

To Know Our Seeds is to Know Our Histories:  
Oneida Community Seed Keepers as Stewards of Traditional Knowledge

by  
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## Abstract

This thesis describes what motivates Oneida community seed keepers to leverage the dissemination of traditional knowledge to facilitate the preservation of indigenous seed varieties on the Oneida Nation of Wisconsin reservation. Violent colonization, assimilation, and removal of Indigenous peoples throughout Turtle Island (North America) intentionally disrupted traditional food, language, culture, and community systems. Persisting community food insecurity and supply chain instability highlights how important food sovereignty is for Tribal Nations to prioritize. Accessible, culturally relevant foods is a vital tenant of Indigenous food sovereignty that is supported by community members who save and grow traditional seed varieties. These stewards are seed keepers.

Eight Oneida community seed keepers provided oral history through qualitative, semi-structured interviews. These interview transcripts were then coded to reveal the motivations, resilience, and strengths of the seed keepers. They were motivated by the drive to honor their kinship relationships, build Oneida's resiliency, promote Oneida's culture and language revitalization efforts, support the health and well-being of their family and community, and build Oneida's food sovereignty. The Oneida community seed keepers leveraged these motivators to support the intergenerational and intracommunity dissemination of traditional seed keeping knowledge and skills. These motivations also informed their selection techniques when choosing which seeds to keep for the subsequent season and which to eat. The interviewees additionally stressed how important growing out and maintaining records, names, and stories are for preserving these traditional Indigenous varieties.

This thesis highlights the relationships seed keepers develop and maintain between generations, communities, and land. It also supports using oral history as a means of supporting the dissemination of traditional knowledge and preserving community stories through the process of conducting research.

## Introduction

To be Indigenous is often described as having an innate, reciprocal relationship with the world around us. Our relationships contextualize the way we interact with each other, our non-human relatives, the colonial systems around us, and our histories. As an Oneida woman, part of the Turtle Clan, with the opportunity to conduct research, I understood the responsibility I had to my community to do so in a way that honors and uplifts these relationships when setting out to conduct this research. Some of the most important relationships to the development and completion of this thesis were created during an apprenticeship at our cultural farm.

Tsyunhehkwa<sup>^</sup> was created by Oneida to support the white corn needs of the community and now also provides pasture raised beef, medicines, traditional produce varieties, and community education, among other services. My time spent working at and volunteering for Tsyunhehkwa<sup>^</sup> introduced me to many incredible individuals who I am honored to call seed, life, and culture mentors. This is where I was first introduced to our seed relatives. Although I had been raised on the reservation and grew up with a strong connection to the land, I was not connected to our traditional foods or seed varieties. I am grateful for all the stories told and conversations shared over lunch or while walking through fields and gardens that supported my curiosity. The first seeds of inspiration for this project were planted during this period.

The agroecology graduate research process empowered me to connect and contribute in a way I would not have been able to otherwise. In the early stages of my degree progression, I attended many food and seed sovereignty events hosted by community members inside and outside the reservation bounds. I learned traditional skills that had thus far been lost to my immediate family, I gained an appreciation for the careful process of seed keeping, and I developed relationships with those doing seed and food system work in Indian Country. These

relationships to my community, network, family, and non-human relatives were necessary to my own successful journey in writing this thesis. In building these relationships, I experienced many of the knowledge dissemination processes which I describe, analyze, and celebrate within this thesis. This relationship building process, along with an incredibly supportive graduate program, advisor, and committee, allowed for a research process which prioritized research topics that mattered to those being researched. Therefore, this thesis developed from my experiences and conversations with Oneida seed stewards. My passion for the land, my relationships, and my community informed my work.

The histories of Native seed keepers are fraught with the violence, forced relocation, and attempted erasure of their Tribes and cultures. Traditional lifestyles, skills, knowledge, and diets were intentionally threatened by legislative genocide and assimilation in an attempt to remove Native communities as barriers and to promote a colonial-style method of individualized agriculture (Wolfe 2006; Hoover 2017; White 2019). Treaties and removal fractured the onayote'a·ká, the people of the standing stone, into several different tribal communities. Besides the Oneida Indian Nation in New York and the Oneida Nation of the Thames in Canada, 654 Oneidas were relocated to the Oneida Nation of Wisconsin. The Oneida reservation in Wisconsin was formed through the 1838 Treaty, establishing 100 acres for each resident Oneidas (Oneida Nation 2018; C. Cornelius 2013; *Treaty with the Oneida* 1838). In the 1860s the boarding school era began. Children in boarding schools were forced to eat low-nutritional, non-traditional rations and were punished using hunger (Hill 2017, 99; Webster 2018, 132; Lewis and McLester III 2005). This was an intentional severing of Indigenous youth from their traditional foods, ecosystem, customs, and knowledge after the previous intentional severing of the Oneida people from their homelands and community.

The Dawes Act and allotment policies encouraged the farming of reservation land, yet for the Oneida people, it led to the decline of farms and acres farmed (Carlson 1981; Hoover 2017; Webster 2018, 132). Many of the interviews in the Oneida Lives book, a compilation of the WPA Oneida Ethnological accounts, discuss what it was like farming in the late 1930s to early 1940s, when the interviews were conducted. Cora Charles, a 59-year-old Oneida woman interviewed in 1941, provides a first-hand account on farming during this time. She writes,

I think that the government is not doing right by trying to make farmers of all the Indians. They are not all interested in farming, and this giving land back to the Indians is not for the Indians' benefit. It only means that they have to work hard and make money for the government. If they stop grinding away, then the government will step in and take it away from that individual and give it to the next foolish Indian.

(Lewis and McLester III 2005, 343).

Many tried to farm with teams of horses pulling plows and the varieties favored by the white market of the time. Most were unsuccessful and had to search for employment in surrounding cities, forcing their families to move out of their community (Lewis and McLester III 2005). This displacement was exacerbated by economic events, such as the Great Depression, when white business owners laid off Oneida workers first as they believed “all Indian people have some other income” (Lewis and McLester III 2005, 15). Whyte, an Indigenous philosopher from the Potawatomi Nation asserts that “[v]iolations of food sovereignty are one strategy of colonial societies, such as U.S. settler colonialism, to undermine Indigenous collective continuance in Indigenous peoples' own homelands” (Whyte 2017). The extraction of resources on Indigenous lands, the pressure to assimilate, and the emergence of commodities are a continued threat against Indigenous communities and their kinship lands (Hill 2017; Lewis and McLester III

2005). These historical atrocities not only impacted the ability of Indigenous Tribes to maintain sovereignty over their food systems, but they also impacted the ability of Indigenous seed keepers to pass down their traditional seeds and seed keeping skills. Passing down, learning, and using traditional methods became an act of resistance and a necessity of cultural preservation and food security.

In response, many Native communities have been investing in repatriation and cultural revitalization efforts. These programs may not only work to reunite traditional seed varieties with their relatives, but also to renew seed keeping practices (White 2019). On a microlevel, individual seed keepers host seed exchanges for their beloved community members and pack up their precious seeds carefully as they travel to share with friends and relatives. On an inter-community level, there are several community and non-profit organizations that specialize in keeping, preserving, and repatriating Indigenous varieties. The redevelopment and repatriation of traditional and culturally important varieties has been a priority of Indigenous groups such as the Pawnee Seed Preservation Society and the Indigenous Seed Keepers Network (ISKN). Both have been at the forefront of reconnecting and sharing ancestral seeds with relatives (White 2019). Once a variety has been delivered back to its relatives, the community's next step is to continue to grow that population to a less vulnerable size. The labor of growing, saving, and regrowing seed varieties is something that used to be shared by groups of family members, but now may fall on individual community seed keepers or inter-tribal groups (G. L. Wilson 1917). For repatriation to become reintroduction, the variety must be actively grown and enjoyed by its kinship community members. This ultimate reestablishment often relies on younger generations and is impeded by all the same colonial forces (Nabhan 1989). Not only are these varieties at risk, but also the stories, histories, growing techniques, ceremonies, and foods which rely on the

integrity of the variety (Nabhan 1989; Hill 2017). A deeper understanding of the roles seed keepers hold in their unique communities, and their expertise over varieties, would aid in supporting these inter-tribal rematriation and seed system efforts.

Rematriation and revitalization efforts are not the only roles community seed keepers fill. They also are crucial in supporting their community's food system, as proven when the COVID-19 pandemic intensified the economic instability and food insecurity of many Tribal Nations across Turtle Island (North America). It disproportionately affected Indigenous communities due to structural economic and health disparities (Sharp 2020; Hoover 2020b). Feeding one's community became a necessary priority as the economy weakened and layoffs continued to increase. Seed keeping groups and individual seed keepers across Turtle Island answered their communities' calls. From the Mohawk community of Akwesasne, Rowen White sent out "three sisters and friends" packages full of herb, produce, and pollinator flower seeds (Hoover 2020a). Cynthia Wilson developed Seeds and Sheep to provide Navajo Nation community members with drought-resistant seeds for gardens from Monument Valley, Utah (Reinhart 2020; C. Wilson 2020). Becky and Steve Webster of Oneida shared "corn, bean, squash, and sunflower seeds with several dozen Oneida community members" (Webster 2023). When shelves were emptied of food and seeds, seed keepers were able to meet their communities' demands (Hoover 2020a). This ability to rely on one's community, as well as access to culturally relevant nutritious foods and the reciprocal connection to the land and food, are tenets of food sovereignty (Hoover 2017; Stevens and Brewer 2019). Thus, seed sovereignty is one of the many different driving forces behind a community's food sovereignty (Hill 2017). Community seed keepers are, and always have been, critical for supporting the food sovereignty efforts of Tribal Nations through their intimate knowledge and relationship to their food and seed systems. Rowen White, Cynthia

Wilson, and the Websters were just a few amongst the many seed keepers throughout Turtle Island who were able to aid in supporting their community's food security and sovereignty through their commitment to community seed systems.

Supporting the Oneida community seed keepers which support these Indigenous seed and food systems expands upon the priorities of the Oneida Nation and its citizens. Colonial adversities, such as chronic health conditions and language erosion, can be offset or improved through the increased access to culturally relevant, nutritious foods and Indigenous spiritual and cultural activities (Quinless 2022; Hoover 2017; Webster 2018; Mt.Pleasant 2011) Preserving, growing, sharing, and eating our traditional varieties bind us to our ancestors (Stevens and Brewer 2019; White 2019). The skill and expertise of seed keeping was traditionally passed down between relatives and learned through doing (G. L. Wilson 1917). What once was a community-building skill may now be undercut by an independent style of colonial agriculture. These relationships to our seeds can guide our path to cultural reconnection and can reteach our communities how to keep these rematriated varieties and connect spiritually (White 2019). The attempted assimilation and destruction to our traditional food, culture, and language lifeways harmed the people of Oneida, and of other Indigenous communities, but did not succeed.

The traditional knowledge necessary to continue the legacy of Indigenous seed keepers, despite colonial intervention and pressure, was carefully passed down to ensure the next generations' preservation of identity, cherished varieties, and food security. The oral history that accompanies these traditional Indigenous varieties, along with traditional knowledge that supports the growing of these traditional Indigenous varieties, is pivotal to understanding the roles Oneida community seed keepers play in the revitalization of culture that was threatened and/or lost through colonialization. In this thesis, I describe how Oneida community seed

keepers leverage their motivators to disseminate traditional knowledge in order to protect the integrity of the traditional Indigenous varieties they steward, through the interviews of eight Oneida community seed keepers.

## Methods

The way we do research matters because it informs how the rest of the world sees us, our communities, and our cultures, traditions, and ways of life. Kathleen Absolon states that “Research has been the foundation upon which genocide was justified” (Absolon 2022). There is trauma inherent to researching Indigenous communities and cultures. Subsequent research can either accurately represent our people, support their sovereignty, and substantiate our traditional knowledge, or it can further establish the colonial constructs and research that have negatively impacted our communities (Absolon 2022; S. Wilson et al. 2019; Cajete 2015). Indigenous research, therefore, is rooted in honor, relationality, reciprocity, and connectedness and centers the lived experiences and stories of Indigenous peoples (Absolon 2022; S. Wilson 2008). Indigenous research should be a wholistic approach, fostered through trustworthy relationships, to an act which is inherently and justifiably untrustworthy (Absolon 2022). I leaned on the relationships I built in the past to conduct research which would further the priorities of my community. Many of these Oneida community seed keepers are inextricably tied to my own life story: they are mentors, previous coworkers, family friends, and community members. Winnifred Pelky is my beloved grandmother. Therefore, remaining objective and disconnected from this research was never an option; Shawn Wilson writes that “the distancing of self from research is as much a product of privilege as it is of different world-views” (S. Wilson et al. 2019; Absolon 2022). These relationships are indicative of not only how tied I am to this project, but also how seriously I take the responsibility to my interviewees and their oral history. My research reflects the traditional dissemination of knowledge between kin and community. Developing and maintaining these relationships, as well as continuing to pass on the stories and knowledge lent

to me by my Oneida community seed keeper interviewees, are responsibilities I will continue fulfilling long past this thesis.

This was a qualitative research study dependent on in person interviews of self-identified Oneida community seed keepers. Requirements for participating included being eighteen or older, being a seed saver of traditional Indigenous seed varieties, consenting to an audio recording of the interview, and self-identification as a member of the Oneida community in Wisconsin. For this project, traditional Indigenous seed varieties were defined as seed varieties which had kinship ties to an Indigenous community (with preference to the Haudenosaunee nations) and/or seed varieties which held cultural and/or spiritual significance to the individual. The Oneida are one of six Indigenous nations of the Haudenosaunee. This research focused on the Oneida community members from the Oneida reservation in Wisconsin. All interviewees lived and/or worked on the Oneida reservation in Wisconsin at the time of interviewing, therefore this is the place I reference when discussing the Oneida community. The usage of the term Oneida community within the population of interest was intentionally used in order to promote a wide range of individuals to participate. Seed keeping is not an activity that is dependent on blood quantum or enrollment status. Additionally, not all community members living in or around the Oneida reservation boundaries are enrolled as Oneida citizens. For this research, I was interested in seed keepers who have or had a direct impact on the Oneida community in Wisconsin. Participants may have self-identified their enrollment status during their interviews, but it was not a requirement to participate nor a question during the interview.

The Oneida Nation of Wisconsin is one of 11 federally recognized Tribes in Wisconsin. Enrolled members of the Oneida Nation are sovereign political citizens, therefore it is a required step when working with tribes to receive permission to conduct research with their citizens or on

their land. Not all Tribes have the same process for approving potential research projects. Navigating these additional timelines and the willingness to collaborate with the Tribal governments is a central tenant for Indigenous research. I first worked with the Chief Counsel of the Oneida Law Office to present the research proposal to the Oneida Business Committee. The research was accepted. This allowed me to conduct research about Oneida, on Oneida reservation lands, with Oneida citizens. This was a conditional allowance, given that the research was not to be published until reviewed and approved by the Oneida Business Committee. After a long history of exploitative research, these measures are intended to hold researchers accountable for their methodologies and the impact of their research. This helps to protect Oneida from exploitative or non-representative research being published about its culture, history, community, and citizens. Since the research study included Native Americans as its target population, the IRB also required collaboration alongside Oneida for the study to be approved on their end.

I conducted interviews using a semi-structured interview guide in September and October of 2024. Interview questions were focused on the participants' backgrounds in seed keeping, characteristics and processes used in the seed keeping process, their motivations to keep seeds, and the process of passing this knowledge down. My interview guide is attached as Appendix C. I encouraged participants to include personal stories of ancestors, legacy, community, and triumphs and tribulations. I ended each session with an invitation to share with me anything they thought I missed that was relevant for this research or to share any additional oral history they wanted to be recorded. Many participants opted to share wisdom they had learned through seed keeping that they thought was valuable for the next generation of Oneidas. Interviewees were allowed to skip questions, take breaks, end the session, and withdraw at any point during the interview. We aimed for an hour to an hour and a half interviews. I used a combination of

personal networks, word of mouth, physical flyers, and social media posts to recruit the interviewees. Interviews were conducted on or near the Oneida Nation of Wisconsin reservation in both public and private areas. IRB requirements for mandated reporting while interviewing participants in their private residence was communicated to participants and followed. As a requirement to participate, interviewees were required to consent to the information and recording developed from their participation to be utilized in not only this thesis but also to be utilized in the production of and future published cultural and educational materials through the Tribe. Interviewees were given the option to opt out of video recordings, but all interviews were required to be audio recorded.

The emphasis on audio recordings was intended to support the future banking of oral history at the Oneida Museum. The video recordings were preferred because of the context it would have provided to the oral history. Body language, settings, and the image of the interviewee all enhances the impact of an oral history piece. When presenting to the Oneida Business Committee for review and approval, I emphasized the value of banking these interviews as oral history. This process was an especially important part to me as an Indigenous researcher. One critique of previous research done with Indigenous communities is the lack of tangible product or impact the research has for the Tribe and community. Researchers, such as myself, benefit off the data, stories, and knowledge of the community through the publication of their research. Collaborating with Oneida and these community members to preserve and use this oral history is just one product that can be extracted from this research process. Oneida has supported the investment in preserving our stories, language, culture, and knowledge before with previous oral history projects. The recordings banked because of this specific project will contribute to this archival resource. Further, it was also important to explicitly allow Oneida and

its departments, programs, and community members to use the interview recordings in future projects. This could include the recordings being used in displays, educational materials, programming, or in continued research by other community members. These stories, skills, and knowledge are owned by the community as a whole. I am just borrowing them for the purpose of this specific research. Returning the recordings to the community allows for a larger impact. Transcripts were developed from the interview audio recordings and then provided to interviewees to review. The traditional knowledge, skills, and experiences expressed in these interviews belong to the interview participants and their respective tribes, therefore participant identities were retained throughout the research process. This is in effort to support the data sovereignty of the Oneida. Participants were provided the opportunity to review transcripts produced from their interviews and any requests to remove, edit, or clarify information was honored. Considering the topic of research, there was a low probability that participants would reveal any personally or culturally sensitive information. This review process ensured that in the event they did, there was a process in place allowing for the removal of it.

I used a physical copy of the interview guide to manage my in-the-moment thoughts and notes as I listened to each interviewee. This provided a map of the questions I prioritized as well as a space to keep track of which questions were naturally touched upon in previous questions. I would write down clarifying and probing questions I wanted the seed keeper to expand upon after the current conversation was over, along with any stories, keywords, or themes that I thought might be significant for future recall. In the later interviews, this also included jotting down any connections I had made between interviews in the moment. Finally, I also used this space for my own reflections on the interviews and my own skills as a new interviewer and researcher.

My first round of coding the compiled and formatted interviews was largely ineffective. This initial coding event was a large, open-ended inventory of anything that I thought was important or impactful. I also compiled my interview notes into this coding document, noting any stories or connections I had made. After this initial coding attempt, I referenced Johnny Saldaña's *the Coding Manual for Qualitative Researchers, 3rd Edition*, for guidance. The subsequent coding events, the coding techniques used, and my own analysis of this process were all further guided by his book. My first round of coding was a mix between general descriptive coding and in vivo coding, where the codes came from the actual language of the participants (Saldaña 2016, 105). I used my transcripts for the next round of coding. After editing each transcript for readability and interviewee review, I would then go back through and code the same interview. Using what I learned from my previous round of coding and my familiarity with the stories, I was able to code using more descriptive categories. As I continued through my interviews, I would often change the codes I was using to be more broadly applicable to more stories and cases, while making notes of where those situations differed and of stories which were impactful examples of that code. Often, I attributed more than one code to a story. For my third round of coding, I used what Saldaña called conceptual coding to give my subcodes a larger encasing code that better suited an overarching idea (Saldaña 2016, 120). I made mind maps to better understand where these categories and ideas overlapped, led to each other, and were dependent on each other. This is where I realized how influential discussing the Oneida Community Seed Keepers' motivations would be in contextualizing how they use the dissemination of traditional knowledge in their seed keeping processes. Finally, these codes could be compiled to analyze the results of my data. Saldaña calls this second cycle of coding, where the researcher searches for these "rules, causes, and explanations in the data, pattern

coding (Saldaña 2016, 236). These final codes are what supported my ultimate understanding of the connection between the Oneida community seed keepers' motivations their activities, and their connection to community and culture.

## Results

At the beginning of each oral history session, I asked the Oneida community seed keepers to introduce themselves in whichever way they felt most accurately represented them. I also stressed that, although I had specific questions to ask for my thesis research, they should also consider what additional language, stories, and details about their lives they wanted represented within the oral history for future generations. This prompted a wide variety of introductions from the participants. Becky, Amy, and Jen took this as an opportunity to use the Oneida language, often introducing themselves through their Oneida names and clans. Participants would continue using their language as much as possible throughout the interviews, especially when it came to locations and groups. Others used the moment to discuss where they grew up, where they settled down and raised families, and where they now work. Winnie described how she grew up in Menasha as one of eleven siblings, raised her ten children in Kaukauna, then moved to Oneida where she now enjoys her grandchildren and great-grandchildren (Pelky 2024). Becky shared how her and her husband Steve traded a secure life and lucrative jobs for their beloved Ukwakhwa homestead where they homeschool their kids and host workshops for the community (Webster 2024). Many of the seed keepers not only lived on the reservation, but also worked on the reservation in roles where they were seed keepers and environmental stewards for the Tribe. For example, Lynn, Jordon, Kyle, and Eric all were working or had worked at Tsyunhehkwa<sup>^</sup>, the traditional farm on the Oneida Reservation. Throughout my sessions with each participant, I wanted the oral history to reflect the work and passion of each seed keeper. These introductions provided crucial context into what drives and motivates their seed stewardship.

A significant aspect of conducting interviews with Oneida community seed keepers who grew and saved seeds on the reservation, was to capture this generational connection between the

participants, their varieties, and the land. Most of the interviewees lived on the Oneida reservation at the time of the interviews, but not all interviews were conducted at the homes of the Oneida community seed keepers. Their connection to the land which their house sat upon, as well as the land that stretched throughout and far beyond the modern Reservation bounds, was an important part of their identity and therefore their introductions. Becky described how she has lived alongside Duck Creek, which prominently runs through the Oneida reservation, for her entire life (Webster 2024). Amy and her family had been living at their house on the reservation for ten years at this point. She expressed how this land and her orchard, chicken coop, bees, and garden beds were all part of a careful plan to support this dream she had for her family. She described this, with the care and sincerity of a mother, “The most important part is that it feels home, but that I can also just walk out my front door and I have food and medicine at my disposal. That’s what my dream is for this place” (Spears 2024). Eric described where the farms of his grandparents and great grandparents used to be, before they retired and their land was developed by the Tribe (McLester 2024). Lynn described how his connection to Oneida was not one of descent or ancestry, but instead a connection through created community and passion (Utesch 2024). Finally, Jen and Kyle discussed how, although they had not spent their entire lives living on the reservation, they felt the importance and pull of being at least nearby their community (Falck 2024; Wisneski 2024). By discussing place, I was able to better contextualize the questions I asked the participants and understand nuances within their answers. These descriptions of place and their importance to the seed keepers and their family also serves as vivid, illustrative oral history for the future as our Tribe continues to grow and change.

One of the fundamental concepts I requested Oneida seed keepers to discuss was their strategies for overcoming obstacles. This was delivered as a pair of questions; first, I asked them

to describe their seed keeping process under perfect conditions, and then I asked them to describe how they hedge against threats to their seeds. In a perfect season, Oneida seed keepers would spend every day out in their gardens studying the physical characteristics of each plant and variety. This could include growing attributes such as germination rates, seedling strength, or drought and flood tolerance or more plant specific characteristics such as beans per pod, corn stalk lodging, ear height, and squash/pumpkin vine strength. Seed keepers would then be equipped to make the most educated selections on which individuals should be eaten, and which should be selected and set aside for seed.

Tuscarora White corn was brought from New York to Wisconsin by a delegation of Oneidas looking to reconnect the Oneida people to their traditional foods they had lost during relocation. The Tuscarora white corn, or Oneida white corn as many of the seed keepers referred to it, is now a staple for foods like kan<sup>^</sup>stohale and corn mush on the Reservation. Tsyunhehk<sup>^</sup> grows about 10 acres of white corn every year to be sent to the Oneida Cannery to be processed for the community. This was a gradual process, though. Finding white corn on the Oneida reservation was not always the reality. In fact, many seed keepers recall growing up without knowing where to find more white corn if their family's stock ran out after a year or two of poor harvest. Eric reflected on being young and noticing his mother's store of white corn seed being slowly depleted throughout the winter,

If we didn't keep this for seed and just used it up for corn soup or whatever, then where are we going to get more? I didn't even know back then. I was in high school or 18, 19. Where do you go to find more white corn if you use it all up? So, in my mind, I guess, I decided I've got to make sure that we have white corn, and make sure that we are planting white corn.

(McLester 2024)

Other individual growers, such as Eric, and community groups, such as Ohe·láku, helped to further increase the amount of white corn accessible to the community. Kyle described to me how impactful it has been for the community's food sovereignty and cultural identity that these different groups and families have started to grow substantial amounts of white corn. He shared, "So when we started to have multiple groups in the community start growing white corn successfully, we looked at that as almost a miracle" (Wisneski 2024). The Oneida community seed keepers found a sense of security and peace with the improved access to Oneida white corn.

Because of the prevalence of Oneida White Corn now grown on the reservation, it has an easily identifiable set of characteristics. It is a variety most Oneidas are familiar with and many of the Oneida community seed keepers that I interviewed grew up with and maintained year after year. Best selection practices were also widely known and standardized. Corn seeds should be taken from only the longest ears with the straightest rows. There should be 8 rows, no discolorations of the kernels, and no dents in the kernels. Finally, the ear should have plump kernels which fill the entire ear, from tip to base, without any missing kernels. Amy described the process of selecting the best Oneida white corn seeds,

If you imagine a big, long ear of corn and you just grab it with your whole hand in the middle, what you harvest is about the width of your hand for your seed. And then the rest of it, you can use for food. So, you only harvest that middle part for the seed because that's like kind of the biggest, juiciest, greatest morsels. so, you want the best, you know. Anytime for anything for seed you want the best.

(Spears 2024)

It takes technique to spot a seed ear and often seed keepers learn by doing. Amy described how she often double checks with one of her mentors, Becky Webster, whether an ear is seed worthy, “You always kind of take it to Becky first, like, is this a seed cob? And then she'll be like, yes, or she'll be like, mmm no. And that's how you learn, you know, is by looking at it and saying, oh, this one is really pretty. And it always seems like those seed ones, they are really pretty. They look really nice. And they're big and they're just perfect, you know?” (Spears 2024). Becky described some of the characteristics she uses to choose seed corn in her white corn populations, and how the process may change slightly from season to season. She explained,

Harvest is often such a frenzy. What we will do is, in good years, we'll go through the field first and just select like between your shoulder and your hip height, nice cobs that are dried out and opening up almost like a flower. You can tell that the corn is drying out really nice in there because if the husks are too tight around it, it doesn't let the corn breathe as much and you can have more mold problems.

(Webster 2024)

The seed ears are then braided, indicated with a corn husk flower, and hung in the basement to dry down.

Many of the Oneida community seed keepers described how ideally white corn would be selected more intentionally for characteristics about the plant itself. Seed ears should only be taken from sturdy stalks with one or two cobs on them. Cobs should be between hip and shoulder height to facilitate easier harvesting. This more intense selection ensures a more accurate representation of the variety, as well as a population more suited for the grower's harvest, but is often too time consuming, and therefore skipped. After selection, the perfect ears, or other forms

of fruit, are set aside for seed and then carefully dried and prepared to be stored over the winter. Ideally, populations would then be labeled right away to ensure correct future identification and to provide crucial environmental context about the season's conditions. Keeping accurate records is one of many responsibilities and challenges seed keepers face. Lynn described his organizational process,

I dry them down and put them in jars, and then put them some place where they're out of sunlight and preferably a cooler space. . . And of course, I label it too. For me at home, it's pretty easy, but you got to as a lot of those seeds look the same. So, you got to make sure you keep a good label on it as well. I usually put the year that it came from, and I try to keep records. Also, I save all of my calendars. In that way, for each of the years, I know what the growing conditions were and kind of what was taking place in that year, so that I've got a good idea of how the seed has adapted to that as well.

(Utesch 2024)

Lynn's process was unique among the other seed keepers interviewed. He similarly valued the names, origins, and histories of the seeds he planted, but he additionally valued understanding the environmental conditions which the seeds were collected from (Utesch 2024). Kyle and Becky discussed the importance of learning how to properly label seeds as a seed keeper and steward. Not only is this to ensure that you have viable seed for the season's planting, but also to ensure that you sustain the stories and kinship relations that belong with the seed and variety (Webster 2024; Wisneski 2024). Becky explained that

People will say, oh, I'll remember what that seed is. No, you're not. You're not going to remember what it is. Just write it down and make sure that you keep a record. You need

to know how old that seed is for viability purposes and it's especially important to accurately write down the name. Talk to different people if maybe she has an inappropriate name. We've received some seeds from Seed Savers Exchange with an inappropriate name, so our friends are in the process of getting her renamed.

(Webster 2024)

Becky also described how some Haudenosaunee and Oneida varieties have lost their original names. Community and cultural leaders will then provide new names based on attributes and personalities. These new ukwehuweneha names, their Oneida names as Oneida relatives, can then be passed along with the varieties to future growers and seed keepers (Webster 2024).

Additional information, such as whether a bean is a trellis bean, bush bean, or a bean that will grow safely on corn, is also vital for seed keepers to include when keeping seed records. Factors such as stewarding traditional seeds that have complex histories or juggling several different varieties at once can exacerbate the barriers to successfully keeping a season's worth of seeds. Ensuring that seed populations have accurate records is just one method seed keepers use to create resilient seed systems. If the seeds are shared or separated from the community member who stewards them, this information can save the variety from losing its name, history, and kinship community.

Perfect seasons are what these seed keepers ultimately dream of, but unfortunately not what they experience. Interviewees revealed how challenging maintaining a population of seeds each year could be and the many challenges they faced. Animal pressure was often the first identified challenge, regardless of what kind of seeds were being saved. Raccoon, deer, mice, bear, rabbits, squirrels, chipmunks, and cranes are all threats to a garden, along with seasonal pests, insects, and diseases. Jen searched for solace from predatory insects through infrastructure

such as low tunnels (Falck 2024). Heartaches of entire gardens being demolished in a night by wildlife are easy to come by. In one instance, Kyle even described to me how his dog seems to enjoy his produce just as much as his family (Wisneski 2024). This year, the raccoons hit Eric's white corn at the green corn stage and knocked it all down in a matter of nights. He was left without a harvest this season, which is unfortunately a common occurrence in Oneida (McLester 2024). Small backyard gardens, especially at their ripest stages, are easy targets for hungry wildlife. Although disappointed, he is not without white corn for his family. Eric shared how he has found success in keeping more than a single season's of white corn seed, "So last year I did really, really well. I got a lot of white corn, and that will carry me for a couple of years, so I don't need to worry. I could have a bad year or two and still have enough to carry me through for the next couple of years" (McLester 2024). This year, Amy's hazelnuts and apples thrived, among many other crops. Her family, though, would not get to enjoy the fruit of their labor. Chipmunks and squirrels demolished her hazelnut crop while the deer ate all their ripening apples. She shared with me,

It just makes me realize we just have to plant more. ...And I'll share, you know, I'll share. Hopefully they'll share with me. But that's the deal you have to plant more of everything...And if I'm gonna plant candy in my yard, I can't assume that they're not gonna wanna come and eat it...I can't expect them to stay away from it, and I'm not going to put up fences.

(Spears 2024)

Instead of chasing the wildlife which threatens her crops off, she encourages their presence and works to live harmoniously with them.

I'm sitting there living my best life in their land. I'm sure there's other animals that would love to be here instead of us being here...It's my favorite part of the day when I'm sitting there working and I look out the window and I see a little squirrel go walking by or a little chipmunk or rabbit eating out in the grass. I appreciate the animals and they gotta eat too.

(Spears 2024)

These animals are our non-human kin. Although they can be damaging to gardens and crops, there is a certain responsibility Oneida people have to the wildlife. Kyle originally taught me this while I worked at Tsyunhekw<sup>^</sup> and struggled with a family of rabbits eating my own family's garden. In our interview, he stated that, "We always say that you should probably grow a big enough garden to where the animals are able to get their share" (Wisneski 2024). Kyle advocated for larger community gardens, such as the model Tsyunhekw<sup>^</sup> follows, in order to support the participating community members and their families, as well as the animals who also call this land their home (Wisneski 2024). This inherent respect for the wildlife which threatens their crop, along with the reciprocal relationship with the land, reflects the values taught in our traditional teachings. Our creation story describes the kinship relationships we hold with the land and the thanksgiving address used in ceremonies and governmental proceedings provides structure for acknowledging these relationships and commitments (Oneida Nation, n.d.; R. Cornelius [2013] 2017; Oneida Nation Educ. Campaigns, n.d.; C. Cornelius 1999). Planting extra for the wildlife, maintaining larger community gardens, and keeping more than a single season's worth of seed are all techniques that these seed keepers use to honor this responsibility. A combination of these practices also ensures the preservation of the traditional seed varieties they steward.

Similarly, the Oneida community seed keepers also identified the changing, unpredictable weather as a rising challenge. Abnormally wet seasons may lead to a loss of soil nutrients, an increased number of pests and diseases, and/or delayed planting and harvesting. On the other extreme, droughts may limit growth and impact pollination. Lynn discussed how a drought's impact on corn's pollination limits the amount of properly developed seed ears, therefore limiting the number of seed harvested that year (Utesch 2024). Having enough seeds banked to support several years of poor-quality harvests can prevent the loss of a variety or at least maintain a seed keepers' forward progress of increasing a variety's population. Lynn added that banking seeds from several different years with different growing conditions can have a positive impact on that variety's ability to endure adverse conditions. He explained to me that, "...I think you do need to keep the best seeds from those years that are challenging, because again, that corn then has that genetic memory of the adverse conditions...Keeping that seed [from those bad years] so that the corn has that memory on how to respond to [those poor conditions] in the future" (Utesch 2024). Oneida community seed keepers used a variety of planting techniques to hedge against these seasonal risks. Eric plants his white corn in mounds, rows, and in three sister systems each year (McLester 2024). Amy has experimented with just about every single planting system there is. She described her success and failures with transplants, garden rows, garden beds, felt bags, 5-gallon buckets, grow lights, and trellises (Spears 2024). Oneida community seed keepers, through trial and failure, have developed diverse planting systems to support the resilience of their seed stewardship against the unpredictability of weather and variation of their land.

The Oneida community seed keepers identified how vital the support of the community was to support the seed system. The labor required for the seed keeping process was an additional challenge they seed keepers faced. After the growing season, the seed keepers were

faced with many hours spent harvesting, processing, sorting, and storing seeds. Companionship is valuable when facing large fields and vital when disseminating the skills and stories necessary to continue this work. Kyle describes the dependence on community involvement and passion to successfully hand harvest and process all 10 acres of Tsyunhehkw<sup>^</sup>'s white corn. He told me,

I think it's so important that we fill that corn shed, you know, every single year. If we have the ability to do it, I think we should fill that corn shed with braids every year. I think it's just something that people, you know, it's just the outcome of if you can fill it, you know, you've really, I think, fulfilled a huge responsibility within the community.

(Wisneski 2024)

The Oneida Nation established Tsyunhehkw<sup>^</sup> to support the white corn needs of the Oneida community, along with supporting education around traditional agricultural practices. The community requires at least 10,000 pounds of white corn each year. Much of this white corn supply supports cultural ceremonies and feasts. The annual Husking and Harvest Bee, where the Oneida community is invited to support the white corn harvesting process, supports both of these missions. Before and after the main event, groups of students, government officials, employees, and community members are hosted at Tsyunhehkw<sup>^</sup>. Laughter rings out from large husking circles, stories of the resilience of our ancestors and our seeds are retold, and the community's supply of white corn is slowly replenished after a long winter of feasts. When the snow comes and most of the community is no longer tempted by warm fall afternoons, a group of dedicated volunteers show up weekly to continue supporting this work. They work alongside the Tsyunhehkw<sup>^</sup> employees, sifting through every individual kernel, to ensure that every ear of corn is preserved as seed or sent to the Cannery to be processed into food.

Jordon discussed in length how the community support and action around growing food and saving seeds increased during and after the Covid-19 pandemic (Powless 2024). His extended family and some select friends all come together to support each other throughout the year. Plots of “hundred plus pounder” pumpkins are grown for nieces and nephews, tomatoes and vegetables are canned in busy kitchens, excess seeds are exchanged, and lessons learned are shared. He told me, “We’d been doing our garden years before that, but we got more involved and more growing, as in more area and more varieties. We started off with seeds from neighbors, from friends, from people that had gone a long way before us” (Powless 2024). Eric shared with me his vision for a more connected Oneida community. Community gardens, food forests, and the awaited cannery innovation center all are activities which promote intergenerational and peer to peer connectedness over food. He stressed that the loss of these skills and activities mean a loss of community connection (McLester 2024). Seed keepers, like other agriculturalists, rely on their families and community to help support the laborious lifestyle. Planting, growing, weeding, harvesting, processing, and saving seeds are all manual, repetitive tasks that benefit from the company and help of the community. Jen said that one of their greatest motivations for having a farm was to give her daughter access to a farming lifestyle and this strong sense of connection to community while growing up (Falck 2024). Many families, including Jen’s and Becky’s, have found success in working together to support the community-based seed and food system in Oneida. Fifteen Oneida families make up the Oneida white corn cooperative, Ohe·láku. They work to revitalize the community’s traditional agricultural skills and widen Oneida families’ access to white corn. Becky described Ohe·láku,

We formed a co-op in 2016 of a bunch of different families. And we called ourselves Ohe·láku, which is among the corn stalks. And the ten of us got together with not a clue

of what we were doing and planted the seeds. And also at home that same year, we expanded our garden. and both our home garden and Ohe·láku were fairly successful. Without us having any idea what we were doing, the corn responded and was very generous with us.

(Webster 2024)

In May of this year, 2025, Becky's homestead Ukwakhwa hosted their own seed giveaway for the community. They offered 100 seed kits which included corn, squash, beans, and tobacco (Webster 2024). Similarly, Tsyunhehkw<sup>^</sup> also runs a seed and plant giveaway every year where they provide over 250 shares of seeds and seedlings (Wisneski 2024). Both events captivate community members who are just starting to learn how to grow all the way to those who have been growing traditional varieties since their youth. Lynn describes how important it is for these varieties to be grown throughout the community,

If community members are looking for seed, for white corn, it at times is available depending on how much seed quantity we do have. But again, we don't just give it out to people that are going to just take it. The idea is that we will share our seed with you, but then, we hope you will bring some back for us to keep in our seed bank. Again, it's all on a trust level. We'll share with you, but we hope that you'll share with us. Because we want to keep these seeds alive. And growing these seeds is the only way you truly keep them going. They have to be part of the community. The more we share with each other and the more we grow these seeds, the more these seeds will thrive.

(Utesch 2024)

These giveaway events allow Oneida community seed keepers to share the varieties they steward to the community at large in a more efficient way, especially without an established local Oneida seed bank. The community supports the seed systems which support the giveaways their own family gardens benefit from.

The Oneida community seed system is thriving and growing because of the community work these seed keepers engage in and because of the resilience they instill into their programs. Not planting the saved seeds is a threat, the Oneida community seed keepers warned. The seed system relies on traditional Indigenous varieties being actively grown year after year. Jen spoke to how the term seed keeping could infer suggest a dangerous behavior of ceasing to grow our traditional varieties in favor of insulating them from all the threats planting inherently opens them up to. She told me,

I'm not the biggest fan of the term seed saving... You don't put them in a jar and stick them on the shelf. That's not what we should be doing with them. We should be planting them and growing them and sharing them so more people have access to them. And I think that work is really consequential in tribal community

(Falck 2024)

Similarly, Becky shared how her own seed mentor, Jessica Greendeer, taught her that “the most dangerous place for a seed is on the shelf” (Webster 2024). Winnifred also discusses how she believed that the best practice for stewarding these varieties is whichever one gets seeds in the ground and the seed keepers can continue successfully (Pelky 2024). Lynn described how important actively growing these seeds were, not only for the strength and viability of the seeds themselves, but also for the community's food sovereignty (Utesch 2024). He described how

important it is to continue getting community members interested in keeping these seeds for it to “not just be a novelty, but to be a true food source” (Utesch 2024). The more people who are growing Oneida and Haudenosaunee varieties means a greater quantity of seeds per variety within the community and a reduction in the volatile scarcity of a rematriated variety. Continual growth promotes the usage of traditional varieties as food instead of solely for ceremonial usage and supports the food sovereignty of the Oneida Nation. This is difficult when the population of a variety is small but highlights the necessity of an entire network of community seed keepers (Utesch 2024). These seed keepers stress the importance of widening Oneida’s access to traditional foods and how vital these seed systems are in supporting this goal.

## Motivations

The eight Oneida community seed keepers that I interviewed are just a few amongst the many Oneidas who are supporting this work and the adjacent food sovereignty effort, along with all of those across Indian Country working to steward their Indigenous varieties. Taking care of our non-human relatives takes a lot of passion and heart work. Emotions often ran high during the interviews, especially when they recounted memories and stories that inspired their work. The seed keepers found the resolve to continue this seed stewardship despite challenges and setbacks and enjoyed sharing the lessons they had learned with others. Each seed keeper walked a unique path, but their ambitions, motivations, and incentives overlapped. They were motivated by the commitment to honor kinship relationships, build community resilience, revitalize culture and language, support health and well-being, and build food sovereignty. The motivations of the Oneida community seed keepers reveal why protecting ancestral knowledge and traditional ecological knowledge of seed keeping matters to the Oneida nation and Oneida community.

### *Honor kinship relationships*

The Oneida community seed keepers shared memories of loved ones and community coming together to share in the appreciation of their favored traditional varieties. The varieties which were sworn to make the best corn soup were shared freely, and memories of beloved grandparents' cooking were shared. There is a sense of homesickness when remembering the favored foods cooked by loved ones far away. Winnie, now with grandchildren and great grandchildren of her own, can still remember the precise recipe her neighbors taught her for canning jam as a newlywed. They were mentors to her in more ways than just in the kitchen. She also reminisced about the terrible hulled corn bread (kan<sup>á</sup>stohale) and stinky leeks her aunt

would force her to eat (Pelky 2024). The food we grow up with and cook for others hold stark memories and stories that connect us to those around us. Honoring and maintaining these bonds strengthens the community. The kinship, familial, and community relationships of the Oneida community seed keepers motivate them to grow these Indigenous varieties.

When the Oneida community seed keepers prioritized growing and saving the varieties that they enjoyed and were passionate about, their kin were more likely to get involved. Eric described how passing on these skills and love for their varieties made him excited about growing a garden and keeping seeds. He said,

After I started having kids, I felt an urgency, I guess, when I saw just how hard working to get white corn in this community was. It was really tough to do, tough to find it. And seeing my mom's storage of white corn just dwindled down to hardly anything, and having children of my own, this is something that could easily be lost if you don't start taking care of it and maintaining it and keeping seeds for a couple of growing seasons going forward. We need to make sure that this happens.

(McLester 2024)

Seed saving, for the Oneida community, is a crucial practice for preserving our traditional Indigenous varieties and revitalizing the practices which support growing them. Eric saw the value in exposing his children to these Indigenous varieties and ensuring the skills passed from his parents, to himself, and finally to his children. He reminisced on fall evenings being spent with his family harvesting and braiding corn as well as carving pumpkins. Although he was once motivated to start growing white corn to preserve the variety within the Oneida community, having a family of his own enhanced this familial motivation. He grows indigenous varieties to

ensure that his children have the skills, experiences, varieties, and memories to continue the tradition for another generation (McLester 2024). Kyle hinted at how impactful saving a family favored variety can be. He explained, “People love watermelon. I think you get happy just eating watermelon. It’s nourishing” (Wisneski 2024). Kyle’s Cousin Bob’s legacy comes from the watermelon variety he devotedly saved for almost a decade. Kyle described longingly how his garden spanned not only the backyard of his neighborhood home, but also his side and front yard. Before Bob’s passing, Kyle was able to bring a “trunk full of food” home from Bob’s garden and save seeds from those coveted watermelon (Wisneski 2024). As he makes his own selections, based on his family’s preferences, he is reminded warmly of his cousin’s legacy. Amy expressed how important her family’s preferences were to the selection of seeds and varieties to continue keeping. She said, “That's probably my most important thing is taste. Because if I'm going to eat something, I want it to taste good” (Spears 2024). Similarly, Lynn described how his family’s favorite food to grow and save seeds from was a green bean variety from Maine. His children enjoyed the mild flavor, tender texture, and the lack of strings. His grandmother would purchase seeds from a catalogue to taste test with her family to decide the varieties her family enjoyed the most and then save the seeds from the best plants every subsequent season (Utesch 2024). What soon developed was a variety curated specifically for her family’s tastes and uses.

When Jordon’s family gets together to harvest or can the fruits of their labor, they include all their family and friends. Not only does this make light work of the labor and fill yards and kitchens with laughter, it also ensures that these seed growing and keeping skills are shared and practiced. His parents, siblings, in-laws, nieces and nephews, friends, and neighbors are all included and benefit. This also includes the circle of kinship each person brings. Eventually one person’s knowledge and experience in the garden is disseminated throughout the entire group

and ends up impacting an entire congregation (Powless 2024). Amy stated, “But I want to make sure that they [her kids] understand, you know, where your food comes from, that they know how to grow it.” She ensured that her family has these skills to protect themselves from the uncertainties of the future. She believed that a strong community is made up of individuals who have the necessary skills to support themselves and their families. Being reliant on these systems, she explained, is a vulnerability; they have failed us before and they’ll fail us again (Spears 2024). Passing these skills on to the next generation ensures they have the capacity to be resilient amongst uncertainty. Saving the varieties which one’s family enjoys growing to eat is a strong motivator for the next generations to be not only involved, but to also keep seeds for themselves and future families.

Some of the most inspiring stories of the resilience of our seeds are those which describe how seeds and varieties find their way back to their kinship communities. Rematriation and maintaining varieties that were lost to Indigenous communities often happens at larger federal or seed bank levels. Seeds lost during forced relocation, assimilation, genocide, and biocolonialism are returned to the Tribes that they have ties, histories, or relatives to. Seed varieties can be lost to families and individuals as well, though. Becky shared an emotional experience during Ohe·láku’s collaboration with Tsyunhekw<sup>^</sup> for the 2024 seed and plant giveaway. In just 38 minutes, 30,000 seeds were given away to community members that year (Webster 2024). Tsyunhekw<sup>^</sup>’s seed and plant giveaways are an annual effort to provide Oneida community members the resources needed to successfully care for a backyard garden. Seedlings, packets of seeds, and sometimes even fruit trees are handed out to the community each year. This is accompanied by tilling services also provided by Tsyunhekw<sup>^</sup> workers as an additional support for elders and those without their own tillers. Becky recalls an emotional reunification of an elder

and a variety of beans he remembered shelling with his family in his youth. Out of the many different varieties of beans offered that year, the variety which tied him to his childhood is the type that called to him when he arrived with his daughter. “I remember this variety... These are the variety that I grew with my grandparents,” he said (Webster 2024). Becky retold his story, “They would take a whole bunch of the beans and put them in a bag and hit them against a tree to shell them. He was describing this bean and his shelling process from when he was a little boy” (Webster 2024). Skills, stories, and histories that were once lost were revived again in this elder and then shared along through Becky with those who she shares the seeds with. Kyle stressed to me how important it is to preserve and continue to pass on stories like these to future generations. He said, “So I think those are stories that you could pass on, you know, are important to write down you know a lot of times orally it could be misconstrued or easily forgotten or especially when you have so many different types of seed in your cellar or in your basement or wherever you have them in your pantry” (Wisneski 2024).

When colonization sought to assimilate and erase our culture, they sought to erase these memories, stories, and skills. Seed and food system work which reconnects us to ancestral seeds, foods, ceremony, and cultures revitalize our blood memory and help us reconnect to our ancestors and community. The seed keepers use these opportunities to honor and build upon their kinship relationships to motivate their work.

### *Build community resilience*

This intercommunity reliance is a core characteristic of Oneida and many other Indigenous communities. In these interviews, Seed Keepers rely on one another for the transference of knowledge and skills, the passing of stories, and the sharing of tools and resources. Many participants were interviewed because they were recommended to me by other

seed keepers I already knew and/or interviewed. These are not just individuals growing food and keeping seeds for strictly themselves and their family — this is the product of a strong sense of community within Oneida and the strong network of seed keepers throughout Indian Country. This community also reaches far past these specific community members and their networks. It includes the ecological and animal community they share lands with and the community of their seven generations of ancestors and descendants. Supporting the resilience of their community motivates the Oneida community seed keepers to uphold the traditional seed systems.

Traditional Indigenous agriculture has always relied on community. Leaning on one's community, and in turn supporting those in your community who needed help and support, develops resilient community structures. The Oneida community seed keepers understood how vital this support system is and how important it is to preserve. Jen described,

I really wanted to have our daughter have access to farming and what that lifestyle is like. Land based lifestyles are far and few between, I think, for kids these days. I really want to emphasize the community building that this work revolves around and the cooperation of everyone kind of chipping in to get quality food into the community and the land.

(Falck 2024)

This community cooperation is also integral for the sharing of seeds and maintaining Oneida's seed system. Many of the seed keepers identified producing excess seeds to share with their family, friends, and community. For example, this past season Jen gave away around 200 tobacco plants and traded her popcorn seeds throughout the community (Falck 2024).

The Oneida community isn't the only source of seed for these seed keepers, but it often was the most important source of seed when it came to traditional varieties. Jen's tobacco plants

were gifted to her and her family from a different seed keeper who had gotten them from Mexico (Falck 2024). Amy described how she sourced her seeds from many different sources, both internal and external to Oneida (Spears 2024). This included local growers, Oneida seed keepers, non profits like seed saver exchange, and companies such as Johnny Seeds. Amy discussed where she gets her seeds from,

Half of the time most of my stuff doesn't grow. I rely on people like Becky and Steve, Jen and Tony, Tsyunhehkw<sup>^</sup>, and Facebook Marketplace...I had found a lady who was right over on Ranch Road who was growing a bunch of garlic and gotten some seed and eating garlic from her. And I used some of her seed to grow this year, and then we ate a lot of it. So, community is my big backup.

(Spears 2024)

Lynn also mentioned how it used to be a luxury to buy seeds from a catalogue during his grandmother's lifetime (Utesch 2024). Now, having the community infrastructure for a seed system, or the connections to source Indigenous varieties is the luxury. Buying seed packets each year is the norm. He described how he saw these conventional seeds as a weakness to a family's and community's long-term resilience. Lynn expressed,

To me, It's an emergency type of situation that hybrids are a one-year thing. A lot of times having a big family, spending a lot of money on seeds, it's not always going to work. So, if I could grow something and keep seeds from something or plants from something for years to [come], it actually economically made it more doable to maintain our garden as well.

(Utesch 2024)

He continued explaining how the number of seeds he keeps isn't just based on the needs of his family, which has since shrunk due to his children growing up, but instead the amount of seeds is based on his view of the future and his plan on how to sustain his family and himself (Utesch 2024). He described,

For me, when I had a family, I knew how many rows I needed to provide for my family, so that kind of determined how much seed I would keep. So I would keep at least enough for those rows and then some. You know, I always kept extra. And again, we try to do that as well here at Tsyunhekw<sup>^</sup>. Every year is a little different, again, like we said, you know if you don't have a little extra. You never know. You still don't know what's going to take place, even through those winter months while you're saving that seed. So you always want to make sure that there's enough going forward in case something does happen to part of the seed that you've got more available.

(Utesch 2024)

A similar concern for the future was expressed in the interviews Becky Webster conducted in her book. She explains that “Many of the people sharing their stories talked about needing to be prepared for whatever uncertainties the future would bring. They mentioned how returning to our traditional practices would help us survive into the future”(Webster 2023).

Seed keepers fulfill an important role when it comes to building and maintaining seed systems which build on the community's resilience. The cooperation amongst community members and willingness to rely on each other is necessary to build traditional seed and agricultural systems. The Oneida community seed keepers are motivated by this intercommunity reliance to continue supporting their seed stewarding work.

*Promote Oneida's Culture and Language.*

The backgrounds and stories of seed varieties are the stories and histories of our people. The two are inextricable. In the same way that your ancestors' stories are part of your own, the stories of our seeds are also braided within our own and should be shared as such. The elder who was reunited with a bean variety from his youth, a story from Becky's interview, shared a glimpse into his own childhood and shared a traditional shelling technique for that variety (Webster 2024). Seed keeping and traditional seed systems provide opportunities to support the language and cultural revitalization of their tribes. Oneida community seed keepers are motivated by this ambition to continue building upon the existing seed system.

The stories, histories, and experiences which accompany traditional cultural skills provide the values and structure for life. Jen emphasized how crucial it is to not only teach seed keeping skills to the next generation, but also to use these skills as a means of preserving traditional foods and fostering community resilience (Falck 2024). These Oneida community seed keepers stress the importance of following ceremonies for the growing season and keeping these values in mind when being a seed keeper and grower. Kyle describes how our ceremonies teach us how to sustain ourselves (Wisneski 2024). He explained,

We were specifically told that we were able to follow seasons and that would sustain ourselves...We really try to share that even here because we get so many people through the door. It's already placed for us...One of the first ones is when we wait for the thunders and that specifically tells us we need to get out to start tapping trees. It's an indicator.

(Wisneski 2024)

The time for planting, harvesting, and celebrating have also been passed down as ancestral knowledge. This cycle connects the Oneida people to their ancestors who relied on ecological indicators, known now as phenology, to survive. Seed stewards for traditional Indigenous varieties have cultural responsibilities throughout the year that must be passed down through generations, Jen explained (Falck 2024). She told me, “A lot of those seeds come with ceremonial responsibilities... We have a responsibility to seed in ceremony. But not everyone knows that. And so I’m trying to say, do the best you can. Without shaming folks into not knowing their ceremonies, because that’s not a great way to feel and grow them” (Falck 2024). Kyle described the role Tsyunhekw<sup>^</sup> plays in cultural activities, including ceremonies. This included educational harvest events and ceremonies like the Harvest and Husking Bee and Green Corn Ceremony (Wisneski 2024). He said,

It’s an honor [when] they’ll call me. Like, hey! How’s the green corn looking? When do you think? And it’s just cool to be a very little sliver, a very little part of that. . . It’s cool to be able to think maybe I had a somewhat of a responsibility in that. And then to be able to see it through at seed saving and take that seed, plant it again the next year, and just have that process kind of replay itself out.

(Wisneski 2024)

This work connects the community to each other, especially during times of cultural revival and reclamation. Traditional seeds are just one small, but vital, part of the process.

Additionally, the Oneida community seed keepers shared how their work supports the revitalization of the Oneida language. Jen shares how one of her mentors shared a map of

traditional nicknames of the area in the Oneida language (Falck 2024). She shared how her family named their homestead after one of these Oneida nicknames. Jen explained,

The name of this farm is Kahulahele. And I've been taught and told that years ago there were different nicknames for different parts of the reservation. And that the nickname for this north central part of the reservation was Kahulahele, which means a gun hanging. And we think it's a reference to hunting. But for the record, for the library and the museum, I would love it if we could bring all those nicknames back.

(Falck 2024)

The Oneida community seed keepers discussed in length about the importance of correctly cataloguing the backgrounds of the varieties being grown out, saved, and preserved. The Oneida language being used in this capacity is vital. Becky said to me,

I think it's so intricately tied to our identity and who we are as a people that to know that these are our relatives that we have been caring for since before contact, and they have a history with us, and it feels like they are constantly pulling us back to our history, our language, our culture, our traditions. And they're a very safe way back, and they're very forgiving, and they're very nurturing, and they're the best teachers.

(Webster 2024)

Using language throughout the seed keeping process, especially when passing down traditional ecological knowledge to the next generation, helps reclaim the connections that have been lost. Winnie described how speaking the Oneida language was lost to her and her siblings in a single generation (Pelky 2024). She explained,

I never asked her (her mother) why they didn't teach us Indian, because in their mind, we would get punished. And my dad, with us growing up in Menasha, didn't want us to speak Indian because I think he was afraid for us, because if we got caught talking to us, talking Indian. In their minds I think that they thought we would be taken away, because they had that embedded in them so deep.

(Pelky 2024)

Language revitalization efforts throughout Oneida and Indian country can be, and often are, supported by the seed system work that the Oneida community seed keepers engage in. The commitment to revitalizing the Oneida language and traditional culture motivates the Oneida community seed keepers to continue preserving traditional seed varieties, and the traditional skills needed to grow, harvest, and preserve them.

### *Support Health and Well-Being*

Food brings kin and community together, which is why its weaponization by colonial powers was and still is so impactful on Indigenous communities. The Oneida Nation understands the connection between the health of its people and the quality of food they are eating. More traditional diets, made up of traditional varieties, are often central to the Food is Medicine movement. Not only are the foods nourishing and supporting the body, but the process of growing, harvesting, preparing, and eating the food is nourishing to the spirit. Being in community with those who support, nourish, and fill you with good intentions is just as important as healthy habits and diets, which explains why being motivated by one's family and community is so compelling. The Oneida community seed keepers were motivated to grow more

traditional varieties to support the health and nutrition of their families and for the wider Oneida community.

Jordon talked about how important it has been to him to learn about the nutritional content of these traditional varieties (Powless 2024). He described to me how “we should start eating like the way our ancestors had, as our bodies were developed for thousands of years, maybe even longer than that” (Powless 2024). The processed foods that fill our Oneida One Stop gas stations today and the commodity boxes of the previous generations aren’t properly fueling our bodies. Eric described to me how the community’s health problems are linked to these food choices (McLester 2024). He explained,

I think these types of traditional plants are healthier than any commercial plants that you buy. This community's got a lot of health issues, a lot of chronic health problems, and I think the majority of that is due to our diet. We're not eating healthy. It can easily lead to diabetes, high blood pressure, heart disease. And it can definitely create a lot of health problems, and we see that throughout the community. The obesity rates are so high. How do you counter that? One way is through a healthier diet, and we know that white corn's got a lot higher protein content, and it's a lot healthier for you than commercial corn. And there's just so many different varieties, ways to fix it, and I've got to believe that traditional non-GMO type seeds and plants are definitely going to be healthier, especially for indigenous people that don't have a history of having highly processed foods and GMO type products in their diet.

(McLester 2024)

Kyle discussed specifically about Tsyunhekw<sup>^</sup>'s involvement in an initiative called "The Local Foods Challenge" and the impacts he saw it made from 2004 to around 2008 or 2009 (Wisneski 2024). Participants signed up to commit to sourcing all the food they ate from a 50 mile radius from where they lived. They could participate for a week or all the way up to a month. Throughout this time, they tracked physical changes they noticed in themselves over that time frame. He described the benefits the participants experienced. This included an increased ability for physical activity and a decrease in chronic health conditions (Wisneski 2024). Kyle told me the feedback he heard from the participants to me,

They would document like, hey, I was running a quarter mile and I would have to stop. Now I'm up to like a mile and a half and I'm only three weeks into this food challenge and I think directly this food challenge is the reason why I can now run a mile and a half instead of the quarter mile. That is really cool. Or, hey dude, my blood pressure is way the hell down, I feel great. [Or] I was borderline, and when people say borderline around here, we know what that [means], you know, it's diabetic. You're like, holy cray, come on. So, they're like, I truly think that maybe it reversed it. I'm not [borderline diabetic] anymore. Like, I still have to take care of myself. I still have that. There's still the ability for me to go into being diabetic or get diabetes, but they thought maybe this 50 mile radius had a direct impact on that, on their situation.

(Wisneski 2024)

The Indigenous varieties and local food produced by these Oneida community seed keepers have a direct impact on the health and nutrition of their families and community. These varieties are nourishing to the body and soul. They have seen the impacts around them, which motivates them to continue stewarding these Indigenous varieties.

### *Build Food Sovereignty*

Oneida community seed keepers not only support Oneida's seed system but also Oneida's general food system through their seed stewardship. A resilient seed system feeds into a resilient food system, and food sovereignty is an important goal to Oneida and surrounding tribes within Indian Country. The Oneida nation's food system is diverse in effort to meet the Oneida community's needs for local and Indigenous foods. It includes infrastructure such as the traditional farm Tsyunhehkw<sup>^</sup>, a conventional farm with a bison herd, the cannery, retail stores within gas stations, an orchard, and community gardens. Families have formed coops and homesteads which host seed swaps and workshops. The Reservation supports medicinal foraging, sportsman licenses for seasonal game, and community maple bushes. These food sources are supported by the efforts of the Oneida community and educational outreach efforts such as OCIFS (Oneida Community Integrated Food Systems). The Oneida community seed keepers are motivated to continue growing, saving, and sharing traditional seeds through a commitment to a food sovereign community for future generations.

Lynn described the connection between strong seed systems and the food sovereignty of the Oneida nation,

It's a good start for them to be able to be resilient and to be self-sufficient. And again, that's the same thing with the indigenous seeds. It's a way to be self-sufficient, sovereign, and not be beholden to anybody outside of yourself and your own community. Until we start to realize that true sovereignty, whether it's as an individual or as a people, comes from being able to be self-sufficient.

(Utesch 2024)

Eric touched on some of the other efforts Oneida as a nation is working on. These included developing food forests around trails and in parks (McLester 2024). Community members would have access to fruits, nuts, berries, and other food bearing plants to encourage food security and the community around foraging and gathering. There is a social aspect to gathering foods as a family and community that Eric misses from his childhood (McLester 2024). He described to me,

My mom would take us to go gather butternuts in the fall. We would dry them on the roof of our outhouse. It was a big flat roof, so that was where we would gather them all up and then put them on there and let them dry out. Those are the things I remember. And going to my grandma's raspberry patch and all the grandkids going over there and we're all picking raspberries for my grandma, picking pumpkins at my grandpa's, and hauling them up to the house or hauling them up to the road. Those kind of activities, it was like a family connection that I don't think happens anymore. Those experiences, you know, everybody picking berries out in the woods, and everyone's scared that you're going to run into a bear. And then everybody's scaring each other as kids. We made fun of it, you know, had a good time. [When those experiences] don't happen, when people aren't gathering, you don't have those, you miss out on a lot of the different connections that people had years and years ago.

(McLester 2024)

A community cannot become food sovereign without the cooperation of its members, and this cooperation starts with these sorts of connections and shared experiences.

Similarly, the Oneida community seed keepers have started to engage in Oneida's community trade economy. Instead of considering the value of goods and services in terms of the federal dollar, this trade economy challenges the community to lean on each other for their needs. It relies on reciprocity as an established value within the community. The Websters' Ukwakhwa homestead has an established trading post where community members can more easily engage in this trade economy. The shelves of the trading post are lined with seeds, baskets, jewelry, canned food, freeze dried food, and art, among many other goods. Jen grows enough to feed her family and save enough seeds. Whatever they can't eat, they then sell and barter for products and food they don't make or grow (Falck 2024). Amy discussed how important it is for her to be able to engage in Oneida's trade economy when it comes to sourcing indigenous and local foods. Between last year and this year she had doubled the amount of garlic she planted. She wanted to ensure she could provide garlic to her family and friends while having enough left over to trade (Spears 2024). Amy said, "I love to trade, and I love to get other stuff, like wild rice. We don't do anything [to produce] wild rice, so I trade almost solely for all of our wild rice. And I've traded corn, I've traded honey, I've traded maple syrup" (Spears 2024) She is able to not only support the inclusion of traditional foods into the diet of her family through trade, but her support of the trading economy in Oneida also supports other producers and artisans throughout the community (Spears 2024).

This trade economy values the specialty skills that come from developing a cultural skill or craft, such as saving Indigenous seeds or crafting traditional planting sticks, pottery, or basketry. It also increases access to traditional and locally grown foods for community members, thus supporting Oneida's food system and progress towards food sovereignty. Stewarding and growing traditional foods, along with this trade economy, contributes to the resilience of the

community food system. The Oneida community seed keepers are committed to this vision of food sovereignty, which motivates much of their work with traditional seed systems.

## Discussion

Indigenous seed keeping is supported through the motivations of the Oneida community seed keepers and their devotion to passing on their skills, stories, and traditional ways of knowing. Inherently, these motivations and transfers of information in turn influence the techniques Oneida community seed keepers employ in their seed keeping process. Additionally, seed keeping supports the dissemination of traditional knowledge in other cultural and language revitalization domains, and the Oneida community seed keepers often identified this as one of their motivators to continue saving seeds and sharing their skills with others. Therefore, their seed keeping methods, motivations, and knowledge-sharing are interconnected and should be analyzed together. Like other Indigenous research, the relationships between these concepts and ideas are not linear and rely upon each other for context and a holistic understanding. As Shawn Wilson describes, “Separated from the rest of their relationships, the ideas may lose their life or become objectified and therefore less real” (S. Wilson 2008). The Oneida community seed keepers were motivated by their commitments to honor their kinship relationships, build their community’s resilience, revitalized Oneida’s culture and languages, support their community’s health and well-being, and build Oneida’s food sovereignty. These motivations support the dissemination of traditional ecological knowledge surrounding the growing, selecting, and preserving of Indigenous seed varieties. Oneida’s seed system relies on seed keepers to pass on their expertise not only to other community members, but also to the next generation. Seeds rely on being grown by this generation in order to be preserved for the next. In these ways, the Oneida community seed keepers will and have successfully leveraged the dissemination of traditional ecological knowledge to preserve the traditional Indigenous seed varieties they have chosen to steward.

Seed keepers require the skills and expertise to keep a variety alive from one season to the next to aid in the rematriation, revitalization, and preservation of an Indigenous variety. A significant part of the dissemination of knowledge process is still dependent on hands-on experience and experimentation. Workshops, community working bees, and growing gardens communally with friends and family all contribute to this learning process (Stevens and Brewer 2019; Webster 2023, 167; C. Cornelius 1999). The Oneida community seed keepers identified how important a willingness to make mistakes and learn from them was to their process. The lessons they learned during a tough season could prevent heartache for a different seed keeper in the future—as long as these lessons are shared. Learning from experience is necessary to seed keeping, as in most things in life. When asked directly about the process of preserving the seeds for subsequent seasons, the Oneida community seed keepers answered expectedly. Their described methods align with historical anthropological and modern descriptions of planting techniques, seed preservation practices, and food preparation among the Haudenosaunee (Waugh 1916, 39; Webster 2018, 142; 2023, 151; Mt.Pleasant 2011; C. Cornelius 1999).

The Oneida community seed keepers learned how to protect their plants, seeds, and varieties from external threats through the passing on of traditional knowledges. During my discussions with the seed keepers, they described the different threats that could become barriers to successfully keeping a season's worth of Indigenous seeds. This included animal and pest pressure, unpredictable and changing seasonal weather patterns, as well as time and labor requirements. The continuation and preservation of these varieties depend on successful, fruitful growing seasons. These identified challenges were reflections of the persisting effects of colonization that the seed keepers mitigated by using their traditional knowledge. Modern land usage and agricultural views led to imbalanced ecosystems and the villainization of our non-

human relatives while traditional knowledge prioritizes the interrelationship between humans, land and wildlife (Devon and Hoover 2019, 12; S. Wilson 2008; C. Cornelius 1999, 73; Oneida Nation Educ. Campaigns, n.d.; Oneida Nation, n.d.; R. Cornelius [2013] 2017). Although often heartbroken by decimated harvests, the Oneida community seed keepers recognized and respected wildlife as kin they had responsibilities to. Nuanced planting techniques, intercropping diverse species, and environmental acclimation of Indigenous seed varieties are tools inherent to traditional Indigenous seed systems that hedge against climate change's unpredictable weather which has disrupted and shifted traditional phenological indicators (Mt.Pleasant 2011; Webster 2023; Whyte 2016; G. L. Wilson 1917; Young, n.d.). Finally, the assimilationist movement to individualized agriculture interrupted the traditional intercommunity reliance which supported the labor-intensive agricultural infrastructure feats, such as acres of large planting mounds (C. Cornelius 1999, 105, 190; Mt.Pleasant 2006; G. L. Wilson 1917, 24). Oneida community gardens, working bees, co-ops, and workshops work to reinvigorate community agriculture on the reservation. The Oneida community seed keepers embody what Kathleen Absolon describes as *Indigenous thought*. She describes that it is “wholistic in terms of looking to our past to understand our present and to have regard for the future” (Absolon 2022). Armed with ancestral knowledge and modern resources, the Oneida community seed keepers mitigate these threats to their Indigenous varieties and support Oneida's seed system.

More specifically, the Oneida community seed keepers leverage diversity to increase the survival of their growing Indigenous varieties. Traditional ecological knowledge and seed keeper experience dictates that the resilience of a variety is connected to their relationship to and resilience of its kinship community (Hill 2017, 105; White 2019, 190; S. Wilson 2008). The traditional knowledge passed down to the seed keepers influenced the techniques they used

within their systems. The interviewees described how they implemented diversity of planting techniques, plant genetics, and plant species within their processes. Incorporating a variety of planting techniques, especially within the context of doing Indigenous science, ensured that each unique variety had the greatest chance of success. Becky specifically described how important it was to understand the nature of each bean variety because they required unique planting techniques (Webster 2024). Some are bush beans, some pair well with corn, whereas others will rip a stalk of corn down. If a variety is not accurately described, it can take some experimenting to properly understand her. Additionally, Amy and Erik described how a variety of planting techniques, even within the same growing season, can hedge against weather volatility (McLester 2024; Spears 2024). An important characteristic of Indigenous seed varieties is their diverse genetics. The Oneida community seed keepers described how they prioritized growing larger populations of a single variety over small populations of many varieties and sharing the seeds between each other to support the mixing of genes within a variety. This supports the resilience of the variety in different environments, contexts, and usages, as well as maintaining the vibrant characteristics unique to each variety and preventing inbreeding depression in specific species (Hart 2008; Hill 2017; Mt.Pleasant 2011; Stevens and Brewer 2019; Young, n.d.). *Áhs^ na?tekutahnu•téle*, the three sisters, is a widely understood example of Indigenous intercropping practices that has traditional roots. It highlights the connection between resilient cropping systems, the relationships between humans and our plant relatives, and the importance of ancestral teachings in seed and food systems (C. Cornelius 1999; Hart 2008; Hill 2017, 105; Mt.Pleasant 2011). These culturally informed techniques, which prioritize the relationships to our non-human relatives and the maximization of diversity, are passed from seed keeper to seed keeper through the transmission of traditional ecological knowledge and Indigenous science.

Seed keeping as a traditional skill relies on a network of seed keepers to pass down the skills through each generation. The Oneida community seed keepers described how they were taught by their older relatives or peers and planned to share their knowledge to the next generation and larger community. At the end of each interview, I made sure to check my notes to ensure that the names of the kin, mentors, peers, and ancestors who had influenced their seed keeping journey were recorded. The interviewees credited these individuals, their legacy, and the assistance of external resources for their passion and skills. Often these skills and knowledge bases were shared through stories of lessons while growing up, memories of loved ones who had since journeyed to the spirit world, and plans for involving the next generation in seed and food system work. Gregory Cajete describes this way of knowing and disseminating traditional knowledges as Indigenous Science or traditional ecological knowledge. It is what has supported and sustained Indigenous communities and peoples since time immemorial and is the “process for exploring, understanding, and explaining the natural world based on this lived experience” (Cajete 2015). The collection of oral history developed through these interviews is an additional opportunity for the knowledge passed down to the seed keepers to be further disseminated throughout the community. The seed keepers learned how to preserve the seeds they grew through Indigenous science, either orally or through modern means for communication and research. The seed keepers leveraged all available resources, including the internet. Amy specifically discussed in length how crucial Googling her questions were while learning techniques and characteristics of new species and varieties (Spears 2024). The Oneida Community Seed Keepers interviewed relied on a diverse network of information sources, both modern and traditional, to continue learning and passing down their skills.

Oral history and storytelling as Indigenous science plays an important role for seed keepers in Oneida. Storytelling is a vital tool for conveying morals, teaching cultural and ceremonial practices, connecting with one's community and their non-human relatives, and transmitting knowledge across generations. The Oneida community seed keepers used storytelling in many of the interviews to teach me about their practices to support this research. Shawn Wilson and Margaret Hughes write that "Stories are a way that Knowledge communicates and participates in relationships (S. Wilson et al. 2019, 10). In receiving these stories, this knowledge, I have a responsibility to my interviewees to continue passing on this knowledge lent to me. The transference of knowledge and stories relies on reciprocal relationships to support these knowledge systems and support resilience lifeways within the community (Absolon 2022; Stevens and Brewer 2019). In seed keeping, stories are used to understand the histories, characteristics, and kinship community of Indigenous seeds. The Oneida community seed keepers shared fond memories of their favorite varieties, which inherently held information about how they and their families grew and used those seeds. Both Amy, Kyle, and Becky all told stories about the bear bean variety (Spears 2024; Webster 2024; Wisneski 2024). Compiling these stories revealed how she was used for food, how impactful she is on these seed keepers and their mentors, how she is a staple for the Oneida community, her role in Oneida's trade economy, and how she enjoys being grown on a trellis. Without her stories, the history of the bear bean and her relationship with the Oneida community would be incomplete.

For rematriated varieties, the detachment of histories and varieties can be reality. Seed banks across Turtle Island preserve and maintain traditional varieties that they have received from Indigenous tribes, private collectors or rematriation acts (Hill 2017). When the Oneida community seed keepers could not access Indigenous varieties through family or community

members, many discussed how they sought out groups such as Native Seed/SEARCH, Seed Savers Exchange, Dream of Wild Health, and the White Earth Ojibwe Land Recovery Project. In large, publicly funded seed banks, the varieties' histories are often erased or lost. Many accessions of seed varieties were collected exploitively. Kinship information and histories such as cultures, customs, and characteristics were not deemed to be valuable and therefore not recorded by extractive collectors (Hill 2017, 95; Nabhan 1989, 97–98). Dr. Nabhan in *Enduring Seeds* asserts that, “As a kind of survival insurance, seed banks may be fine, but there will be tremendous losses if we assume that they are all we need in the way of long-term conservation measures. . . For one thing, many of the collections now in gene banks have little more than an accession number and a country of origin attached to them” (Nabhan 1989, 97). The Oneida community seed keepers emphasized how vital it is that these Indigenous varieties are grown instead of statically preserved on a shelf or in a seed bank, especially when it comes to rematriated Indigenous varieties. Rematriation does not automatically reestablish that variety permanently into the community's food system (Nabhan 1989, 102). Cultural revitalization efforts and seed system activities can support communities attaching new memories, experiences, and skills to those rematriated varieties in order to support this reestablishment (Herrigty and Hill 2024). Retelling the stories connected to these varieties, throughout the growing, harvesting, saving, and eating process ensures that this traditional knowledge that is intertwined within each variety is preserved. Oneida community seed keepers relied on story telling as a device for knowledge dissemination.

The Oneida community seed keepers, and their engagement with the community through seed keeping, support the interconnection between Oneida's food, culture, health, and language. Colonization removed traditional foods from the diets of Indigenous communities through

assimilation policies that removed Indigenous people from their lands and communities. Becky Webster described how this, along with introducing Western foods and forcing a reliance on USDA commodities, “slowly eroded indigenous traditions, cultures, languages, as well as tribal political and economic systems” leading to the loss of Indigenous peoples’ historical food sovereignty (Webster 2018, 134; Devon and Hoover 2019; Hill 2017, 99; Mihesuah 2005, 306). Resistance against continued colonial oppression through the restoration of culture, health, language, and relationships is a daily fight towards seed sovereignty, and therefore food sovereignty (Hill 2017, 94; Hoover 2017, 45; Hunt and Holmes 2015, 157–58). For Oneida, the Oneida community seed keepers, and those who support Oneida’s food and seed system, this goal starts with the “[restoration of] a system of tribal agriculture practices in which healthy and culturally appropriate goods are grown and harvested in accordance with tradition”(Webster 2018, 132). Seed stewards keeping Indigenous seeds support the rejuvenation of traditional skills, culture, and language, especially those which food sovereignty is dependent on. Surviving ceremonies, traditional skills and practices, and phenological knowledge are all proof of the resilience our ancestors had. This knowledge was passed down generation to generation, continually threatened but never completely lost. The co-existence and reciprocal relationship between Oneida community members, their seeds, their food, and their non-human relatives is central to being Oneida and Haudenosaunee. Food and the memories of food in conjunction with kinship relationships is an important part of one’s identity as a community member, especially when that food has ancestral and ceremonial connections (Lupton 1994). The Oneida community seed keepers actively sought out ways to strengthen Oneida’s relationship to these Indigenous varieties and traditional seed keeping techniques through ceremonial, nutritional, medicinal, and communal responsibilities.

The motivations behind seed keeping ultimately affected the techniques that the Oneida community seed keepers described using. For example, seed keepers who were rematriating a community's variety would focus solely on increasing the number of seed available, while avoiding any contamination of the variety's characteristics. Their goal was to produce enough quantity of seed, while still preserving the variety's characteristic integrity, to share with the kin tribe or other community members to reestablish it as a community crop and food source (Herrighty and Hill 2024; Spears 2024). Amy described in her interview how Chelak had provided snubnose corn seeds for her to increase the variety's population. Her responsibility was to grow the seeds given to her in such a way that produced the most amount of corn to then save for the subsequent year (Spears 2024). There was also an expectation that the corn stayed true to type and didn't cross-pollinate with any other open pollinated varieties. Until the snubnose corn variety has enough of a population in Oneida to be sustained without fear of losing the variety after a tough season, very few ears will be used for anything but seed. Amy described how she conceptualized the difference between keeping snubnose corn and white corn. She said, "I think it really kind of depends upon the overall purpose. You know, this snubnose, we're almost trying to save it to an extent, so we're going to be a little bit less picky about what we are keeping right now. The white corn, we've been growing it for so long, so we only want to keep the best for our seed" (Spears 2024). Comparatively, the Oneida white corn is being grown and saved by many different members of the Oneida community. Tsyunhekw<sup>^</sup> alone grows almost 10 acres of white corn every year for the cannery and community. It also has the additional security of being grown across the state of Wisconsin by other Tribal growers. Although each population is inherently genetically unique due to human selections and environmental conditions, there are agreed upon characteristics which keeps the variety true to type. For example, in corn, seed

keepers are picky about which ears, and which parts of the ears, they keep for seed, in the interest of upholding an agreed standard. This can include kernel color, shape, size, or the physical ear placement on the stalk (Webster 2023, 218). Seed keepers often prioritized preserving the traditional characteristics of varieties by selecting individuals which best represent the variety as a whole. Heterogeneity is welcomed and expected, as population diversity not only reflects the traditional expression of cultural varieties but also is a matter of resilience in plants that experience inbreeding depression (White 2019; Mt.Pleasant 2011). This accepted heterogeneity is what differentiates seed keepers from commercial breeders who prioritize the uniformity of marketable traits. Becky described to me that,

Our seeds hold future generations of corn. We need to keep our seeds safe to ensure we can continue growing and incorporating corn into our daily diets. This is becoming more difficult in recent times because of GMO seeds and different companies trying to place patents on our heirloom Indigenous seeds. Those threats make seed saving and seed keeping even more important practices. If we can keep those seeds safe, we can continue to grow them year after year.

(Webster 2024)

Jane Mt.Pleasant reminds us that, “it is impossible to have a “pure” corn variety: all the plants differ from each other in some way” (Mt.Pleasant 2011, 22). Seed keepers balanced the resilience genetic diversity provides with preserving the traditional characteristics of a unique variety.

The Oneida community seed keepers also chose growing and saving techniques intentionally for the preservation of traditional seed keeping skills or to facilitate knowledge

dissemination. Amy talked about how Ohe·láku plants three sister demonstration plots for educational purposes along with their rows of corn (Spears 2024). Similarly, Kyle discussed how Tsyunhekw<sup>^</sup> prepares small plots of three sister mounds for the community while the rest of their white corn is planted in rows. He described how he knew that the white corn would grow better in an intercropping system with two or three sisters, but the time and labor limitations make it inaccessible for their purposes (Wisneski 2024). Educational plots, such as these, support community members who do want to invest in growing the three sisters in their own gardens and preserve the existence of the practice in the community.

Finally, there are the varieties which the Oneida community seed keepers save simply for the fact that their families enjoy growing and eating them. Instead of expecting a harvest in which a variety's integrity is preserved, the process and harvest which creates the most enjoyment and memories is prioritized. Eric stated it simply, "The kids like pumpkins, so I'm always trying to plant pumpkins" (McLester 2024). These may not be Indigenous varieties, and they may not be carefully selected for seeds at the end of the season. Their value doesn't come from their history, sacredness, or practicability. Instead, it comes from the joy it instills in their loved ones and the memories created in its presence. Amy described how mammoth sunflowers connect her to her sister-in-law who lives in Kentucky. Her family grows, eats, and shares the sunflower seeds with their chickens, making sure to always save some to continue the original line received from her sister (Spears 2024). Lynn's grandmother was the greatest influence on his life, teaching him how to garden, can, and take care of a family. Her favorite plant to grow were her flowers, "they were a beauty to her, and that was what she really got her greatest joy from," he shared (Utesch 2024). He now grows and saves native prairie plants and flowers for his pastures, along with supporting his wife's love for flowers. Winnie lived with her aunt when she

was young and was often tasked with caring for her aunt's beloved flowers. "That must be how I got to like flowers, but at the time, I didn't like them because I had to do all the weeding," she explained (Pelky 2024). Her large garden is now a haven for her grandchildren and great-grandchildren to play and make-believe in. As one of those grandchildren, Winnifred and my mother are the reason I personally value planting flowers outside my apartment. Jordon discussed at length how he can apply the skills learned from growing with his family and at Tsyunhekw<sup>^</sup> to his food plot for hunting. Upkeeping the plot, sitting during the season, and enjoying the harvest are all shared with and help support his loved ones (Powless 2024). The seed selection and keeping processes in each of these examples are aligned with different motivations than when the Onedia community seed keepers select and keep Indigenous varieties. Instead of being driven by varietal preservation, they are driven by their loved one's delight, allowing for more relaxed growing and saving techniques.

## Conclusion

Seed stewardship in Oneida, and Indian Country, is receptive to what Kathleen Absolon describes as Indigenous methodologies because of its reliance on the stories and histories (Absolon 2022). This thesis begins to describe how community seed keepers are motivated to leverage the dissemination of traditional knowledge to protect traditional seed varieties within the Oneida community. It also serves as an additional example of how Indigenous research methods, or at the very least research methods which align with Indigenous ways of knowing and holistic worldviews, can exist in academia while directly supporting our oral history traditions (Absolon 2022; Quinless 2022, 77). Additionally, the development and sharing of the oral history produced through the interviews was a priority for the research project. The stories, histories, and knowledge expressed by the interviewees for this research is owned by these community members and their respective tribes, including Oneida.

The Oneida community seed keepers identified the land they grew up on, gardened on, and lived on as a vital part of their identity, especially when on the Oneida reservation. They shared stories that described how Oneida and the surrounding areas in Wisconsin were for the generations before them. These stories, passed down from one generation to the next, connected historical Oneida to modern Oneida. The seed keepers valued the intergenerational and community connections they fostered through learning the skills necessary to keep seeds and engaging in food and seed sovereignty activities. The passions imparted to them by their relatives were the same passions they shared with their community members and kin through the dissemination of information, skills, and stories. Our identities are inextricably tied with the stories and histories of our ancestors and communities. Seed varieties too have histories, stories, and communities as part of their identities. These must be protected and passed down with the

same care as the varietal seeds themselves. Careful records should be kept by those who steward them. The Oneida community seed keepers stressed how important it is for everyone to label the seeds they come in contact with.

The reintroduction of Tuscarora white corn to the Oneida people of Wisconsin was significant for Oneida's seed and food system revitalization, seed and food sovereignty movements, and the reconnection to a traditional diet. What once was scarce and reserved for special occasions and ceremonies has slowly expanded to being reestablished as a staple in the community's diet. This reintroduction of white corn, just like any other agricultural and food producing endeavor, was not without struggles. The Oneida community seed keepers identified several threats to their seed keeping process, especially when traditional ways of growing and relationship building are not followed due to colonial influences. Wildlife can pose a threat to ripening produce but accepting that feeding one's non-human relatives is part of the reciprocal relationship with the environment can mitigate the heartbreak. Exploitive land usage practices exacerbated seasonal weather instability, but environmental adaptation of Indigenous seeds can hedge against some of this unpredictability. Without the interdependence of one's community, traditional agricultural techniques can be incredibly laborious and these identified threats incredibly discouraging. Reconnecting with the concept of mutual aid and community working bees reflects the ancestral practice of community lifeways and thus supporting the resilience of each individual seed keeper through the resilience of the community they reside within. Spending time in community with friends and family supports cultural and intergenerational reconnection. Company transforms lonely, tedious tasks with community building, laughter, and storytelling. Finally, the largest identified threat to their seed keeping process was community members not growing and sharing the seeds—preservation without growing the populations out

and getting those foods out to families and community members. The goal is to widen access to these traditional foods and varieties to support Oneida's community food sovereignty. These challenges threaten the preservation of traditional seed varieties, but the Oneida community seed keepers have proven that community interdependence is the key to reestablishing varieties within their community.

While facing physical and systemic barriers, the Oneida community seed keepers used their personal motivators to continue seed stewardship and seed keeping. The attempt to categorize the seed keepers' motivations into distinct, separate themes was important for illustrating why Indigenous varieties are worth seed keepers' effort and attention, additional to their recognition as living relatives. It lacks the depth and complexity to fully and accurately describe an individual's internal motivations holistically, though. The identified motivations, in practice, are a web of interwoven ideas and systems contributing to each seed keeper's unique experiences and situation. The Oneida community seed keepers were motivated by their kinship relationships. They were eager to involve their family, especially younger children, in the seed growing, keeping, and eating process. This also included their intentional relationship building with the land, animals, and plants around them. They also were motivated by progressively building their community's resilience. The seed keepers served as resources for each other and built a network of seed stewards in which they could rely on. They also supported the infrastructure for Oneida's seed system to maintain their independence from commercial seed catalogues and Genetically Modified Organism (GMO) seeds. Overall, they were motivated by creating a sense of security for a future that they were weary of. Additionally, the Oneida community seed keepers were motivated by the revitalization of Oneida's culture and language. Our seeds tell the stories of our people, and our ceremonies provide structure and cues for

agricultural activities. The Oneida community seed keepers were proud to support their community's ceremonies and the revitalization of the Oneida language after it was unsafe for the older generations to practice for so long. Finally, they were motivated by increasing Oneida's access to traditional foods and diets. Colonization weaponized food against our communities. The movement towards food sovereignty is taking back that power. Traditional foods mitigate chronic health conditions and empower community members to invest in their food systems and trade economies. Oneida's seed system and seed keepers are integral to Oneida's food, health, culture, and language. Food is central to our sense of identity and community. Therefore, expanding traditional diets is essential for accomplishing Oneida's food sovereignty and revitalization priorities.

The motivations of the Oneida community seed keepers ultimately affect the techniques they employ when seed keeping. Indigenous varieties that are established within the community call for picky, precise seed selection. There is enough seed throughout the community that maintaining the highest standard of varietal characteristics, without limiting the genetic diversity of the population, becomes the priority. Alternatively, the seed keepers described how they would focus on increasing the population size of an Indigenous variety that is newly rematriated or is very limited in population. The absolute perfect seeds are less of a concern in these cases, as the goal is to increase access to the variety. Finally, they also described how they save varieties, even non-Indigenous varieties, to honor and serve their kinship relationships. They keep these varieties simply to pass on the enjoyment of gardening and seed keeping onto their children. Taste and ease take preference in these cases.

Seed keeping remains a vital part of ensuring our stories, customs, and knowledges are accessible to future generations. The Oneida community seed keepers described how their role as

seed keepers reached beyond just passing down their seed keeping skills and varieties. Their personal motivations and seed keeping activities pushed them to pass down the stories and traditional knowledge necessary to support a holistic community food and seed system. Their planting and harvesting activities were both influenced by and directly supported seasonal ceremonial responsibilities. Many of the seed keepers not only planted plants for food or seed keeping, but also for medicinal uses. They were continually looking for ways to incorporate the Oneida language in their process, especially when it came to organized community outreach and workshops. Many received Oneida names for their homesteads and encouraged visitors to give prayer and offerings when planting and harvesting. They worked with organizations, schools, non-profits, researchers, and intertribal groups to further cultural restoration efforts. The seed keepers understood the benefits of hands-on experience when learning how to save seeds and therefore implemented workshops to further share their knowledge. These activities, inspired by their personal motivations, ensured that the varieties they preserved would be stewarded by the next generation because of the seed keeping learning opportunities the seed keepers provided to their community and kin.

Seed keeping knowledge and techniques are not only useful for the preservation of Haudenosaunee varieties, but also to support other community activities like rematriation, self-sufficiency, food plots, and medicine populations. This work supports the community members who are in the process of reconnecting. Supporting the Oneida community seed keepers and their educational outreach helps preserve and disseminate traditional ecological knowledge further throughout the community and Indian Country. Many Oneida community members are still in their journey of reconnection. Not every family has embraced seed keeping or growing food, as the Oneida Seed keepers I interviewed have. This means that there is an immense pressure on

these individuals and families to support the rest of the community's need for these traditional varieties. The Oneida community seed keepers described how a strong community and network can save time and resources when managing and supporting the transmission of traditional knowledges, skills, and stories. They used storytelling as a traditional Indigenous way of knowing and relationship building, especially when passing on traditional ecological knowledge. They relied on stories to share with me who their own seed and garden mentors were. Not all Indigenous seed varieties come with vital stories and ethnographies, especially those which were displaced from their kin communities. Our own histories are tied to the histories of these seeds; therefore, we can create new memories and experiences tied to these rematriated varieties to aid in reestablishing them within our communities. The reestablishment of these traditional varieties is crucial to the continued community-wide reestablishment of our own traditions and lifeways. Reconnecting to our seeds is reconnecting to our people and communities.

The lessons and practices learned from my interviews with these Oneida community seed keepers can be applied to Oneida's own expression: *Good Mind, Good Heart, Strong Fire*. It is a reminder to Oneida on how to support a community based on wisdom and informed decision making, relationship building and empathy, and resilience. This ideology builds shared expectations for a holistic, community existence. Building a holistic community seed system can be facilitated through these same tenants.

### ***Good Mind***

*Seed keepers can honor their kinship relationships through passing down the skills and stories needed to continue this seed work to the next generation. Oral history, storytelling, and traditional ecological knowledge are all sources of Indigenous knowing that have been passed down through generations.*

*Our own community's histories are reflected in the histories of our seeds.* Extensive and accurate record keeping keeps these histories and stories alive, as well as ensuring varieties are grown out successfully. These seeds are our relatives; their stories are our stories.

*Seed keepers' motivations affect the techniques they utilize when working with a seed variety.*

These motivations can also be leveraged to more fully support other cultural domains that benefit from the dissemination of knowledge.

### ***Good Heart***

*Our seeds are our relatives.* Seed keepers seek to honor the relationships with their community members, relatives, and non-human relatives. These seeds come with ceremonial responsibilities.

*Oral history supports reciprocal relationships.* These relationships need to be honored, maintained, and upheld. Storytelling, as a form of oral history, is vital for disseminating traditional ways of knowing and memorializing ancestral stories and histories.

*Seed keepers support their community's cultural and nutritional needs.* The rematriation of seeds, skills, and stories are vital for the expansion of traditional diets which support the nutritional health of Indigenous communities. Food is medicine.

### ***Strong Fire***

*Seed keepers save more than a single season's worth of seeds to hedge against seasonal threats.*

Our ancestors understood how important these seed varieties were to preserve for the next generations. They successfully protected them during forced relocation and assimilation, and attempted genocide. The Oneida community seed keepers too strive to preserve their varieties for the next generation.

*Diversity strengthens seed systems.* Diversity of a variety's genetics, of planting techniques, and of intercropped species all contribute to the resilience of a seed keeper's process.

*Supporting seed keeping and the dissemination of these traditional knowledge and skills can expand the resilience of the community.* Seed keeping supports seed sovereignty, which is inherently links to food security and sovereignty.

Oneida's seed system excels in several areas. These include the spread of the concepts of food is medicine. Oneida is funding programs and initiatives to support seed systems through food security and food is medicine efforts. Also, there is a web of seed keepers all supporting Oneida's seed system. This isn't the work of a single familial unit, but instead the responsibility is spread throughout many individuals. The diversity of planting, growing, and keeping techniques, while keeping the values and importance of preservation at the core, supports not only the genetic diversity of the varieties, but it also prevents varieties from being lost from the community due to poor growing seasons. A single garden threatened by pests, such as a raccoon or bear, will not collapse the traditional seed economy developed by these Oneida community seed keepers. An additional safeguard is the preservation of oral tradition, skills, and knowledge through the dissemination of information to subsequent generations. Just as varieties are passed from generation to generation, so are the skills needed to support future seed work.

The Oneida community seed keepers illustrated how vital preserving the integrity of Indigenous varieties is for the reclamation and revitalization of culture and language in Oneida. In his interview, Kyle explained to me how important it is to acknowledge the complexities that can prevent or dissuade community members from getting involved in the food and seed sovereignty movements. External pressures, obligations, responsibilities, and struggles can be immense barriers to growing and keeping seeds, especially Indigenous varieties (Wisneski 2024).

Building community resilience and capacity to remove some of these barriers supports the growth and prosperity of Oneida's seed system.

Through oral history, storytelling, and the dissemination of our knowledge, we encourage ourselves and the next generation to remember what it means to be Indigenous and the relationships which strengthen us. At the end of Winnie's interviews, she left me with this last piece of advice that she wished for Oneidas to identify with. She asserted,

I think that all our kids and our generations are like my grandchildren, great-grandchildren. I hope they always know they're Indian, that they got Indian, and always be proud. Never hide it from anybody because you're Indian because sometimes they had to hide it. They would hide. It. They wouldn't admit they were Indian. . . but always be proud of who you are.

(Pelky 2024)

Herbert Lewis reiterates this point in the Introduction for the Oneida Lives WPA book. He says, "Despite all; of the obvious acculturation, the individuals who speak in these texts never—not for a moment—forget that they are Oneidas, Iroquois, and Indians" (Lewis and McLester III 2005, Introduction - XXX). The ability to remind each other of all the different relationships which makeup our identity is the power of oral history and the importance of continuing to share traditional knowledges throughout our communities. To know our seeds is to know our histories.

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## Appendix A



Minimal Risk Research IRB  
8/12/2024

**Submission ID number:** [2024-1074](#)  
**Title:** Seed Selection Techniques Used by Oneida Community Seed Keepers  
**Principal Investigator:** William Tracy  
**Point-of-contact:** Elena Elvira Hill  
**IRB Staff Reviewer:** Steph Wilson

The MRR IRB conducted a review of the above referenced initial application. The study was determined to meet the criteria for exempt human subjects in accordance with the following category(ies) as defined under 45 CFR 46:

(2)(ii) Tests, surveys, interviews, or observation (low risk)

If this study falls under VA regulations, you must get final approval from the VA Research & Development Committee prior to starting research activities.

NOTE: If the research under this exemption application becomes subject to FDA regulations, or other changes are made that could affect the exemption status, you must contact the IRB as the IRB's exemption determination may no longer apply.

You have identified the following financial sources to support the research activities in this IRB application:

- Tracy, William - SWEET CAP: INTEGRATED TECHNOLOGIES TO IMPROVE SWEET CORN PRODUCTION AND MARKETABILITY, MSN217501 - Direct Sponsor: UNIVERSITY OF FLORIDA, P0094670 UFDSP00012378 - Primary Sponsor: USDA, NATL INSTITUTE FOOD & AGRICULTURE

If this information is incorrect, please submit a change to modify your application as appropriate.

To access the materials the IRB reviewed and accepted as part of the exemption determination, please log in to your ARROW account and view the documents tab in the submission's workspace.

Although the human subjects research described in the ARROW application referenced above was determined to meet the federal criteria for exemption and thus does not require continuing

review, please be aware of your responsibilities related to the conduct of the research and when additional IRB review is required. Prior to starting research activities, please review the Principal Investigator and Study Team Responsibilities in the [Investigator Manual](#), which includes a description of the types of changes that must be submitted to ensure the research continues to comply with the conditions of the exemption and/or category(ies) of exemption.

If you have general questions, please contact the Minimal Risk Research IRB at 608-263-2362. For questions related to this submission, contact the assigned staff reviewer.

## Appendix B

Jo Anne House, PhD | Chief Counsel  
 James R. Bittorf | Deputy Chief Counsel  
 Kelly M. McAndrews | Deputy Chief Counsel

Carl J. