions: Southeast, Interior, Aleutians-Pribilof Islands, Northwest Alaska, and for more statewide-perspectives, we sought input from the Alaska Food Policy Council's Indigenous Foods Working Group. Steering Committee Meetings were held over Zoom on a bimonthly or monthly basis and committee members were generally asked to provide guidance on the following topics:

1. What regional and/or Tribal representatives would be willing to collaborate with us on this project?
2. What information has already been gathered that we can incorporate into our needs assessment regarding Tribal food and agriculture?
3. What knowledge gaps are there in what we know about Tribal food security,

   A) What is needed to address it?
   B) What is the best method to gather this information?
4. Whether there is regional interest in partnering on a grant for the Tribes Extension Program.

In **Phase 2**, the authors worked with regional Steering Committee representatives to guide the development of the research, the survey questions, and review data collection methods. The organizations that had steering committee members are listed in the executive summary for each region. Individual Steering Committee members' identities have been kept anonymous for privacy. If any organization or individual is interested in learning more, they may contact the authors of this report. The survey tool was developed using Qualtrics Survey Software. Anonymous survey invitations were sent electronically to potential participants through the networks of our Steering Committee partners, and advertised publicly through events like the Tribal Farm Bill Coalition's Alaska listening sessions, and on the Intertribal Agriculture Council's Facebook account.

In **Phase 3** we conducted semi-structured key-informant interviews (n=10) with Alaska Native individuals from each region we surveyed around the state to better understand the goals and barriers Alaska Native individuals have with regard to food security, sovereignty and production. Primary survey and interview data were thematically coded and emergent themes and summary statistics were compiled and are presented in this report.

In **Phase 4** we conducted a review of secondary data from Tribal needs assessment reports, gray, and white papers pertaining to Alaska Native food security, sovereignty and needs from as many regions and/or communities around the state as we could find literature on. Excerpts from these documents are cited throughout this report and included in appendices to create a more holistic picture of the needs, barriers and successes around Tribal food security and sovereignty in Alaska. Additionally, we have compiled numerous Tribally-initiated or Indigenous-produced reports, videos, and publications pertaining to food security and food sovereignty in Alaska on the Alaska Tribes Extension Website.

Interpreting the Survey and Interview Summaries

THIS SECTION PROVIDES ADDITIONAL CONTEXT ON HOW TO INTERPRET SURVEY AND INTERVIEW RESPONSES.

Surveys

Due to the low response rate (<5%) of the total sample pool in all regions except the Northwest, which had a response rate of approximately 9%, the survey results are not statistically significant, and interpretation of results should be considerate of this fact. However, we did see certain themes emerge consistently across most surveys collected that suggest a degree of saturation[33] was achieved in our survey (i.e., challenges pertaining to access of wild foods as a primary inhibition to food sovereignty among Alaska Native populations).

The Survey instrument was broken into five categorical sections.

1. Participant demographics;
2. Questions pertaining to aspects of food security and sovereignty;
3. Questions about food goals in the community;
4. Questions about the FRTEP and Extension programming in the community and region.

Survey participants who could be confirmed as real respondents (non-fraudulent entries) were compensated $25 via prepaid gift cards as payment for taking the survey.

Organization of Survey Results

For questions 1 through 4, tables summarize the answers that survey participants provided by both providing the Thematic Code as well as a demonstrative quote from a particular survey participant that captures the essence of the code. The tables are intended to demonstrate the range of responses that individuals provided, identify themes within the survey data and avoid redundancy in the report format. For example, if a similar response was provided by multiple survey respondents, the assigned thematic code will be followed by a specific quote, and a (n="x"), which indicates how many individuals shared a similar response to a given question. For example, if three individuals from a region indicated their greatest source of dissatisfaction with food in their community is the high cost of groceries, it will be denoted in the table as: High Cost of Food: "The cost of groceries—if they make it on the ferries—is so high we can't afford much" (n=3).

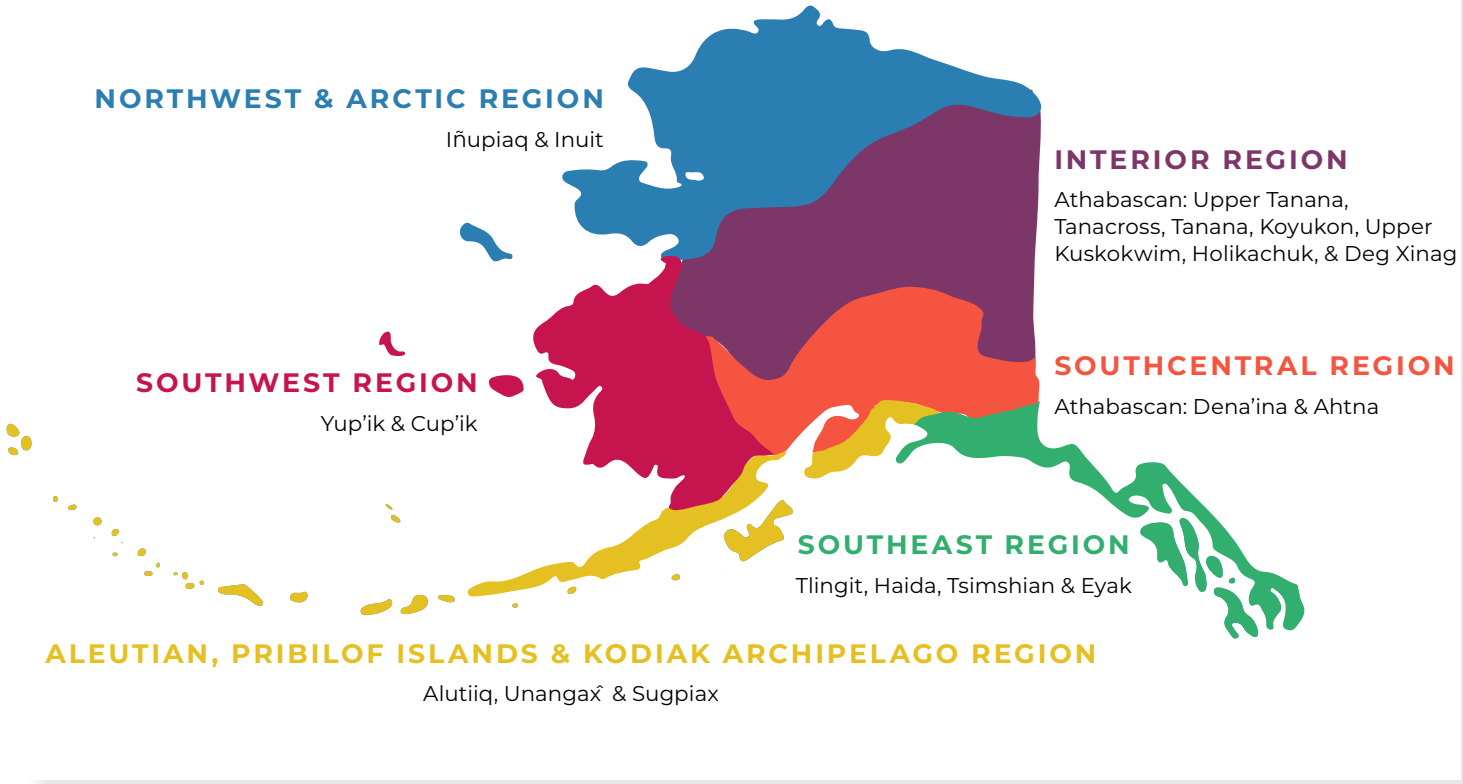
Question 5 was designed to take a "temperature reading" on how individuals felt about their food procurement options both in present and future scenarios. Some terms are related, and could be categorically clustered, for instance the terms: farming, ranching, and gardening, might all be categorized as "agriculture" or "growing food." However, the question is designed to take multiple "readings" on how individuals feel about various food production and procurement methods and identify culturally perceived differences.

For questions 6 through 8, participants were asked about what they felt increased food production in their communities might look like, and whether there were terms that better described their relationship to producing food than those commonly used by funding agencies and policymakers. Those responses are presented in a combination of narrative and table formats to provide sufficient detail. Question 9 asked participants to describe which Extension-based workshops they would be interested in attending if they were offered. This last question is designed to highlight the priorities of Tribes and Indigenous individuals with regard to achieving food-secure and sovereign communities and how federal programs (like the Federally Recognized Tribes Extension Program) might support these goals.

Key informant interviews were conducted following the completion of survey collection. Interviewees were selected based on those that self-selected to be contacted for a follow-up interview, by reaching out to individuals who were recommended by Steering Committee members, or contacted by the authors based on publicity regarding an individual's endeavors to improve food security for their community/region. Interviewees were compensated at a rate of $100 per hour for their time.

In the process of analyzing survey and interview results, we developed categorical codes based on the words, insights and experiences research participants shared with us, and from those codes identified **Emergent Themes**.[34] This process is a common analysis method used in qualitative social science research where the complexity of the data is increasingly structured according to assigned codes and labels; looking for overarching patterns that "emerge" from said codes until saturation is reached. A review of these emergent themes and a brief overarching analysis will follow the summaries of regional results. In the section that follows, we provide summaries of surveys and interviews (primary data) broken out by generally recognized regions of Alaska and the cultural groups within each region (see Figure 1).

Figure 1



Regional Food System and Agriculture Surveys and Interviews

NORTHWEST & ARCTIC REGION
Iñupiaq & Inuit

INTERIOR REGION Athabascan: Upper Tanana, Tanacross, Tanana, Koyukon, Upper Kuskokwim, Holikachuk, & Deg Xinag

SOUTHCENTRAL REGION
Athabascan: Dena'ina & Ahtna

SOUTHWEST REGION
Yup'ik & Cup'ik

ALEUTIAN, PRIBILOF ISLANDS & KODIAK ARCHIPELAGO REGION
Alutiiq, Unangax̂ & Sugpiax

SOUTHEAST REGION
Tlingit, Haida, Tsimshian & Eyak

INTERIOR REGION

Athabascan: Upper Tanana, Tanacross, Tanana, Koyukon, Upper Kuskokwim, Holikachuk, & Deg Xinag

Executive Summary for Interior Region

THE NEEDS AND BARRIERS TO TRIBAL FOOD PRODUCERS VARIED IN THE INTERIOR REGION SOMEWHAT BASED on urban and rural locality of study participants. Generally, individuals who participated in the survey were most satisfied by the ability to harvest wild foods and the variety of wild foods available. Some respondents indicated satisfaction with programs and/or infrastructure that supported the production of fresh produce like community gardens or high tunnels as a means for the community to congregate and have greater access to fresh and healthy foods. In the Interior region like elsewhere in Alaska, high prices and lack of fresh produce and the abundance of unhealthy foods in rural stores are some of the greatest sources of dissatisfaction with regard to food. Another common source of dissatisfaction in the Interior region—and shared across all those surveyed—pertains to the ability to access subsistence or wild foods including the time, cost, prohibitive regulations and experience associated with being able to access/harvest wild or traditional foods. A unique source of food system frustration to the Interior region is the development of the Nenana-Totchaket Agriculture Project. The interview participants spoke most to this issue, and feelings were mixed, seeing the development as both a possibility for increasing local food production, as well as a threat to traditional foods, cultural practices, and the health of the ecosystem writ large.

With regard to what is most needed to enable communities to move toward greater food security and sovereignty, many respondents indicated that their top priorities are: education for both wild food harvesting and agriculture/gardening, food storage solutions, youth education pertaining to nutrition, workforce development (good paying jobs), and funding or financial support for food production facilities and infrastructure. While the majority of survey respondents did not feel terms such as "ranching" applied to their cultural values or lifestyle, the history of stewarding wild plants like "Indian potato" or *Troth,*[35] gardens and small-scale agriculture in the region post-European contact means that many respondents felt more familiar with gardening with certain root crops having been adopted into the category of "traditional foods."[36] Still, survey and interview respondents were clear that agriculturally grown products needed to be raised and used in tandem with wild foods, and that they could not replace traditional foods with regard to cultural and spiritual significance, health and overall well-being.

The Interior Region Steering Committee included individuals from the Tanana Chiefs Conference (TCC), and The Cooperative Extension Service (CES). Surveys were distributed at the Interior Native Farm Bill Coalition round-table listening session via postcards with a QR code, the Nenana Agricultural Education Day, and TCC's Facebook page.

Survey Results for Interior Region

A TOTAL OF 21 INDIVIDUALS COMPLETED THE INTERIOR ALASKA SURVEY. TEN OF 42 VILLAGES IN THE INTERIOR region are represented by at least one survey response (see Figure 2.1). The Interior region survey had a large portion of respondents (~50%) who indicated they currently resided in Fairbanks (not a village). Therefore, an asterisk (*) indicates responses from urban survey participants where applicable. A majority (86%; n=18) of respondents were Alaska Native or two or more races (see Figure 2.2). Since there were only two non-Indigenous service providers and one 'undeclared' respondent with regard to race, the summaries that are presented below are not broken out by race (i.e. Alaska Native versus some other race). Participants were majority female 76% (n=16), 14% were male (n=3), and 5% (n=1) identified as two-spirit (see Figure 2.3). The ages of participants ranged from 19 to 70+(elder) years old (see Figure 2.4).

Figure 2.1 *Interior Region Communities Represented*

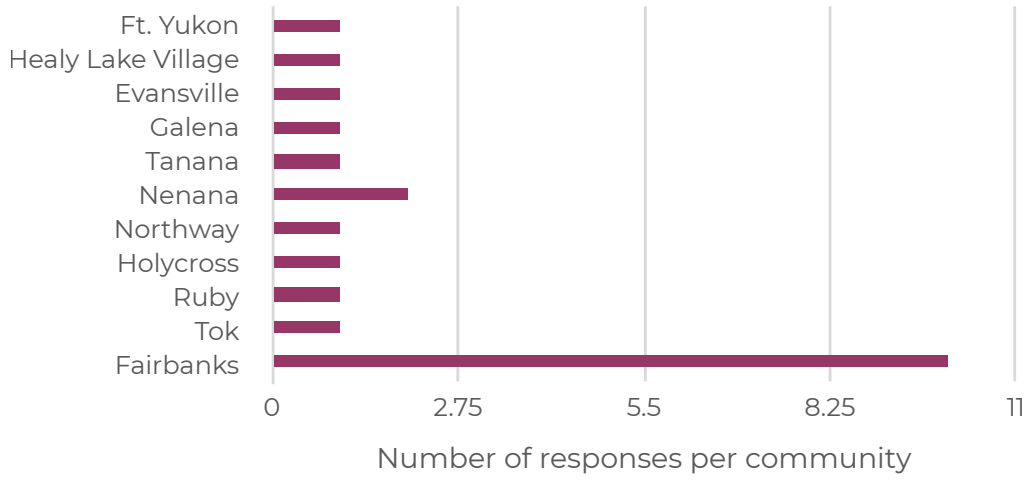


Figure 2.2 *Race of Interior Region Survey Participants*

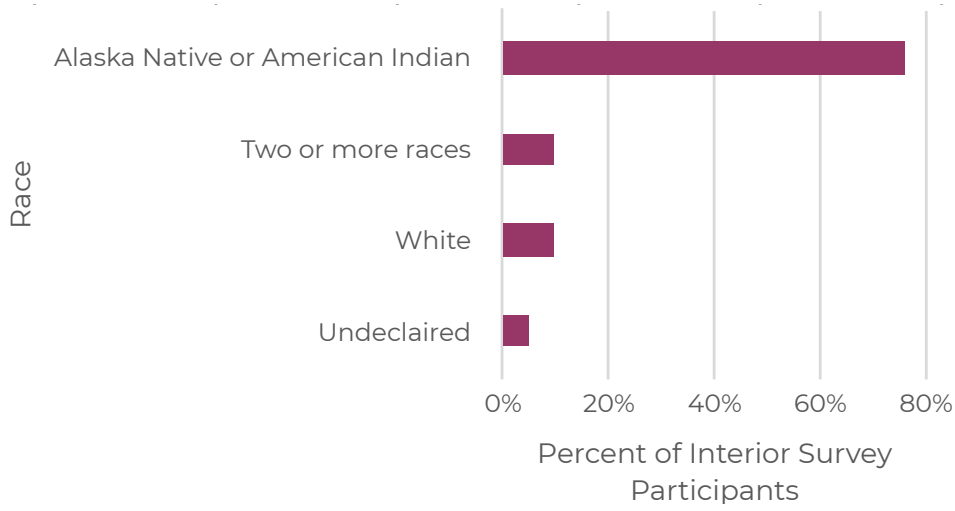


Figure 2.3 *Gender of Interior Region Survey Participants*

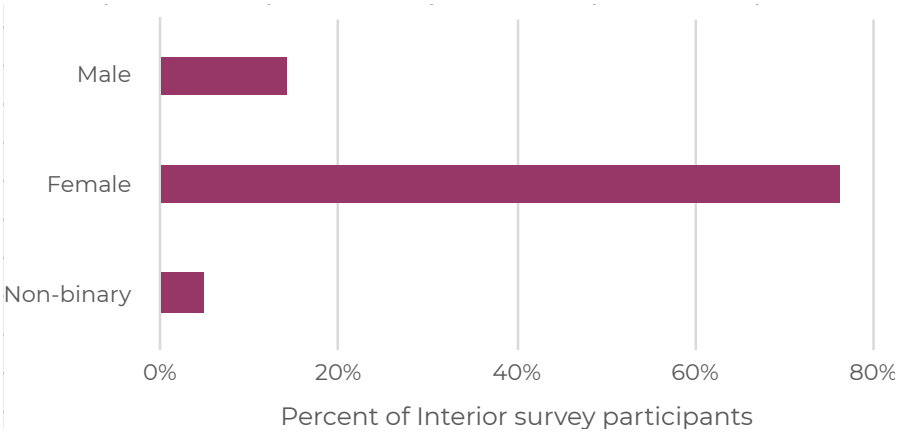
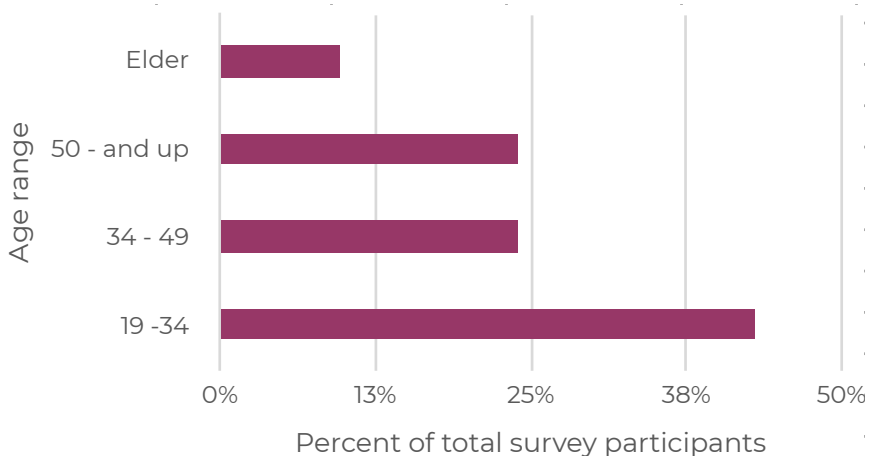


Figure 2.4 *Age of Interior Region Survey Participants*



INDIGENOUS FOOD LEADER: STEPHANIE BLUEKINS

STEPHANIE'S FAMILY COMES FROM FORT Yukon and Rampart. She owns and operates a large and successful greenhouse in Fairbanks, Alaska, called the Plant Kingdom. In the spring, she donates extra plants to villages. She hopes to start a community shared agriculture program that will be available to remote villages. Recently she offered a container gardening workshop in Fairbanks at the Tanana Chiefs Conference food security summit with the Alaska Tribes Extension program. Participants took home a 14-inch round container filled with lettuce, Swiss chard, a tomato, herbs, and even flowers that they can harvest all year long on their porch. She is excited to share her knowledge and plants with villages. Stephanie recommends buying "soilless soil" like Pro-Mix because it goes a long way and is the lightest to ship. Other more traditional potting mixes can be very heavy and it can be painful to pay so much money for shipping dirt! Of course, even better, keep in mind that you can make some of your own soil by composting.

▸ The Plant Kingdom: https://theplantkingdom.com/

Survey Results Pertaining to Food System and Production Needs

Tables summarize the answers that survey participants provided by both providing the Thematic Code as well as a demonstrative quote from a particular survey participant that captures the essence of the code.

1. Survey respondents were most satisfied about food in their community in the following ways:

ACCESS TO WILD FOODS

- "Ability to pick berries nearby my residence;" "I am able to harvest wild foods [fish, game and plants]" (n=7)
- "AC Company bought out Galena Liquor Store and the prices are MORE reasonable. The cost of food is lower, and we can afford to buy locally instead of ordering most food as usual."
- "More resources such as food boxes coming into the community"

GROWING FOOD

- "I am able to garden." (n=3)
- "I'm most satisfied with our high tunnel we have at the NVC office and we plant and grow our own vegetables every summer. We need more updates so we can grow them year-round."

PROGRAMS

- "Moose, caribou, fish, salmon, hooligans, ptarmigan, geese, ducks, greens, berries, farm chickens, goose, pork, and bypass mail."

ACCESS TO MARKET FOODS

- "I am most satisfied about the variety of stores and restaurants that sell [different types of food.]" (n=2)*

ACCESS TO LOCALLY PRODUCED FOODS

- "We have options for fresh produce, local and homegrown food is very beneficial." (n=3)

2. Survey respondents were least satisfied about food in their community in the following ways:

HIGH COST OF FOOD

- "The prices are crazy high!!!!;" "We can hardly afford anything healthy from the store" (n=8)
- "Personally, I cannot say I am satisfied with anything about the food in my community. The general store prices are high. We cannot currently obtain many subsistence foods (i.e. fish, moose, geese, etc.)"
- "Not a lot of educational resources about subsistence foods in the area"*

ACCESS TO FRESH FOOD

- "I'm least satisfied with our village not having any fresh fruits and healthy foods year-round." (n=5)
- "Soda and sugar/sodium/unhealthy fats are so prevalent in our villages"

HIGH COST OF LIVING

- "The cost of shipping goods and no, or non-competitive barge services" (n=2)
- "I am dissatisfied with the amount of pesticides Fairbanks residents use on the roses and dandelions that grow in the city. I wish there was a pesticide ban in the city. It makes making syrups, jams and jellies risky because I don't know if there's chemicals on the plants."*

3. Survey question: "What do you feel are the biggest barriers/limiting factors for you to be able to achieve the percent of food you would like to be able to hunt, fish, gather, grow?"

The following quotes are responses regarding specific examples of barriers to being able to produce or procure preferred foods:

HIGH COST OF LIVING

- "Lots of factors but the main one is financial. With the rising prices it seems almost impossible to do anything;" "Access to, and cost of hunting and fishing equipment: gun, fishing poles, licenses, etc." (n=8)

ACCESS TO RESOURCES

- "Transportation to get water to grow food [access to water for irrigation]" (n=2)

TIME

- "Work, no personal leave. No one to teach my kids as I'm a single working parent." (n=4)

EDUCATION

- "I need to learn—I don't know how to shoot a gun, and I live in an area where there are no set nets or fish wheels allowed;"* "Learning what to grow, how often to water, irrigation system installation and plant management." (n=6)

TIME, EDUCATION & COMMUNITY INVOLVEMENT

- "We need knowledge and hands to help to garden. I don't have enough knowledge or time to harvest all the edible greens we can grow and forage."

4. When asked, "What do you think is most needed to help your community move towards your vision for food security?" survey participant responded:

EDUCATION

- "We need to make sure our children of this generation are understanding the ways of hunting and fishing," "Education about growing produce, getting equipment and skills to grow the food" (n=6)

COMMUNITY INVOLVEMENT

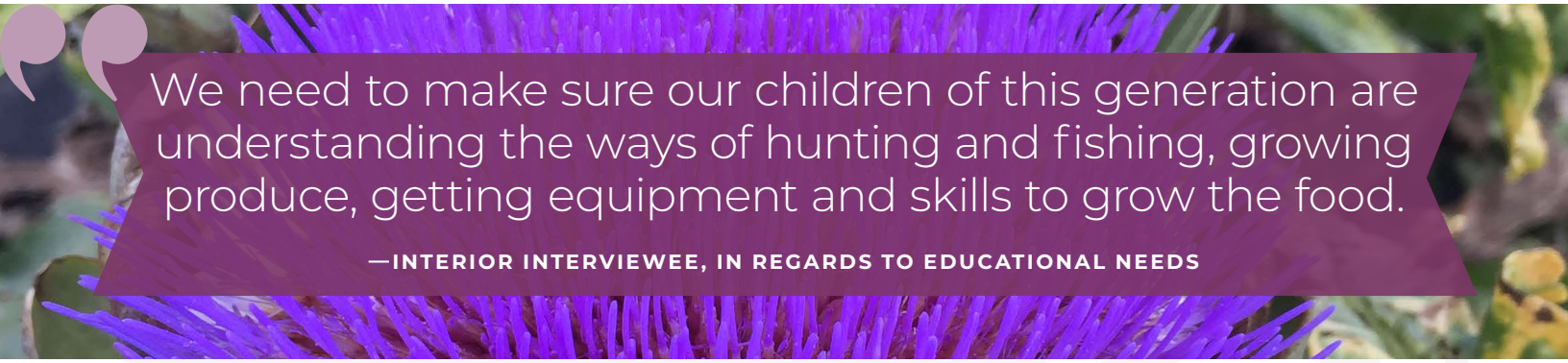
- "People willing to help;" "we need more community involvement" (n=5)

INFRASTRUCTURE

- "Long term food storage;" "We need to have a greenhouse or system that can grow food through the winter" (n=2)

TECHNICAL ASSISTANCE & FUNDING

- "We need help with grant writers, funding assistance and training" (n=3)



> We need to make sure our children of this generation are understanding the ways of hunting and fishing, growing produce, getting equipment and skills to grow the food.
>
> —INTERIOR INTERVIEWEE, IN REGARDS TO EDUCATIONAL NEEDS

5. Respondents were asked how they felt when they heard the following words and phrases:

- "Agriculture"
- "Traditional and Native Foods"
- "Farming and Ranching"
- "Fishing"
- "Hunting"
- "Gathering"
- "Food Sharing"
- "Buying Food from the Store"
- "Subsistence"
- "Ordering Food Online"

Survey participants were given the option to respond:

- "Applies to my life and/or cultural values;"
- "Does not apply to my life and/or cultural values;"
- "something I want to do more of," and;
- "something I want to do less of."

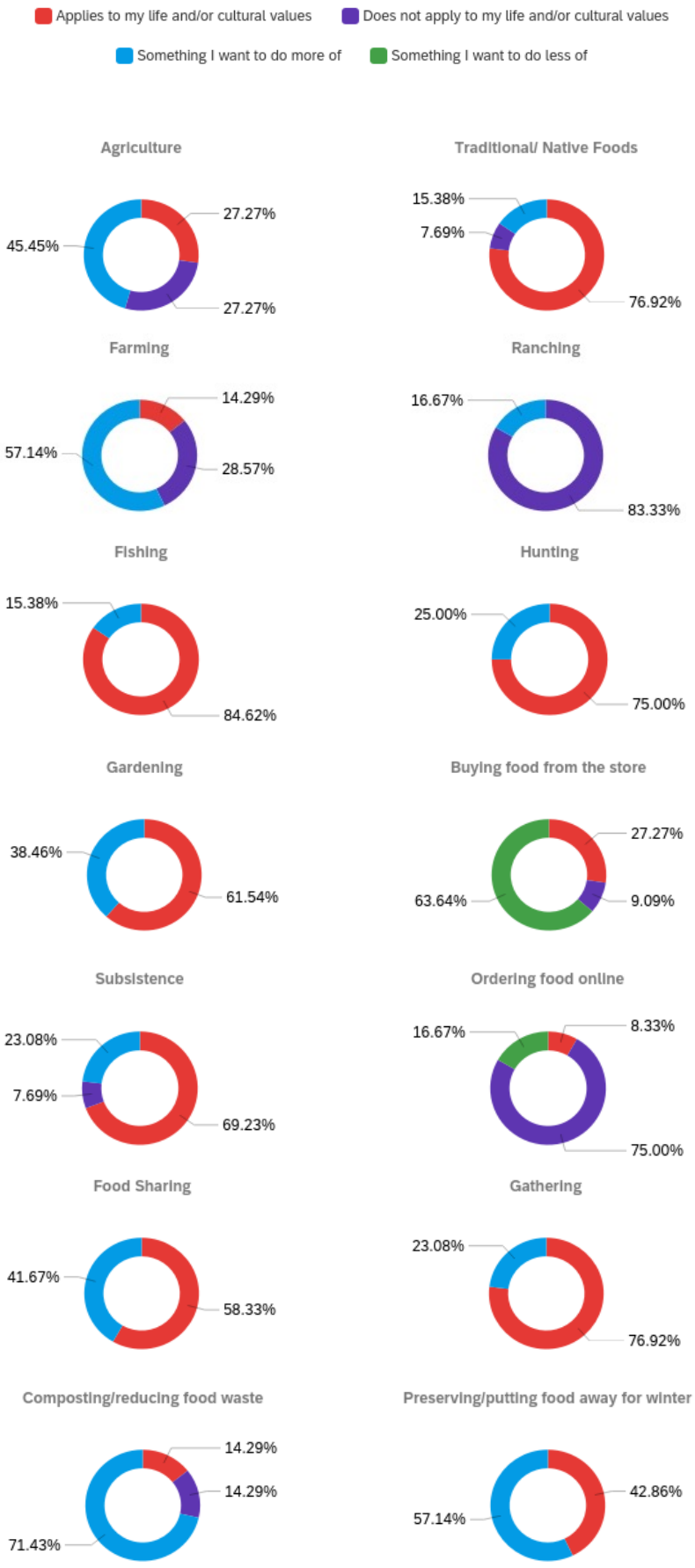
Figure 2.5 on the following page uses ring graphs to depict the percentage of total participants (n=21) who selected each of the above categorizations for each word.

WITH REGARD TO THE HARVESTING OF WILD FOODS (for instance: hunting, fishing, gathering wild plants), approximately 70% of respondents consistently expressed that these activities were part of their lives and cultural values. Participants also indicated that respectively, harvesting traditional foods (15%), hunting (25%), fishing (15%), subsistence activities (23%), and gathering (23%) were all activities that they wanted to do more of. Conversely, 63% of respondents indicated wanting to buy less food from the store, and 17% wanted to order less food online, respectively. Purchasing market foods (groceries) represents the largest category of what respondents from the Interior region would like to be less reliant on for sourcing foodstuffs.

WITH REGARDS TO THE TERM "AGRICULTURE," 45% of respondents indicated they would like to see more agriculture in their community; however, 27% indicated that agriculture did not apply to their cultural values/lifeways. The split of responses regarding the term "farming" was very similar to how individuals responded to "agriculture" with an even greater percentage of individuals indicating that farming was something they wanted to do more of (57%). To the term "ranching," 17% of respondents indicated they would like to see more ranching activities in their community; however, 83% of respondents indicated that ranching did not apply to their cultural values/lifeways. The results for the term "gardening" were much more favorable. A majority (62%) of respondents indicated gardening activities were applicable to their cultural values/lifeways and 39% said they would like to see more gardening in their community.

WITH REGARD TO POST-HARVEST food-related activities, "food sharing," "preserving/storing foods for winter," and "composting/reducing food waste," respondents indicated these were activities they felt were part of their cultural values/lifeways (58%, 43%, and 15%, respectively). Notably, many individuals indicated these were activities they wanted to do more of: with 42% wanting to share more food; 57% wanting to preserve/store more food; and 71% wanting to compost/reduce food waste.

Figure 2.5 *Interior Region Attitudes About Language Used to Describe Agricultural, Subsistence, and Traditional Food Activities*



6. Respondents were asked whether they wished there was more food produced (grown and/or raised) in their communities (i.e. gardens, farms, or ranches).

- One hundred percent (n=21) of the survey participants indicated they would like to see more locally produced foods.

6b. Participants who indicated they would like to see more food produced locally were asked, "What does increased local food production look like to you?" Survey participants responded with the following suggestions:

- "More direct farmer-to-village or -Tribes type programs. Even if it's to the village store so they can sell food with a longer shelf life, while supporting businesses here in the state.
- "More people gardening and trading food local." (n=3)
- "It means that more families produce food by growing their own gardens to me. It also means that families go out with their whole family and gather and pick berries and wild plants as needed. I don't see many families going out with their children nowadays."
- "Growing more vegetables and having a way to keep them fresh (i.e. root cellar for potatoes, carrots and winter squash.)" (n=4)
- "Youth education: Food production facilities at all schools to educate the children of our community how to grow fresh produce." (n=2)
- "A storage and distribution center for fresh-grown garden veggies to the community." (n=2)
- "We should have more community gardens." (n=4)
- "More family-owned gardens and, the community greenhouse being used to its fullest potential. Plans for long-term production."
- TCC [The local Tribal Consortium nonprofit] more involved with providing information and education about growing vegetables and/or fruit. And, providing the tools necessary.
- Education opportunities like community preservation/canning events.

INDIGENOUS FOOD LEADER: CHARLIE WRIGHT

CHARLIE WRIGHT IS A RAMPART VILLAGE COUNCIL TRIBAL MEMBER and Tanana Chiefs Conference Executive Board member. He serves on multiple boards advocating for food security and sovereignty for Interior Alaska Tribes. He is a lifelong gardener. He would like Tribes to have gardening and farming as a tool to achieve food security, but he says there is resistance to becoming a farmer. When he started talking about gardening to hunters and fishermen, he was laughed at.

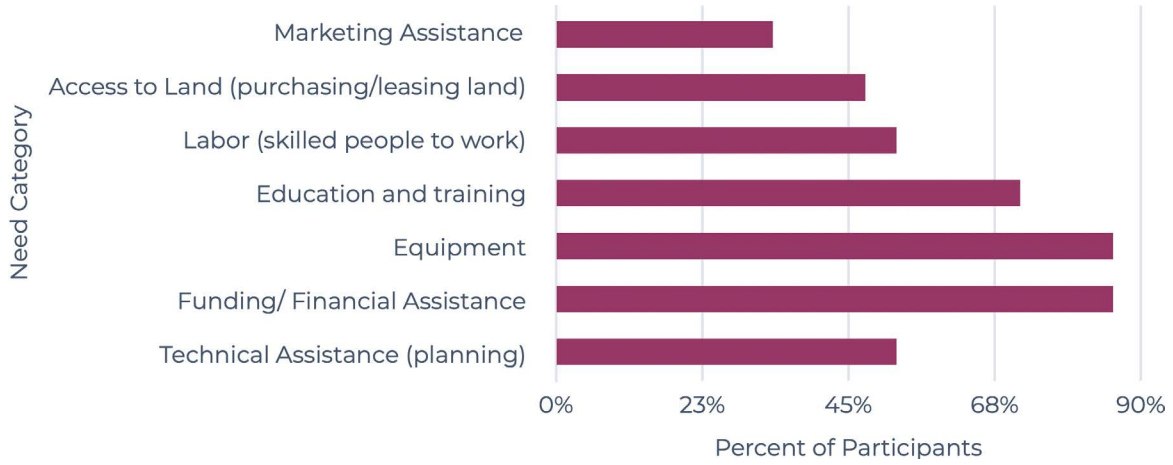
Charlie says, "A lot of reasons why gardens in villages fail is that they don't have champions. You have to have champions. It's like having 100 dogs in your dog lot. You have to be there every morning." He adds, "Tribes need to rethink their personnel. They need to hire gardeners and planners. They need to start thinking about TCDs [Tribal Conservation Districts]." He defines food sovereignty as "being able to manage your own resources on the land. He says, "I haven't been able to do that for a long time and that's why we're in the state we're in now. Long ago, the people managed the land very well and took care of their resources. I was taught about the cycles of animals and fish. Most animals, most everything that we eat off the land, runs in cycles. We're taught not to take too much, only take what we need and always leave some for later to keep the species going. So food sovereignty is this great stewardship of the land and to me, I define food sovereignty as the ability and access to our traditional foods to eat and harvest the food of your choice, not what's available or provided to you but what you're able to actually go out and choose for yourself."

- Food Sovereignty Video Series, Morris Thompson Cultural and Visitors Center, 2022, video series: https://www.youtube.com/playlist?list=PLGC0b7lQFD741_Ik8BJb-Sp_kQ3p-bUIs

7. Survey participants were asked, "What do you feel you would need to start a farm, ranch or other food production enterprise in your community?"

Participants were allowed to select more than one option. Figure 2.6 represents the areas survey participants felt should be prioritized in order to start a new food production enterprise. Equipment and Funding/Financial Assistance were tied for being ranked as the highest priority by survey participants (n=18—respectively). Education and training were ranked the second most important area (n=15), with technical assistance and labor/workforce development tied for third most important (n=11). Access to land and labor were also ranked as highly important by over 50% of participants in order to start a food enterprise in Interior Alaska.

Figure 2.6 *Interior Region Farm, Ranch or Community Food Production Start-up Needs*



INDIGENOUS FOOD LEADER: EVA BURK

EVA DAWN BURK IS DENA ATHABASCAN FROM TOGHOTTHELE (NENANA) and Manley Hot Springs. She is one of the leading Indigenous voices in Alaska when it comes to aligning agriculture with Indigenous values. She has been featured in national news regarding the issue of the large-scale agriculture land sales in and around Nenana. She was raised at a fish camp 90 miles from Nenana. She and her family also ran a trap line about 30 miles west of Nenana. She was instrumental in starting the Nenana Land Back movement along with Charlie Wright (her partner) and youth. She says, "It is not just about returning land ownership but there's a lot of public lands that are managed by people that have no connection to those lands. They sit in their offices and they hire a team of scientists that might not be from here and they make a whole plan about how they get to use our lands with little input from the local people or the Indigenous people who live there. And so [the] whole process needs to change and I'll say this about food sovereignty: My dad was born a free man. Nobody told him when and where and how to hunt fish or trap; he did that on his own with his own indigenous knowledge."

Eva defines food sovereignty "as the ability and access to our traditional foods. To eat and harvest the food of your choice, not what's available or provided to you, but what you're able to actually go out and choose for yourself. So to me food sovereignty, especially for Indigenous people, is having the right to access land at the time that you need to harvest traditional foods and then also the health and wellness of the land that you have your culture to know how to harvest; that you have decision-making power."

- Nenana Land Back one step at a time https://youtu.be/QgoyGyq8P78
- www.NativeMovement.org/landback
- Indigenous Agriculture at Calypso Farm https://calypsofarm.org/indigenous-agriculture/
- Alaska Food Policy Council keynote speaker: https://www.youtube.com/watch?v=W-rfulOxCZg
- Food Sovereignty Video Series, Morris Thompson Cultural and Visitors Center, 2022, video series: https://www.youtube.com/playlist?list=PLGC0b7IQFD741_Ik8BJb-Sp_kQ3p-bUIs

8. Survey participants were asked to provide up to five words or phrases that best described their personal food production activities in order to assess what food production terms and language is most culturally relevant to Indigenous food producers.

The following is a list and the number of occurrences each word or phrase was given:

- Harvesting/traditional harvesting (n=13)
- Gardening (n=13)
- Fishing (n=7)
- Gathering (n=9)
- Sharing/trading (n=2)
- Going to camp (n=1)
- Hunting/trapping (n=6)
- Taking care of plants/ working in relationship with plants (n=3)
- Preserving food (e.g. canning, jarring, drying, freezing...) (n=10)
- Foraging (n=2)
- Preparing for winter (n=3)
- Creating healthy foods (n=3)
- Berry picking (n=9)
- Subsistence (n=2)
- Raising livestock (n=1)

Survey participants were asked to select which Extension-based workshops relating to food they would be interested in attending if they were offered.

Participants were allowed to select more than one option or enter a unique topic. Respondents indicated that workshops pertaining to the following were their highest priorities:

- Harvesting and using native plants (n=5),
- Canning meat and fish (n=4),
- Composting (n= 4), and
- General gardening (n=4) .

Overall, Interior survey participants showed a general widespread interest in a range of food-related workshop options. Raising livestock, Master Gardener courses, and starting a food-related business were the lowest-ranked workshop topics.

INDIGENOUS FOOD LEADER: KATHLEEN PETERS ZURAY
TANANA VILLAGE GREENHOUSE

KATHLEEN PETERS ZURAY IS THE ENVIRONMENTAL COORDINATOR FOR THE TANANA TRIBAL COUNCIL. IN THE past, Kathleen has made contributions to Tanana's state-of-the-art greenhouse. About six years ago, Tanana received funding from the Rasmuson Foundation Rasmussen funding and had a greenhouse built to serve the Tanana community and Tanana school district. The greenhouse was built right next to the school with the intention that it could be a learning environment and food source for the students.

For two summers the greenhouse was operational and vegetables were grown in repurposed water tanks, which serve as raised beds. Community members and students enjoyed fresh vegetables. Continued funding allowed them to further improve the greenhouse and install a water and lighting system. However during construction, the greenhouse was gutted, and no one has brought it back to life. The greenhouse now has been abandoned, unused, for three years.

Many villages have similar stories. A successful greenhouse takes a lot of time and energy and many villages don't have a person or people to manage the greenhouse. In Tanana, they do not even have the knowledge of how to operate the greenhouse and all the special features it includes. Their funding source stopped and with that, the motivation to further learn about and develop the greenhouse. Many villages receive the funding to have these greenhouses built but have little to no training on how to operate them. Kathleen hopes the greenhouse in Tanana can come back to life. She believes that with better cooperation and school involvement, proper education on how to run the greenhouse, as well as a person/people to manage it, the greenhouse can be operational and successful again.

(Left) Kathleen Peters Zuray inside the unused greenhouse. Photo taken by Anja Maijala during a workshop in Tanana June 2023. (Right) Photo of the repurposed water tank raised beds, which used to be inside the greenhouse. They now sit outside and are not used. Photo taken by Anja Maijala during a workshop in Tanana June 2023

Interview Summaries

THREE INDIVIDUALS FROM THE INTERIOR REGION WERE INTERVIEWED FOR THIS PROJECT. THE INTERVIEWEES included two Indigenous individuals under 30 years old who had experience working for their community on small-scale indigenized food sovereignty projects, and one elder with experience as a Tribal administrator. Both youth interviewees are in the process of visioning and building the local food system in their work respectively, and view agricultural/gardening practices as part of a whole food system that builds food sovereignty. One interviewee put it eloquently stating, "Food sovereignty is the *first* step toward tribal sovereignty." The elder interviewee generally viewed gardening as not as important as fish and wild foods. The quotes that follow are specific examples the interviewees gave with regard to certain prompts in the interview process.

When asked, what does it mean to you to be a food producer? And, do you consider yourself one? One youth interviewee responded:

> *"I think that I am a supporter of food producers, I help out or give labor in ways that I can … I consider the definition of a producer being both someone who harvests and processes traditional foods or wild foods as well as someone who grows [food]. I feel like that's the case for a lot of Indigenous people in Alaska, specifically because we're not traditionally agricultural people … I think, [growing food] is part of the evolution of our culture right now responding to food insecurity and climate change."*

The other youth interviewee indicated they didn't feel like they were a producer yet, but that this was a role they wanted to move into, stating:

> *"I want to take on both hunting and harvesting as well as growing food to become a producer for my community and family. I see wild foods playing a larger role in all of this, though."*

The elder explained that they were a harvester, not a producer, saying,

> *"I grew up harvesting wild potatoes [troth], wild rhubarb, willow alder buds, spruce tips, and medicinal herbs … sure we had small garden where we grew potato, rutabagas, turnips and mustard greens … the nutrients and vitamins are coming from the land"*

To the question, what does agriculture mean to you? One interviewee explained:

> *"There is an importance placed on agriculture in my life currently, because it's what I like, but I also think of agriculture as tied to colonization, and I am often challenged to reconcile that feeling."*

The second interviewee explained the term agriculture made them think of the work they had been doing the summer prior for their home community, but also had feelings of conflict, as they explained:

> *"[Agriculture is] a word that's been used a lot in my life in the past year or so, and it wasn't really something that I thought I would be involved in, because to me, I hear the word agriculture, and I think of Western agriculture, and it makes me want to redefine what it is to reflect the way that our tribes will use agriculture … for me the way that I blend agriculture into my life and my culture is as a supplement to these things that we already have, like our native plants in our native foods, and the agriculture we already have, which is us tending to the berry bushes, and, harvesting from wild plants. … When I think about the use of agriculture in our rural communities, well, I think about how I want us to have access to our own healthy, regionally sourced, vegetables like potatoes, carrots, celery, and radishes—things that supplement the healthy diet that we already have. I see it as a tool to make [our diets] healthier, and give it more variety, because, I don't think that the vegetables and the agricultural products we do have access to in the stores in rural communities are great quality."*

The elder described their description of agriculture stating:

> *"We grow up farming from our land; for animals, fish and birds. We take care of the land like the farmer knows everything about what's growing on his land, we know when the migrating birds will arrive, when plants are ready, and how much we need to harvest."*

INDIGENOUS FOOD LEADER: EVELYN SARTEN

EVELYN SARTEN AND HER LATE HUSBAND ED (DWIGHT) HAVE GARDENED IN RUBY, Alaska, for a quarter of a century. Evelyn estimates she grows about 30% of her food. Evelyn was raised on the land on a Native American reservation in Taos, New Mexico. She was taught to live with the land and she's always grown her own food. Their garden in Ruby is characterized by innovation and making do with what is available. For instance, their chicken coop fence was constructed from an old couch frame, old bed frames, and leftover fencing from the school. Now her one remaining chicken lives in her Arctic entryway.

In addition to growing her own large garden, she also works for the Native Village of Ruby as the Natural Resources and Agriculture Program director helping others in Ruby garden as well. With Evelyn, Heidi Rader, and the Tribes Extension Program (www.uaf.edu/ces/tribes) sent out vegetable and flower seeds, and organized gardening and plant foraging workshops at the school, as well as purchased and built a raised bed garden for the school.

She grows carrots, lettuce, tomatoes, turnips, peas, pole beans, onions, garlic, a variety of herbs, and really "anything that grows." In a high tunnel, she grows zucchini, corn, tomatoes, pumpkins, cabbage, herbs and spaghetti squash. They were able to get a high tunnel through the Natural Resource Conservation Service but due to their hilly property, they had to split the high tunnel into two pieces. One year, they did not clear the snow in time and one of their high tunnels collapsed.

One of her biggest challenges is watering her garden. She has to carry water either from the river or the watering station, then often waters the garden by hand. She has a sizable hill to carry her water up as well.

To new gardeners, she says,

> Don't be afraid, just start. Try your luck, you know your best. That's all you can do is start seeds and see what happens. A seed is like a baby. You just take care of it and watch it grow and give it water when it needs it and give it sunlight and aeration when it needs it. It'll pretty much tell you how it wants to be taken care of. That's how I do it.

The interviewees were asked whether they thought agriculture or ranching practices were culturally relevant or had a place in their culture (Dené). To this question one explained:

> *"Based on traditional values in agricultural practices [agriculture] is more important now than it was historically. I see us producing less food through Western agricultural methods, and creating a model that works for us. In the past, the capitalist mode of food production has been an attack on our sovereign way of life. To feed ourselves, we have to design it for ourselves."*

The second interviewee explained they thought indigenized agricultural models were a currently evolving and necessary practice in Alaska, stating:

> *"We need to make agriculture fit into what works best for us as a culture and as a people. I think that if it is Indigenous-led, then it is naturally going to evolve into something that is meant for us. I think if people come to our regions and try to tell us what agriculture is, and what it should look like—what works best for them—then I think that would be really inappropriate."*

The elder explained their complicated sentiments towards this question, describing how food was at the center of culture and tradition. They said:

> *"We will never lose our culture, or beliefs. Over thousands of years we learned how to adapt to survive—survive to thrive. We've been adapting from day one, it doesn't mean we like the changes that force adaptation, but it's part of who we are."*

PRESERVING HEALTHY LIFESTYLES IN GALENA

2021 MICRO-FOOD SECURITY GRANT RECIPIENT

PROJECT LOCATION:
Galena

MISSION & ACTIVITIES:
In 2021, Louden Tribal Council requested and received a $10,000 Micro-Food Security Grant from the Alaska Division of Agriculture to host a three-part workshop series to help teach young people the knowledge and skills to safely preserve the subsistence harvest. The Alaska Tribes Extension Program partnered with them on this workshop series. Some participants also received the supplies and equipment needed to safely preserve the subsistence harvest.

"With the necessary equipment, knowledge, and confidence, these young people can pass that knowledge down to their own children, creating a more sustainable and healthy community for generations to come."

DONNA ERICK OF VENETIE TOOK A THREE-DAY FOOD PRESERVATION CLASS from Cooperative Extension Service in the 1980s in Galena. She said it was the best and most useful class she ever took. She received a canner that she still uses and she learned how to use the canner in the class. And she still has the publications from that class. She said the canner still works great, although one time the petcock got clogged with a mosquito. It was the only time it didn't open.

When asked about what they thought of Tribes raising/growing more of their own food, and what they thought the appropriate scale of that production looked like, one interviewee responded:

> *"It is not new or foreign to us to be food producers—our grandmothers had gardens—and while there will always be a reliance on traditional foods, we are having to get more creative. I think we can do both … It will always be cheaper in time, costs, and energy to feed people through commercial means, but it will cost us in other ways, as we've already seen with health epidemics in our communities. We need to be thinking about small-scale community-led [food production] methods. The best way is village-based, depending on local needs and land features of each community. We can also be thinking about which communities might be best suited to [raise] and distribute food in some regions."*

The other interviewee reflected on the experiences they had growing up, and their vision for a food-sovereign future, explaining:

> *"I grew up gardening a little bit with my dad, but I never realized how important these skills could be for food security … Also, with not having salmon, that's a huge hit to us in the Interior, so I feel like the realities of climate change have and will continue to affect us and I don't see it getting better. It's really startling and scary to have the feeling like you have lost a food choice. As a result, I think we are trying to brainstorm solutions to be able to feed our communities in a way that is satisfying. I think that the future of agriculture in our Indigenous communities will be a response to this and I would hope, that in 10-20 years, Indigenous nations throughout Alaska and Canada and the U.S. will be able to organize food sovereign movements in their regions so that we can have trade routes and share our abundance of different things, because, I think that this cash economy around food isn't necessarily serving our people."*

The elder interviewee explained:

> *"It can't be one or the other … can't just be hunting, fishing or farming. … The economics of starting farming versus wild foods [are high]; we need both."*

They went on to explain that one of their primary concerns associated with growing domestic foods, saying:

> *"Growing food [requires] cutting trees, destroying permafrost. … It is dangerous for the environment when you take those away, making a scar on the land—trading something that won't feed people for 50 or more years. It takes a lot of land to provide enough food for the fish, birds and game."*

When asked if they thought growing food should be prioritized as a way to increase Tribal food sovereignty, two of the interviewees felt that raising food could contribute to food sovereignty, but that it was a complex topic. One interviewee shared:

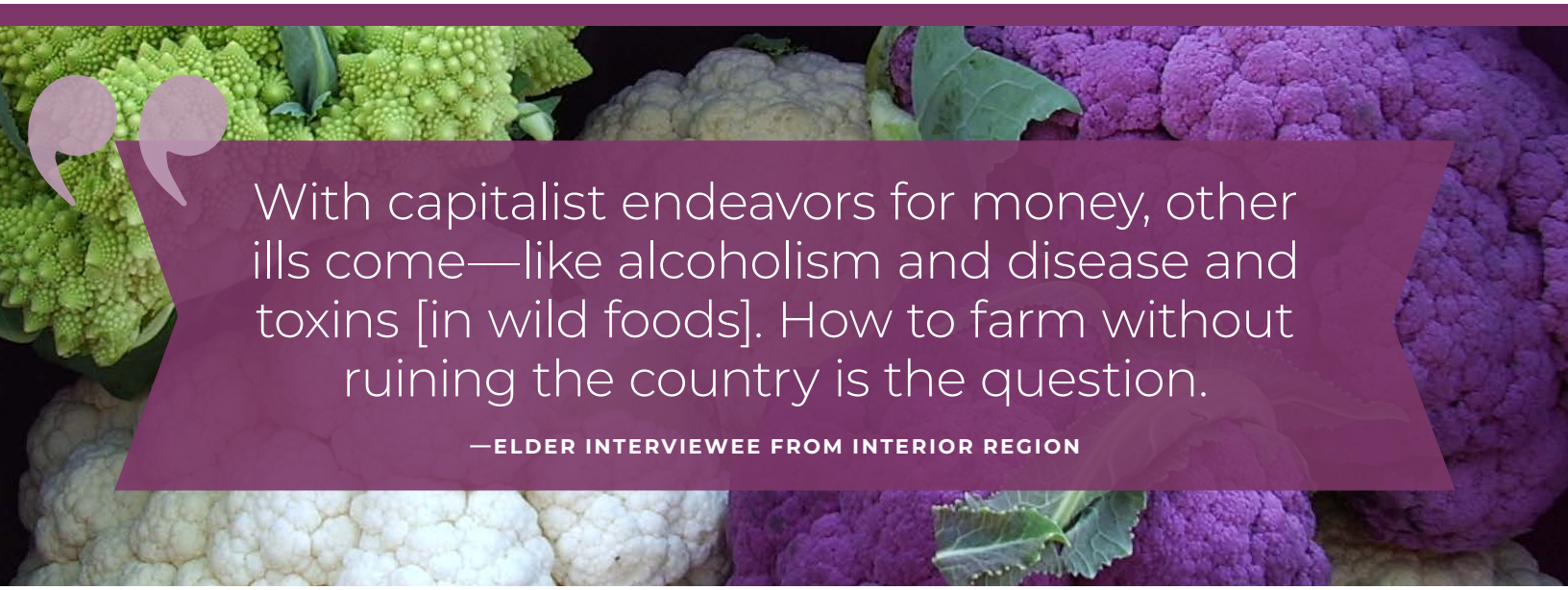
> *"That's a tough question to answer. I think personally yes, but there are some people who don't want to grow food because they feel it is giving in to land-trauma and loss of traditional foods. Despite that, Indian potato was cultivated intentionally—this is part of our culture—growing and stewarding foods in our territories. Gardening is the most akin to what we have done historically. A garden makes sense, especially with cultivated berries, and fits within our stewardship practices, to only think of Native people as hunters is an oversimplification."*

And, the other interviewee explained:

> *"I would like to learn more about permaculture design, because I don't want [growing food] to be a short-term-solution; the agriculture I want is to be sustainable and long-term, where we can continue to keep our land healthy. I don't want to see the overdevelopment and contaminants on the land being the norm with the development of agriculture in the region. Right now, we're really lucky, and I'm really grateful that in my region the land is pretty healthy, and even though climate change is affecting it, generally it's pretty safe to eat foods harvested from our region. So, with agriculture, and the development of this land, I hope we are intentional about making sure that it, whatever we do, is sustainable and has a low impact. For example, with the Nenana-Totchaket sale, I'm really anxious and nervous to see how people develop that land because there is a potential for it to be harmful. … A lot of people in my community harvest food every year from that area, and for me, it breaks my heart to think that we could be risking these other [wild] food sources when we don't have salmon right now."*

The elder cautioned that,

> *"with capitalist endeavors for money, other ills come like alcoholism and disease and toxins [in wild foods]. How to farm without ruining the country is the question."*



With capitalist endeavors for money, other ills come—like alcoholism and disease and toxins [in wild foods]. How to farm without ruining the country is the question.

—ELDER INTERVIEWEE FROM INTERIOR REGION

When asked what they felt the largest barriers to food sovereignty in Alaska were, the interviewees cited the following topics:

- Capital to start a food-related enterprise (i.e., jobs with living wage, grant writers, fiscal support from state and Tribe/Tribal corporations);
- Access to and cost of supplies—inhibits start-ups in the region;
- Workforce/workforce development;
- Living wages for people to do local "food work:"

> *"Harvesting traditional foods, growing and processing food is hard work, and takes time. People need to be compensated for that as long as we're living in a capitalist society. It would be liberating to get paid a living wage to provide for our communities in a healthy way;"*

- Community buy-in;
- Climate change;
- Cost of living in rural Alaska;
- State laws/regulation on wild foods and natural resources (i.e., subsistence/hunting permitting, land development projects like the Nenana-Totchaket): A quote from the elder addressed this matter expressing:

> *"[Currently] the State and Federal government determine the rights [Indigenous] people have to access the healthiest foods."*

Another interviewee also addressed natural resource legislation explaining:

> *"It's not that [the Nenana-Totchaket] is a bad idea to boost agriculture in the state, but it's handled all wrong by the state. The site is just not right—environmentally, location-wise, or culturally for what they are proposing—and it doesn't square with the state's claim [to improve food security for Alaska]. It's frustrating that the project has been so mishandled and that locals aren't being given any say in what development happens or looks like."*

Interview Participants were asked what, if any grants or programs have been utilized for their work. The following are those resources, funding opportunities and/or programs that were listed:

- Alaska Division of Agriculture Microgrants
- BIA agriculture funds
- Grassroots fundraising
- FRTEP workshops
- Tribal Corporation Support

SOUTHCENTRAL REGION

Athabascan: Dena'ina & Ahtna

Executive Summary

THE NEEDS OR BARRIERS TO TRIBAL FOOD PRODUCERS IN THE SOUTHCENTRAL REGION WERE SIMILAR TO those of other regions, however, there appears to be a greater interest in the use of gardening and agriculture to support local food security needs. This is likely in part due to the more urban location of the survey and interview participants, which includes greater access to farmland, farms, farmers markets, and community gardens, as well as the challenges associated with wild foods being harder to access for harvest. Also likely related to the more urban residence of the participants, there was a higher degree of satisfaction with the access to, and diversity of market foodstuffs in the Southcentral region responses when compared to other regions, and dissatisfaction was more associated with access issues like transportation to obtain groceries, and variety of foodstuffs available. There was a consistent interest among Southcentral respondents in producing more food locally, which included production methods using: greenhouses, gardens featuring wild plant species, and more marine-based food production. Respondents also consistently indicated they would like to harvest more wild foods and conveyed the importance of wild foods to their diets and cultural values.

While no formal steering committee was created for the Southcentral region, project advisors from the Alaska Food Policy Council's Indigenous Foods Working Group, and Intertribal Agriculture Council (IAC) Technical Assistance program were consulted. The survey was distributed at the Southcentral Native Farm Bill Coalition's round-table listening session (via postcards with a QR code), and the IAC Facebook page. Due to a high rate of fraudulent survey responses, only five uncorrupted and complete survey responses were retained for the Southcentral region and summarized here. One interview was conducted with an Indigenous entrepreneur and service provider.

Survey Results for Southcentral Region

THE SURVEY WAS COMPLETED BY RESPONDENTS FROM AT LEAST THREE COMMUNITIES: CHICKALOON, BY way of Wasilla (n=1), Soldotna (n=1) and Anchorage (n=2), and one respondent who chose to not declare their community of residence. It is explicable that most Southcentral survey respondents reside in urban cities as this region includes the heaviest concentration of urban/on-road communities in the state. Eighty percent of survey participants identified as Alaska Native and/or American Indian (n=4), and 20% (n=1) identified at two or more races. Participants were entirely female (100%). The ages of participants ranged from 19 to 69 years of age.

Survey Results Pertaining to Food System and Production Needs

Tables summarize the answers that survey participants provided by both providing the Thematic Code as well as a demonstrative quote from a particular survey participant that captures the essence of the code.

1. Survey respondents said that they were most satisfied about food in their community in the following ways:

ACCESS TO WILD FOODS

- "Fish (dry and to cook), moose meat, seal, and any other native food because it helps me have energy and native foods are most satisfying of all foods to me."

ACCESS TO MARKET FOODS

- "Choice, we have 5 large grocery stores to choose from in a 10 mile radius;"
- "I like being able to buy milk at the store best, because it can supplement the nutrition of my children."

ACCESS TO WILD FOODS & ACCESS TO LOCALLY PRODUCED FOODS

- "Access and ability to harvest subsistence & local foods."

ACCESS TO MARKET FOODS, LOCALLY PRODUCED FOODS & WILD FOODS

- "The[grocery] options are becoming more diverse. Organic foods are now available all the time. Farmers are growing organic food near where I live and I can get that easily. There is also a push to return to our traditional foods."

2. Survey respondents said that they were least satisfied about food in their community in the following ways:

ACCESS TO RESOURCES

- "The lack of transportation access to get to healthy food vendors/stores."

PREVALENCE OF UNHEALTHY FOODS

- "There is so much soda, sugar, unhealthy foods in the village where I'm from."

ACCESS TO FRESH FOOD & HIGH COST OF FOOD

- "Difficulty finding, and high cost acquiring fresh fruit & veggies."

> When I was growing up, I never experienced limited anything—nowadays there are limited openings for fishing—we are having to fight for our Native food.
>
> —INTERVIEWEE FROM SOUTHCENTRAL REGION

Survey participants expressed the most common barriers pertaining to food-production practices involved lack of access to high-quality foods; the high costs of harvesting wild foods, including taking time away from work; and knowledge/education gaps. The following table below provides quotes from survey participants regarding specific examples of barriers to preferred foods.

3. To the survey question, "What do you feel are the biggest barriers/limiting factors for you to be able to achieve the percent of food you'd like to be able to hunt, fish, gather, grow?"

ACCESS TO WILD FOOD

- "Limited fish—when I was growing up, I never experienced limited anything—nowadays there are limited openings for fishing—we are having to fight for our Native food."

ACCESS TO WILD FOOD, RESOURCES, & TIME

- "Access, time, money for gas and equipment and [getting] time off from work to harvest."

EDUCATION & ACCESS TO WILD FOODS

- "Education—I don't know how to do much subsistence hunting/harvesting practices. Also, I live in an area where traditional fishing methods aren't allowed to be used."

4. When asked, "What do you think is most needed to help your community move towards your vision for food security?" survey participants (2 of 5) responded:

- "I would love to see more resources available for home agriculture and self-sufficiency, farming, and ranching."

EDUCATION

- "Hands-on education, more opportunities to learn gardening skills." (n=2)

INDIGENOUS FOOD LEADER: MOLLY CERRIDWEN

MOLLY CERRIDWEN IS YUP'IK, SIBERIAN YUP'IK, and Irish with ancestral ties to Qaluyaaq (Nelson Island, Alaska) and County Kerry, Ireland. She is a member of Too Naaleł Denh (Manley Hot Springs Tribe) and Knik Tribe. Molly is the founder of Shapeshifting Wellness; an Alaska Native traditional healing and yoga clinic in Knik, Alaska. She weaves traditional health-based practices with complementary and alternative medicine modalities to support each person, and each community where they are in their journey of wellness. She contracts with the Alaska Tribes Extension Program to teach through hands-on workshops, virtual workshops, conferences, and on YouTube.

You can find a selection of her virtual workshops here: https://www.youtube.com/watch?v=MKVML96053A&list=PLaq6r5nsLDdeaaMonqxgLCZnIpWEr_pWn

And here: https://www.youtube.com/@RurALCAP/videos

5. Respondents were asked how they felt when they heard the following words and phrases:

- "Agriculture"
- "Traditional and Native Foods"
- "Farming and Ranching"
- "Fishing"
- "Hunting"
- "Gathering"
- "Food Sharing"
- "Buying Food from the Store"
- "Subsistence"
- "Ordering Food Online"

Survey participants were given the option to respond:

- "Applies to my life and/or cultural values;"
- "Does not apply to my life and/or cultural values;"
- "something I want to do more of," and;
- "something I want to do less of."

Figure 3.1 on the following page uses ring graphs to depict the percentage of total participants (n=5) who selected each of the above categorizations for each word.

One hundred percent of all respondents said that terms like "traditional native foods," "fishing," "agriculture," "food sharing," and "gathering" applied to their lifestyle and/or cultural values. Fifty percent indicated that "farming" was something they wanted to do more of, while the other 50% indicated that farming did not apply to their cultural values. Sixty-six percent of respondents indicated that the term "ranching" did not apply to their lifestyle, but 33% indicated that it was something that did apply to their lifestyle/cultural values. Gardening was something that 66% indicated did fit within their cultural values, and 33% said it was something they wanted to do more of. "Ordering food online" and "buying goods from the store" were activities respondents indicated that they currently did (33% and 66% respectively) but that they would prefer to do less of (33% respectively).

> We have 2 large greenhouses for the tribe, and the vegetables go to the Elders and youth programs first and then the community. I would like to see more of these kinds of efforts/gardens all over the state!
>
> —INTERVIEWEE FROM SOUTHCENTRAL REGION

Figure 3.1 *Southcentral Region Attitudes About Language Used to Describe Agricultural, Subsistence, and Traditional Food Activities*

6. Respondents were asked whether they wished there was more food produced (grown and/or raised) in their communities (i.e. gardens, farms, marine-farming or ranches).

One hundred percent of the Southcentral region survey participants indicated they would like to see more locally produced foods.

6b. Participants who indicated they would like to see more food produced locally, were asked what increased local food production would look like to them.

Survey participants responded with the following suggestions:

- "Greenhouses, tribal community gardens that provide more food security. Places to grow food and community to become healthier in mind and body."
- "Ways to get people interested in supporting greenhouse projects."
- "We can farm wild plants responsibly by gathering the seeds, cuttings or divisions of wild plants. I grow all the wormwood and nettles I use for my medicinal salves. I also grow about 35 other wild plants at home and dozens of wild plants in our traditional plant beds at work. We have 2 large greenhouses for the tribe, and the vegetables go to the Elders and youth programs first and then the community. I would like to see more of these kinds of efforts/gardens all over the state!"
- "I want to produce more marine-grown food and have more choices of marine-grown food available."

