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## Food Sovereignty in Indigenous Communities: Extension Programs for Health, Culture, and Resilience

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# Food Sovereignty in Indigenous Communities: Extension Programs for Health, Culture, and Resilience

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**Abstract.** Extension is not equitably serving Indigenous communities due to the effects of colonization in the Land Grant System, a lack of funding, and a lack of understanding of the needs of Indigenous communities. The concept of food sovereignty offers a way to create meaningful educational programming and, despite the inequitable access to services, there are some Extension educators that collaborate with Indigenous communities. To understand these collaborations, I investigated the Western Region of Extension through an interview study. The interviews revealed that educators are facilitating programs having to do with food sovereignty that meet communities' goals and respect Indigenous sovereignty.

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## INTRODUCTION

The foundation and purpose of Land Grant Institutions (LGIs) and the Cooperative Extension System are to bring access, education, and agricultural support to the citizens of the states they serve; however, Extension is failing to serve Indigenous communities equitably due to a lack of funding and a lack of understanding of the needs of Indigenous communities on the part of Extension educators (Hiller, 2005; Emm & Breazeale, 2008). Though Extension serves nearly 100% of U.S. counties, there are Extension offices in less than 10% of Indigenous communities (Brewer et al., 2016; NCAI, 2010). Furthermore, LGIs and Extension have a complicated history associated with colonization. The Morrill Act of 1862 provided land for the formation of LGIs, but that land was the product of Indigenous land dispossession (Stein, 2017). This history, the mission of the Land Grant System, and the lack of recent publications addressing Extension programming in Indigenous communities warrant a renewed interest in scholarship in this area.

Despite this inequitable access to Extension, there are a small number of Extension educators that do collaborate with Indigenous communities (Hartmann, 2021). These programs are important for community development and agricultural education and are vital to the Land Grant mission. In order to better understand Extension's collaborations with Indigenous communities, I investigated Extension educator's collaborations with Indigenous communities in the Western

Region of Extension through a qualitative interview study. The interviews revealed that many of these educators are facilitating programs having to do with food sovereignty in Indigenous communities. Because of Extension's expertise and in light of the inequitable access to Extension that Indigenous communities suffer, the concept of food sovereignty offers an avenue for Extension to create meaningful educational programming that meets Indigenous communities' goals and respects Indigenous sovereignty.

## THEORETICAL FRAMEWORK

The concept of food sovereignty emphasizes the importance of people's right to healthy, sustainable, culturally relevant food, while taking the production of that food into account. Food sovereignty emphasizes autonomy over a group's food system because of the cultural significance of food. The term was first defined in 1996 by La Via Campesina—an international group of small-scale farmers—responding to the effects of neoliberal policies on agriculture and defending their rights to land and seeds. Neoliberalism is a political and economic philosophy that maintains the dominance of the market in making decisions about human needs and well-being; the philosophy values efficiency, deregulation, and the removal of tariffs designed to foster local control. In contrast, the concept of food sovereignty prioritizes production for

local markets, requires fair prices for producers, and values community control of resources (Alkon & Mares, 2012).

At the 2007 Forum for Food Sovereignty, 500 delegates from over 80 countries adopted the Declaration of Nyeleni, which states, “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.” The declaration goes on to emphasize the need to include the next generation in food production; the importance of environmental, social, and economic sustainability; and equality between genders, races, and classes (Declaration of Nyeleni, 2007).

Food justice is a similar and related term that holds many of the same commitments. Food justice calls attention to the ways that the intersecting identities of race, class, gender, and other forms of inequity affect food systems via the economic, cultural, social, and health importance of food. Many scholars call for a food system that is environmentally sustainable, responds to racial and economic disparity, and highlights the contributions of racialized, gendered, low-income, and Indigenous communities (Alkon & Agyeman, 2011). By doing this, food becomes a medium for enacting social justice and change.

Food justice activists critique the concept of neoliberalism and how it affects the food system; for example, allowing the free market to regulate and govern itself has often had the effect of shoring up corporate profits at the expense of access to food for marginalized communities. Critiques of neoliberalism include issues with production agriculture, labor practices, and inattention to inequities in the system (Alkon & Guthman, 2017). Other interlinked issues addressed in food sovereignty discourse include industrialization of agriculture, colonial strategies of (under) development, and protection of the rights of farmers, women, and Indigenous peoples (Kamal et al., 2015).

Neither food justice nor food sovereignty should be confused with *food security*, the idea “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (United Nations, 2019). While the aforementioned terms may seem similar, food security does not specify how, where, and by whom food is produced, nor does it challenge inequities in the food system. Some argue that the idea of food security has contributed to the focus on neoliberal policies—whose goal is to maximize food production. This emphasis leads to a disregard for how and where food is produced and who will benefit from its production (Hoover, 2017).

For Indigenous communities, food sovereignty is part of the larger struggle for political, cultural, and ecological sovereignty (Ruelle, 2017); it has been applied to Indigenous rights movements (Claeys, 2012). Grey and Patel (2015)

identified this relationship as one of the most complex and theoretically deep areas of food sovereignty research. Indigenous rights movements use the idea of food sovereignty in a way that, “involves the relationship between a physical territoriality and a kincentric universe.” By “kincentric,” they recognize that Indigenous peoples extend their social relations to the extant cosmos, a very different view than the commodification of capitalism. Therefore, “food can be seen as the most direct manifestation of the relationships between Indigenous Peoples and homelands, and it consequently occupies a central place in traditional thought” (p. 437). Indigenous rights movements have used the “rootedness” of this definition to resist the colonization of Indigenous place, recognizing that Indigenous food and foodways are inseparable from cultural, social, and political resurgence.

Cooperative Extension—with its emphasis on community development, its wide geographic and ideological reach, and its connections to the academic knowledge of the LGIs—is uniquely situated to take on the challenges presented by food sovereignty while encouraging the communities it serves to build capacity based on their own cultural and agricultural goals. Creating community-centered programming and improving access to educational resources are both at the heart of the mission of Extension, and food sovereignty programming is a potential avenue to achieve these goals. Given the importance of traditional foodways and place to Indigenous culture and resiliency, community-centered and place-based Extension programming can be transformational. Importantly, there is Extension work being done in Indigenous communities today, although the structure and equitable access to educational programming can be very different than in traditional Extension programs.

## EXTENSION IN INDIGENOUS COMMUNITIES TODAY

Extension work in Indigenous communities is performed by various programs facilitated by an 1862 LGI, one of the 1994 Tribal College and Universities (TCUs), or through services administered by the tribe itself. Many of the grant-funded opportunities are available through the United States Department of Agriculture’s National Institute of Food and Agriculture (USDA-NIFA). For example, the Federally Recognized Tribal Extension Program (FRTEP) is a “non-formal, knowledge-based educational program” in which Extension agents from LGIs founded in 1862, 1890, and 1994 do specific outreach in Indigenous communities. Currently, the program is serving 122 Indigenous Nations in 19 states and funds 36 Extension offices (FRTEP, 2022). The Tribal Colleges Extension Program (TCEP) allows 1994 TCUs to establish Extension offices on their campuses. Both programs are grant-funded programs through the USDA-NIFA (NIFA, n.d.). There are other grants that 1994 TCUs can apply for as

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well, including grants focused on research (currently funded at \$4 million), equity (currently funded at \$4.5 million), and newer programs like the New Beginnings for Tribal Students program (funded in 2021 at \$5 million) (USDA, 2022).

Funding is an equity issue for Extension educators in Indigenous communities regardless of source—whether they are from an 1862 or 1994 institution. For every \$100 in federal funding received by 1862 LGIs, TCUs receive little more than \$1 (Gavazzi, 2022). For example, Extension Services at 1994 Institutions are currently funded through the USDA-NIFA at \$8.5 million. When all these programs are compared to funding for 1890 and 1862 LGIs, the disparities become more contextualized; the Smith-Lever Act is currently funded at \$315 million, Hatch is funded at \$329 million, and Extension Services at 1890 Institutions is funded at \$62 million (USDA, 2022). Brewer et al. (2016, p. 18) state that Extension programs succeed because of, “sustained programming efforts within communities and because issues important to the local communities are addressed. The uncertainty of funds and competition between FRTEP agents limits their ability to perform the core tasks that have made Cooperative Extension so successful.”

In addition to these grant-funded programs, educators at 1862 LGIs can collaborate with 1994 TCUs or with Indigenous communities directly to offer Extension programming; it is these programs that are the focus of the study presented here. By collaborating across the Land Grant System, Extension educators can harness the capacity of all involved to share expertise, engage students, and serve communities in culturally-sustaining ways and with the potential for more stable programming over time. While these collaborations do take time and intention, they are vitally important to provide equitable access to the benefits of the Extension system.

## METHODOLOGY

These data about food sovereignty emerged out of a larger project whose goal was to understand what makes collaboration between Extension educators and Indigenous communities successful and what barriers to successful collaborations exist in the Western region of Extension. To answer these questions, I conducted a qualitative interview study of 1862 LGI educators that collaborate with Indigenous communities. The Western region of Extension encompasses 13 states—Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming—, American Samoa, Guam, Micronesia, and the Northern Mariana Islands. I conducted 20 interviews in total, and while there were many programs that addressed Indigenous farmers, food production, and food safety, seven of those participants explicitly discussed their programs having to do with food sovereignty. In this study, the methods of research are prevalent in colonized,

Western research, but the methodology aimed to be decolonizing. Specifically, I used interviews and a survey as methods for data collection, while the overarching rationale of the project and the analysis of the methods emphasized a prioritization of stories, the co-construction of knowledge with participants, and the liberatory effects for Indigenous peoples (Fierros & Delgado Bernal, 2016).

The sampling for the interviews was a mixture of convenience and purposive (Bazeley, 2020). I prioritized diversity of participants in the interview: they held a variety of professional positions, were Indigenous and non-Indigenous, and lived throughout the region. Interview participants’ universities, reservations, and specific job titles have been removed to protect their identities, and each was given or chose a pseudonym. I completed interviews over the phone due to travel restrictions during the COVID-19 pandemic, and I recorded audio during the interview with participants’ approval. I did construct a semi-structured interview protocol, but in keeping with the idea that storytelling is important in decolonized knowledge creation, the direction of the interview was allowed to evolve as the participants’ perspectives directed them (Brayboy, 2005; Solórzano & Yosso, 2002; Smith, 2019; Stanton, 2014).

To analyze the interviews, I used thematic analysis (Bazeley, 2020; Braun & Clarke, 2006) by familiarizing myself with the data, noting initial ideas in research memos, and building codes. I searched for patterns within my codes, sorted them into categories, and created themes by identifying analytical clusters. The analysis evolved towards interpretation of those patterns and their significance, broader meanings, and implications (Braun & Clarke, 2006). Because the topic of food sovereignty is deep in its theoretical and practical applications, and because it was robustly represented in the findings, it is the only theme that I discuss here. Further, to more thoroughly understand the stories of the participants, I used a semi-narrative analytical approach. I kept participants’ stories, “intact by theorizing from the case” (Riessman, 2008, p. 53). This allowed me to better understand how the participants made meaning in their work and to include counternarratives. I gave participants opportunities to provide feedback on whatever components of the process they wanted, including reviewing transcripts, providing feedback on findings, and collaborating on conclusions.

## FINDINGS

Many of the programs that educators described focus on food sovereignty, and program founders designed them to meet the diverse needs of local communities. Julie, a FRTEP Program Leader, talked about food sovereignty as it relates to food access by providing affordable, sustainable, non-processed foods:

[Reservation Name], like most Native communities, is a food desert, which is why we shifted towards the food focus. It's more focused on building food security and helping people make healthier choices when it comes to food. There's one grocery store in [Town on the reservation]. You can get a questionable tomato for \$4 or a Coke and Cheetos for \$2. It's hard to tell people that those are the choices they need to be making when they don't have the income to support that. That's part of why we were working on building that garden education of, "You don't have to go buy fresh veggies, you can grow it in your backyard."

Julie describes issues that are present in many rural communities, where geographic isolation and the cost of living make the cost of healthy food prohibitive. In Indigenous communities, the higher rates of diabetes and other obesity-related health issues are worse than the U.S. average, so making healthy, culturally relevant food accessible is important (Hoover, 2017).

Dave, an Advisor and County Director, also referenced the health disparities in his community and said that they are one of the reasons that food sovereignty is important to them. Importantly, Dave functions as a "resource," available to the community when they need his assistance:

They (the tribes) were interested in food sovereignty, so I started working with them on their food sovereignty gardens. I'm a technical resource, so when they have some problem, they give me a call and I get them in touch with somebody, or I figure out the answer... I got a grant from the USDA, so we did an inventory of all the food sovereignty gardens for food safety. They've got a high-risk population, 'cause of diabetes and obesity, so food safety is really important to the gardens.

For the tribes that Dave serves, food sovereignty isn't just about producing enough food, even if these programs were originally started to make the food supply in his remote counties more secure. Now, they are more about health and autonomy:

Because we can't grow things and we're very remote, the whole valley only has three days of food, so there's interest in more resilience in the food supply. These gardens are not raising enough to make any realistic difference, as far as how much food they're getting. They're trying to demonstrate more than anything that it can be done, to have some control over things they have access to.

Here, we see the importance of food and farming beyond sustenance; providing food to the local community in their

own way is just as important to the Indigenous people in Dave's community as sustenance is. Further, Dave has hired a member of one of the tribes he serves to help him facilitate these programs in the communities.

Kent is an Associate Director for Tribal Extension, and he described some of the programs that his FRTEP Agents are facilitating to bring back traditional foods:

There is a lot of effort right now in food sovereignty and bringing back some of the traditional foods, like squash, sugar cane, some of these things that were lost that the elders used to be aware of. Even hunting and eating pack rats was one of those staple diets. One of our FRTEP Agents partnering with nonprofits had a project where they map the old diets of the [Tribe].

In addition to the importance of health described by Julie and Dave, Kent highlights the cultural importance of traditional foods. His programs are more in-depth than just growing traditional foods; they are also concerned with learning more of the history of traditional diets and the associated culture.

Carrie is a FRTEP Agent and identifies as Native. She discussed the programming that she delivers that is centered on food sovereignty:

We have been talking about tribal food sovereignty for a very long time... Teaching tribal members, and people, not just tribal members, how to grow their own food. I took for granted as a kid, the abundance of salmon that we had. We had it in the freezer, we canned it, we had it dried, we had it smoked, we subsisted off of it. In [local river], the salmon were killed off by the dam, were taken away from the [Tribe's] people. The [Tribe] has been working hard, we've had two years of salmon release programs into our ancestral tributaries.

I would like to see traditional foods incorporated at the schools... Just incorporating one traditional meal into students' lunches reduces things like diabetes, hypertension, and things like that. I had a meeting with our elementary school principal... He was unaware that Natives had the highest diabetes rate. I was like, "These are your students!" So, we started talking about food sovereignty.

Carrie discusses the importance of food sovereignty in a few contexts; she reflects on her own experiences as a child, when her family participated in traditional salmon fishing and how important that food was to their subsistence. She also connects these ideas to the health of her community—specifically that of school-aged children—and how she might be able to collaborate with the school system to introduce one traditional meal per week. These themes are all important aspects of food sovereignty.

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James, who is also Native, also connects his early experiences with traditional foods to his current work in Guam assisting farmers:

When I was growing up, where I built my house, was my family farm. I grew up with my grandmother, with traditional crops. Breadfruit, mangoes, and some corn. For a time, a lot of the local farmers were going into growing crops that were brought in from the West. They're growing well, we just had to put more input into it. Then, in the early 2000's, they had this word, "sustainability." What are we gonna do to sustain the agriculture that we have here on Guam? There was a light in everyone's head that said, "It worked out when we used our traditional crops." For me, if you want a sustainable farm, traditional crops are the best way to go.

In James' experience, Western and Asian crops will grow on Guam if farmers use more intensive farming practices. If the sustainability of agriculture is the goal, however, farmers should embrace the ease of traditional Guamanian crops as part of their long-term goals.

Margaret's state is also interested in food sovereignty, and they make a point to not just focus on rural agricultural practices; they recognize that much of the Native population they are serving lives in urban settings:

Many of our tribal folks are living in major metropolitan areas. We are partnering with our Extension unit to talk about how we can help people do community farming, how they can use traditional foods in healthy ways. We've even created a partnership with our on-campus Native American community to engage in a better understanding of First Foods, and how do we help our urban Native community members have access to this knowledge. I think food sovereignty is really big.

Access to healthy, culturally relevant foods is equally important in urban settings, so that is also a priority of Margaret's university.

## DISCUSSION AND IMPLICATIONS

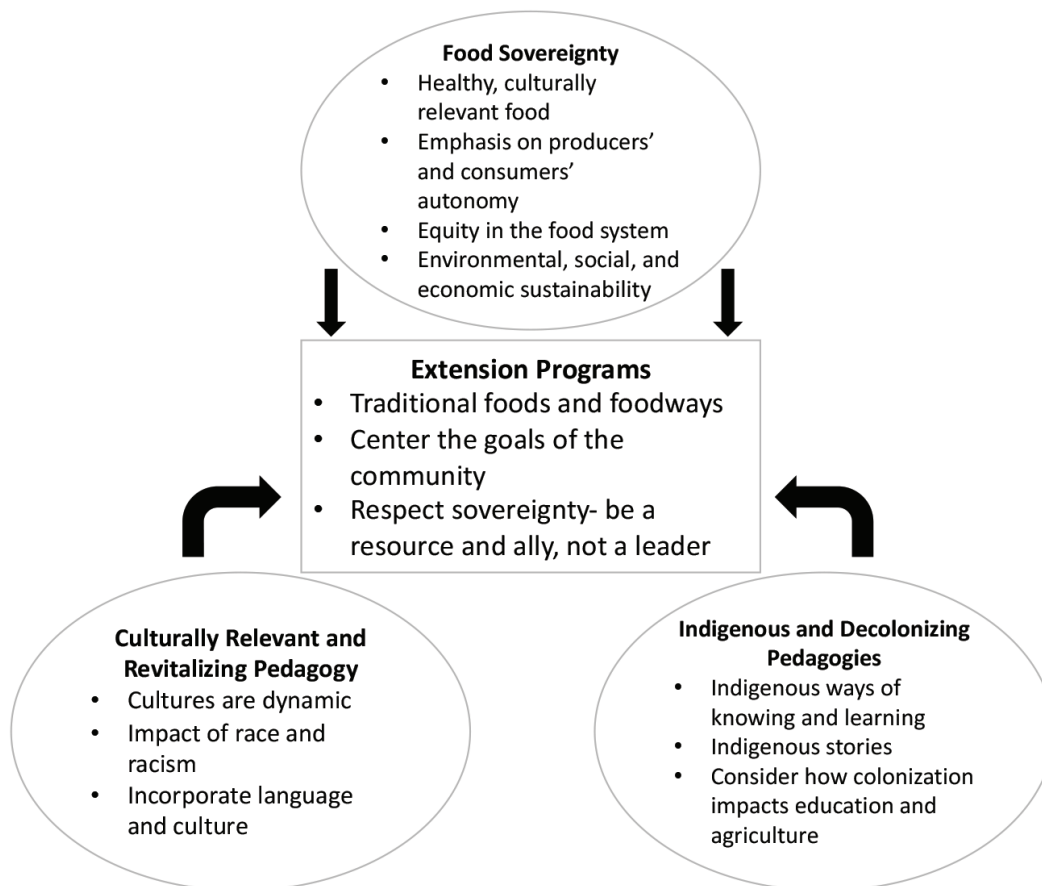
The programs discussed in interviews were varied and served diverse communities; however, common themes included the importance of food's impact on health, culture, resiliency, and sovereignty. Indeed, providing healthy, culturally-relevant food, with an emphasis on the autonomy of the producers and consumers, is foundational in food sovereignty. Many participants discussed the importance of traditional foods to health and culture, and while many Extension programs are designed to address these issues (Hartmann, 2021), food sovereignty is one impactful avenue to directly target

these ideals—particularly because it can respect Indigenous sovereignty.

Many of the interview participants, including Julie, Dave, Kent, and Carrie, highlighted the health disparities that rural and Indigenous communities often face due to limited access to healthy and affordable food. These disparities include a higher incidence of diabetes, obesity, and heart disease (Indian Health Service, 2019). Programs about gardening and nutrition education are widespread and successful in Extension, and many Extension educators already have the knowledge and expertise to teach these topics. Adapting these programs to emphasize food sovereignty could make them more culturally relevant to Indigenous communities and others while addressing the disproportionate health disparities faced by Indigenous communities.

Of course, due to the large scale of these issues, not all food sovereignty programs are going to be able to fix rural and Indigenous communities' lack of access to healthy food; but, as we saw in a few cases here, there can be a greater importance to food and farming beyond subsistence. The cultural and social aspects of growing and eating traditional foods provide an opportunity for the community to come together, engage with their culture, and pass that culture on to future generations. This historical and cultural connection to food and foodways are often lost in Indigenous communities due to the dispossession of their native lands and associated agricultural practices. Programs established on the concept of food sovereignty can offer control and autonomy to communities and respect tribal sovereignty. Also, in James' case, growing traditional foods not only offered his farmers a way to connect to their history, but also to participate in sustainable agriculture as that became important to them as well. Given the unique history and culture in Indigenous communities, food sovereignty can be a way to provide meaningful programming.

Given that Extension programming is most successful when it centers community goals and uses culturally relevant pedagogy (Hartmann, 2021), programs addressing food sovereignty could be combined with appropriate pedagogies to be most effective (Figure 1). Culturally relevant and revitalizing pedagogies emphasize that cultures are dynamic and change over time (Ladson-Billings, 2014), incorporate the impact that race and racism have on education (Brown-Jeffy & Cooper, 2011), and explore how to teach in the context of Indigenous education and sovereignty (Brayboy & Castagno, 2008; Klug & Whitfield, 2003). They do this in many ways, such as incorporating language and culture into educational programming and using Indigenous epistemologies that have often been silenced through colonization (McCarty & Lee, 2014). Another pedagogical option is Indigenous and decolonizing pedagogies. These decenter Western ways of knowing and learning and center Indigenous ways of knowing. While some scholars use either "Indigenous"



**Figure 1.** Food sovereignty, associated pedagogies, and Extension programs.

or “decolonizing” to describe their pedagogy, and some use both, Indigenous pedagogies tend to use Indigenous epistemologies in teaching, value Indigenous knowledge, and incorporate Indigenous culture (Battiste & Youngblood, 2009; McKeon, 2012), while decolonizing pedagogies identify how colonization has impacted educational practices and ideologies and reconstruct them through Indigenous stories (Bartlett et al., 2012; Brayboy, 2005; Davis, 2014) and culture (Fellner, 2018; Pratt et al., 2018; Tejeda et al., 2010). For example, stories can teach about connection to place, connection to one’s self, and connection to all things (Cajete, 2017).

If Extension educators are interested in developing food sovereignty programs, the programs and pedagogies described here can serve as examples. Importantly, the goals of the communities’ being served and the tenets of food sovereignty need to be included in the development and implementation of any food sovereignty program. Also, to address a point made by Margaret, urban communities should not be forgotten when we think about Indigenous peoples. This study included participants that predominantly serve

rural Indigenous communities, but this in no way reflects the way many people from minoritized communities interact with their food system. More research about addressing the needs of urban communities through Extension is vital. Extension can support educators in these programs by providing training on the concepts and pedagogies described here (Martenson et al., 2011), as well as supporting future research about these programs, the educators that collaborate with Indigenous communities, and the perspectives of the other members of these collaborations—namely, the Indigenous community members themselves.

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