7. Survey participants were asked, "What do you feel you would need to start a farm, ranch or other food production enterprise in your community?"

Participants were allowed to select more than one option. Figure 3.2 represents the areas survey participants felt should be prioritized in order to start a new food production enterprise. Funding/financial assistance was ranked the highest (n=4), with education and training and Skilled labor tied for second most important (n=3). Technical assistance was also ranked as highly important by over 50% of participants in order to start a food enterprise in Southcentral Alaska (see Figure 3.2).

Figure 3.2 Southcentral Region Farm, Ranch or Community Food Production Start-up Needs

8. Survey participants were asked to provide up to five words or phrases that best described their personal food production activities in order to assess what food production terms and language is most culturally relevant to Indigenous food producers.

The following is a list and the number of occurrences each word or phrase was given:

- Traditional harvesting (n=2)
- Gardening (n=3)
- Fishing (n=1)
- Gathering (n=2)
- Sharing/trading (n=1)
- Berry picking (n=2)
- Hunting/trapping (n=1)
- Traditional practices (n=1)
- Preserving food (e.g. canning, jarring, drying, freezing...) (n=2)
- Teaching my family how to eat (n=1)
- Wild harvesting (n=3)
- Harvesting healthy food (n=1)

9. Survey participants were asked to select which Extension-based workshops relating to food they would be interested in attending if they were offered. Participants were allowed to select more than one option.

A majority of respondents (> 80%) indicated they would be most interested in workshops that focused on: gathering and using native plants (n= 4); learning about traditional foods through native language (n= 4); traditional hunting/fishing techniques (n= 4); traditional foods conservation/stewardship (n= 4). Respondents were also highly interested (>60%) in workshops that focus on traditional food preservation practices (n=3); drying foods (n=3); canning meat and fish (n=3); and seed starting (n=3).

TRIBAL CONSERVATION DISTRICT:
AHTNA INTERTRIBAL RESOURCES COMMISSION (CRITR)

MEMBER TRIBES OF THE CHUGACH REGION: Native Village of Cantwell, Mentasta Traditional Council, Cheesh'na Tribe, the Native Village of Gakona, the Gulkana Village, the Native Village of Tazlina, the Native Village of Kluti-Kaah, and the Native Village of Chitina. As landholders, the two Alaska Native Corporations, Ahtna Incorporated and Chitina Native Corporation are also members.

MISSION AND ACTIVITIES: The goals of CRITR include managing their own resources on their own homelands and to develop partnerships with agencies and others "within our traditional use landscape."

OBJECTIVES:

1. Helping people to utilize and manage tribal resources with their capabilities and needs for protection and improvement.
2. To carry out broad programs of assistance encompassing technical, research, educational and financial assistance to landowners and users.
3. Aid in administration, coordination, financing and delivery of USDA programs related to community development and natural resource management and conservation programs.

WEBSITE: https://www.ahtnatribal.org/

Interview Summary

ONE INDIVIDUAL FROM THE SOUTHCENTRAL REGION WAS INTERVIEWED FOR THIS PROJECT. THE INTERVIEWEE was an Indigenous entrepreneur and service provider for their home community. The individual's profession informed their views and responses, but there were themes that emerged with regard to health and food needs that aligned with the survey responses. One of the main themes was the areas closer to urban spaces were becoming over-harvested, and that many urban harvesters didn't appear to know good wild harvesting etiquette. This was concerning to the individual because while they felt using some agricultural/gardening strategies to produce more food for Tribes was possible, it needed to be *complementary* to the harvesting of wild foods. The quotes that follow are specific examples the interviewee gave with regard to certain prompts.

When asked, "What does it mean to you to be a food producer? And, do you consider yourself one?" the interviewee responded:

> *"Being a food producer means that I go out and harvest wild foods, or from the garden and turn those items into a product (i.e. BBQ sauce from berries, or medicine). Yes, I consider myself a producer."*

To the question, what does agriculture mean to you? The interviewee responded:

> *"Agriculture means growing and tending to my own food. This is different than harvesting wild foods out there—a natural system versus a more controlled system."*

The interviewee indicated they were worried about the depletion of wild foods in areas close to urban centers, especially during emergencies such as the pandemic where market foods were less available.

KENAITZE INDIAN TRIBE FOOD CACHE PROGRAM

PROJECT LOCATION: Homer, Ninilchik, Anchor Point, Seldovia, and Soldotna

MISSION AND ACTIVITIES: The Kenaitze Indian Tribe was federally recognized as a sovereign, independent nation in 1971 under the Indian Reorganization Act as amended for Alaska. Today, they have more than 1,800 Tribal members who live across the Kenai Peninsula and beyond. The Tribe's mission is "to assure Kahtnuht'ana Dena'ina thrive forever."

Offering care to those in need is one of the Tribe's top priorities. The Tribe delivers a variety of programs and services that promote the wellness of their people and the community. The Tribe's food cache is open to all members of the community. Donations from the community as well as fish caught in the Tribal net help stock the food cache. To ensure they have enough provisions for everyone, the food cache is available on a once-per-month basis.

KEY PARTNERSHIPS: The Tribe also offers a wild game harvest program, which is operated in partnership with state and community agencies. Through this program, they are able to harvest meat from roadkill moose and other wildlife and make it available to those in need.

Images and Adapted Text: https://www.kenaitze.org/services/food-bank/

*From AFPC Food Security Action Plan, Used by Permission from AFPC.

When asked about what they thought of Tribes raising/ growing more of their own food, the interviewee responded:

The interviewee discussed the use of wild foods in cultivated spaces, the need for dedicated labor to support local Tribally-organized food growing operations and other resources, like land needed for maintaining cultivated foods. For instance, they stated:

> *"There will be some wild foods that you can get to grow, but some don't transplant [or propagate] well. Non-native foods will be useful to supplement, or complement wild foods in our diets—like potatoes, cabbage or carrots for a moose stew—but these [crops] take A LOT of work and time to grow and maintain. Our culture was focused on a whole natural landscape that could sustain itself with minimal human intervention, versus one patch of ground that needs a lot of energy put into it. The thing is, [agricultural vegetables] are not all we're ever going to eat—we're not predisposed to it—if it's something that goes with fish or berries, our wild foods, it's better for our bodies and the land."*

Question: What are the largest barriers to food sovereignty in Alaska?

The interviewee cited the following challenges:

- Lost knowledge of wild foods (i.e., harvesting wild greens)
- The ability to gather wild foods is limited due to ownership over them [natural resource regulations]
- Access: the price of transportation to go far enough out to harvest where things aren't over-harvested and the time required to travel those distances
- Financial capital to start food production endeavors, like build a greenhouse or community garden.

TRIBAL CONSERVATION DISTRICT: TYONEK
TYONEK GROWN PROGRAMS

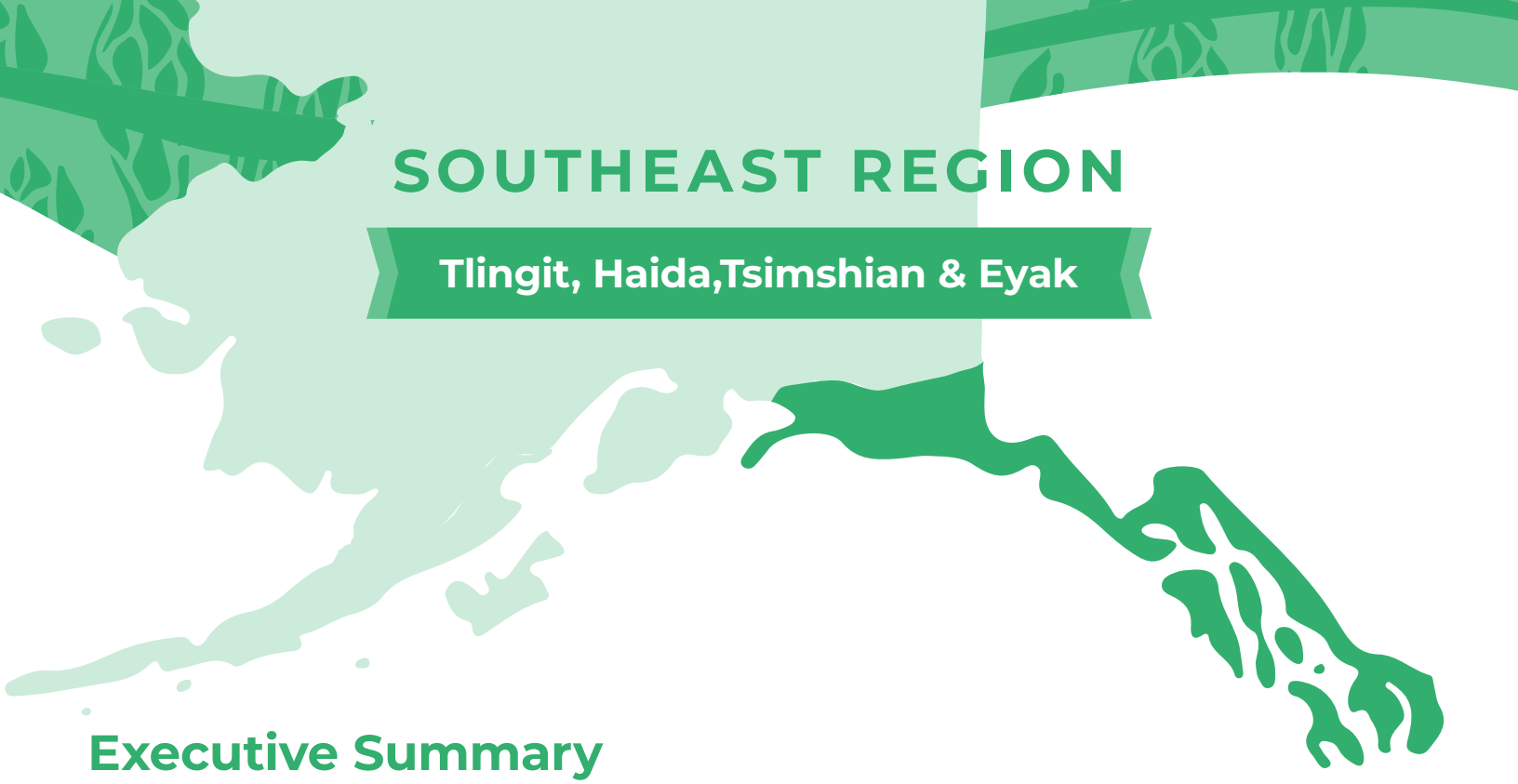
ORGANIZATION: Tyonek Tribal Conservation District

PROJECT NAME: Tyonek Grown Programs (community farm, hydroponics, food security)

MISSION AND ACTIVITIES: Through the Tyonek Grown program, TTCD addresses our strategic direction to improve food security through community agriculture. Since 2012, Tyonek Tribal Conservation District has worked with the Native Village of Tyonek (NVT) to develop an agricultural program aimed at enhancing food security and providing fresh organic vegetables to community members. Each year, TTCD and NVT work together to ensure community goals and needs are being met. The garden has grown into a 1.5-acre operation with two NRCS-funded high tunnels (48 foot x 22 foot), solar-powered irrigation and ventilation systems, 15 outdoor raised beds, over 2,000 row feet of potatoes and mixed vegetable crops, perennial fruits, and plans for expansion in the coming years.

In addition to the Tyonek Grown program, TTCD's Habitat Monitoring and Restoration program supports tribal food security by conserving and restoring fish habitat for Pacific salmon (*Oncorhynchus* spp.), through fish passage improvements, northern pike suppression, and anadromous fish surveys. TTCD biologists improve fish passage for migratory salmon by replacing culverts that impede fish movement with fish-friendly culverts that mimic the natural stream bed, increasing fish access to spawning and rearing grounds. TTCD also leads northern pike suppression and eradication efforts in the Tyonek area watershed to reduce pike's impact on salmon and restore impacted salmon populations. Northern pike are an invasive fish species that are present in the Tyonek area, preying heavily on juvenile salmon leading to the decline of salmon populations. In addition, TTCD annually surveys waters with unknown anadromy to add salmon spawning/ rearing grounds to the state of Alaska's Anadromous Waters Catalog (AWC). AWC-listed waters are protected under state law. Adding streams within the Tyonek Tribal Conservation District ensures important spawning and rearing habitat is protected to support healthy salmon populations.

WEBSITE: https://ttcd.org/



SOUTHEAST REGION

Tlingit, Haida,Tsimshian & Eyak

Executive Summary

THE NEEDS OR BARRIERS TO TRIBAL FOOD PRODUCERS IN THE SOUTHEAST REGION ARE HEAVILY INFLUENCED by the unique geographic features of the region. Many survey and interview respondents cited marine sources of food (both wild harvested and produced) as topics of both interest for increased production, or concern with regard to climate change affecting food sources. Most respondents were most satisfied with the diversity and abundance of wild foods in the Southeast region, and least satisfied with the high costs and unreliability of market goods that were available (or unavailable) in their communities.

Answers to questions varied depending on the community within which an individual resided. For instance, an individual from a larger community may comment on the access to a seasonal farmers market or an organic grocery store, whereas individuals from smaller communities were more likely to cite the access to or abundance of wild foods and community relationships that are created through the harvest, preparation and sharing of traditional or "subsistence" foods. Overall, there appears to be a higher interest in and acceptance of small-scale food production in the Southeast region as compared to some others that were evaluated in this process. That being said, food production activities in the region are often conducted under cover in either a greenhouse or high tunnel and interest in larger-scale agriculture and or ranching-type activities was virtually absent among Indigenous participants. There is an apparent interest in the increase of marine foods production (i.e., kelp and shellfish), which is understandable given the maritime nature of all Southeast communities and the reduction in some wild marine foods that have left gaps in the traditional diet. Like all other regions in this study, those surveyed or interviewed in Southeast Alaska felt that any food production methods or enterprises undertaken are something that should be developed as a way to supplement and complement traditional foods in local diets.

The Southeast Steering Committee included individuals from Tlingit and Haida Central Council (THCC); The Sustainable Southeast Partnership; the Organized Village of Kasaan; The Southeast Alaska Regional Health Consortium (SEARHC); and the Cooperative Extension Service (Southeast District). Surveys were distributed via the communications networks of Steering Committee organizations and Tribal-serving organizations (i.e. THCC and SEARHC). As a result, the demographics of survey participants is diverse with regard to race, gender, age and whether participants responded as an individual versus service provider. Survey results are analyzed both as a complete data set, with some questions broken out by Indigenous participants' responses to best identify the needs and/or desires of the Indigenous population with regard to food production in the Southeast region.

Survey Results for the Southeast Region

TWENTY-NINE INDIVIDUALS BEGAN THE SURVEY, HOWEVER ONLY 19 RESPONDENTS COMPLETED THE SURVEY. The survey was completed by respondents from at least nine communities, including: Craig, Haines, Juneau, Klukwan, Metlakatla, Prince of Wales, Sitka, Wrangell, and Yakutat. Three respondents chose to not declare their community of residence (Figure 4.1). Fifty-eight percent of survey participants identified as Alaska Native and/or American Indian (n=11), 33% identified as white (n=6), and a total of 8% identified as two or more races (n=1), Hispanic/Latinx (n=1), or preferred not to answer (n=1; see Figure 4.2). Participants were majority (85%) female, and 15% percent of survey participants were male (see Figure 4.3). The ages of participants ranged from 20 to 70+(elder) years old (see Figure 4.4).

Figure 4.1 *Southeast Region Communities Represented*

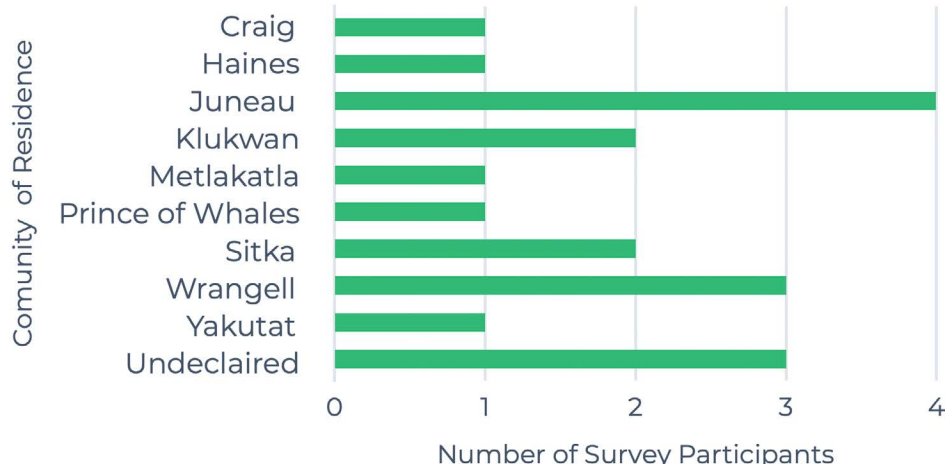


Figure 4.2 *Race of Southeast Region Survey Participants*

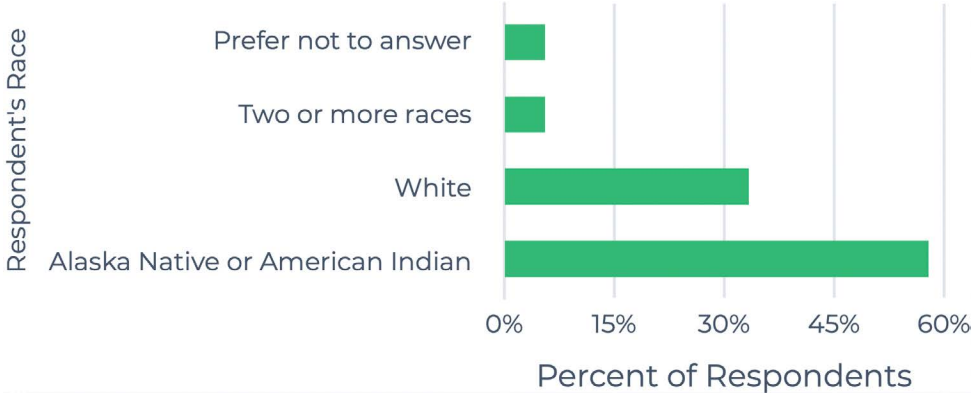


Figure 4.3 *Gender of Southeast Region Survey Participants*

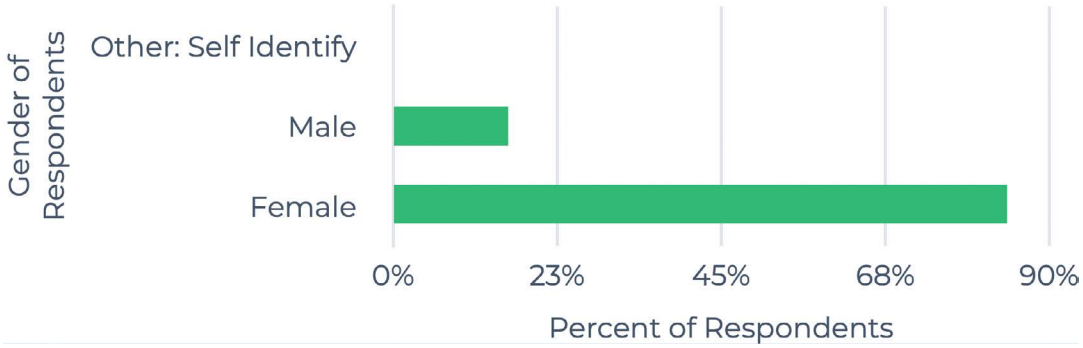
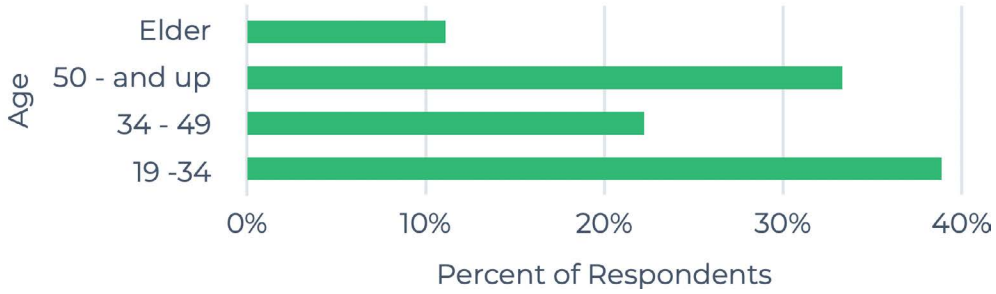


Figure 4.4 *Age of Southeast Region Survey Participants*



TRIBAL CONSERVATION DISTRICT: CHUGACH REGION

MEMBER TRIBES OF THE CHUGACH REGION: Tatitlek Village IRA Council, Native Village of Eyak (Cordova), Port Graham Village Council, Nanwalek IRA Council, Chenega Bay IRA Council, Qutekcak Native Tribe (Seward), and the Valdez Native Tribe.

MISSION AND ACTIVITIES: This Tribal Conservation District was established in 2021 under the Chugach Regional Resources Commission (CRRC), which was established in 1984. The goal of CRRC is to promote Tribal sovereignty and protect their subsistence way of life.

OBJECTIVES:

1. Advocate for Alaska Native hunting and fishing rights by keeping up to date with current fish and wildlife management trends in Southcentral Alaska
2. Enhance Alaska Native management of traditional lands and resources through cooperative agreements with land managers that are based upon indigenous knowledge systems and scientific principles.
3. Improve food security through community agriculture projects, infrastructure development, food-safe distribution support, and value-added product.
4. Ensure that the district is a self-sustaining and professional model district effectively working with entities to ensure the continued sufficient renewable natural resources in the district.
5. Provide a forum for education, knowledge-sharing, capacity-building, business incubators, and outreach around indigenous and scientific management principles and traditional ecological knowledge systems.
6. Support sustainable practices through waste reduction and reduced energy consumption.

WEBSITE: https://www.crrcalaska.org/website/index.php/our-programs/tribal-conservation-district

Survey Results Pertaining to Food System and Production Needs

1. Indigenous survey respondents said that they were most satisfied about food in their community in the following ways:

ACCESS TO WILD FOODS

- "I am most satisfied that we are able to live off the lands and waters, and continue to do so with the same teachings that my grandparents were taught. I look forward to giving the same to my own children. The food in our community is what makes us who we are." (n=7)

ACCESS TO MARKET FOODS

- "I'm happy that we have a small mercantile store that provides staples such as flour, water, sugar, microwave meals, bread, etc."

ACCESS TO WILD FOODS & SHARING NETWORKS

- "My family has abundant opportunities to harvest wild foods (fish, deer, herring eggs, beach asparagus, berries, mushrooms, etc.) & have a deep respectful connection with our food. I also value the community that is strengthened & maintained by the frequent sharing of harvests between families, neighbors, and others."

ACCESS TO LOCALLY PRODUCED FOODS

- "That there are more new, small farms and food producers starting up each year." (n=2)

2. Indigenous survey respondents said that they were least satisfied about food in their community in the following ways:

ACCESS TO FRESH FOODS

- "The produce that makes it to our community is often damaged by transport or halfway spoiled by the time it makes it to the store shelves;" "The lack of farmers growing in the community, and thus the lack of local foods." (n=8)

DIVERSITY OF FOOD AVAILABLE

- "I'm not satisfied with what's offered in the store." (n=2)

HIGH COST OF FOOD

- "The cost of groceries, if they make it on the ferries, is so high we can't afford much." (n=4)

HIGH COST OF LIVING, TIME & LACK OF LOCALLY PRODUCED FOOD

- "The cost of wild harvest activities—in both time and the cost of gear/travel. And that it is hard to impossible to get local foods into local stores."

> The cost of groceries, if they make it on the ferries, is so high we can't afford much.
>
> —INTERVIEWEE FROM SOUTHEAST REGION

3. Survey question: "What do you feel are the biggest barriers/limiting factors for you to be able to achieve the percent of food you'd like to be able to hunt, fish, gather, grow?"

Indigenous survey participants expressed the most common barriers pertaining to food-production practices involved lack of accessibility to land, time, high costs and knowledge/education gaps. The following table represents the shared themes from specific examples respondents provided and indicates the number of participants who cited each theme as a barrier.

ACCESS TO LAND

- Access/availability of land for growing food (n=4)

TIME

- "Time for gathering, growing, hunting and fishing activities due to having to work" (n=6)

HIGH COSTS

- Cost of materials and/or equipment for growing food, and hunting/fishing (including permit costs) (n=5)

EDUCATION

- Knowledge of best practices for harvesting/processing wild foods and growing domestic food crops (n=6)

PROJECT: S'NDOOYNTGM GALTS'AP METLAKATLA COMMUNITY GARDEN & COMPOST

LOCATION: Metlakatla

MISSION AND ACTIVITIES: Located 20 miles south of Ketchikan, the Metlakatla Indian Community (MIC) is located on Annette Island and is the only Indian Reserve in Alaska. Here, a community garden has taken root and garnered state-wide interest. The site hosts a 80-foot x 40-foot high tunnel for the garden and community use and a 40-foot x 20-foot greenhouse for commercial use for the garden to produce food for the community.

In 2021, two nonprofits collaborated to launch a food catalyst fellowship program in support of Alaska Native and Native American leaders around Southeast Alaska: Gatgyeda Haayk, Metlakatla's community garden champion, was one of the recipients. Soil amendments can be expensive to purchase and ship around Alaska. The garden project has been expanded and composting incorporated into this site — demonstrating that local leadership is critical to sustaining and scaling local food production. For the next three years, Gatgyeda Haayk is teaching an experiential learning course in partnership with the Alaska Tribes Extension Program, RurAL CAP, and the Office of Partnerships and Public Engagement.

KEY PARTNERSHIPS:

- Metlakatla Indian Community
- Residents of Metlakatla
- Gatgyeda Haayk— local food champion
- RurAl Cap
- Alaska Tribes Extension Program
- Office of Partnerships and Public Engagement

***Image:** Gatgyeda Haayk*

*From AFPC Food Security Action Plan, Used by Permission from AFPC.

4. When asked, "What do you think is most needed to help your community move towards your vision for food security?" Indigenous survey participants responded:

EDUCATION

- "Teaching the younger generation how to build a good smokehouse, how to use it;" "The knowledge of how to hunt and butcher" (n=5)

COMMUNITY INVOLVEMENT

- "Community buy-in and ownership—getting people to understand this [producing healthy food] is something they can do for themselves."

FUNDING

- "Financial assistance for community garden or greenhouse infrastructure" (n=3)

4b. Non-Indigenous participants responded the question "What is most needed to help your community move towards food security?" with suggestions such as:

EQUITY & ACCESS TO RESOURCES

- "There are a lot of food producers here, but not many people who are from underrepresented populations. They don't have the same access to knowledge, financing, tools, training, materials, and land to produce their own food."
- "I think that our community needs better communication. I feel like telephone calls or in-person communication works best around here. With new technology such as text messages or emails, or Facebook it seems more convenient for those with access to technology to get word out, but there is an older population here that relies on telephone and radio."

INFRASTRUCTURE

- "Community gardens, networking with Tribes to learn and teach traditional harvesting, more school growing/learning activities and abilities."

EDUCATION

- "Education and knowledge sharing. Access to good soil. Availability of raised beds. Community seed bank. And access to space/land"

2021 MICRO-FOOD SECURITY GRANT RECIPIENT

PROJECT: INCREASING HYDABURG'S CAPACITY TO STORE FRESH AND FROZEN FOOD

LOCATION: Hydaburg

MISSION AND ACTIVITIES: In 2021, Hydaburg Cooperative Association requested and received a $10,000 Micro-Food Security Grant from the Alaska Division of Agriculture to purchase and install two new freezers and coolers as well as to pay for electricity for the freezers. The freezers were needed to store fresh and frozen food for meals for Elders so that they did not have to cook mostly shelf-stable foods that were less nutritious. They also planned to use the freezer space for preparation for the Haida Culture Camp, which hosts 250-300 participants and "involves gathering subsistence foods (salmon, crab, deer, halibut, etc) for months in advance of the event."

Final Microgrant for Food Security Projects awarded 2021

5. Respondents were asked how they felt when they heard the following words and phrases:

- "Agriculture"
- "Traditional and Native Foods"
- "Farming and Ranching"
- "Fishing"
- "Hunting"
- "Gathering"
- "Food Sharing"
- "Buying Food from the Store"
- "Subsistence"
- "Ordering Food Online"

Survey participants were given the option to respond:

- "Applies to my life and/or cultural values;"
- "Does not apply to my life and/or cultural values;"
- "something I want to do more of," and;
- "something I want to do less of."

Figure 4.5 uses ring graphs to depict the percentage of total participants (n=19) who selected each of the above categorizations for each word.

Figure 4.5 *Southeast Region Attitudes About Whether or Not Agricultural, Subsistence, and Traditional Food Words are Applicable to Respondents' Lives and Cultural Values and Something They Want to do More or Less of*

WHEN ASKED, "HOW DO YOU FEEL WHEN YOU HEAR THE FOLLOWING WORDS?" 44% OF RESPONDENTS SAID "farming" was something they wanted to do more of, however, 44% said it did not apply to their life and/or cultural values. When asked about "gardening," 33% said it was something they wanted to do more of and 67% said it applied to their life and/or cultural values. The majority of respondents (>60%) said the words or phrases: "traditional/Native foods," "fishing," "hunting," "subsistence," and "gathering" all applied to their life and/or cultural values, and of those same terms, 25% or more indicated these were activities they would like to do more of. Half (50%) of all respondents said that "buying food from the store" is something they would like to do less of, and ~42% indicated they would like to purchase less food from online sources.

5b. When these questions were broken out by race, Indigenous participants' responses shared similar trends:

Food production activities like farming, ranching and agriculture and food procurement from the store or online sources were identified as least likely to apply to individuals' cultural values (See Figure 4.6). Inversely, the food production activities that Indigenous participants indicated as most in line with their cultural values were those that involved the harvest and processing of wild foods, along with approximately 13% who indicated gardening and agricultural practices aligned with their cultural values (see Figure 4.7). Similar to the pattern that emerged from the complete data set, Indigenous survey participants were more inclined to want to increase food production activities from wild food sources (see Figure 4.5). Indigenous participants also reported wanting to pursue more gardening (8%), composting (16%), and food preservation (16%) activities (see Figure 4.8). Over 40% of Indigenous participants reported wanting to purchase less food from the grocery store and online sources (see Figure 4.9).

Figure 4.6 *Southeast (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Words that are Not Applicable to Respondents' Lives and Cultural Values*

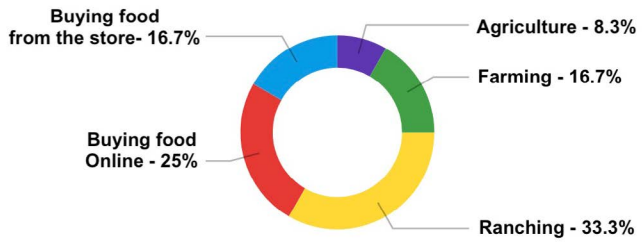


Figure 4.7 *Southeast (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Words that are Applicable to Respondents' Lives and Cultural Values*

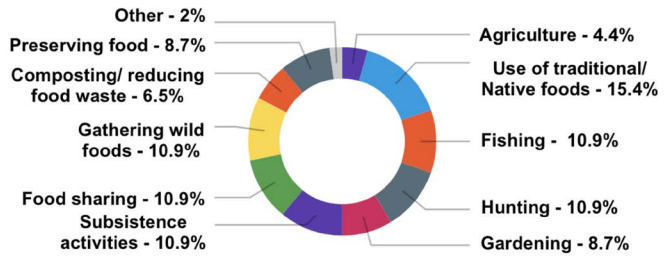


Figure 4.8 *Southeast (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Activities They Want to Do More of.*

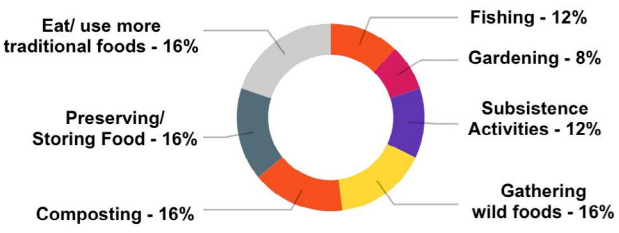


Figure 4.9 *Southeast (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Activities They Want to Do Less of.*

6. To the question, "Do you wish there was more food produced (grown and/or raised) in your community?" respondents indicated the following:

More than 94% of respondents indicated they would like more food produced in their community, and ~6% indicated that they would "maybe" like to see more food produced in their community. No participant indicated they did not want more food produced locally.

6b. Of the participants who indicated they would like to see more food produced locally, they were asked what increased local food production would look like to them.

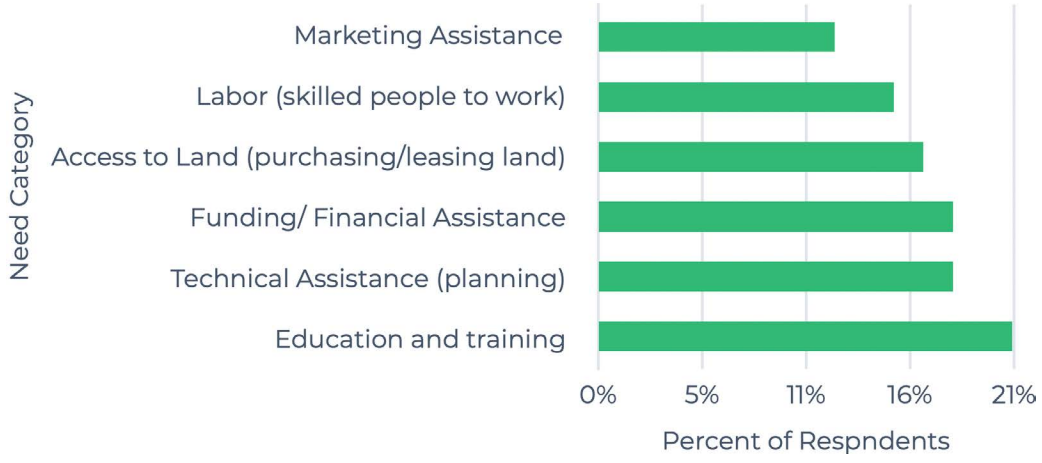
Survey participants responded with the following suggestions:

- "An area within the community to grow veggies and a greenhouse to support growing those veggies that do not grow well within a temperate rainforest."
- "More space for growing, access to training and education on how to grow your own produce."
- "A professional garden/farm we operate or can purchase food at; funding to support local growers and access to affordable arable land."
- "More food production in my community to me would look like more than just having a community garden; maybe having a food pantry for those who cannot afford things at the mercantile; or a program to help buy staples. The garden is a great idea, however, not many people know how to garden."
- "Networking with Tribes to learn and teach traditional harvesting, more youth education around learning harvesting and growing activities and abilities."
- "Produce more local vegetables at a small scale since our topography doesn't lend itself to large farms."
- "Convert yards to gardens, year-round growing space, farmers markets, and local seafood markets."

7. Survey participants were asked, "What do you feel you would need to start a farm, ranch or other food production enterprise in your community?"

Participants were allowed to select more than one option. Figure 4.10 represents the areas survey participants felt should be prioritized in order to start a new food production enterprise. Education was ranked the highest (n=14), with technical, and funding assistance tied for second most important (n=12). Access to land and labor were also ranked as highly important by over 50% of participants in order to start a food enterprise in Southeast Alaska.

Figure 4.10 *Southeast Region Farm, Ranch or Community Food Production Start-up Needs*



8. Survey participants were asked to provide up to five words or phrases that best described their personal food production activities in order to assess what food production terms and language is most culturally relevant to Indigenous food producers.

The following is a list and the number of occurrences each word or phrase was given:

- Harvesting/sustainable harvesting (n=7)
- Gardening (n=5)
- Fishing (n=5)
- Gathering (n=5)
- Processing fish and game (n=1)
- Berry picking (n=3)
- Hunting (n=2)
- Subsistence (n=4)
- Preserving food (e.g. canning, jarring, drying, freezing...) (n=3)
- Connection to land (n=3)
- Working in relationship with plants (n=1)
- Harvesting healthy food (n=2)

9. Survey participants were asked to select which Extension-based workshops relating to food they would be interested in attending if they were offered.

Participants were allowed to select more than one option and/or enter another topic. A majority of respondents (> 60%) indicated they would be most interested in workshops that focused on gathering and using native plants (n=13); traditional food preservation practices (n=11); traditional foods conservation and stewardship practices (n=11); and learning about traditional foods through Native language (language revitalization) (n=11). Other workshop topics that were ranked of interest by 48% of respondents were: seed starting, general gardening, traditional hunting and fishing techniques. One Southeast respondent included a suggestion (Native Plants as Medicine) for another topic that wasn't included on the list of possible workshop topics to choose from.

TRIBAL CONSERVATION DISTRICT: PRINCE OF WALES ISLAND

MEMBER TRIBES OF THE CHUGACH REGION: Tatitlek Village IRA Council, Native Village of Eyak (Cordova), Port Graham Village Council, Nanwalek IRA Council, Chenega Bay IRA Council, Qutekcak Native Tribe (Seward), and the Valdez Native Tribe.

MISSION AND ACTIVITIES: This Tribal Conservation District was established in 2014.

TOP 10 NATURAL RESOURCE RELATED CONCERNS (from: https://youtu.be/2sV2uFPYuRU)

1. Reduction in annual salmon returns
2. Herring, herring roe and herring roe on kelp stock
3. Sustaining clean drinking water and water rights.
4. A future role in natural resource co-management efforts with local, federal, private and state agencies.
5. The Sitka black-tail deer population and its ecosystem.
6. How the Endangered Species Act can affect customary and traditional harvesting and gathering.
7. The commercialization of natural resources.
8. Climate change and how it can negatively affect natural resources.
9. Paralytic shellfish poisoning and harmful algal blooms and how they can affect food safety and security.
10. Balanced and sustainable environment regarding effective removal of invasive or noxious plants, birds, wildlife and sea plants.

YOUTUBE: https://youtu.be/2sV2uFPYuRU

Interview Summaries

THREE INDIVIDUALS FROM THE SOUTHEAST REGION WERE INTERVIEWED FOR THIS PROJECT. TWO interviewees were Indigenous and both were working for their respective communities on indigenized food sovereignty projects including a guardian's program and a community garden. One interviewee was non-Indigenous but works for the Southeast Alaska Regional Health Consortium (SEARHC), the regional healthcare corporation and is married into an Indigenous family. The work each individual was involved in informed their views and responses, but similar themes emerged with regard to local food needs, and the types of agricultural or food production activities that would be most beneficial for the region.

Interviewers asked, what does it mean to you to be a food producer? And, do you consider yourself one?

One interviewee responded,

> *"I guess, in my mind 'producer' is such a foreign word, I would associate it with a big agricultural producer like they produce masses and masses of a crop, and where I'm nowhere near that. In my mind I'm more of a grower, or nurturer, I do produce food for the community, so I guess in that aspect, I am a producer."*

Another Interviewee responded,

> *"I myself am not so much a producer. I think the work I do creates space for our communities to be more able to harvest or produce food for themselves. It's creating a network of communities and individuals who are stronger and healthier together."*

And the third interviewee explained that they themselves were not a producer but had clientele who they considered producers based on the amount of berries they harvested and put up every year, those who harvested medicinal plants to make healing products, and communities who had their own greenhouse or gardens, like Craig, Klawock and Kake.

The interviewees were asked whether they thought agriculture or ranching practices were culturally relevant or had a place in their culture (Tlingit, Tsimshian). To this question they said:

> *"Tribal interest in growing more food is growing, more so in the last 5 years. Social media gives you a sense of how much all of it—gardens, farmers markets, little farms—have grown. It does seem like there are mixed perceptions, some people are for it and others are not, they feel it takes away from traditional foods. I personally think it's great to get more fresh and healthy foods into our communities."*

Another interviewee explained:

> *"I'm trying to figure that out right now, because of the effects of COVID-19 and how it plays and continues to affect our food system along with climate change. Food security is really important for me, for my community. I'm thinking about how we make sure we have quality food people want to eat so that regardless of what's happening out in the world, we're able to take care of our own."*

The third interviewee stated:

> *"There has been a significant increase in interest within the last three years—because I've really been trying to get the Community involved in the garden and there's a lot of interest all of a sudden, a lot of people want to do it, but they're just scared that they don't know enough or that they don't have the green thumb."*

When asked about what they thought of Tribes raising/growing more of their own food, and what they thought the appropriate scale of that production looked like, the interviewee who manages a community garden responded:

> *"I'm currently trying to get a feasibility study or a needs assessment done so I can figure out what our true community needs are, and then base the scale of the garden on that. I'd like to be able to get families involved in growing their own foods so it's not all on the Community Garden to produce, some families will be able to sustain themselves, and then the Community Garden would be able to produce fruits and vegetables to meet the gaps. I know it does need to be a little bit bigger than what I currently have—which is a 80'x40' high tunnel, and large 20'x40' greenhouse."*

Another interviewee described the success of the Taay Hít greenhouse, funded by the Bureau of Indian Affairs (BIA) and a planning grant from the Native American Agriculture Fund (NAAF), and how this model is one they see working for Tribes in Alaska—something that is *"Imagined, owned, and operated by tribes to create enhanced food security and food sovereignty for tribal citizens."* The interviewee read an excerpt from a recent Tlingit and Haida Tribal News article, quoting,

> *"With the lessons we learned, we're hoping to spread and grow the greenhouse program in new locations. Local foods are healthier because they haven't been processed and shipped. Local foods are a mitigation to all of our economic lows like climate change, a pandemic and supply chain issues."*

The third interviewee talked about the limited amount of land in their steep, mountainous community explaining,

> *"There isn't a lot of land available here for growing food, so it is something that we are interested in at the scale of community gardens, home gardens and in schools, but a quarter to a half-acre is more than enough land to grow on in a community of this size."*

When asked if they thought food production activities should be prioritized as a way to increase Tribal food sovereignty, one interviewee stated:

> *"I think most of the community's focus is on salmon because that's the community's big traditional food harvest, to get us through the winter months and spring months. I think it's become more important to people, because now we're really losing [fish] numbers and then also we don't have as many fishermen willing to give fish away because fishing is money and everybody needs that money. So, I think everybody's priorities are split—if I had to choose, I'd say gardening is important, but not as important as the salmon."*

Another interviewee said that they felt marine production, like kelp, and non-land-based foods production was definitely increasing and they felt positive about that as a way to produce food and income for the region. They noted that the focus on subsistence [wild-harvested] foods was a bigger focus for their community and felt that traditional growing and production activities could be done together, but that growing food was a big competition for time with subsistence actives, explaining:

> *"We could grow more, but need more education, more youth education especially, and looking at traditional harvesting and growing activities together, not separate."*

When asked what the largest barriers to food sovereignty in Alaska were, the interviewees cited the following topics:

- Intergenerational communication (elders and youth connecting and knowledge sharing)
- Access to land for food production, (i.e. The majority of our island is not accessible for development)
- The pandemic disruption to being able to gather and work on things in person
- Education, for youth and adults around both wild-harvesting and raising food
- Adequate, healthy Soil (natural capital)
- Cost of getting supplies or equipment to remote locations
- Climate change (i.e., unexpected droughts, loss of traditional foods like salmon and shellfish, berries not growing where they used to):

> *"As the climate changes, our waters are going to continue to get warmer, we need to figure out how that's going to impact our marine biology because a lot of our way of life is from the sea."*

- Financial capital—funds for projects, support for grant writers to bring in more money.

Interview Participants were asked what, if any grants or programs have been utilized for their work? The following are those resources, funding opportunities and/or programs that were listed:

- Bureau of Indian Affairs (BIA)
- Planning Grants from the Native American Agriculture Fund (NAAF)
- Tribal/Corporation Support (i.e. Sealaska)
- USDA NRCS—Regional Conservation Partnership Program (RCPP)
- Private Foundations: (i.e. Rasmuson and Edgerton)

> Local foods are a mitigation to all of our economic lows like climate change, a pandemic and supply chain issues.
>
> —INTERVIEWEE FROM SOUTHEAST REGION

ALEUTIAN, PRIBILOF ISLANDS & KODIAK ARCHIPELAGO REGION

Alutiiq, Unangax̂ & Sugpiax

Executive Summary

THE SURVEY WE COLLECTED WAS CLOSED EARLY DUE TO THE DESIRE TO NOT CAUSE CONFUSION AMONG residents in the region pertaining to multiple simultaneous survey efforts since the Aleutians Pribilof Islands Association (APIA) received a USDA Regional Food Systems Partnership Planning Grant to conduct a Food Security Assessment for the Region. As such, only three surveys were collected from the Aleutians Region for this study before it was closed. Therefore, we cannot make any conclusive statements about the region, and encourage readers to review the results from the APIA Food Security Assessment for a more robust understanding of the region's food security needs and goals (see Appendix B).

Of those individuals that did participate in the survey and interview, all indicated that small-scale food production using gardening and sustainable agricultural techniques were desirable for increasing access to healthy fresh foods in the Aleutians region. The region has a history of intentional stewardship of wild plant species (pre-contact) and gardening and small-scale farming (post-Russian-contact)[37, 38] which likely has bearing on survey and interview participant's interest in pursuing agricultural endeavors for increased food security. However, like those respondents from other regions, the interest in using gardening and agriculture as a means to increase the availability of fresh local food is desired only in tandem with activities around gathering and harvesting wild foods—not as a replacement for wild food in local diets.

The Aleutian, Pribilof Islands & Kodiak Archipelago region steering committee included personnel from the Aleutian Pribilof Islands Association (APIA). Surveys were distributed through the APIA network. Six individuals began the survey, however only a total of 3 respondents completed the survey.

Survey Results for Aleutian, Pribilof Islands & Kodiak Archipelago Region

THE SURVEY WAS COMPLETED BY RESPONDENTS FROM THREE COMMUNITIES, INCLUDING: NONDALTON (N=1), King Cove (n=1) and Port Heiden (n=1). Two out of 3 survey participants identified as Alaska Native and/or American Indian (n=2), and 1 preferred not to answer. Two respondents were female and one was male. The ages of participants ranged from 20–69 years old.

Survey Results Pertaining to Food System and Production Needs

Tables summarize the answers that survey participants provided by both providing the Thematic Code as well as a demonstrative quote from a particular survey participant that captures the essence of the code.

1. Survey respondents said that they were most satisfied about food in their community in the following ways:

ACCESS TO WILD FOODS

- The availability of substance foods: berries, waterfowl, caribou, fish, and crustaceans"
- "The ease of access to our subsistence berry picking sites" (n=3)

2. Survey respondents said that they were least satisfied about food in their community in the following ways:

LACK OF LOCALLY PRODUCED FOODS

- "The lack of farmers, limited access to fresh vegetables and fruit, especially in the winter months when freight is delayed and every two weeks in the community"

ACCESS TO RESOURCES

- "That our subsistence hunting seasons are tailored around non-subsistence users [sport fishing/hunting]"

3. To the survey question, "What do you feel are the biggest barriers/limiting factors for you to be able to achieve the percent you'd like to be able to hunt, fish, gather, grow?," interviewees responded with the following:

Specific examples of barriers to being able to produce or procure preferred foods:

CLIMATE CHANGE & TIME

- "Preserving food, harsh weather, adequate storage, and time necessary to harvest"

ACCESS TO WILD FOODS & NATURAL RESOURCES POLICY

- "Timing of open harvest periods set by management agencies doesn't align with the best time to harvest wild foods for their seasonality"

4. When asked, "What do you think is most needed to help your community move towards your vision for food security?," survey participant responded:

FUNDING

- "Financial support"

COMMUNITY INVOLVEMENT

- "Tribal corporation and community support"

EDUCATION

- "Having someone teach us Gardening skills"

5. Respondents were asked how they felt when they heard the following words and phrases:

- "Agriculture"
- "Traditional and Native Foods"
- "Farming and Ranching"
- "Fishing"
- "Hunting"
- "Gathering"
- "Food Sharing"
- "Buying Food from the Store"
- "Subsistence"
- "Ordering Food Online"

Survey Participants were given the option to respond:

- "Applies to my life and/ or cultural values;"
- "Does not apply to my life and/or cultural values;"
- "something I want to do more of," and;
- "something I want to do less of."

Figure 5.1 uses ring graphs to depict the percentage of total participants (n=2) who selected each of the above categorizations for each word.

Figure 5.1 *Aleutian, Pribilof Islands & Kodiak Archipelago Region Attitudes About Language Used to Describe Agricultural, Subsistence, and Traditional Food Activities*

Interviewers asked, "How do you feel when you hear the following words?"

One hundred percent of respondents who responded to this question (n=2) said farming and agriculture was something they wanted to do more of. One respondent indicated that ranching did not apply to their lifestyle, but the other indicated it was something they wanted to do more of. Both respondents said "traditional/ Native foods," "fishing," "hunting," "subsistence," and "gathering" all applied to their life and/or cultural values. Both (100%) of respondents said that buying food from the store is something pertains to their lifestyle (how they currently get food).

6. Respondents were asked whether they wished there was more food produced (grown and/or raised) in their communities (i.e. gardens, farms, marine-farming or ranches)?

One hundred percent (n=3) of the survey participants indicated they would like to see more locally produced foods.

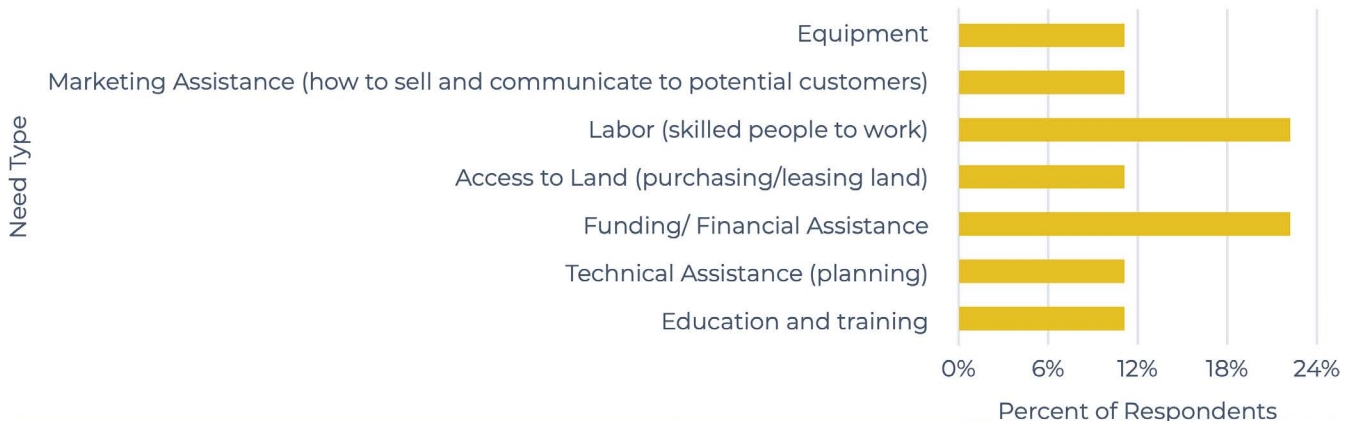
6b. Of the participants who indicated they would like to see more food produced locally, they were asked what increased local food production would look like to them. Survey participants responded with the following suggestions:

- "Greenhouses, tribal-ran community gardens that provide for elders and children"
- "Labor; people paid to produce food for the tribe"
- "More gardens"

7. Survey participants were asked, "What do you feel you would need to start a farm, ranch or other food production enterprise in your community?"

Participants were allowed to select more than one option. Figure 5.2 represents the areas survey participants felt should be prioritized in order to start farms, ranches, or community food production enterprises. Labor and funding were ranked the highest (n=2).

Figure 5.2 *Aleutian, Pribilof Islands & Kodiak Archipelago Region Farm, Ranch or Community Food Production Start-up Needs*



8. Survey participants were asked to provide up to five words or phrases that best described their personal food production activities in order to assess what food production terms and language is most culturally relevant to Indigenous food producers.

The following is a list and the number of occurrences each word or phrase was given:

- Harvesting (n=2)
- Growing our own food (n=1)
- Raising animals for food (n=1)
- Gathering (n=1)
- Sharing/Trading (n=1)
- Berry Picking (n=1)
- Hunting (n=1)
- Producing food for ourselves (n=1)

9. Survey participants were asked to select which Extension-based workshops relating to food they would be interested in attending if they were offered.

Participants were allowed to select more than one option. A majority of respondents (> 65%) indicated they would be most interested in workshops that focused on:

- Learning about traditional foods through Native language;
- Traditional food preservation techniques,
- Youth activities;
- Making sausage, and;
- Community gardening (n=2, respectively).

The rest of the workshop topics were selected as of interest by at least one respondent.

PROJECT: ALUTIIQ GROWN

LOCATION: Kodiak Archipelago

MISSION AND ACTIVITIES: Alutiiq Grown is a collective of tribal and community-owned farms located in the Kodiak Archipelago. Their mission is to increase the region's food security through providing fresh and local foods to Elders and community residents. From hydroponics and soil farming, to raising chickens, and more it exists to feed the people. Alutiiq Grown projects include regenerative mariculture, Qik'rtaq Food Hub, hydroponic development, and other farmer resources. This project includes farms both on and off Kodiak's road system and includes the communities of Larsen Bay, Old Harbor, Ouzinkie, Port Lions, and the city of Kodiak.

KEY PARTNERSHIPS: Funding, planning, implementation, and community partners include:

- Kodiak Archipelago Leadership Institute
- Native American Agricultural Fund
- U.S. Department of Health and Human Services
- Native Conservancy
- Alaska Ocean Farms LLC
- University of Alaska Fairbanks Cooperative Extension Service
- Kodiak Soil and Water Conservation District
- Outreach and Assistance For Socially Disadvantaged Farmers and Ranchers and Veteran Farmers and Ranchers (2501 Program)
- Oceanside Farms
- Vertical Harvest Hydroponics
- Natural Resources Conservation Service—Alaska

Image & text adapted from: https://www.alutiiqgrown.com/

*From AFPC Food Security Action Plan, Used by Permission from AFPC.

Interview Summary

ONE INDIVIDUAL FROM THE ALEUTIANS REGION WAS INTERVIEWED FOR THIS PROJECT. THE INTERVIEWEE was an Indigenous service provider for their community and active in a community started, and maintained small farm. The background of this individual informed the themes that emerged with regard to health and food needs, and the types of food production activities that benefit their community.

The interviewee stated at one point in the interview that the communities' response to challenges with regard to their food system can be summed up as, "We have always practiced resiliency—it's part of the process of being successful as a culture—it's all trial and error."

When asked, "What does it mean to you to be a food producer? And, do you consider yourself one? the interviewee responded,

> *"Yes, we are all producers here—with fish, moose, seal, berries, we gather and make a lot of food! The whole family is fishermen and women. All of this is our way of life."*

To the question, what does agriculture mean to you? The interviewee responded,

> *"It means growing the food we want to eat locally. Raising food and subsistence offset the cost of living here."*

The interviewee was asked whether they thought agriculture or ranching practices were culturally relevant or had a place in their culture (Alutiiq: Masrriq). To this question they said:

> *"The tribe started the farm and fish processor in response to caribou herd and salmon declines. We no longer have a commercial fishery, but we can bring fish in from elsewhere if we process it here. We're having to change the diet of our people because we need a substitute for traditional foods... we want those changes to be as healthy as possible"*

PROJECT: QAQAMIIĜUX̂—TRADITIONAL FOODS AND WELLNESS PROGRAMS AT ALEUTIAN PRIBILOF ISLANDS ASSOCIATION

LOCATION: Aleutian Pribilof Islands, Anchorage

MISSION AND ACTIVITIES: The goal of the Traditional Foods Program is to promote the use of traditional foods as part of a healthy diet and for overall well-being. Traditional foods must be celebrated. The harvesting, preservation, and preparation of traditional foods have been a vital part of Unangax life from time immemorial. Many traditional values are expressed through the harvesting and preparation of local foods: the importance of sharing, respect for Elders, helping and taking care of others, not being greedy, and taking care of the land, air and water, to name a few. The Traditional Foods and Wellness Programs work in tandem to carry out food-related initiatives and are dedicated to supporting the health and wellness of the Unangax people. Current projects are focused on working with Elders and community leaders to preserve traditional food knowledge and address food access and food security throughout the region. A new Federally Recognized Tribes Extension position has been established with funding from the Native American Agriculture Fund to help with these activities.

KEY PARTNERSHIPS: The Aleutian Islands extend westward over 1,100 miles from the southwestern corner of the Alaska mainland, and include the Pribilof Islands, which lie to the north. The Aleut people have traditionally been stewards of the land, coastal waters, and the resources in the Aleutian/ Pribilof Region. The 13 communities represented by APIA are Akutan, Atka, Belkofski, False Pass, King Cove, Nelson Lagoon, Nikolski, Pauloff Harbor, Sand Point, St. George, St. Paul, Unalaska, and Unga. Other communities that are a part of the Aleutian Chain, but not a part of APIA are: Adak, Amchitka, and Attu.

Text Adapted from: https://www.apiai.org/ community-services/traditional-foods-program/

*From AFPC Food Security Action Plan, Used by Permission from AFPC. *Image: Sally Swetzof in Atka*

When asked about what they thought of Tribes raising/growing more of their own food, and what they thought the appropriate scale of that production looked like, the interviewee responded:

> *"When the Alaska Department of Fish and Game did not allow hunting [of caribou], we had to provide a better diet for ourselves. The farm we started is a supplementary food security program for our community. The scale is relatively small. We need to stay manageable since there aren't that many people to manage the farm. We use everyday common tools and techniques and have had success with veggies like lettuce, peas, cabbage, rhubarb, cucumbers, and tomatoes and pigs, turkeys, geese, and rabbits."*

When asked if they thought gardening activities should be prioritized as a way to increase Tribal food sovereignty, the interviewee stated:

> *"Mostly people in the community are supportive of the farm, but we still miss caribou."*

When asked what the largest barriers to food sovereignty in Alaska were, the interviewee cited the following topics:

- Technical assistance for grants—supporting technical staff to run programs
- Human capital—need for more people with dedicated time and workforce development
- Fostering interest and engagement in youth and people from the community
- Seasonality—the competition of raising domestic foods with summer harvesting activities. Having a hydroponic system maintained at the school or community center where teachers and students can maintain it would be ideal
- Disruption of barges/transportation of food and supplies to community(ies)
- More training needed—interviewee took the Calypso Farm and Ecology Center's Indigenous Farmer Training Program in 2022, and felt Tribes need more opportunities like that.

Interview Participants were asked what, if any grants or programs have been utilized for their work?

The following are those resources, funding opportunities and/or programs that were listed:

- USDA Regional Food Systems Partnership Planning Grant (RFSPP)
- Calypso Farm and Ecology Center's Indigenous Farmer Training Program
- Alaska Division of Agriculture Micro-grant program
- Regional Cooperation (Aleutian Pribilof Islands Association) sponsorship
- Tribal Corporation sponsorship

We have always practiced resiliency—it's part of the process of being successful as a culture—it's all trial and error.

—ALEUTIANS REGION INTERVIEWEE

NORTHWEST & ARCTIC REGION

Iñupiaq & Inuit

Executive Summary

THE NEEDS AND BARRIERS TO TRIBAL FOOD PRODUCERS IN THE NORTHWEST AND ARCTIC REGION HAVE some unique characteristics to those of other regions in several ways. The high-latitude of the region caused many participants to cite both Arctic climatic conditions and geomorphological features (i.e. permafrost) as reasons why growing food using agricultural techniques was not feasible or desirable. The amount of time it takes to build, maintain a garden or farm; time conflicts with subsistence activities, the need for education and, or technical assistance, financial capital and access to appropriate land were cited as other challenges regarding growing/producing more in the NW region. Additionally, some participants noted they had never heard of terms like "agriculture," "composting" or "ranching," and a majority of survey respondents indicated these terms did not align with their cultural values or lifestyles; demonstrating the lack of cultural-relevancy for some forms of food production in the region. That being said, the history of reindeer herding in the region did come up in the interview and survey process. The practice of reindeer herding, while complicated by its colonial history, may play a role in generating renewed interest in an Indigenized-ranching model in the Arctic, involving northern-adapted species (like reindeer or yak) for the region. In the interview, the respondent commented how their maternal grandparents were reindeer herders after domesticated reindeer were introduced to the region. They talked about how it became a source of family pride, food and income.

There was greater familiarity and interest by the majority of survey respondents to do more small-scale and community-gardening as a means to produce some fresh produce. Respondents indicated gardening would be desirable to reduce costs of fresh produce since much of what makes it into rural stores is often close to spoiling or has already spoiled by time it arrives. Many included that any domesticated foods grown or raised needed to be done in tandem and complementary to wild harvested foods. Overall, participants tended to indicate they would prefer to do more wild food harvesting (i.e., hunting, fishing, wild gathering, etc.) over agriculture, farming, ranching activities in the future. There was a strong emphasis on increased support for harvesting traditional foods through means of access—both from a governance/policy, as well as, physical access perspective, respondents also cited education, financial assistance, and cold storage for wild-harvested foods in the region. No respondent felt grown or raised foods could replace wild foods culturally, nutritionally nor cost-effectively. The time it takes to harvest, cost (due to high gas and equipment prices), climate change, and increased pressure on wild species harvested for food and regulatory policies were the top reasons people cited in the reduction of wild foods harvests.

The Northwest and Arctic region steering committee included individuals from the Chukchi Campus, and the Maniilaq Association. Surveys were distributed via Chukchi Campus and Maniilaq personnel as well as via the Intertribal Agriculture Council (IAC) Facebook page. Surveys were shared with Alaska Native individuals, Tribal organizations and Tribal-serving organizations employees. Therefore, the demographics of survey participants is diverse (i.e. race, gender, age and individual versus service provider). One interview was conducted with an Indigenous Maniilaq Health Center employee.

Survey Results from the Northwest & Arctic Region

A TOTAL OF 32 RESPONDENTS FROM SIX DIFFERENT COMMUNITIES IN THE NORTHWEST AND ARCTIC REGION of Alaska participated in the survey, including White Mountain, Nome, Noatak, Noorvik, Kivalina and Kotzebue. A majority of responses (86%) were residents of Kotzebue (see Figure 6.1), which is a regional hub, the location of both the Chukchi Campus and Manillaq Headquarters, and is the second largest population in the Nome Census area. The race of survey respondents was more diverse than some regions surveyed. Of the Northwest respondents, 65% are Alaska Native and 45% are non-Indigenous but worked for Tribal-serving organizations, as such, survey results are analyzed both a complete data set, with some questions broken out by demographic to better identify Alaska Native needs and desires with regard to food production in the Northwest and Arctic region. Respondents were 87 % (n= 27) female, and 16% were male (n=5). Ages of survey participants ranged from young adults (19 years old) to elders (70 years+).

Figure 6.1 *Northwest & Arctic Region Communities Represented*

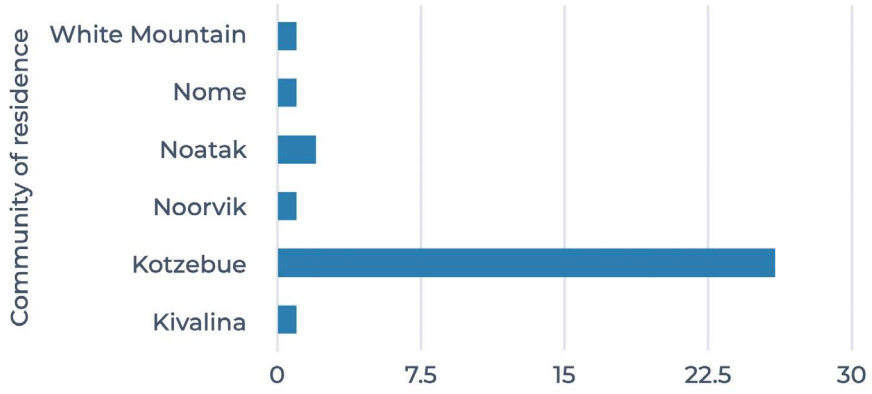


Figure 6.2 *Race of Northwest & Arctic Region Survey Participants*

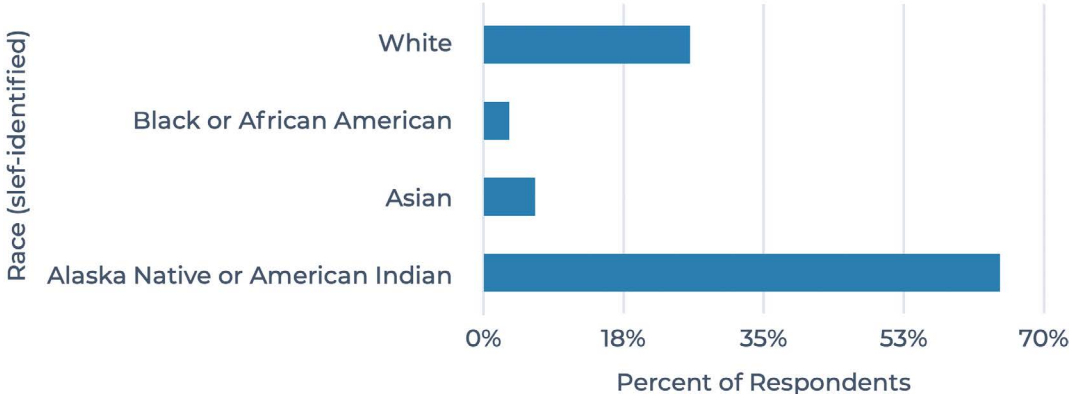


Figure 6.3 *Gender of Northwest & Arctic Region Survey Participants*

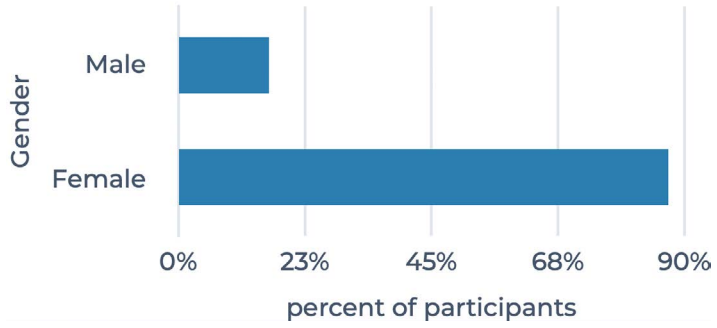
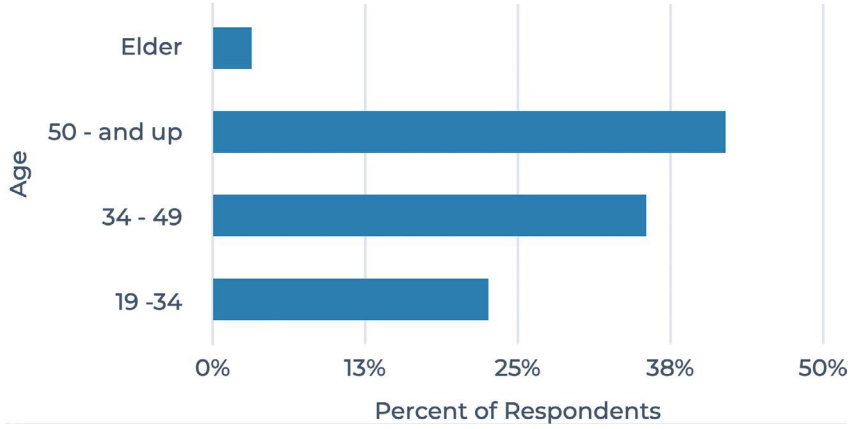


Figure 6.4 *Age of Northwest & Arctic Region Survey Participants*



PROJECT: PILGRIM HOT SPRINGS GARDEN

LOCATION: Approximately 60 miles northeast of Nome, near Mary's Igloo

MISSION AND ACTIVITIES: Pilgrim Hot Springs is the site of geothermal activity, which makes for a great garden opportunity! The hot springs are on a 320-acre property, located in remote Northwestern Alaska, nestled between Hen and Chickens Hill and the Kigluaik Mountain range. The sub-Arctic farm has been a site for agriculture and farming activities since the early 1900s. Because of the geothermal activity, the ground doesn't freeze at Pilgrim, which makes for perfect early planting. This is one piece of the puzzle for eco- and agritourism on the hot springs site, including historical and natural interpretation tours, cabin and tent camping, and a variety of events throughout the year.

With some revitalization efforts and a renewed desire for localized food security, Pilgrim Hot Springs "dug" back into gardening and food production fairly recently. From 2016–2018, a strong gardening effort was made at Pilgrim Hot Springs to grow local produce for the region. Many impressive vegetables were harvested to the delight of local customers. The gardens rested for a couple of years after this effort. In 2021, they tested crops and hired a full-time farmer to expand production and train locals who were interested in food security and farming.

KEY PARTNERSHIPS:

- Bering Straits Native Corporation
- Kawerak Inc.
- AmeriCorps Vista

Image: https://www.pilgrimhotsprings.com/the-garden

*From AFPC Food Security Action Plan, Used by Permission from AFPC.

Survey Results Pertaining to Food System and Production Needs

Tables summarize the answers that survey participants provided by both providing the Thematic Code as well as a demonstrative quote from a particular survey participant that captures the essence of the code.

1. Survey respondents said that they were most satisfied about food in their community in the following ways:

ACCESS TO MARKET FOODS

- “Pantry staples are usually in stock at the store: Rice, Flour, Sailor Boy Crackers, Peanut Butter, Jelly, Salt, Vegetable Oil, Eggs, Fresh Produce. These types of foods go very well with our traditional foods."
- “I am impressed by the variety and relative freshness of food available in the stores."
- “That [Kotzebue] has more than one option to purchase food” (n=5)

ACCESS TO WILD FOODS

- “Access to traditional foods"
- “Most satisfied that we still participate in subsistence activities including hunting, whaling, fishing and gathering”(n=3)

ACCESS TO WILD & LOCALLY PRODUCED FOODS

- “I am able to get fresh meat, fish, berries, and greens from the land. Able to grow fresh veggies in summer”

ACCESS TO WILD & SHARING NETWORKS

- “I am most satisfied with subsistence food in our community. Most of our hunters share their catch” (n=2)

2021 MICRO-FOOD SECURITY GRANT RECIPIENT

PROJECT: SALMON SEINE NET AND GREENHOUSE

LOCATION: Nome

MISSION AND ACTIVITIES: In 2021, Eva Dickson requested and received a $5,000 Micro-Food Security Grant from the Alaska Division of Agriculture to purchase a salmon seine net for her immediate family “to provide salmon to eat throughout the year.” The remaining funds were intended to be used on her greenhouse and the fruits and vegetables would be shared with family and friends.

Final Microgrant for Food Security Projects awarded 2021

2. Survey respondents said that they were least satisfied about food in their community in the following ways:

ACCESS TO FRESH FOODS

- "Not having fresh produce regularly available at our local grocery store;" "The store runs out any perishable foods fast;" "sometimes limited access to fresh fruit and even other staples especially bad after the pandemic started"(n=4)

HIGH COST OF FOODS

- "Cost of fresh fruit and vegetables;" "the prices of store-bought foods are so high, and quality is bad" (n=3)

PREVALENCE OF UNHEALTHY FOOD & ACCESS TO FRESH FOODS

- "The prices at the local stores for healthy food is so expensive and junk food is very cheap"

DIVERSITY OF FOOD AVAILABLE

- "Last summer during fishing season it was raining all the time so we did not get to preserve any dried fish for the winter"

HIGH COST OF LIVING

- "With the prices of food and gas going up it is hard now that we have to travel way up our river to get caribou, the most common food that our household eats" (n=3)

ACCESS TO RESOURCES

- "There is a large potential for local food market of some kind (gardeners, small production share or bake-sale level) and for improved security practices (i.e. like using the abandoned hydroponic units)—but little SUSTAINABLE support to make these things happen. The intermittent nature of initiatives makes it hard to 'invest' time in making anything work"

3. Survey question: "What do you feel are the biggest barriers/limiting factors for you to be able to achieve the percent of food you'd like to be able to hunt, fish, gather, grow?"

Survey participants cited the most common barriers as pertaining to climatic conditions, the expense associated with harvesting wild foods, lack of human capital (i.e., people with knowledge of harvesting practices to teach others, individuals to harvest food or time to grow food). The following quotes are specific examples respondents gave organized into the aforementioned categories:

CLIMATE CHANGE

- "Environmental unpredictability—the weather and climate changes from year to year" (n=5)

ACCESS TO WILD FOODS

- "Limited moose and muskox hunts, unreliable fish and crab availability"

COMMUNITY INVOLVEMENT

- "We need ways to share, barter, or buy more locally harvested food from those who are capable"

INFRASTRUCTURE

- "Lack of community green house or building to allow environmentally-appropriate agriculture;" "Having a big enough freezer to hold more subsistence foods at home and in community;" "Prices of materials for building infrastructure" (n=4)

EDUCATION

- "Lack of knowledge and practical application of hunting game; lack of knowledge on how to grow food"

TIME & HIGH COST OF LIVING

- "Lack of time—taking time off from work to do subsistence/growing food ends up costing money due to not working those days" (n=3)

> We need ways to share, barter, or buy more locally harvested food from those who are capable.
>
> —NORTHWEST AND ARCTIC REGION INTERVIEWEE

4. When asked, "What do you think is most needed to help your community move towards your vision for food security in your community?" survey participants responded:

EDUCATION

- "We need a place to gather and talk about healing, wellness and prevention. Teach our young children there is more to life than drinking and doing drugs and tie this to our culture and traditional foods;" "More people who are willing to show younger children how to hunt and process foods from the land and river [youth education];" "Need more education and assistance with growing own food, same with the traditional foods;" "More outreach [teaching people] the best and easiest way to preserve different foods" (n=7)

ECONOMIC INCENTIVE

- "Job offers/funded positions to get more people engaged with food production" (n=2)

ACCESS TO LAND

- "More land dedicated to food is necessary particular with our new location site that the village plans on relocating to"

NATURAL RESOURCES POLICY

- "Governance—Attention to conservation (prioritizing local subsistence hunters over out of state hunters);""More support for access to subsistence harvesting" (n=3)

INFRASTRUCTURE

- "Long-term winter food storage;" "We need a huge greenhouse that is available to community for members who do not have space or knowledge to grow more vegetables;" Improving our food system would include having food storage and a place to cut your meat to put away" (n=7)

COMMUNITY INVOLVEMENT

- "Increased community food production will encourage trading and sharing"

TECHNICAL ASSISTANCE

- "Someone to write grants and to manage and coordinate [them]"

5. Respondents were asked how they felt when they heard the following words and phrases:

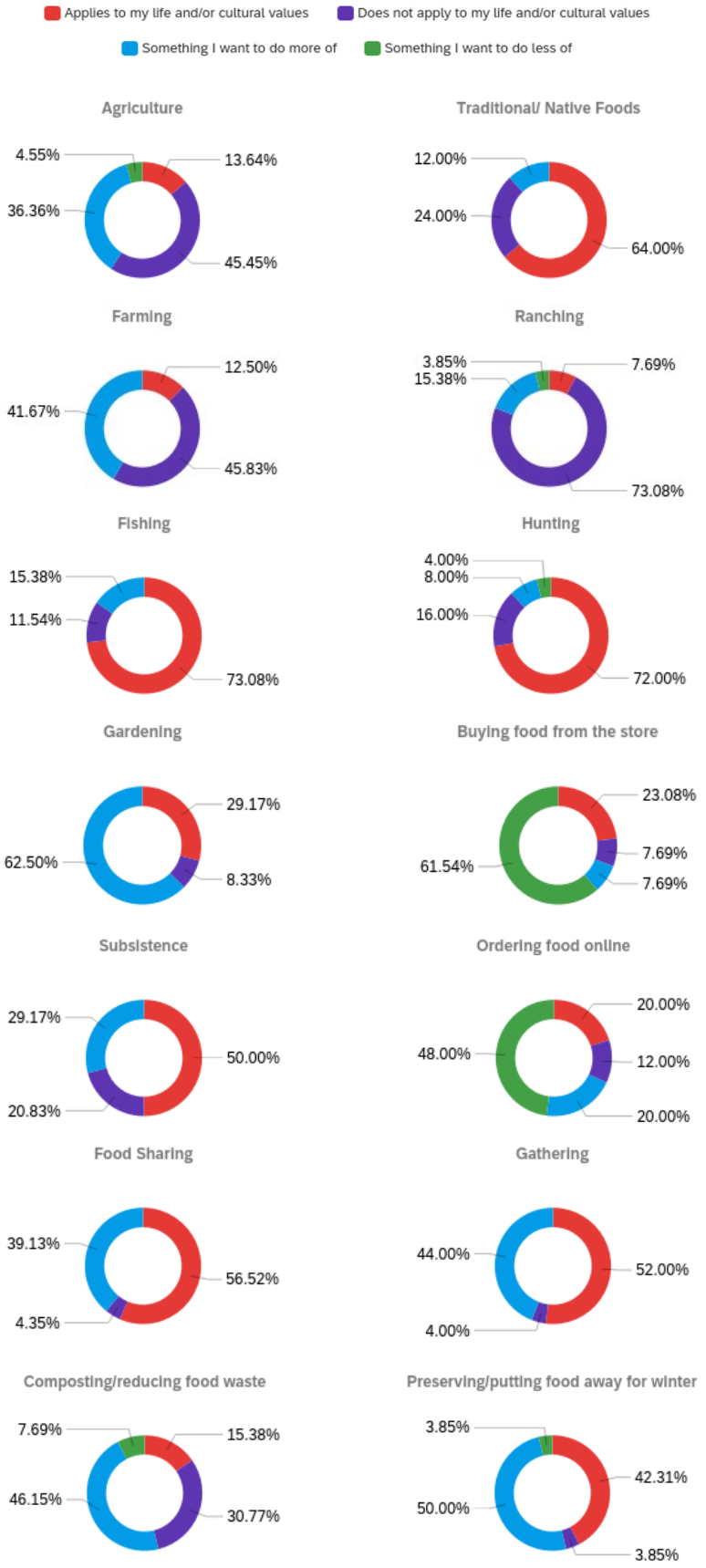
- "Agriculture"
- "Traditional and Native Foods"
- "Farming and Ranching"
- "Fishing"
- "Hunting"
- "Gathering"
- "Food Sharing"
- "Buying Food from the Store"
- "Subsistence"
- "Ordering Food Online"

Survey participants were given the option to respond:

- "Applies to my life and/or cultural values";
- "Does not apply to my life and/or cultural values";
- "something I want to do more of," and;
- "something I want to do less of."

Figure 6.5 uses ring graphs to depict the percentage of total participants (n=27) who selected each of the above categorizations for each word.

Figure 6.5 *Northwest & Arctic Region Region Attitudes About Language Used to Describe Agricultural, Subsistence, and Traditional Food Activities*



BASED ON THE ABOVE RESULTS, IT'S WORTH POINTING OUT A FEW TRENDS AT THE COMMUNITY LEVEL.

WITH REGARDS TO THE HARVESTING OF WILD FOODS (for instance: hunting, fishing, gathering wild plants), approximately 70% of respondents consistently expressed that these activities were part of their lives and cultural values. Participants indicated that respectively, harvesting traditional foods (12%), hunting (8%), fishing (15%), subsistence activities (29%), and gathering (44%) were activities that they wanted to do more of. Conversely, 61% and 48% of respondents want to buy less food from the store, and/or order less food online, respectively. Purchasing market foods (groceries) represents the largest category of what respondents from the Northwest and Arctic region would like to be less reliant on for sourcing foodstuffs.

WITH REGARDS TO THE TERM "AGRICULTURE," 36% of respondents indicated they would like to see more agriculture in their community, however 46% indicated that agriculture did not apply to their cultural values/lifeways. Four and-a-half percent indicated agriculture was something they wanted to do less of. The split of responses regarding the term "farming" was very similar to how individuals responded to "agriculture." To the term "ranching," 15% of respondents indicated they would like to see more ranching activities in their community, however 73% of respondents indicated that ranching did not apply to their cultural values/lifeways. Only 8% indicated that ranching had any relevance to their cultural values/lifeways. Interestingly, the results for the term gardening were much more favorable. A majority (63%) of respondents indicated they would like to see more gardening in their community, and another 30% indicated gardening activities were applicable to their cultural values/lifeways. Only 8% of respondents indicated that gardening did not have cultural or lifestyle significance to them.

WITH REGARDS TO POST-HARVEST FOOD-RELATED ACTIVITIES, "food sharing," "preserving/storing foods for winter," and "composting/reducing food waste," respectively, 57%, 42%, and 15% of respondents indicated these were activities they felt were part of their cultural values/lifeways. Notably, many individuals indicated these were activities they wanted to do more of: with 39% wanting to share more food, 50% wanting to preserve/store more foods, and 47% wanting to compost/reduce food waste. Only a small minority in each of the above categories indicated that these activities were not part of their cultural values of (approximately <5%) with the exception of composting in which 31% indicated this term was not culturally significant to them.

WHEN RESULTS WERE BROKEN OUT BY INDIGENOUS RESPONDENTS, results varied somewhat, but two general trends remained. Western food production methods were less culturally relevant, and wild food harvesting activities were most relevant, with a general desire to do more of the latter. To illustrate, a small percentage of Indigenous participants indicated that agriculture (3%), farming (1%), ranching (3%), or gardening (3%) was part of their cultural values or lifeways. Conversely, a much larger portion of respondents indicated greater cultural relevance of: hunting (19%), fishing (16.5%), traditional foods (17%), gathering wild foods (11%) and general subsistence activities (10%) (see Figure 6.6). In keeping with this trend, when participants were asked what food production activities they wanted to practice more of, agriculture, farming, and ranching were all ranked low (<7%) with the exception of gardening, which 18.6% of participants indicated they wanted to do more of (see Figure 6.7). Additionally, participants tended to indicate they would prefer to do more wild food harvesting (i.e., hunting, fishing, wild gathering, etc.) over agriculture, farming, ranching activities in the future. Many respondents (>50% total; >25% of Indigenous) indicated they wanted to purchase less food from the store or online. Citing the high prices, often expired, or poor state of perishable items and produce (see Figure 6.8).

Figure 6.6 *Northwest & Arctic Region (Alaska Native or American Indian) Attitudes About Whether or Not Agricultural, Subsistence, and Traditional Food Words are Applicable to Respondents' Lives and Cultural Values*

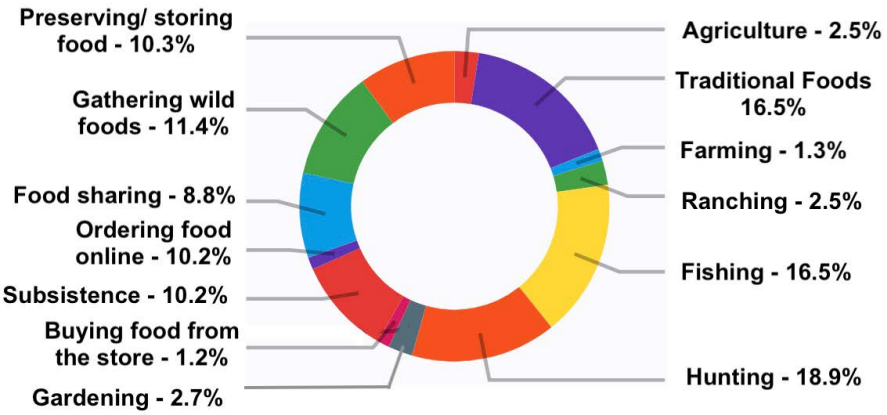


Figure 6.7 *Northwest & Arctic Region Region (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Activities They want to Do More of.*

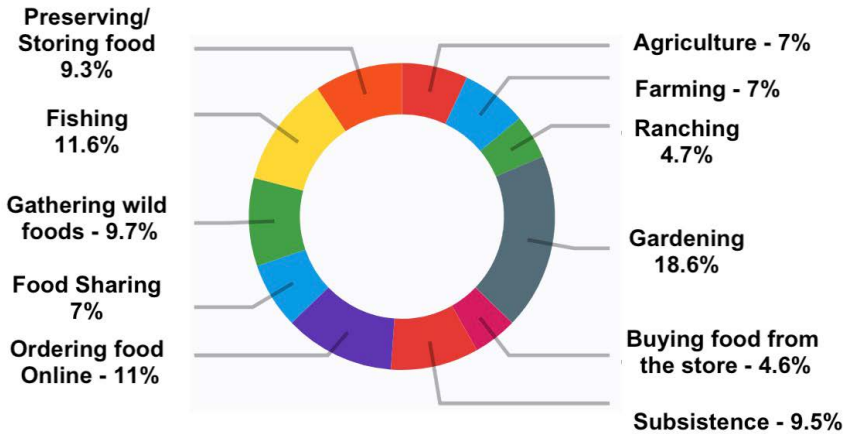
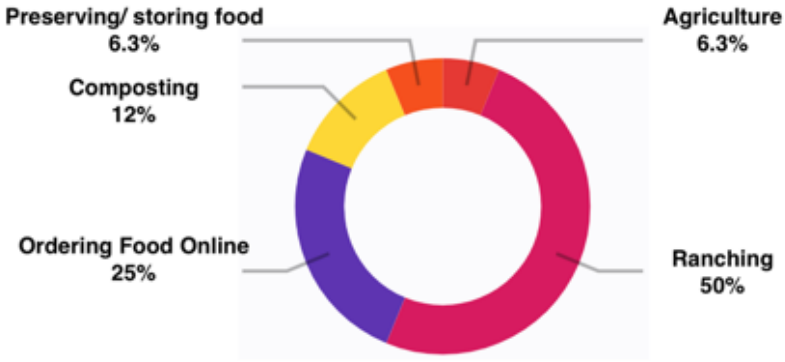


Figure 6.8 *Northwest & Arctic Region Region (Alaska Native or American Indian) Responses to Agricultural, Subsistence, and Traditional Food Activities They want to Do Less of.*



INDIGENOUS RESPONDENTS who selected they did "not want to see more of..." or "did not align with cultural values," explanations included:

- "I have never heard of ranching, agriculture, farming and composting... these don't mean anything to me"
- "Ranching and agriculture are 'large' activities that are neither part of my tradition nor particularly viable here"
- "Lack of knowledge about what farming or ranching consists of. My grandmother and mother had small gardens—that's more familiar"
- "Not interested in [agriculture, farming and/or ranching]"
- "I think farming and ranching wouldn't work well here. We have permafrost, and not many people are interested in that kind of thing"

WITH REGARD TO WILD FOODS Indigenous respondents stated:

- "I believe that a culture as strong and as old as ours has a lot of great knowledge teach about the land and how it provides year-round... we shouldn't need anything else if everything is in balance"
- "Connection with the land, seasons and each other. In Kotzebue, the common conversation is subsistence-based...in the post office, at the grocery store, on the street, one of the first things we talk about is what people are catching or gathering. It unites the community and keeps us healthy."
- "It's too expensive to live here without subsistence harvesting"
- "Having traditional/Native foods is a healthier way to live, it also connects you to the land and people through gathering and sharing with family/community."
- "It's a source of health, culture, sense of wellbeing, and our tradition"

6. Interviewers asked, "Do you wish there was more food produced (grown and/or raised) in your community?"

More than 86% of respondents indicated they wanted or would maybe want (13.8%) more food produced in their community. However, many cited the short growing season, harsh climate, financial cost of production in the Arctic, and lack of technical knowledge challenges to producing more food locally. For example, one respondent explained:

> *"We had Arctic Greens here in Kotzebue, but it was more expensive than the greens shipped in from outside. It would be nice if they were not so expensive if produced locally. I have tried to grow locally but it was way too much work for me, and not very successful. Kotzebue is cold and windy. Potatoes were the only vegetable I had any success with."*

2021 MICRO-FOOD SECURITY GRANT RECIPIENT

PROJECT: COMMUNITY HEALTHY FOODS PROGRAM—SUBSISTENCE AND LOCALLY GROWN VEGETABLES

LOCATION: Bethel

MISSION AND ACTIVITIES: In 2021, the Orutsararmiut Native Council received a nearly $10,000 Micro-Food Security Grant from the Alaska Division of Agriculture to provide Bethel with seeds, starters, fertilizers and tillers for rent; as well as meat processing equipment to more efficiently butcher moose for the community, in particular Elders, widows, and those who are disabled.

Final Microgrant for Food Security Projects awarded 2021

6b. Participants who indicated they would like to see more food produced locally were asked what increased local food production would look like to them.

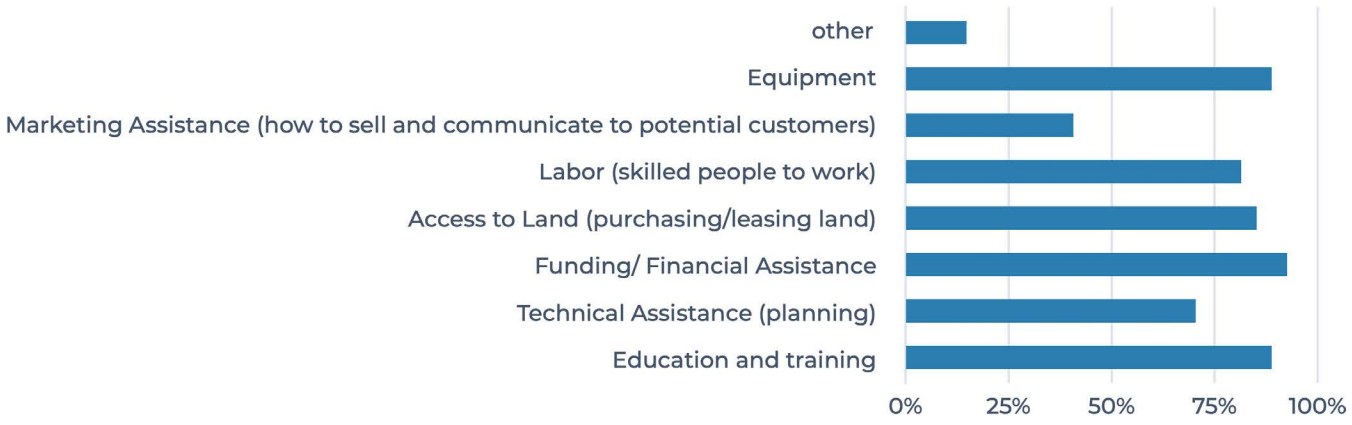
Survey participants responded with the following suggestions:

- "It would be amazing to have a large-scale local greenhouse for produce"
- "The hydroponic units were close to marketable—but required more consistent support. The Chukchi Campus Community Garden needs more support because there is greater capacity for more to happen there"
- "We would need High tunnels or other means to greatly increase food production and extend growing season for the community"
- "Greenhouses. Both commercial and personal"
- "A funded position to support local hunters who can harvest for the community members who cannot [harvest wild foods] for themselves"

7. Survey participants were asked, "What do you feel you would need to start a farm, ranch or other food production enterprise in your community?"

Participants were allowed to select more than one option. Figure 6.9 represents the areas survey participants felt should be prioritized in order to start a new food production enterprise. Funding and financial assistance was ranked the highest over 90% (n=25) of respondents, with education and equipment tied for the second-highest priority for 89% (n=24) of respondents. Access to land and skilled labor were also ranked as highly important by over 80% of participants in order to start a food enterprise in Northwest Alaska. Additionally, 15% of Northwest survey participants indicated other needs including: "Seeds and materials;" Appropriate production regulations;" and "Business planning for profitability" [Economic assessment].

Figure 6.9 *Northwest & Arctic Region Farm, Ranch or Community Food Production Start-up Needs*



8. Survey participants were asked to provide up to five words or phrases that best described their personal food production activities in order to assess what food production terms and language is most culturally relevant to Indigenous food producers.

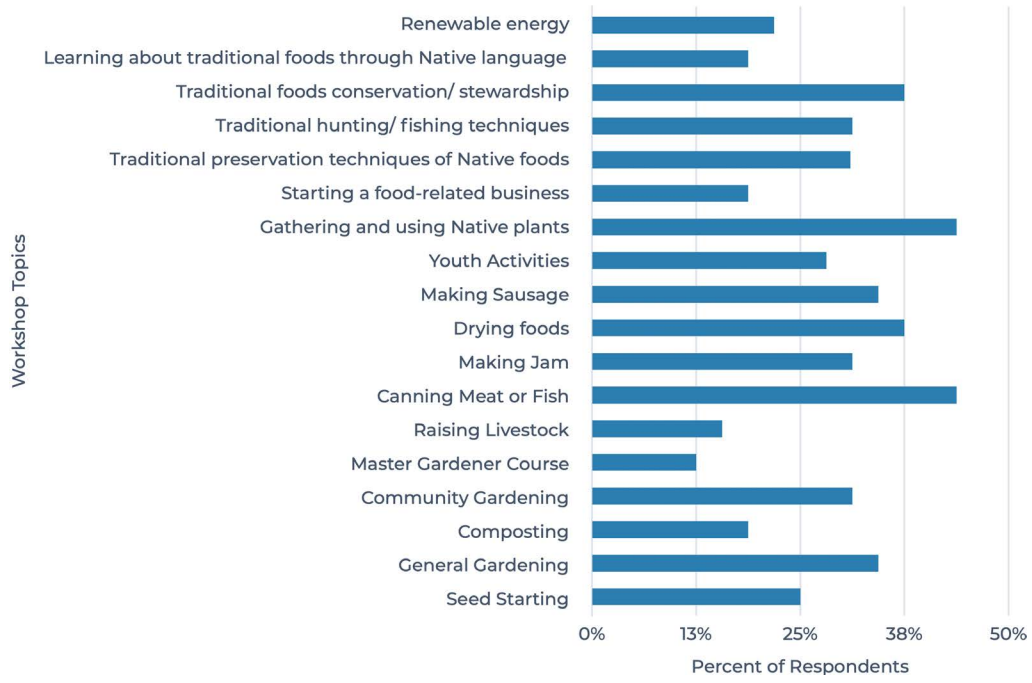
The following is a list and the number of occurrences each word or phrase was given:

- "Harvesting" (n=3)
- "Gardening" (n=4)
- "Fishing" (n=4)
- "Gathering" (n=3)
- "Sharing/Trading (n=2)
- "Going to camp" (n=2)
- "Hunting" (n=2)
- "Working in relationship with plants" (n=1)
- "Preserving food" (e.g. canning, jarring, drying, freezing...) (n=7)
- "Working together/teamwork" (n=2)
- "Preparing for winter" (n=3)
- "Traditional practices" (n=2)
- "Berry picking" (n=4)
- "Subsistence" (n=3)
- "Growing" (n=3)
- "Connection to/stewardship of land" (n=3)
- "Hard work" (n=3)

9. Survey participants were asked to select which extension-based workshops relating to food they would be interested in attending if they were offered.

Participants were allowed to select more than one option. Over 40% of respondents indicated they would be most interested in workshops that focused on "gathering and using wild plants" (n=14) and "canning meat or fish"' (n=14). Respondents were also highly interested in topics such as "Traditional stewardship/conservation practices" (n=12), "drying foods" (n=12), "making sausage" (n=11), and general gardening (n=11). Workshops pertaining to raising livestock (n=5) and Master Gardener Course (n=3) were ranked lowest in interest to Northwest survey participants.

Figure 6.10 *Northwest & Arctic Region Interest in Food-Related Extension Workshops*



Interview Summary

ONE INDIVIDUAL FROM THE NORTHWEST AND ARCTIC REGION WAS INTERVIEWED IN A SEMI-STRUCTURED FORMAT for this project. The interviewee was an Indigenous Maniilaq Health Center employee. The individual's profession and experience growing up in the region informed their views and responses. Notably, they felt agriculture was not an ideal solution for increased food security in the region, due to the environmental conditions, effort, and competition for time and resources agriculture requires. They did see the husbandry of northern animal species (like reindeer) as a possibility for increasing food security and contributing to the local economy. The quotes that follow are specific examples the interviewee gave with regard to certain questions.

The interviewer asked, "What does it mean to you to be a food producer? And, do you consider yourself one?"

The interviewee responded,

> *"Producing is making [food], we don't grow it but we harvest berries, greens, meat and fish. Then made into ready-to-eat foods... yes by the USDA definition [$1000 or more of product produced during a year] we are definitely producers."*

Question: What does agriculture mean to you?

The interviewee responded,

> *"[Agriculture] makes me think of land—getting food from land, and taking up a lot of space. It's not something we could do a lot of because of permafrost and the long winters."*

The interviewee was asked whether they thought agriculture or ranching practices were culturally relevant or had a place in their culture (Iñupiaq). To this question, they said:

> *"Yes, it is culturally relevant. My maternal grandparents were reindeer herders. They raised and herded the animals most of their lives—it was something that was brought in [by European settlers] that the community adopted. There are no herds left around here right now, but it was something my grandparents and mother talked about with pride. It gave them a source of food and income."*

When asked about what they thought of Tribes raising/growing more of their own food, and what they thought the appropriate scale of that production looked like, the interviewee responded:

> *"A big part of our culture revolves around how we harvest food—that's mostly subsistence [wild] foods—we can only grow a small amount here. The challenge is time and space. Gardens here are small, maybe 3 x 3 feet [beds]. The cost of getting materials up here; the time it takes to get ready, the time to take care of [the garden], and time it takes away from other things for the amount of food you get is not really worth it... but having some root crops, like potatoes is nice."*

When asked if they thought food production activities should be prioritized as a way to increase Tribal food sovereignty, the interviewee stated:

> *It takes a lot of planning and teamwork to make sure a garden is maintained; summer is the season when people come and go to harvest other foods. The difference is taking care of a small patch of land—or going to harvest off the whole landscape that takes care of itself... It would help if the Tribe, Corporation or College would support a community garden—like paying someone to keep it going. That would be a good priority and help"*

When asked what the largest barriers to food sovereignty in Alaska were, the interviewee primarily cited climate change and how it is affecting wild food species like caribou (i.e., migration routes changing), berries and plants (i.e., abundance and distribution) and how it is making environmental conditions more unpredictable.

Interview Participants were asked what, if any grants or programs have been utilized for their work?

The following are those resources, funding opportunities and/or programs that were listed:

- The Reindeer Research Project (UAF)—historically
- Regional Corporation (Maniilaq)
- The Chukchi Campus (UAF)—Food Security and Sovereignty Project

INDIGENOUS FOOD LEADER: CHAD NORDLUM

I AM NOT A FARMER. I GREW UP IN KOTZEBUE, ALASKA. FARMERS DO NOT COME from Kotzebue. Snow mobile racers, dog mushers and fishermen come from Kotzebue, but not farmers. Hunting and gathering are the traditional ways of the Inupiaq people but the Inupiaq have always been adaptable. Kotzebue does have a small gardening community, as do other villages in our region. In fact my great-grandfather, who came from Michigan, was well known for his garden on Front Street in the early nineteen hundreds. He grew cold weather crops like turnips. My grandfather also had a garden every summer as he got older, using a retired boat as a raised bed.

Still, I did not begin gardening until I returned to Kotzebue nearly four years ago. I started mostly because I enjoyed the idea of growing food above the Arctic Circle in a challenging environment. But I also worried about our food security, all fresh produce comes from outside of Alaska by the most inefficient and costly means (in terms of both environment & money). I began with a small garden, added two raised beds and now I am experimenting with greenhouses. What I have realized is that it is possible to grow a variety of things in our challenging environment, it requires a lot of work, but it can be done.

Now that I realize that growing is possible, it only makes sense to produce as much produce as we can locally. That means starting a farm. The ideal would be that the cost of food could go down and food quality rise at least seasonally. There are many challenges to starting a farming operation including acquiring suitable land, finding tools & equipment where none exists and lack of infrastructure to support a farming operation despite these challenges I believe that there is a huge opportunity in farming in this region. Besides being profitable farming would help the economy by keeping more money local, not to mention having better produce available will improve the health and wellness of the people of the region.

What I hope to get from going to Calypso Farm is to gain knowledge of a working farm. Being in Fairbanks, I believe that the climate is similar to some of our upriver villages, the operation might translate closely to what could be done in villages like Kiana, Ambler or Kobuk. I have never been on a working farm so there is a huge knowledge gap that needs to be filled. In the near future I hope to identify land near an upriver village suitable and available for farming. Most likely it will require negotiation with the regional corporation or other entity. I do have land available and there are areas that are suitable for growing, but it is hard to get to with no roads and being about 30 miles from any village. Logistically I don't know if I can develop that area and keep my job. While I am trying to solve this puzzle I plan to continue and expand my subsistence gardening here in Kotzebue. I also will continue to be in contact with some of the local gardeners and sharing ideas and learning.

Although I am not a farmer now, I do hope to be someday.

*This project was supported by the Beginning Farmer and Rancher Development Program of the National Institute of Food and Agriculture, USDA, Grant # **2010-49400-21719**. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author (s) and do not necessarily reflect the view of the U.S. Department of Agriculture.*

INDIGENOUS FOOD LEADER: NASUGRAQ RAINEY HOPSON

We do as much as we can to preserve traditional Inupiaq values and knowledge this way.

—RAINEY HOPSON

NASUGRAQ RAINEY HOPSON IS INUPIAQ, BORN in Utqiagvik and raised in Point Hope, Alaska, where her mother was from. She lives in Anaktuvuk Pass, Alaska, where her husband is originally from. She and her family live a predominantly subsistence life, which means they harvest animals and plants from the wild of the Arctic for a good portion of their food. "We do as much as we can to preserve traditional Inupiaq values and knowledge this way." She also owns and runs a small seasonal agricultural business out of a high tunnel called *Gardens in the Arctic*.

Rainey said her journey into growing food started when her doctor told her she needed to eat more healthfully. When she started to look at the options available to her in the village store, and the cost of importing fresh and healthy food from Fairbanks, she realized her options were slim. So she said to herself, "You know what? I'm going to try and grow something here!" Rainey said the difference in Anaktuvuk Pass is that it gets really hot in the summer (compared to the Point Hope). She built garden boxes, inspired by her step-grandmother, who was a gardener in Oklahoma during the Great Depression.

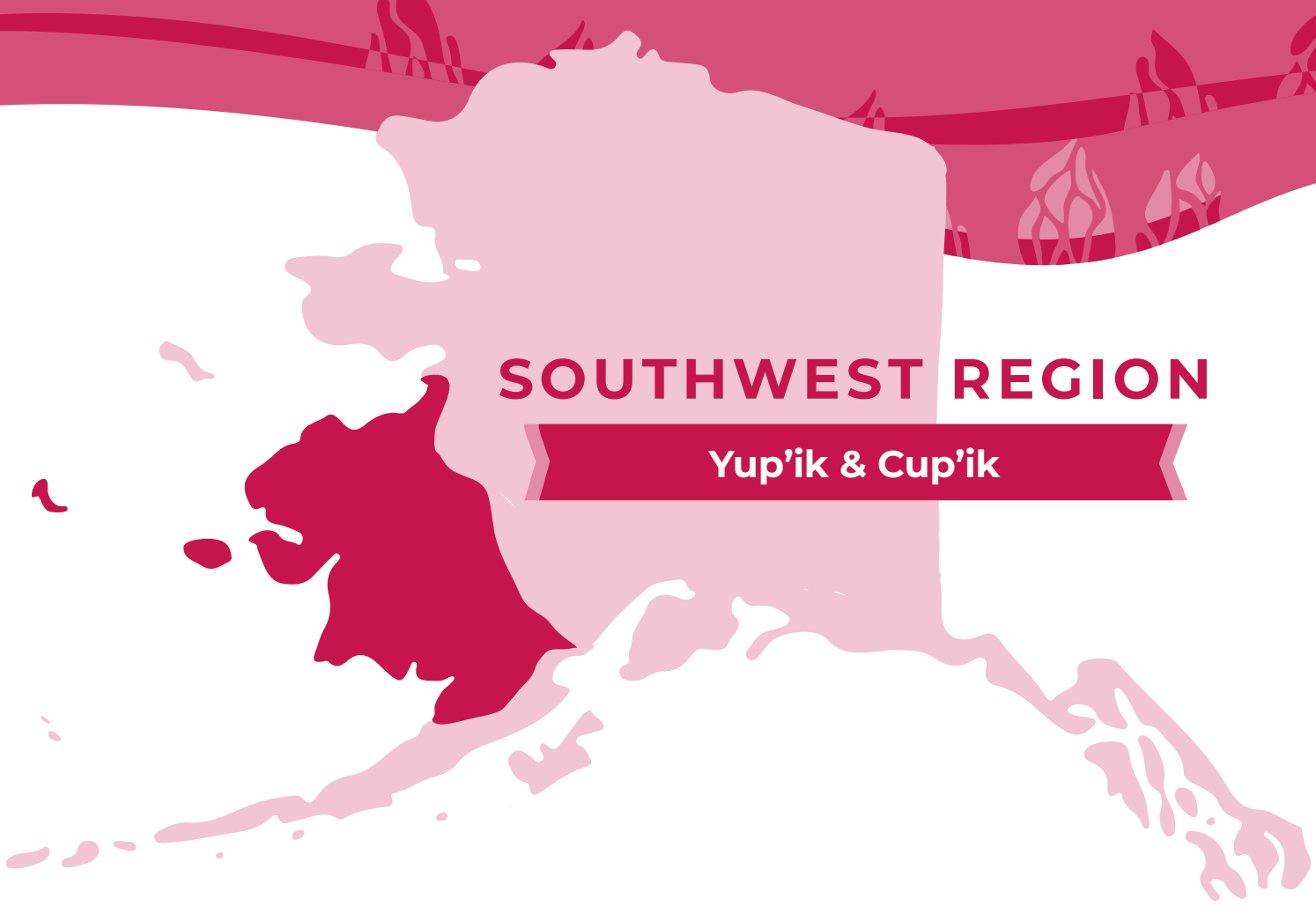
She said, "a garden saved her family of 14 people during that time." Rainey and her siblings went to visit her every summer, and that's where she learned the basics "through osmosis" she said, "how to plant, compost, take care of chickens and smoosh slugs!"

When she decided to try gardening for herself, Rainey said there was not a lot of research or information available about how to grow things in the Arctic. She read everything she could, then she built boxes and did a lot of trial and error. Rainey said the first year she "collected dirt, put it in boxes, planted seeds, and everything died." She describes herself as having a stubborn streak and decided to learn more and keep trying. After two to three years, she learned how to successfully grow lettuce and leafy greens — even tomatoes!

Neighbors started noticing what Rainey was growing and asked if they could buy or trade for some of her vegetables. According to Rainey, "that's how it all started." Rainey put in extra beds and started a Go Fund Me campaign (after her Native corporation, Arctic Slope Regional Corporation denied her initial request for funds) to be able to build her garden.

She raised enough money to buy Earth Boxes, fertilizer and seeds, and asked people in her community if they would like her to show them how to grow things for themselves. After her initial success raising food and funds for her work, Rainey received support from ASRC to further develop her farm, and bought a high tunnel. Rainey is also now a consultant for the National Science Foundation Permafrost Grown research project. She receives support for her work and provides input on high-latitude agricultural research.

Now, she said, there are "a few families that are really into it and grow food for themselves," but she said her work is "mostly getting people acquainted with growing food, knowing how to do it, and knowing what to do with what they grow." Rainey said she strives to blend her traditional values and Inupiaq ways of life with gardening, though she admits that she doesn't "go out" for things as much in the summer because of having to take care of the garden. She explains that the payoff is seeing youth engage with growing and eating healthier foods. Rainey has been selling produce for more than eight years. She said she does it because she loves plants, but also because "it's like a community service to me. I'm part of this community, and I should be doing something to contribute."



SOUTHWEST REGION

Yup'ik & Cup'ik

Executive Summary

WE WERE UNABLE TO CONDUCT SURVEYS IN THE SOUTHWEST REGION, WHICH ENCOMPASSES COMMUNITIES in the Bristol Bay and the Yukon Kuskokwim river delta and mountain regions. The population of the Southwest region, not including the Aleutians West and East, is 33,245 with 2020 Census estimates that 70-90% of the population are Alaska Native identifying.[39] Based upon knowledge of the region's geographic location and by reviewing publications regarding subsistence/agricultural activities in the region, potential needs and barriers to food processors in the region may overlap with the needs of the Northwest & Arctic; and Aleutian, Pribilof Islands & Kodiak Archipelago Regions.[40] The latitude of the region indicates both Arctic climatic conditions and geomorphological features (i.e. permafrost) to be a challenge for growing food using traditional, western agricultural techniques. Additionally, the amount of time it takes to build, maintain a garden or farm, time would conflict with subsistence activities, particularly with salmon harvests throughout the summer and fall months.

The most recent food security analysis by the Alaska Department of Fish and Game (ADFG) found that for 1,113 households in 25 Yukon and Kuskokwim River communities for study years 2009, 2010, and 2011, 77% of households were food secure, 11 percentage points below the USDA findings for Alaska overall in those years.[41] In the Southwest region, ADFG estimated that 121% of protein intake and 18% of daily caloric intake were from wild-harvested foods.[42]

In place of a survey analysis, we have provided several resources describing agriculture and traditional harvest/subsistence practices in the region. The studies we cited below and in appendix A, demonstrate the importance of supporting community-based agriculture and/or traditional harvesting practices for both food security and overall community wellness.[43] [44] [45] [46] [47]

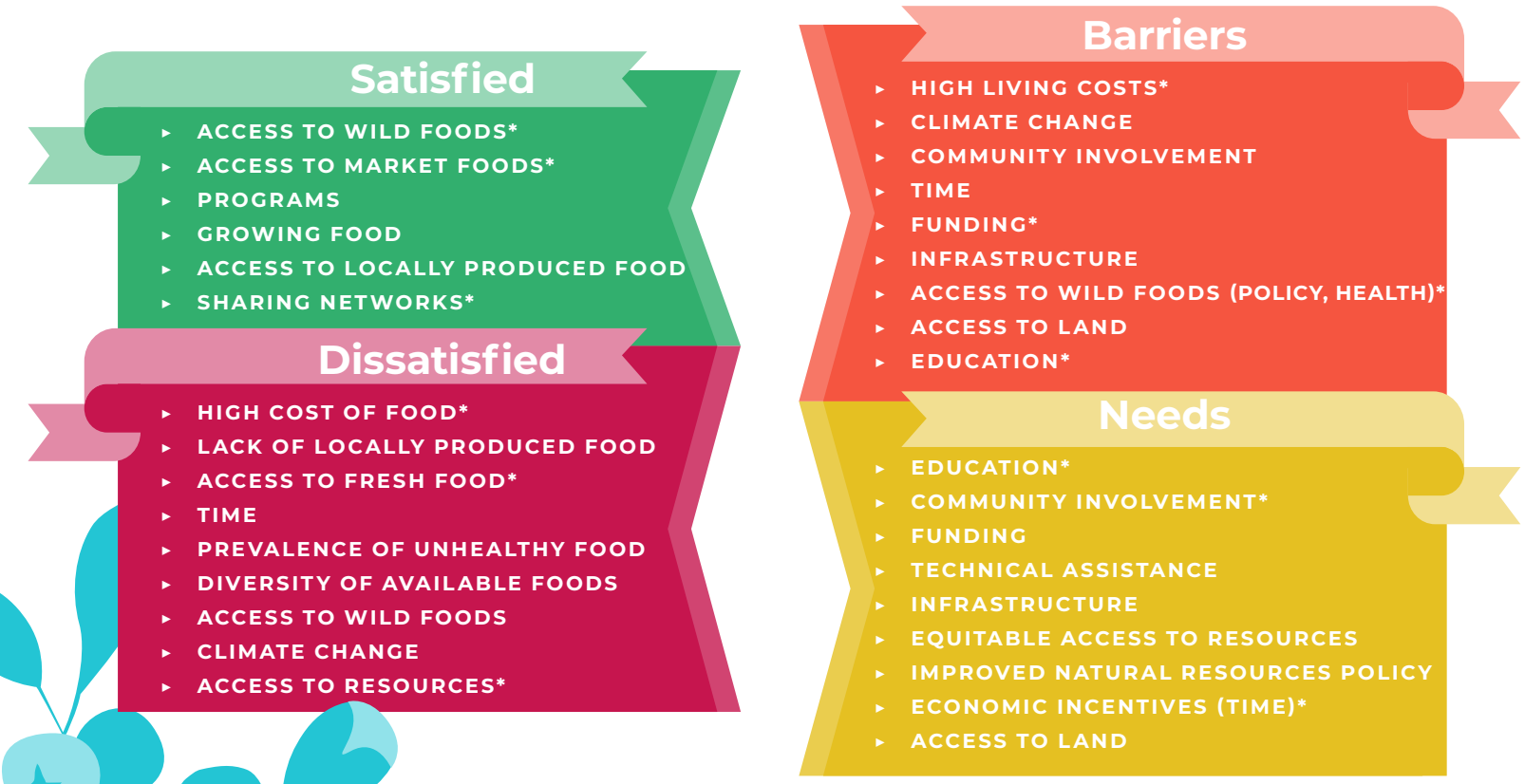
Discussion: Analysis of Surveys and Interviews

IN THE PROCESS OF ANALYZING SURVEY AND INTERVIEW RESULTS, WE DEVELOPED CATEGORICAL CODES based on the words, insights and experiences research participants shared with us, and from those codes identified Emergent Themes. The following is a brief description of the most common emergent themes with regard to satisfaction, dissatisfaction and the needs of, and barriers to tribal food producers. These themes feed directly into the recommendations that are made in the next section of this report.

The trends we observed in the survey and interview data indicate that while there is a desire to include more locally grown (Tribally grown) foods into Indigenous food systems, those efforts are often limited for a variety of generalizable reasons across all regions surveyed. Based on analysis of the emergent themes, the single greatest source of food system satisfaction among research participants was: access to wild foods, followed by access to locally produced foods, access to market foods, and sharing networks. meanwhile, the greatest sources of dissatisfaction included: access to fresh foods, high cost of food, and access to resources (e.g. built, natural and financial capital).

With regard to themes pertaining to the barriers and needs identified by research participants, it became clear that there was a great deal of overlap between barriers to increased/successful food production and the needs of Tribal food producers (see Figure 7.1). The following is a summary that further describes the types of challenges or needs with regard to the most-cited themes from this research.

Figure 7.1 *Emergent Themes of Satisfaction and Dissatisfaction as Well as Needs and Barriers to Food Security and Sovereignty in Alaska from this Research.*



Emergent Themes

PIECES OF TRANSCRIPT FROM RESEARCH PARTICIPANTS WERE INCREASINGLY MERGED AND ABSTRACTED to develop this final list of emergent themes. The most prominent themes (most cited) for each of the four above categories (satisfied, dissatisfied, barriers and needs) has an asterisk after them.

Education

The knowledge and skills required to grow and raise foods that are not part of a traditional or wild-foods based diet are often needed to further engage, grow and utilize more domestic foods.

High Cost of Living

Obtaining supplies, equipment and materials that aid in more local food production was cited repeatedly as the greatest barrier to starting a new food production endeavor (for either domestic or wild foods).

Time

The ability to take or dedicate the time necessary to produce food. This is often a conflict for both wild food and domestic food production—individuals either not being able to take time from their jobs, raising families, or having to choose one priority over another (i.e. to grow a garden or spend summer months harvesting wild foods). One Interviewee expressed:

> *"It takes a lot of planning and teamwork to make sure a garden is maintained; summer is the season when people come and go to harvest other foods."*

Infrastructure

Infrastructure for food production, storage, processing, etc. is a consistently cited challenge with regards to increased local food production and food sovereignty efforts in rural Alaska communities. For instance, many respondents cited the need for greenhouses, raised beds, or cold storage facilities to meet the needs of community efforts to grow, raise and harvest more food.

Community Involvement

In every region surveyed, participants noted that producing food takes time and more effort than one individual is able to accomplish. Some individuals indicated that a viable solution to this perennial challenge would be to create (fund) positions where individuals from the community would be compensated to maintain food production (e.g., grow, hunt, fish, and gather) and distribution for the community.

Funding

Efforts to create food sovereignty movements in a rural community are often borne of the passion of one or a few individuals. Many of these programs or efforts end if those individuals are not able to physically or otherwise sustain their efforts. There are increasing cases of food sovereignty programming that have received more stable funding through programs like Natural Resource Conservation Service, funding from Tribal or regional Corporations or regional health corporations. Identifying more stable sources of funding, supporting, and making more programs available that do provide start-up funds for local Tribally-run food movements would address a major need in many communities looking to start some kind of food production endeavor.

Climate Change

Variability in the seasons, changing weather patterns and the manifestation of those changes in plant and animal populations is something that many participants cited with regard to why there is now a greater need to grow/produce more food within their communities and regions. Being that the greatest source of food system *satisfaction* individuals cited was the access to wild foods, these changes are extremely alarming and disheartening to many Tribal food producers (harvesters).

Throughout the entirety of this research (working with steering committee members, survey and interview participants) one very clear and critically important point was made over and over again, that using gardening and western agricultural means to increase the availability of fresh, healthy food is desired only in tandem with activities around gathering and harvesting wild foods. Put another way, no individual indicated that growing food could or would sufficiently serve as a replacement for wild foods in Indigenous diets. This point was made repeatedly during the research process, but summed up eloquently in quotes from interviewees in Southeast and Interior Alaska, stating:

> *"If I had to choose, I'd say gardening is important, but not as important as the salmon," and; "It is not new or foreign to us to be food producers, our grandmothers had gardens, but there will always be a reliance on traditional foods."*

To drive the point home, some participants who are in favor of local food production through means of growing food, are simultaneously concerned about what increased western agricultural production techniques might mean for the health of wild food populations. To once again highlight a quote from one of the Interior Alaska interviewees, they expressed:

> *"with agriculture, and the development of this land, I hope we are intentional about making sure that whatever we do is sustainable and has a low impact. For example, with the Nenana-Totchaket sale, I'm really anxious and nervous to see how people develop that land because there is a potential for it to be harmful... a lot of people in my community harvest food every year from that area, and for me, it breaks my heart to think that we could be risking these other [wild] food sources when we don't have salmon right now."*

These quotes demonstrate how the center of Indigenous food production and sovereignty *is* wild foods, and the priorities of tribal food producers may evolve to feature more grown/raised foods, but that these strategies to improve food sovereignty will neither nutritionally or culturally provide a replacement for wild foods. What we can learn from this research is that to be an Alaska Native food producer does not necessarily mean one who engages with intensive western-agricultural-style food production; it may be individuals who harvest, gather, and provide for their communities in a variety of ways. This definition is further demonstrated in the following quote from a local food initiative leader who stated:

> *"...in my mind 'producer' is such a foreign word, I would associate it with a big agricultural producer like they produce masses and masses of a crop, and I'm nowhere near that. In my mind I'm more of a grower, or nurturer, I do produce food for the Community, so I guess in that aspect, I am a producer."*

This sentiment demonstrates the mismatch that can occur with the language that is used around food production in the realm of federal, technical or policy programming versus how Indigenous food producers or harvesters perceive what they do.

To this point, one of the survey questions asked participants to provide words that they use to describe their food production activities and means. Of 80 survey participants, only one respondent used a word/phrase ("raising livestock") that is more recognizable as agricultural in nature. Many participants[34] across all regions used the term "gardening" or "growing" to describe their food production activities, but the largest single used

word among Indigenous food producers surveyed[38] was “harvesting.” The word harvesting was associated with other words such as “sustainable," “traditional," “family," “wild” or associated with the actual resource they were harvesting (e.g. “fish," “moose," “plant-relatives," “plants I tend," etc.). Participants also used the word “gathering” in large numbers.[21]

The example above demonstrates how terms that are often used in federal funding programs and opportunities meant to increase food production, security and even Tribal food sovereignty use language most familiar to western agriculture and audiences, and may be exclusive to Indigenous (especially Alaska Native) perspectives on food production. Take USDA’s Beginning Farmer and Rancher Development Program (BFRD Program). On the one hand, one of the authors, Rader, received funding from this program to meet the needs of rural Alaska Natives through the Alaska Growers School[48] even though the goal of the BFRD Program is “ensuring there will be a ‘new generation’ of beginning farmers and ranchers.”[49] They funded Rader’s 2010 Project, “to reach out to underserved Alaska Natives in remote communities by developing and implementing a relevant, research-based course that would provide an Alaska Native living in a remote community the knowledge and skills necessary to grow enough food for themselves and 10 families. This subsistence food production is expected to be in combination with food secured from hunting, fishing, and gathering.”[50] While the project was funded initially, two subsequent proposals were not funded. Despite initial funding from this program, many of the Alaska Native producers that benefited, ultimately, did not meet the production-scale expectations of the grant review team. Rader submitted a renewal proposal in 2014 and 2015 to the BFRD Program. “The Alaskan Growers School: Helping Alaskans Achieve Their Big and Small Production Goals Through Education”[51] was ranked as High Priority but was not funded in 2014. Although these were by no means the only concerns and only 44% of projects were funded that year, relevant to this discussion, reviewers noted the following:

> *For the overall review, Negative Aspects of the Proposal were noted as: “Should gardeners be included as audience for this project? Define gardener vs. farmer. . .” The 2015 proposal was not funded either. Currently, the BFRD Program says that, “The term ‘farmer’ is used in the broadest sense and may be interpreted to include agricultural farmers, ranchers and non-industrial private forest owners and managers,” which is hopeful but to many, still conjures a more strict definition of a farmer and rancher because it’s not a particularly inclusive word. When applying for a grant or program, eligibility requirements and target audience are one of the first determinants of whether or not to apply for a grant. It’s risky to apply for a grant that you may or may not be eligible for and a large, up front time investment. If left up to the interpretation of a reviewer who run the gamut of experience and perspectives, by design, it may mean the difference between being funded or not.*

An additional example is the USDA’s Value-Added Producer Grants. The Local Food Producer grant application states that “the grant applicant must be an eligible agricultural producer defined by the program: Independent Producer, Agricultural Producer Group, Farmer or Rancher Cooperative, or Majority-Controlled Producer Based Business."[52] The document does not include a definition of ‘independent producer’, which may or may not be interpreted as a local food harvester.

For someone unfamiliar with USDA agricultural language, these statements may be perceived as exclusionary to community-based traditional food initiatives. For example, an Alaska Native applicant may wonder whether their project qualifies, or if their activities qualify as an enterprise, or how agricultural risk translates to traditional food harvesting practices. Addressing the barriers identified above will undoubtedly improve Indigenous individuals’ and communities’ ability to improve their food system and build food sovereignty through culturally relevant means. The recommendations that follow offer a roadmap for affecting positive changes to these ends.

Key Recommendations

THE FOLLOWING KEY RECOMMENDATIONS WERE INFORMED BY THE SURVEYS AND INTERVIEWS WE conducted, Indigenous food stories, our cumulative experience of working with Tribes in Alaska in the area of food and agriculture for 26 years, and a literature review of food system assessments and Tribal food security and sovereignty in Alaska.

KEY RECOMMENDATION

Use Tribal priorities to guide USDA programs and grants for Tribes.

THE NATIVE FARM BILL COALITION RECOMMENDS GIVING 638 TRIBES AUTHORITY FOR MANY USDA PROGRAMS and recommends that USDA programs, "Recognize Tradition, Ecological, and Knowledge-based conservation as well as include tribal priorities in the definition of priority resource concerns.[53] One way Tribes have done this is through Tribal Conservation Districts which have been highlighted throughout this report and are also described in Appendix B in the "Natural Resource Conservation District Section." The Alaska Food Policy Council also advocated supporting Tribal Conservation Districts as one way to "Support Food Justice for Alaska Natives and Improve Tribal Collaboration and Engagement."[54] Additionally, Tribal (regional or community level; see Appendix A) food assessments should be used to inform and guide grant and policy design.

The USDA announced the new Indigenous Animals Harvesting and Meat Processing Grant (IAG) in April of 2023. This is a landmark opportunity that is "designed to support the priorities of Tribal Nations in meeting the needs of traditional harvesting methods and Indigenous animals. This project intends to fund projects which invest in Tribal Nations' supply chain resiliency, traditionally harvested animals, restoring local Indigenous food systems, and Indigenous processing methods, and expanding local capacity for the harvesting, processing, manufacturing, storing, transporting, wholesaling, or distribution (communal or commercial) of meat, poultry, seafood, and other animals that provide culturally appropriate food and food security to tribal communities. The primary purpose of all projects must be to expand or enhance Indigenous animals and meat processing capacity in Indian Country."[55] This kind of grant opportunity highlights a positive example of what is meant by using Tribal priorities to guide USDA programs.

When programs aim to improve food security and sovereignty, allow and support wild-harvest and non-economically driven activities with equal priority to agriculture.

AS DISCUSSED IN THE ANALYSIS SECTION, INCLUDING HUNTING, FISHING, GATHERING, AND SUBSISTENCE or community agriculture production would increase the equity of certain programs that focus wholly or primarily on agriculture as a means to increasing food security/sovereignty. By making sure that the language of requests for proposals and programs includes these other, more culturally appropriate ways of getting food from the land for Tribes, these programs will inherently become more inclusive and likely to meet not only the program objectives but the needs of Tribes as well.

For instance, the definition of a farmer is important because it provides access to grants and programs that otherwise are not available to the general public. The number of reported farmers in a region through the US agricultural census also influences overall funding for agriculture type programs (including Extension). As mentioned earlier, there are very few documented Alaska Native farmers, yet there are many Alaska Natives that get food from the land in a variety of ways. Those harvesting, processing and distributing food in more traditional ways should be counted, literally, and figuratively speaking to be eligible to receive federal program benefits. We recommend that an expanded definition includes all of the ways people secure food from the land in Alaska, and Indian Country in general.

Below are examples of USDA Programs and/or actions that already do this or are moving in the direction of accomplishing this recommendation:

- Launched in 2021, the USDA Indigenous Food Sovereignty Initiative is a promising step in the right direction, promoting "traditional food ways, Indian Country food and agriculture markets, and Indigenous health through foods tailored to American Indian/Alaska Native (AI/AN) dietary needs. USDA is partnering with tribal-serving organizations on projects to reimagine federal food and agriculture programs from an Indigenous perspective and inform future USDA programs and policies."[56]
- The USDA Equity Commissions provided the following Recommendation (no. 5) on Subsistence Farmers:

> *"The Equity Commission is concerned that the Census of Agriculture does not fully account for subsistence farmers who rely on trading and/or sharing resources. The current farmers/ranchers included in the census–whether rural or urban–count if $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. The Native farming community believes that the Census of Agriculture data on Native farmers is incomplete, making policymakers and USDA staff believe the community is smaller than it is and therefore ineligible to receive program benefits. Direct the National Agricultural Statistics Service (NASS) to include the varying types of farmers and ranchers in the next Census of Agriculture to account for the nature of many traditional forms of how agriculture products are produced, sold, or exchanged. In addition, NASS should evaluate the threshold used to quantify a qualifying farmer and provide education on alternative forms of documentation that can be used for eligibility. The Secretary should also direct NASS to research and consider changing the definition of a farm."*

- In Alaska, the Natural Resource Conservation Service (NRCS) allows subsistence to count towards the $1000 worth of products needed to be considered a farmer, which can drastically expand the number of grants and programs someone can access.
- The Supplemental Nutrition Assistance Program (SNAP) benefits do support both gardening[57] as well as purchasing supplies for hunting and fishing (only in Alaska).[58] Per 7 CFR 271.2 "Eligible foods" (7), only Alaska is eligible: "In the case of certain eligible households living in areas of Alaska where access to food stores is extremely difficult and the households rely on hunting and fishing for subsistence, equipment for the purpose of procuring food for eligible households, including nets, lines, hooks, fishing rods, harpoons, knives, and other equipment necessary for subsistence hunting and fishing but not equipment for the purpose of transportation, clothing or shelter, nor firearms, ammunition or other explosives. . ."[59]
- The State of Alaska's Division of Agriculture Mini-Food Security Grants[60] (see Appendix B) is a good example of a program that has been designed with the ability to support Tribal food procurement activities (e.g., hunting, fishing, and gathering) and created a model to fund those projects. Examples of how these funds are spent might be things like helping someone purchase a freezer for storing food, or equipment for fishing. See the Indigenous Food Stories throughout this report for the wide array of people who have used this seed funding to increase their food security.

KEY RECOMMENDATION

Promote food justice, food sovereignty, greater access, and cultural awareness of foodways and traditions.

INDIGENOUS AND PEOPLE OF COLOR IN GENERAL ARE DISPROPORTIONATELY FACED WITH LIMITED ACCESS to healthy food.[61] Yet, these communities have a complex history with the USDA, which has historically marginalized and disenfranchised their ways of living. Given these histories and the very title of U.S. Department of Agriculture, which signifies the western perception of food production, significant efforts to transform this dynamic relationship to better serve Tribal communities is needed. In order to do this, the grants and programs that aim to support food security and sovereignty for Tribal people and territories should double down their efforts to promote food justice and cultural awareness of foodways and traditions.

Based on review of the existing literature on tribal food systems and sovereignty,[62,63,64] as well as our own primary research for this report and beyond,[65] it is critical that racial equity and cultural awareness be centered in the creation of any programming intended to address hunger relief, food security and/or sovereignty. This recommendation was first identified in the Alaska Food Policy Council's Food Security Action Plan, Goal Three[66] (see Appendix D for all of the goals and objectives from this plan). Here, we reiterate this recommendation since the AFPC Action Plan was the result of a multi-year, state-wide effort to aid the State of Alaska in more objectively, equitably, and sustainably addressing food systems challenges. The objectives below were sourced from individuals who work in and around Alaska's food system; both Indigenous and non-Indigenous. The following are some the objectives and strategies AFPC outlined in their report to meet this recommendation:

Objective 1: Preserve, Honor, and Expand Traditional Knowledge and Foodways

- **STRATEGY 1:** Incorporate Traditional Ecological Knowledge into all parts of the food system, from planning to implementation
- **STRATEGY 2:** Tribal consultation on all projects that may affect Traditional hunting/gathering/fishing areas
- **STRATEGY 3:** Co-management/Tribal management of lands and waters
- **STRATEGY 4:** Employ culturally relevant methods and strategies for research, outreach, and collaboration

Objective 2: Support Food Justice for Alaska Natives and Improve Tribal Collaboration And Engagement

- **STRATEGY 1:** Protect subsistence rights
- **STRATEGY 2:** Support Tribal food system development
- **STRATEGY 3:** Support development of additional Tribal Conservation Districts

Without centering racial and cultural awareness; and equity and justice; true food sovereignty for Indigenous people will continue to be unattainable.[67] The above strategies provide tangible actions that funding agencies, policy makers and advocates can take to better enable tribes to achieve food sovereignty.

Use relevant food system indicators and evaluation metrics for Tribes in Alaska.

WE RECOMMEND ADOPTING FOOD SYSTEM INDICATORS AND EVALUATION METRICS FOR FOOD SECURITY AND sovereignty that are salient to Tribes in Alaska. The following are some examples of what these indicators might include based on other regional food system assessments conducted by Tribal entities and organizations:

Metrics identified by Tanana Chiefs Conference (TCC) Regional Food Assessment and Recommendations[68]

- Percentage of the typical regional diet that is made up of traditional foods, compared to a goal or target representing the community or region's desire for traditional foods.
- Identify barriers and possible solutions to overcome the barriers that TCC communities face around harvesting, preserving, and preparing traditional foods.
- Identify changes observed in TCC communities around subsistence food practices over the last 10 years.
- Track youth engagement in subsistence way of life and Indigenous knowledge related to traditional foods.
- Expand data collection of traditional/ subsistence foods to include traditional food available at retail sales outlets and/ or in institutional programs or facilities.
- Continue to track indicators for traditional foods offered at retail establishments and through institutional food programs (e.g., school lunches, elder lunches, at hospitals).

The Native American Agriculture Fund (NAAF)[69] uses the following evaluation metrics including the number of farmers and ranchers served. In addition to the number of new farmers and ranchers, inclusive evaluation metrics used by the NAAF should include:

- Fishers
- Community Producers (Community producers include small-scale producers such as those involved with community gardens, school gardens or other similar activities.)
- Gatherers (not currently used by the Native American Agriculture Fund)
- Wild Food Harvesters

Other metrics for inclusive food system evaluation identified by the Alaska Food Policy Council's Food Security Action Plan[70] relevant to measuring food sovereignty and security in Alaska include:

- Number of culture and fish camps
- Number of Traditional Foods learning opportunities
- Publications released about food and culture, including academic
- Number of community-based food projects launched, in process, completed
- Number of State-Tribe and/or Federal-State-Tribe co-management agreements
- Presence of community monitoring entities
- Quantity and general locations of resource harvested (whale, caribou, berries, etc.)

Fully fund the Federally Recognized Tribes Extension Program with mandatory, non-competitive funds.

THE FEDERALLY RECOGNIZED TRIBES EXTENSION PROGRAM IS BROAD, INCLUSIVE, AND FLEXIBLE ENOUGH to meet the priorities of Alaska Native Tribes. The program is also guided by Tribal priorities by design, helps to address hyper-local needs, and would work towards meeting Key recommendations 1 and 2 listed above. See Appendix B for more information on the program.

The Native American Agriculture Fund[71], Native Farm Bill Coalition[72], the Indian Country Extension Commission[73], USDA Equity Commision[74], and the Sitka Conservation Society[75] all recommend that the Federally Recognized Tribes Extension Program be fully funded. Our surveys confirm the interest and need for Extension type education programming for Tribes in Alaska. The first FRTE program in Alaska was developed in partnership with Tanana Chiefs Conference serving 37 Interior Tribes since 1991. With additional funding from the 2501 program through USDA, now the Alaska Tribes Extension Program is able to serve all Tribes in Alaska. Additionally, there is a FRTE Program in Bristol Bay and a new one in the Aleutian Pribilof Island Region in 2024. This kind of growth not only demonstrates the need for greater funding to the FRTE Program in Alaska, but highlights how increased programming with tribal priorities at their core can be utilized to bolster existing programs to better serve Tribal food system needs. Within the FRTE Program, we also recommend hiring or contracting with Traditional Knowledge holders to co-teach and co-create culturally relevant knowledge and programming.

Acknowledge that agriculture has been a source of trauma and associated with colonialism for Indigenous peoples and focus programmatic efforts around healing and resilience.

SOME ALASKA NATIVES FIRST GARDENED OR FARMED OR AT BOARDING SCHOOLS AND SO GARDENING AND farming is sometimes linked to the traumatic experience of boarding schools.[76] As described earlier in the Historical Context section of this report, originally legislation through the Farm Bill, such as the *Homestead Act*, was one of the primary means of dispossessing Tribes of their traditional lands.[77]

The Growing Resilience Project in the Wind River Reservation is an example of a program that has sought to address the trauma associated with the imposition of western agriculture on Indigenous peoples.[78] The Project helped 96 participants create gardens and they researched the gardens' impact on families, identified gaps in gardening, food preservation, and even grocery shopping knowledge and skills. The history of forced gardening activities at boarding schools influenced that generation's avoidance of gardening because of the associated trauma; however, the Growing Resilience Project saw indigenized-gardening "as a resilient response to the colonization and genocide that systematically diminished food sovereignty for people in the Wind River Reservation."[79]

As a result of the Wind River project, individuals talked about how growing food led to their kids eating healthier foods, increased knowledge of food, and cooking food from the garden, whereas before they had a garden, there was no interest in cooking. Another participant said,

> *"It's instilling in our kids, showing them that we're able to do this ourselves instead of relying on the stores for their produce and waiting. And teaching them, empowering them that really, they're able to grow their own food."*

One participant said their garden was their place of prayer and medicine.[80]

This example demonstrates how the acknowledgment of historical traumas, and fostering space to reclaim agricultural and food stewardship practices can lead to the ability of Indigenous People to process and heal from those traumas. Indigenous ownership of food sovereignty movements can and does serve as a medium for empowering communities to heal, as well as, provide nutritional and economic support for Indigenous communities.[81]

Conclusion

Throughout this process we have endeavored to include perspectives and stories from Indigenous communities and individuals from most regions of Alaska, however, there is no way for one document to capture the multitude of unique histories, cultures and traditions of all Alaska's Indigenous peoples.

ONE OF THE ORIGINAL REASONS FOR DOING THIS PROJECT WAS THE IMPRESSION THAT THE LANGUAGE used by many agricultural programs was not well aligned with the goals and needs of Alaska Native Tribes and individuals. Those of us who are highly familiar with agricultural programs and services know that they often can support a wider array of food sovereignty and security initiatives, while on the surface appearing to only support agricultural activities. We hope that policy makers and funders will consider how the language of requests for proposals, evaluation metrics, and program goals and objective may or may not be made more inclusive to other means of securing food. There is an opportunity here for funding agencies to amend their programmatic goals and objectives to be more inclusive of Indigenous food systems. Furthermore, we hope that we have provided policy makers and funders with inclusive language that they can use in their programs.

Our intent is that the key recommendations outlined in this report will be actionable items for Tribes, Tribal consortia and policy makers in the areas of food sovereignty and security in Alaska.

More extensive and comprehensive research in this area is needed to better understand Tribal perceptions and attitudes in Alaska towards agriculture especially in a fast-changing world.

Our goal is that this report will be a catalyst for improved programmatic offerings, policy and encourage discussion, data collection, and research that promotes better communication and understanding between agriculture grantors, program managers, policy makers and Tribes. We feel that the methodologies we developed and the approach we took could be a stepping stone for Tribes or Tribal consortia to more comprehensively research these important issues in their communities and to continue to highlight their Indigenous food stories with policy makers, funding agencies and stakeholders alike. Furthermore, we hope that the information pertaining to Indigenous food and agriculture that has been aggregated as part of this work will be used by Tribes to further identify and help meet their food security and sovereignty goals.

Appendix A

Alaska Tribal/Community Food System Assessments

THIS REVIEW OF FOOD SYSTEM ASSESSMENTS WAS ORIGINALLY COMPILED BY ALASKA FOOD POLICY COUNCIL[82] Summer Intern, William Kessler. This was adapted and added to with permission from AFPC to focus on Tribally driven food assessments and plans. As part of this project, we reviewed regional and community plans as well as food assessments, particularly those led by Tribes or Tribal-serving organizations. We looked at the aspects that focused on food security and sovereignty for this report. Our summaries are organized by cultural groups and regions for ease of review and comparison to our primary data collection methods (surveys/interviews) which were collected based on regional and cultural affiliations.

Food sovereignty and security can be assessed at many different levels--usually community, region-wide, or state level. The Food Sovereignty Assessment Tool can be used by Tribes or groups of Tribes to conduct their own assessments.[83]

Note: This is not a comprehensive list of Alaska community food system assessments. For more food systems research and planning resources, visit the following websites:

- *Alaska Food Policy Council's Alaska Food System Resources*
- *Alaska Tribes Extension Program Tribal Food Sovereignty*
- *Alaska Food Systems Website*

INTERIOR REGION

Athabascan: Upper Tanana, Tanacross, Tanana, Koyukon, Upper Kuskokwim, Holikachuk, Deg Xinag

Tanana Chiefs Conference Regional Food Assessment and Recommendations, 2021

In August of 2021, Tanana Chiefs Conference surveyed tribal members about food security in light of the catastrophic salmon run. The report cited the need for more quantitative and qualitative information to adequately assess food security in the Tanana Chiefs Conference region (Interior Alaska). In the region, per capita subsistence harvest was about 335 pounds per year from 1987–2017.[84]

Key concerns of the Tanana Chiefs Conference include food quality, the ability to gather food through subsistence methods, and food storage. Recommendations that are given to address these problems include educating kids by editing school curriculum to include information on subsistence methods which aims to create a connection between youth and subsistence. Also, they recommend acquiring funding for infrastructure and storage like refrigerators, creating a marketing campaign to educate on the connection of food from subsistence methods to health outside of schools, partnering and supporting already existing groups to use resources more effectively such as the Interior Alaska Food Network which seeks to create a food distribution model, and promoting the use of farmers markets.

Sixty-one percent of respondents to the Interior Alaska Communities Harvest Practices Survey (2017) indicated that they were satisfied or very satisfied with the health of their household's traditional practices, while 26% indicated that they were unsatisfied or very unsatisfied (page 5). Forty-nine percent of respondents to the Interior Alaska Communities Harvest Practices Survey indicated that they believed their household's

traditional harvest practices have declined or significantly declined over the last 10 years. A 2021 analysis of subsistence activity in Interior Alaska revealed that, of the communities studied, there was a significant decline in the total geographic area these communities used for subsistence ways of life. Of the 77 people who completed the survey, 55 wanted salmon from other regions, and 31, 28, 24, and 14 people wanted to raise bison, reindeer, cows, and chickens, respectively.[85] Almost 60% (41) of 70 respondents said they wanted to learn how to preserve food (canning, vacuum sealing, jamming, etc.) and 47% (33) wanted to learn gardening.

Recommendations and Best practices for Subsistence were (page 8):

1. Set measurable and achievable regional goals around subsistence foods. For example, "Increase the incorporation of subsistence foods into institutional programs by 10 percent by 2025."
2. Work with educational partners to incorporate subsistence knowledge or practices into curriculum design and/or offer subsistence focused trainings or community workshops to increase skills and knowledge among village populations, with a specific emphasis on creating intentional connections between youth and subsistence.
3. Seek funding for additional community food storage infrastructure, including freezers, refrigerators, and equipment used to preserve and keep harvested foods.
4. Explore the possibility of working with the EPA IGAP to increase food security in Tribal Environmental Work Plans.
5. Assess the viability of Tribal Conservation Districts (TCDs), funded by the USDA Natural Resources Conservation Service (NRCS), in the TCC region. For example, Tyonek Grown is operated through the Tyonek Tribal Conservation District. https://ttcd.org/programs/tyonek-grown-program/
6. Support the work of the Subsistence Regional Advisory Committee (RAC).
7. Work with institutional programs (e.g., school lunches, elder meals, hospital meals) to incorporate subsistence and traditional foods into menus and pantries.
8. Create a regional marketing campaign that links the importance of traditional foods to health outcomes and the celebration of traditional village culture(s).
9. Work with TCC village leadership to create or support existing regional harvest celebration events or programming.

SOUTHEAST REGION

Tlingit, Haida,Tsimshian & Eyak

2020 Hoonah Food System Assessment, 2020

Jenifer Nu, Southeast Alaska Watershed Coalition | Hoonah, Alaska

The Southeast Alaska Watershed Coalition (SAWC) and the Sustainable Southeast Partnership (SSP) collaborated with the Hoonah Stewardship Council (HSC) and the Hoonah Indian Association (HIA) to initiate a targeted community food system assessment for Hoonah in the winter of 2019 and spring 2020. The assessment aimed to gather specific information about prioritized sectors of Hoonah's food system as identified by the Hoonah Stewardship Council. The assessment gathered information using a local producer survey, a retailer survey, and a community survey. This report summarizes findings from these surveys alongside other relevant information about Hoonah's food system to provide an overview of the community's food system. This report also includes recommendations for priority projects, programming, and next steps.

The report explains that, "Hoonah receives on average 68 inches of rain, on average, per year. The US average is 38 inches of rain per year. On average, there are 85 sunny days per year in Hoonah. The U.S. average is 205 sunny days." With the rain, limited amount of sun, and short growing season, season extension techniques

are a great option, but agriculture options is also limited because a lack of arable land. Unforested lands are steep and mountainous, muskeg, or sensitive wetland areas that are important habitat for salmon and other wild food resources.

Southeast Alaska Food System Assessment: A pilot project to identify actions to promote self-sustaining communities and a resilient food system, 2014

People and Place Program, Southeast Conference, Sheinberg Associates and University of Alaska Fairbanks Cooperative Extension Service | Southeast Alaska

This report presents an analysis of data collected for a pilot study of Southeast Alaskan community and regional food systems from September through December of 2013. The purpose of this research is to identify existing food system challenges in order to target areas of change and actions that can be taken to promote self-sufficient communities and a more resilient food system. As new data is collected, this report can be updated. Ultimately, this research will help guide future efforts to increase the production of cultivated and harvest of wild food that is locally processed, distributed, and consumed in Southeast Alaska. An initial baseline of food cultivation operations in communities around the region was established. This included a survey of the goals, challenges, and limitations of these growing operations to determine opportunities to improve procedures and identify factors that lead to success. A sample of cultivators were surveyed in the communities of Haines, Gustavus, Juneau, Elfin Cove, Game Creek, Pelican, Sitka and Farragut Bay. This assessment does not provide comprehensive data on all facets of cultivated foods within Southeast Alaska.

ALEUTIAN, PRIBILOF ISLANDS & KODIAK ARCHIPELAGO REGION

Alutiiq, Unangax̂ & Sugpiax

2022 Aleutian Pribilof Islands Association Regional Food Security and Climate Change Adaptation Symposium: Food Security Findings, April 12–14, 2022, Anchorage, Alaska.

The predominant theme from this conference was "Community and Connection."

> *"Attendees highlighted the importance of resource sharing during harvest of both traditional and agricultural foods. The sharing and fostering of knowledge for practical skills, knowledge of traditional and non-traditional resource availability and sourcing, and for more administrative knowledge such as grant availability and regional networks. It was mentioned numerous times that traditional knowledge should be considered valid data and that storytelling is both a valid and valuable form of data collection."*

The importance of work/life balance was also noted, particularly as to how it relates to allowing time to harvest, gather, fish, and hunt harvesting, gathering, hunting and fishing. A lack of appropriate infrastructure was also identified including a need for climate-controlled storage along the supply chain for food and more consistent ferry service. The need for this infrastructure is heightened in light of climate change.

A variety of action items were identified including to "host a regional food festival to promote sharing of knowledge, culture, and harvest" as well as to "consider a regional food hub or mobile app for community members to barter and share food excess" and "to consider financial incentives to train gardening professionals."

Aleutian Pribilof Islands Association Wellness Strategies for Health Community Health Assessment, 2015

This survey collected responses from throughout the region. A total of 97 community members (47% Alaska Native) answered the survey online or in-person. Stakeholder interviews were also completed, a total of 27

interviews from throughout the region were completed. The biggest concern was the cost of healthy food and beverages.

It is noted that the Unangan (Aleut) people have lived a maritime, subsistence lifestyle for thousands of years, with major changes to their sources of food and additions to the economy and sources of food in the 20th century.

One participant noted that, "When a community is reliant on airplanes to deliver food, and those planes are only scheduled for 2-3 times per week and the plans cannot always fly due to weather or other factors, fresh foods are either not available, arrive with a very short shelf life, or they are already spoiled. In addition to limited flights and poor weather preventing flights, airlines get paid by the weight of the cargo. Delivering produce, eggs, bread is not as profitable as delivering a pallet of alcohol, soda, energy drinks, or canned goods. With the cost of fuel and the time it takes to make a roundtrip flight to one of our islands (7–8 hours from takeoff to landing with a fuel stop), it is not surprising the airlines make decisions based on possible profits."

"Community members reported getting most of their food from the local grocery store, with the exception of subsistence harvested foods including fish, game, and birds. A number of suggestions were given around increasing the use of traditional and healthy foods. Primary among them were decreasing the cost of healthy foods and increasing access for example, "better prices for vegetables" and "the store could order better frozen vegetables and frozen fruit." Also, it was expressed that teaching people how to collect and use traditional foods would be helpful, "learning subsistence methods." Community members mentioned many healthy foods they had eaten in the past week, including traditional foods "halibut, sea lion, and seal oil" and store bought fruits and vegetables "salad, apples, and oranges." However, community members also mentioned less healthy foods they had eaten in the past week, including candy (11 responses) and chips (8 responses). About 80% of community members reported some consumption of soda or energy drinks. Stakeholder interviews asked participants "What do you think are the most important health concerns for people in our community?" 4 out of 27 people answered nutrition (Aleutian Pribilof Islands Association Survey Summary July 2015. "

Kodiak Rural Regional Comprehensive Economic Development Strategy, 2022 | (pgs. 56–60, 71–75) |Kodiak Area Native Association | Kodiak, Alaska

Agricultural activities in the region among village communities are increasing due to a Kodiak Archipelago Leadership Institute farming project with funding partially from the US Department of Health and Human Services Administration for Native Americans. Methods of achieving this increase come from Alaskan Native Corporation financial support, local city financial support, and technical assistance training. This report provides an overview of activities and SWOT analysis of both agriculture and mariculture.

NORTHWEST & ARCTIC REGION

Iñupiaq & Inuit

Alaska Inuit Food Security Conceptual Framework: How to access the Arctic from an Inuit Perspective, 2015

Food sovereignty and security was outlined in a conceptual framework by the Inuit Circumpolar Council-Alaska in 2015. This is the most often cited report describing what Tribal Food Sovereignty looks like in Alaska. It was indigenous led with 146 Inuit contributing authors as well as a 12 member Advisory Council. They found that without food sovereignty, there was no food security. One of the biggest threats to Indigenous Food Security is the lack of decision-making power and management authority for Indigenous communities over the food resources they depend upon.

They identified six components of food security that are summarized here:

- **Culture:** The idea that food defines cultural, self, and shared identity. Cultural values are learned in the process of harvesting traditional food.
- **Availability:** A healthy, diverse Arctic ecosystem ensures that traditional foods are available.
- **Accessibility:** Having to do with access to food including the ability to learn the skills, make tools, and obtain and preserve traditional foods as well as to barter.
- **Health and Wellness:** Encompasses environmental, community, and individual health.
- **Stability:** Ensures that future generations have access to healthy ecosystems where they can secure traditional foods.
- **Decision-Making Power and Management:** Integral to food sovereignty, this concept notes the importance of having an equitable say in decisions and management.
- **Food Sovereignty:** Ties into all of these components and is defined in this report as, "The right of Alaskan Inuit to define their own hunting, gathering, fishing, land and water policies; the right to define what is obtain and maintain practices that ensure access to tools needed to obtain, process, store and consume traditional foods. Within the Alaskan Inuit Food Security Conceptual Framework, food sovereignty is a necessity to supporting and maintaining the six dimensions of food security.

2022 Bering Strait Community Needs Assessment | McKinley Research Group

Bering Strait Region/Kawerak Service Area (Nome Census Area), Alaska Goals for the region are self-sufficient villages, the protection of traditional ways of life and culture, subsistence resources protected, and cooperation and respect between tribal and government entities. Subsistence opportunities are seen by 80% of the surveyed population as a strength. 79% of those surveyed see a high cost of living as a community challenge, which can at least partially be attributed to the cost of imports. 39% of households outside of Nome report at least someone in their household being unable to afford food. The calculated price differential for food is 1.7 times greater in the region than in Anchorage. Climate change threatens food security by affecting current food subsistence practices like fish camp access, types of fish available, and berry harvests.

Fourteen percent of people in the region said 75-100% of their food came from subsistence (page 156). The report noted that as high as 73% of households (Brevig Mission) and Teller (70%) received cash public assistance or food stamps/SNAP compared with 13% for Alaska as a whole (page 46). On average in the region, 388 pounds of food including marine mammals, fish, birds, eggs, roots, berries, and greens was harvested per resident in 2017 compared with just 19 pounds in the municipality of Anchorage (page 53).

The report noted also that Elders' knowledge was underutilized while at the same time, youth did not have access to enough healthy activities. A solution would be to, "Create a program in villages so Elders. . .[can] provide their expertise on traditional practices. This would include stipends for Elders' time (page 143)."

SOUTHWEST REGION

Yup'ik & Cup'ik

Development of a quantitative food frequency questionnaire for use among the Yup'ik people of Western Alaska, 2014 | Fariba Kolahdooz, Desiree Simeon, Gary Ferguson, Sangita Sharma | Western Alaska (focus on Yup'ik population), Alaska

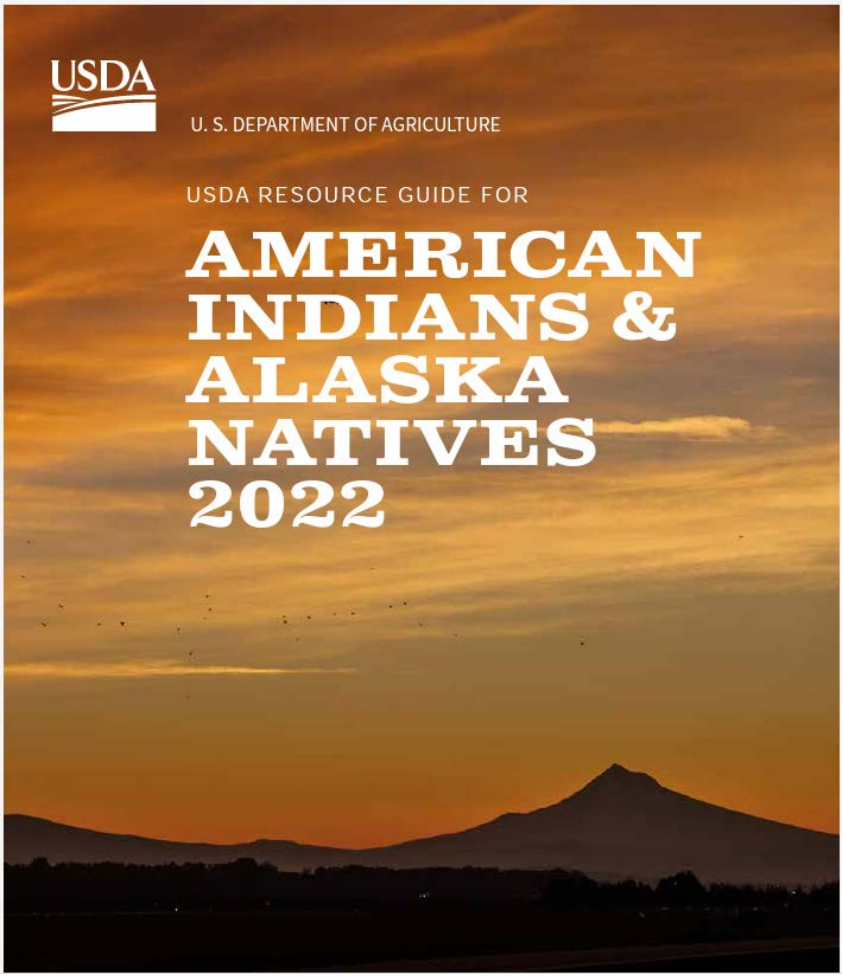
Store-bought foods are deemed less high quality than traditional foods. There is a decline in traditional food consumption among the Native population which is linked to a decrease in health. The study aimed to develop a nutritional education program tailored to Alaska Native populations to address obesity and related chronic diseases.

Appendix B

(Agricultural) Grants and Programs that Support Tribal Food Security and Sovereignty

ALTHOUGH THIS LIST IS NOT COMPREHENSIVE, WE PULLED OUT SPECIFIC PROGRAMS THAT ARE HISTORICALLY more agricultural in nature, but have broadened their scope to include support for Tribal food security and Sovereignty, or highlighting newer programs that specifically support Tribal food sovereignty and security. In the past year, there have been many new programs started that specifically support Tribal food sovereignty and security through traditional ways and may include agricultural means.

USDA Resource Guide for American Indians & Alaska Natives 2022



This is an excellent resource guide for USDA grants and programs that extends far beyond farming and ranching and into energy, housing, forestry programs to name a few. These programs may apply specifically to Tribes or Alaska Native & American Indians, updated 2022.

Alaska Division of Agriculture Mini-Food Security Grant Program

In 2021, the Alaska Division of Agriculture offered a new grant called the Mini-Food Security Grant (up to $10,000 each) and received 2,000 applications.[86] A total of $1.8 million was awarded to 236 projects in 2021. In 2022, over 7,000 applications were received! Preference was given to applicants from food insecure regions of Alaska—mostly rural areas with high populations of Tribal members, but the applications are open to anyone including individuals and those with an organization. The number of applicants for these small grants points to the tremendous need for and interest in small-scale efforts to promote food security in Alaska.

One of the key takeaways from these grants is the sheer variety of grants that is needed to support sovereign and secure Tribes in Alaska. For instance, in Nome, there was a request to use the funds to put a down payment on a snow machine to be used for hunting, hauling water/heating oil/firewood & ice fishing. One grant in Cordova was used to support subsistence distribution. Some grants were used for community gardens, farms, and greenhouses. Others were used for cold food storage. A grant recipient in Craig, wanted to use the grant to help buy a skiff to help obtain food for Elders, widowers, and others who couldn't hunt. In Galena, the grant was to be used to provide education on food preservation in workshops, for example of preserving vegetables, fish, and meat. Rader partnered with Galena to provide Extension education for their grant in tandem with the canning equipment give away.

One thing to note is that these grants were small and relatively easy to apply for. This type of grant uniquely met the wide variety of needs for Alaska Natives and Tribes and could serve as a model for other grantors wanting to promote food sovereignty and security. Another thing to note is that, in large part, due to the volume of applications, it took a long time for recipients to obtain their grant funds so the process needs to be improved.

Federally Recognized Tribes Extension Program

The Federally Recognized Tribes Extension Program, which the lead authors of this report have been funded by for more than 15 years, broadly and inclusively supports Tribes through a diversity of programs.The priorities of FRTEP are:

1. Positive youth development programs, including 4-H for tribal youth
2. Native Farmer and Rancher Productivity and Management
3. Native Community Development:
    - Economic and Workforce Development
    - Food Systems, Farm and Community Markets, and Food Sovereignty
    - Natural Resource Conservation and Adaptation to Environmental Changes
    - Human Nutrition and Reduction of Childhood and Adolescent Obesity
    - Native Language and Culture Preservation
    - Traditional Ecological Knowledge sharing and learning, or knowledge held by indigenous cultures about the environment or cultural practices.

Although agriculture is included in the program priorities, and was historically the primary priority of the grant, it is now one of many priorities that are important for Alaska Natives and Native Americans. Another essential component of this program is that it is a partnership between a land grant university and a Tribe or Tribes. An MOU or MOA outlines real contributions from both the University and the Tribe. It also ensures that Tribes have a voice in what the focus of the Extension agent does and what programs they work on. In a survey of FRTEP Agents/Educators, more agents said they provided services in "Traditional/Indigenous food systems assistance for food security" than any other topic.[87] From surveys, many agents noted that the strength of FRTEP lies in the local connections, flexibility, awareness of Tribal needs, and dedication to the

Tribes they serve. Weaknesses identified were that the program is competitive, has limited funding that is on a four funding cycle. Survey respondents suggested that permanent, higher levels of funding is needed to build impactful programs.

In a recent report, the Indian Country Extension Commission outlines an equitable plan to fund Extension work, in partnership with Tribes.[88] Rather than using the number of farmers and ranchers in Indian Country, the Commission recommended using a Modified Smith-Lever Formula (USDA program) based on land, population, and per capita income. Indian Country Extension Development under the Revised Federally Recognized Tribal Extension Program. Other organizations are advocating for fully funding the Federally Recognized Tribes Extension Program as well.

Food Distribution Program on Indian Reservations Self-Determination Demonstration Project

The Food Distribution Program on Indian Reservations (FDPIR) Self-Determination Demonstration Project recently announced new procedures for distributing food on Indian Reservations. Instead of the USDA packaging and purchasing all of the foods.

Through this demonstration project, participating tribes are able to:

- Select one or more foods that they would like to procure for inclusion in the food package,
- Identify the food(s) in the food package that they would like to supplant with the tribally procured food(s),
- Establish contract(s) with a vendor(s) to procure the selected food(s), and
- Distribute the tribally procured food(s) alongside other USDA-provided foods in the FDPIR food packages distributed to their tribal members.

Native American Agriculture Fund

The Native American Agriculture Fund (and the funder of this report) does a great job with inclusive language both in their RFA's and in their reporting systems. In their RFA and reporting systems, they explain:

NAAF is interested in the impact of your proposed project per agricultural producer group below:

- Farmers
- Ranchers
- Fishers
- Harvesters
- Community Producers. Community producers include small-scale producers such as those involved with community gardens, school gardens or other similar activities.

Sovereign Equity Fund

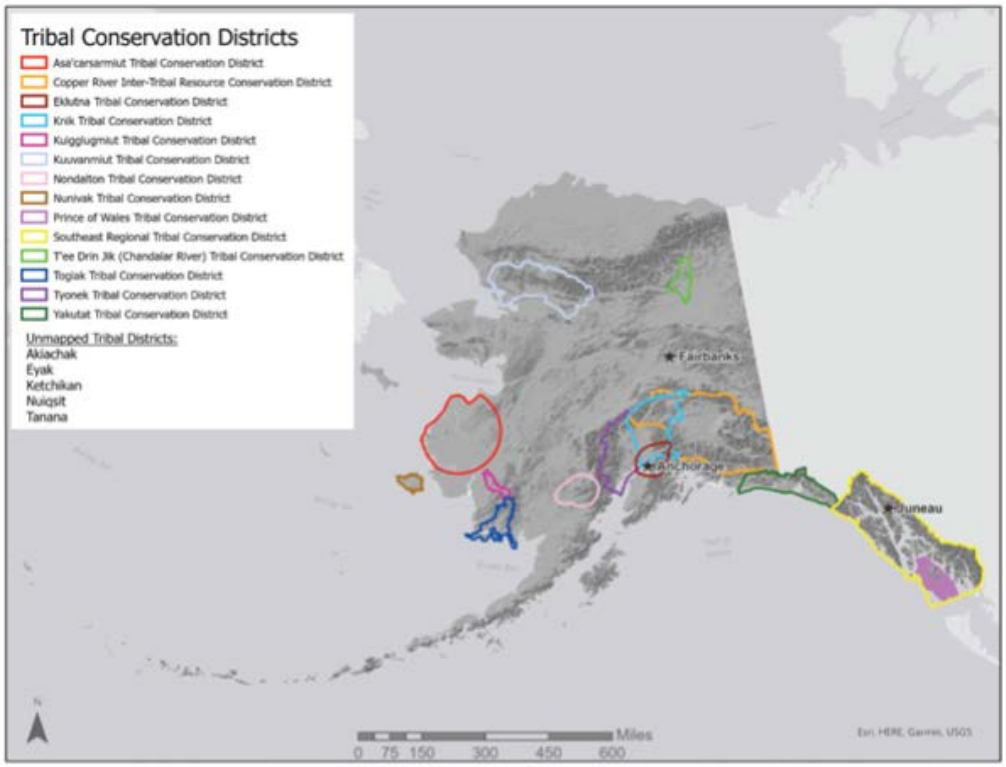
The Sovereign Equity Fund has a great opportunity called the Cultural Foodways Fund for Tribal Colleges and Universities that seeks to fund:

- "Projects that focus on learning about, sharing, and safeguarding the artistic, cultural and humanistic aspects of Native foodways.
- This opportunity is designed to highlight place-based and people-centric connections that focus on the importance of food and agriculture to Tribal communities beyond (but inclusive of) economic value.
- This includes work that addresses the traditions, ceremonies, cuisines, language, art, storytelling, cosmologies, belief systems, customs, and ways of being intertwined with Indigenous foodways.
- We are particularly interested in projects that narrate a story of the traditional relationships with food, culture, and values found throughout Indian Country."

Natural Resources Conservation Service

USDA Natural Resources Conservation Service (NRCS) uses a broadly inclusive definition of a farmer as someone who secures $1000 worth of food from the land by any means.[89] Yukon and the Northwest Territories in Canada, include those who herd wild animals (i.e., caribou and muskox), breed sled dogs, outfit horses, and harvest indigenous plants and berries in their definition of farmer.[90] But just being included in the definition of a farmer or rancher doesn't necessarily mean that a program, grant, loan, or service designed for a farmer or rancher will be helpful to someone securing food by hunting, gathering, fishing for it, or even growing it on a small, non-commercial focused way. But, NRCS has helped many Tribes and Alaska Natives in Alaska and has been proactive in reaching out to communities and making their programs accessible.[91] Alaska NRCS has also helped many, many Alaskans purchase high tunnels to extend their growing season and has given rural applicants more funding than their less rural counterparts.

Tribal Conservation Districts



One thing NRCS also has done is to help Tribes form Tribal Conservation Districts (TCD). Currently there are 21 TCDs in Alaska. Tribal Conservation Districts are a tool for Tribes to communicate their priorities to USDA whether agricultural in nature or stewarding their land in ways that promote sovereign and secure food systems.[92] Tribal Conservation Districts (TCDs) "help NRCS understand the priority resource concerns of Alaska Native entities; and NRCS benefits from continued engagement with our Alaska Native partners." Not only can TCDs help NRCS understand Tribal priorities, they can also help other USDA agencies, policy makers, and those engaged in the food system understand Tribal priorities. For example, funding that might normally be used for on-farm soil conservation elsewhere, has been used for building and sustaining trails for subsistence hunting and gathering in Alaska.

USDA Outreach and Assistance for Socially Disadvantaged and Veteran Farmers and Ranchers Program (2501 Program)

The USDA Outreach and Assistance for Socially Disadvantaged and Veteran Farmers and Ranchers Program (commonly known as the 2501 Program) serves underserved and veteran farmers, ranchers, and foresters, is an example of a program that has and does help Alaska Natives and Alaska Native Tribes tremendously. However, the language in the RFA and the required metrics of this program could be more inclusive of the traditional foodways of Alaska Natives. For example, the 2501 program says, "current and prospective farmers and ranchers who are socially disadvantaged or veterans" in their RFA and measures success through increases in the number of farmers and ranchers as well as the number of farmers and ranchers who participate in a particular program.

Appendix C

Gaining Ground: A Report on the 2018 Farm Bill Successes for Indian Country and Opportunities for 2023

THE NATIVE FARM BILL COALITION, FORMED IN 2017, HAS MADE IMPORTANT STRIDES IN COMMUNICATING THE needs and goals of Tribes across the U.S. and have detailed, numerous, highly impactful recommendations for the farm bill that benefit Native communities in myriad ways. In the 2018 Farm Bill, 63 beneficial provisions were included specific to Tribes and ". . . created new pathways for Tribal voices to be prioritized and included in USDA programs, and recognized Tribal sovereignty through increased Tribal parity as well as the application of self-determination opportunities to USDA for the first time in history." In 2022, the coalition conducted roundtables across the U.S. by region as well as multiple roundtables by region in Alaska to advocate for Indian Country needs in the 2023 Farm Bill. Here are some highlighted recommendations that may be of particular relevance to Alaska.

- **Give Tribes 638 authority for many USDA programs.**
- **Conservation priorities**: Support Alternative funding arrangements, Recognize Tradition, Ecological, and Knowledge-based conservation as well as include tribal priorities in the definition of priority resource concerns (pages 24-35).
- **Nutrition**: More traditional/tribally purchased foods for CSFP (pages 42-53).
- **Research**: Fully fund the Federally Recognized Tribes Extension Program through mandatory, non-competitive funds (pages 83-85).
- **Forestry**: Transfer lands back to Tribal Nations and protect sacred sites (pages 86-93).
- **Horticulture**: Protect tribal seeds and traditional foods (pages 100-105).
- **Miscellaneous**: "Establish a "First Right of Refusal" for Tribal Nations to purchase available USDA lands in their Ancestral Territories" & Recognize Tribal Departments of Food and Agriculture (pages 114-121).

Appendix D

Food Security Action Plan

2020–2022 USDA Regional Food System Partnership Planning Grant, *Alaska Food Policy Council and Beyond: Growing Connections and Building Networks for Greater Food Security*

THIS USDA REGIONAL FOOD SYSTEMS PARTNERSHIP PLANNING GRANT WAS INITIATED BY THE ALASKA FOOD Policy Council (AFPC) to aid the State of Alaska in more objectively, equitably, and sustainably addressing food systems challenges.

Grant activities included:

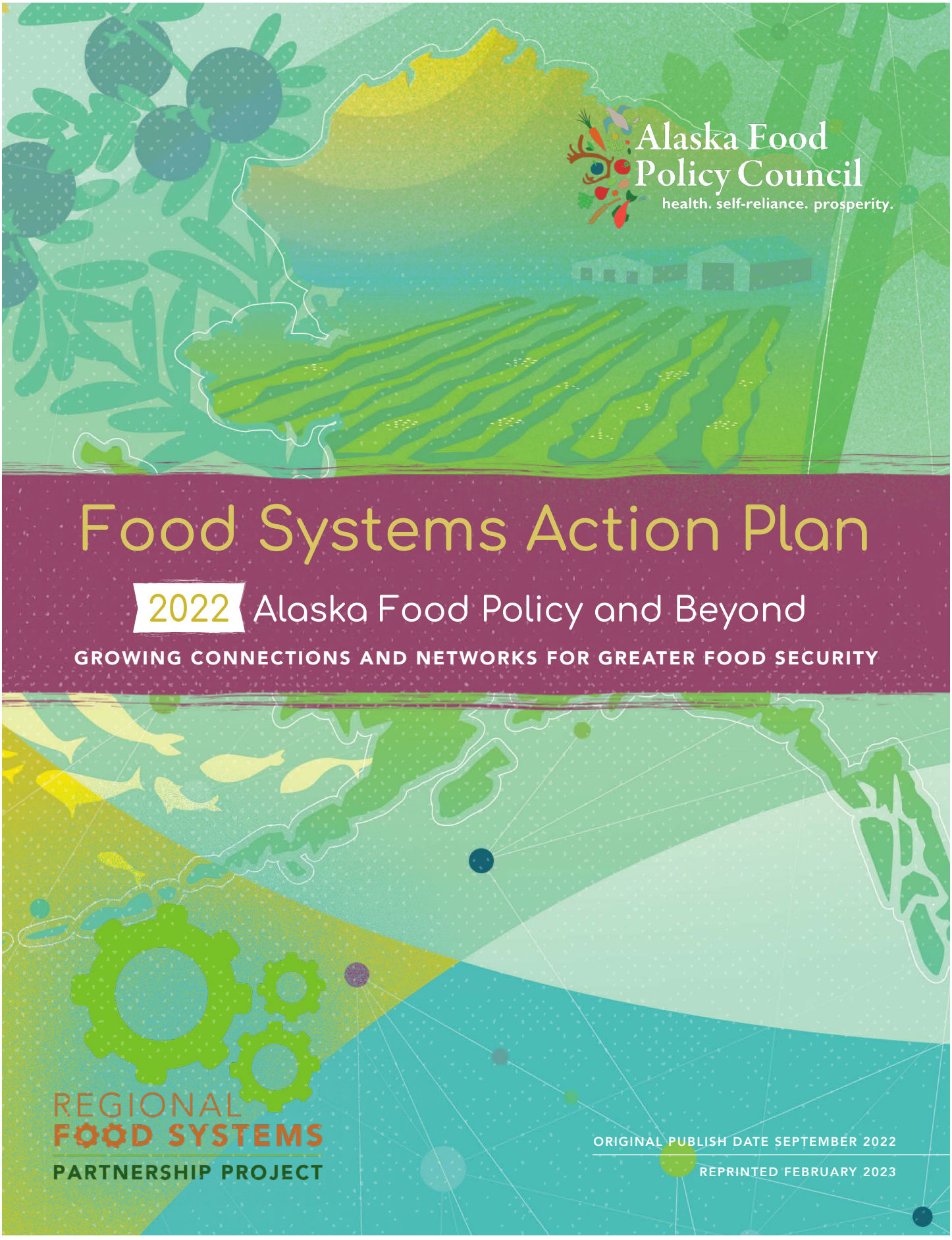
- The identification and strengthening of regional food systems networks;
- Providing network education and leadership development;
- Engaging residents in the process of collaboration and ideation around food systems solutions;
- Establishing a communications and resource-sharing ecosystem. At the state level, grant funds and activities have catalyzed a dynamic food systems network with the potential to scale across the state.

These activities aided the group in achieving the three proposed objectives outlined in the initial grant application, which are as follows:

- **Objective 1**: Improved connection, communication, and collaboration of food system organizations/ local food policy councils, statewide for collective action at improving Alaska's food system.
- **Objective 2**: Identification of community food systems assets, barriers, and capacities, to foster connection and collaboration.
- **Objective 3**: Statewide food security action plan, informed by regional Alaskan nodes representing a wide range of locations and stakeholder groups.

The outcomes of this grant were tangible at the community level, and positioned AFPC strongly to scale the resources developed and engage even more Alaskans in their food system. In addition to this report, a digital community was formed—the Alaska Food Systems Network, as well as an accompanying digital, dynamic map to track food knowledge, skillsets, and assets around the state.

At the close of this planning project, much opportunity exists to scale our activities in an implementation phase, funded by the USDA's RFSP Implementation grant. It was clear from participant discussion and written feedback that there exists much enthusiasm for continuing to foster cross-community connections. Ongoing support will be needed to do so, with a distributed, community-led approach.


Alaska Food
Policy Council
health. self-reliance. prosperity.
Food Systems Action Plan
2022 Alaska Food Policy and Beyond
GROWING CONNECTIONS AND NETWORKS FOR GREATER FOOD SECURITY
REGIONAL
FOOD SYSTEMS
PARTNERSHIP PROJECT
ORIGINAL PUBLISH DATE SEPTEMBER 2022
REPRINTED FEBRUARY 2023

Alaska Food Policy Council and Beyond: Growing Connections and Building Networks for Greater Food Security

2020–2022 USDA REGIONAL FOOD SYSTEM PARTNERSHIP PLANNING GRANT PROJECT REVIEW AND STATEWIDE FOOD SYSTEMS ACTION PLAN

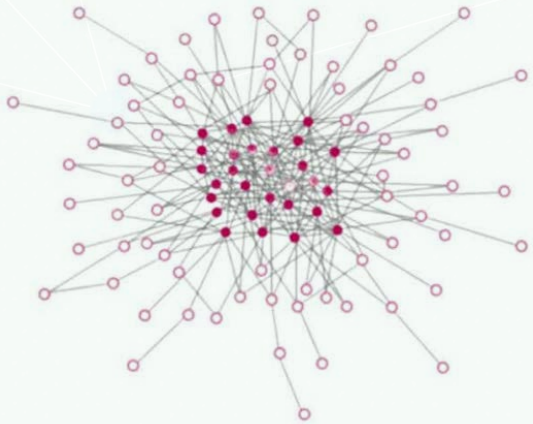
A FOOD SECURITY ACTION PLAN WAS CREATED THROUGH OUR 2020–2022 USDA REGIONAL Food System Partnership Planning Grant Project, *Alaska Food Policy Council and Beyond: Growing Connections and Building Networks for Greater Food Security*. **This multi-stakeholder action plan aims to democratically address food system challenges through inclusive, participatory action, building the capacity for resiliency and sustainability in the Alaskan food system**.

ACTIVITIES INCLUDED REGIONAL COMMUNITY ASSET MAPPING WORKSHOPS ACROSS THE state, with over 325 Alaskans representing various aspects of the food stem. While each region articulated cultural and place-specific assets that could be used to leverage positive food systems change, aggregate data indicates significant shared interest areas. To avoid being overly prescriptive and allow for place-based decision-making, the goals are more general, while the objectives provide detail, with potential strategies for achieving the listed goals. Please note, there is no hierarchy in how these goals are listed.

Created on behalf of the Alaska Food Policy Council and the numerous organizations and individuals who contributed to and participated in this project. Thank you for your dedication to improving Alaska's food system for all.

IT IS IMPORTANT TO NOTE that opting in to be a member of this asset map takes upfront time and effort to both create a useful profile and learn the system. Additionally, it requires backend maintenance that will require consistent oversight by the Alaska Food Policy Council. This tool will only be as useful as the quality of profiles and frequency of usership. **Increasing awareness and making it easy to access and use will be an iterative process, which has just begun**.

Example of a Systems Shifting Network with Strong Connections to Periphery



Current Alaska Food Systems Network Map

Recommendations

BASED ON ASSET WORKSHOP AGGREGATE DATA

THE DATA GENERATED FROM ALL OF THE REGIONAL ASSET-MAPPING workshops is archived by AFPC and is openly accessible to all interested parties for continued work. While each region articulated cultural and place-specific assets that could be used to leverage positive food systems change, aggregate data indicates significant shared interest areas.

A REVIEW OF THESE KEY THEMES IS PROVIDED AS A BASIS FOR developing a statewide food security plan that is inclusive of the interests and assets of each region. After this section, the Action Plan digs deeper into actionable steps. The goals are more general, while the objectives provide detail, with potential strategies for achieving the listed goals. Please note, there is no hierarchy in how these goals are listed.

THIS PROJECT'S ORIGINAL INTENT was to create a true action plan, with detailed, tangible steps towards meeting objectives. Recognizing that every community is in different phases of food system development, with different assets, barriers, and needs, we created this collaborative statewide action plan, that is not overly prescriptive and allows place-based decision making and planning and community self-determination. It is critical to note that per funding for this project from the USDA, this is a "planning" grant, with the opportunity to apply for "implementation" funding upon the close of this project.

PLEASE NOTE: THE "POTENTIAL PARTNERS" LIST IS NOT COMPREHENSIVE; THOSE LISTED SERVE TO PROVIDE EXAMPLES.

Alaska Food Security Action Plan

GOAL ONE

IMPROVING FOOD SYSTEM LITERACY AND SKILLS TO BUILD GREATER CAPACITY, AWARENESS, AND INTEREST IN FOOD SECURITY

- Youth food education
- Youth and Elder mentorship programs
- Preserving and (re)discovering traditional foods and foodways
- Harvest, production, processing, compost, and healthy consumption skills

GOAL TWO

BUILD/IMPROVE FOOD SYSTEM PHYSICAL INFRASTRUCTURE

- Community commercial kitchens
- Food storage space
- Food processing/slaughtering facilities
- Community composting
- Food hubs
- Growing season extension options

GOAL THREE

PROMOTE FOOD JUSTICE, FOOD SOVEREIGNTY, GREATER ACCESS, AND CULTURAL AWARENESS OF FOODWAYS AND TRADITIONS

- Preserving and expanding traditional knowledge and foodways
- Food justice and tribal outreach for Alaska Natives
- Food chain relationships
- Create stronger regional food systems networks
- Local food availability awareness
- Food waste recapture (seafood, gardening, animal processing, etc.)

GOAL FOUR

PROVIDE TECHNICAL EXPERTISE AND GRANT OPPORTUNITIES TO INCREASE FOOD SYSTEM CAPACITY

- Exploring Mariculture (sea lettuce, sea asparagus, kelp)
- Exploring kelp harvesting as livestock feed
- Regional website/ resource library development
- Grant-writing workshops and funding resources

GOAL FIVE

ENHANCE, IMPROVE, AND CREATE NEW MARKETS AND FOOD PRODUCTION

- Increase Viability of Local Agriculture
- Build relationships between food producers, institutions, distributors, and local restaurants and breweries
- Address Food Waste

ACTION PLAN GOAL ONE

Improve Food System Literacy and Skills to Build Greater Capacity, Awareness, and Interest in Food Security

Objective 1: INCREASE YOUTH FOOD LITERACY (FISH, FORAGE, HUNT, FARM, COOK, AND EAT)

STRATEGIES:	POTENTIAL PARTNERS:
Encourage food system literacy by adding relevant materials to school curriculum to prepare the next generation of farmers, fishers, harvesters, foragers, and informed eaters	*FFA, local school districts, Agriculture in the Classroom, 4H, Alaska Native culture camps*
Create a central clearing house that provides information regarding education/ cooperative extension workshop opportunities	*CES, AFB, Resiliency Commissions, Garden Clubs, Community Centers, Master gardeners, peer mentorship*
Fund high school agriculture programs, scale this model state-wide	*High schools (ex. King Tech—Anchorage), Boards of education, FFA, 4H, Dept. of Labor, Community colleges, corporate partners for "food chain internships"*
Inform parent groups of existing resources for food systems education, cooking classes, nutrition, foraging, gardening, small-scale hydroponics. Increase awareness of funding for small-scale projects like these.	*PTAs, sports and social club parents, Tribal culture camps, TCD, SWCD*
Encourage USDA Farm to School grant applications	*Kodiak Area Native Association, Alaska Farm to School*

Objective 2: PROMOTE THE PRESERVATION AND (RE)DISCOVERING OF TRADITIONAL FOODS AND FOODWAYS

STRATEGIES:	POTENTIAL PARTNERS:
Support Elder-youth mentoring programs (hunting, fishing, foraging, farming)	*Schools, Tribal entities, APIA*
Support school-based programs (school gardens, cooking classes, FFA, etc.)	*CES, museums, community centers, food banks and pantries, farmers markets*
Create seed saving classes, community seed libraries, and Alaska-based Seed Bank	*DNR Plant Materials Center, Tribal Conservation Districts, AVI, Cooperative Extension*

Objective 3: SUPPORT ADULT EDUCATION AND WORKFORCE DEVELOPMENT

STRATEGIES:	POTENTIAL PARTNERS:
Partner with University system for local research and education opportunities	
Expand agricultural research center to satellite programs	*UA system, with satellite campuses, APU, other adult education providers*
Create or reintroduce degree programs (undergradaute and graduate) and non-degree community courses in food systems	
Create buildable, scalable training programs (a "journeyman's" type educational track), utilizing community specific specialities	*UA system, with satellite campuses, APU, SWCD, TCD, local producers and fishermen*
Develop workforce for meat processing through community training and internship program for meat processing	*Local meat producers and processors, UA system, AFB*
Create training program for Veterans focused on next careers in agriculture and food	*Alaska Veteran's Foundation, UA system, with satellite campuses*
Implement local hiring preference policies or incentives	*State legislature, private industry, public entities*

Objective 4: CREATE AWARENESS ABOUT WHAT FOODS ARE AVAILABLE LOCALLY

STRATEGIES:	POTENTIAL PARTNERS:
Create buy-local campaigns	*DNR, CES, AFB, AFMA, Buy Alaska, DHSS*
Fund "Chef at the Market" programs to demonstrate low cost recipes utilizing local ingredients	*DNR, CES, AFMA, Buy Alaska, farmers markets, food hubs, local food groups*

ACTION PLAN GOAL TWO

Build/Improve Food System Physical Infrastructure

Objective 1: INCREASE THE NUMBER OF COMMUNITY COMMERCIAL KITCHENS AND THEIR USE

STRATEGIES:	POTENTIAL PARTNERS:
Create a centralized database of available kitchens, with contact information and potentially on demand booking	*FFA, local school districts, DEC, Municipality of Anchorage*
Expand school district central kitchens to enable easier vegetable processing, to enable more sourcing of whole products from local farmers	*School districts, city councils, state legislature, food hubs*
Increase local processing to make ability to serve local seafood in nutrition programs more accessible	*ADFG, DEC, Schools, senior care facilities, hospitals*

Objective 2: BUILD AND FUND FOOD STORAGE SPACES

STRATEGIES:	POTENTIAL PARTNERS:
Enhance food hub operations by supporting collaboration across regional food hubs, including shared infrastructure, knowledge sharing, and distribution system; consider creating a statewide working group	*CES, SBDC, MEP, AFMA, Wallace Center*
Identify locations and needs per community for constructing community storage facility for root crops	*UAF, CES, local and regional food networks, food banks, food hubs, city councils, farmer co-ops*
Form collaborative small farmers co-operative to maximize use	*AFB, food hubs*
Research ideas for cold storage accessible to entire community—a community food locker, incorporating traditional cold storage technology (siġluaqs) in villages as model	*UAF Agricultural and Forestry Experiment Station (AFES)*
Encourage space use to be maximized through off season partnerships	*Personal use and subsistence communities, farmers, including peony growers*
Position disaster preparedness with food production, storage, and processing	*ACEFCS, food hubs*

Objective 3: CREATE ADDITIONAL FOOD PROCESSING AND SLAUGHTER FACILITIES

STRATEGIES:	POTENTIAL PARTNERS:
Create plans and partnerships to house a USDA or state approved mobile animal slaughter in every borough	*Local meat processors/ producers, AFB, SWCD, TCD*
Explore farmer cooperative models as a place where produce grown can be aggregated for wholesale or distribution at the community level	*AFB, food hubs, retail grocery stores*
Promote self organization among producers to negotiate contracts pre-season, ensuring a market for local products	*Grower co-ops*
Provide facilitation for connecting local suppliers to local growers and fishers	*UAF*

Objective 4: ADDRESS FOOD WASTE

STRATEGIES:	POTENTIAL PARTNERS:
Design/replicate community composting programs	*Local and regional food networks, gardening clubs*
Coordinated and incentivized composting at the municipal- or borough-level composting programs	*Cities/towns (ex. Municipal of Anchorage has a muni composting program) and borough assemblies*

Objective 5: DIVERSIFY PRODUCTION METHODS AND CROPS

STRATEGIES:	POTENTIAL PARTNERS:
Invest and develop in vertically integrated farms, that do not rely on imported nutrients	*Alaska Seeds of Change*
Diversify production approaches through hydroponics	*Fairbanks SWCD, AVI, Alaska Seeds of Change*
Continue support for mariculture industry capacity with further research for animal feed, including pets, and processing/storage, soil amendments for farming	*AMA, DNR, ADFG, private industry*

Objective 6: CREATE BETTER-CONNECTED COMMUNITIES

STRATEGIES:	POTENTIAL PARTNERS:
Increase broadband access	*AFN, Tribal Broadband, other telecom providers, Federak Trade Commission, UA system*

ACTION PLAN GOAL THREE

Promote Food Justice, Food Sovereignty, Greater Access, and Cultural Awareness of Foodways and Traditions

Objective 1: PRESERVE, HONOR, AND EXPAND TRADITIONAL KNOWLEDGE AND FOODWAYS

STRATEGIES:	POTENTIAL PARTNERS:
Incorporate Traditional Ecological Knowledge into all parts of the food system, from planning to implementation	*IAC, APIA, ICC, AVI, AFN, ANTHC, Federally Recognized Tribes Extension Program (UAF), TCD, AFN, Ketchikan Indian Community, Sustainable Southeast Partnership*
Tribal consultation on all projects that may affect Traditional hunting/gathering/fishing areas	
Co-management/Tribal management of lands and waters	
Employ culturally relevant methods and strategies for research, outreach, and collaboration	

Objective 2: SUPPORT FOOD JUSTICE FOR ALASKA NATIVES AND IMPROVE TRIBAL COLLABORATION AND ENGAGEMENT

STRATEGIES:	POTENTIAL PARTNERS:
Protect subsistence rights	*IAC, ICC, AVI, AFN, ANTHC, APIA, AFPC, TCD, SWCD, Ketchikan Indian Community*
Support tribal food system development	
Support development of additional Tribal Conservation Districts	

Objective 3: SUPPORT IMMIGRANT FARMERS AND FOOD PROCESSORS

STRATEGIES:	POTENTIAL PARTNERS:
Create programs and outreach efforts to meet specific needs of these communities	*ACLT (Grow North Farm), CSS Catholic Social Services*
Provide translation services and create materials in multiple languages	*Alaska Institute for Justice—Language Interpreter Center, Alaska Native Language Center (UAF)*

Objective 4: SUPPORT STATEWIDE CONNECTION AND RELATIONSHIPS

STRATEGIES:	POTENTIAL PARTNERS:
Create programs and outreach efforts to meet specific needs of these communities	*Anchorage Community Land Trust, Catholic Social Services*
Create forums/ opportunities for statewide growers/ foragers/ fisheries to meet with each other	*DNR, TCD, SWCD*
Support Farm to School + Farm to Institution through local food procurement purchasing preference	*DNR, school districts, hospitals*
Create stronger regional food systems networks by expanding the Regional Food System Partnership project into the Alaska Food Network, developing goals and objectives collaboratively	*AFPC, local and regional food network groups*
Better leverage existing community resources through creation of regional website/ resource library development, with dedicated funding to keep up to date	*AFPC, CES, AVI*

Objective 5: INCREASE ACCESS TO LOCAL FOOD FOR ALL ALASKANS

STRATEGIES:	POTENTIAL PARTNERS:
Create SNAP, WIC, SFMNP double up programs at farmers markets, farmstands, food hubs, and CSAs	*DHSS, FBA, AFMA, AFB*
Revise policy/permitting to allow for greater direct to consumer sales	*DEC, AFPC, AFB, AFMA*
Create policies and resources that would aide commercial fishers to sell straight to consumers rather than shipping seafood to outside	*ADFG, DEC, AFPC, regional economic development corps*

ACTION PLAN GOAL FOUR

Provide Technical Expertise and Grant Opportunities to Increase Food System Capacity

Objective 1: PROVIDE FARMERS WITH ACCESSIBLE RESOURCES AND CONNECTIONS

STRATEGIES:	POTENTIAL PARTNERS:
Create and maintain resource list for new farmers who are just starting to know where to begin and all the steps needed to start a farm	*UAF AFES, AFT, SWCD, TCD, AVI, AFB, local and regional food Networks*
Create networking opportunities for new and beginning farmers to interact with established farmers	*UAF AFES, AFT, SWCD, TCD, AVI, AFB, local and regional food Networks*
Increase awareness of local food production and methods at the community level through micro-grant support and network coordination	*DNR, USDA, state and local governments*

Objective 2: SUPPORT EMERGING MARICULTURE INDUSTRY

STRATEGIES:	POTENTIAL PARTNERS:
Promote research on kelp harvesting as livestock feed	*UA system, DNR, MEP, AMA, AMCC, Economic Development Corporations*
Research value-added kelp product development	

Objective 3: ORGANIZE GRANT-WRITING WORKSHOPS & FUNDING RESOURCES

STRATEGIES:	POTENTIAL PARTNERS:
Create a clearing house/ database that provides information regarding grants	*AFPC, AFB, SWCD, TCD*
Advocate for grant cycles that do not overlap with busy farming/ fishing seasons	*AFPC, AFB, Alaska Food Coaltion*
Create statewide accessible grant language for organizations writing federal grants	*AFPC, AFMA, AFB, FBA, Alaska Food Coalition*

Objective 4: SUPPORT FOOD ENTREPRENEURS

STRATEGIES:	POTENTIAL PARTNERS:
Establish grant programs for investing in start-up costs	*MEP, Spruceroot*
Provide beginning businesses with technical resources and business plan assistance	*MEP, DEC*

ACTION PLAN GOAL FIVE

Enhance, Improve, and Create New Markets and Food Production

Objective 1: INCREASE VIABILITY OF LOCAL AGRICULTURE

STRATEGIES:	POTENTIAL PARTNERS:
Develop affordable agriculture land in sustainable and informed ways, with local input honored	*Tribal entities, TCD, DNR*
Create a mechanism for connecting people that want to farm with affordable or leased land that is set aside for agriculture	*AFT, DNR*
Diversify and support agencies promoting local food	*State of Alaska, non-profits, regional and local food groups*
Engage community members in small-scale/ microproduction like community gardens	*Yarducopia, Anchor Gardens*
Develop additional activities around agriculture, like agrotourism	*AFT, AFMA, regional and local food groups*
Promote programs like Salmon Safe Agriculture	*NOAA, CIK, DNR*
Create and track metrics for consumption needs and production output—create qualifiers/methods for tracking imports (ex. how do we get that 95% imported stat and how do we measure change)	*UA system, state agencies (ex. commerce, natural resources, fish and game)*
Support the improvement of the transportation system to reduce the cost of shipping food in this state	*AK Department of Transportation*

Objective 2: BUILD RELATIONSHIPS BETWEEN FOOD PRODUCERS, INSTITUTIONS, DISTRIBUTORS, RESTAURANTS, BREWERIES, GROCERIES, AND SCHOOLS

STRATEGIES:	POTENTIAL PARTNERS:
Create forums/ opportunities for producers to network with restaurants and institutional buyers	*SWCD, TCD, food hubs, Alaska MEP, BuyAlaska*
Support Farm to School + Farm to Institution through local food procurement purchasing preference	*State agencies DHSS- Child Nutrition, Commerce, DNR*

Objective 3: CONNECT SEAFOOD PROCESSORS WITH OPPORTUNITIES TO ADD VALUE TO INDUSTRY WASTE

STRATEGIES:	POTENTIAL PARTNERS:
Create working group to explore industry waste in fisheries' working group priorities	*SeaGrant, AMCC, Alaska MEP, DEC, NW Pacific Fisheries Commission*

Appendix E

Alaska Food Security and Independence Task Force 2023, Wild Foods

THE PAGE ON WILD FOODS IS PARTICULARLY RELEVANT TO THIS REPORT AND LOOKS SPECIFICALLY AT TRIBAL food sovereignty as part of an action plan for increasing state food security..

Appendix F

Interim Report 2023: Recommendations made to the U.S. Department of Agriculture to advance equity for all, USDA Equity Commission

THE USDA EQUITY COMMISSION'S REPORT IS HIGHLY RELEVANT TO THIS REPORT. BELOW ARE SELECTED recommendations (quoted) from the historic USDA Equity Report Interim Report 2023 report from the 32 unanimously approved recommendations.

Recommendation 5:

Subsistence Farmers; The Equity Commission is concerned that the Census of Agriculture does not fully account for subsistence farmers who rely on trading and/or sharing resources. The current farmers/ranchers included in the census–whether rural or urban–count if $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year. The Native farming community believes that the Census of Agriculture data on Native farmers is incomplete, making policymakers and USDA staff believe the community is smaller than it is and therefore ineligible to receive program benefits.

- Direct the National Agricultural Statistics Service (NASS) to include the varying types of farmers and ranchers in the next Census of Agriculture to account for the nature of many traditional forms of how agriculture products are produced, sold, or exchanged. In addition, NASS should evaluate the threshold used to quantify a qualifying farmer and provide education on alternative forms of documentation that can be used for eligibility. The Secretary should also direct NASS to research and consider changing the definition of a farm.

Recommendation 11:

Elevate the Office of Tribal Relations; The Equity Commission agrees with a repeated recommendation from the 2021 RFI (Request for Information) Listening Sessions about the need for USDA to respect Tribal nations' sovereignty. By elevating the Office of Tribal Relations to the Assistant Secretary level and providing dedicated resources, USDA can strengthen the Nation-toNation relationship with Indian Tribes and help improve support for Tribal ownership, protection, and conservation of land. The Tribal Liaison positions should have direct access to senior decision makers and be a combination of both career and appointed positions to ensure appropriate oversight and continuity over time.

- Elevate the Office of Tribal Relations from its current office to become The Office of the Assistant Secretary of Tribal Affairs.

  a. Establish the Assistant and Deputy Assistant Secretary of Tribal Affairs positions.

  b. Align or create Tribal Liaison positions within each Agency, Mission Area, and Offices that have access to the highest ranking official within those areas; some of these positions already exist, some may need to be created, some should be elevated within their area to serve as the highest ranking official or career leader (example: Senior Executive Service [SES], Assistant Secretary, Administrator or Chief). These positions should also have the authority to coordinate and work with the Office of Tribal Relations or newly elevated Office of the Assistant Secretary of Tribal Affairs.

  c. Dedicate a Tribal Affairs attorney (GS-15 or SES) within the Office of General Counsel (OGC) to act as a support for the office and Agency-level Tribal Relations staff.

Recommendation 24:

The Federally Recognized Tribal Extension Program; The Equity Commission understands that one of the most significant inequities faced by Tribal producers is a lack of access to technical assistance when compared to other producers. The land grant extension system, meant to serve all producers, has historically left Tribal producers behind. The Federally Recognized Tribal Extension Program (FRTEP) was created to solve that issue; however, the program has not had an influx of funding since 1990, and although the 2018 Farm Bill did add 1994 Tribal Colleges and Universities as eligible sites for FRTEP, no new funding came with this. Currently, 38 FRTEP agents across the country are intended to serve as many as 2,000 producers per person, while their counterparts in the land grant extension system each serve approximately 200. This results in inequitable service to Tribal producers. The Commission recommends USDA allocate a set aside, using a similar formula method used in County Extension, for the FRTEP to bring equity between the extension programs.

- Seek increased funding for the Federally Recognized Tribal Extension Program (FRTEP) and remove the competitive nature of the current application process to allow for more collaboration across Tribal extensions. a. Increase funding for the FRTEP program to $50 million. The current funding requires FRTEP agents to serve as many as 2,000 producers per person, while their counterparts in the land extension program only need to serve 200. The competitive funding is static for FRTEP and the 1994s. As new programs compete and are added, all existing programs in Tribal Nations suffer from further reduced funding. This type of competitive funding is not found in County Extension programs. County Extension is based on a formula, and we recommend Tribal extension be based on this formula.

Endnotes

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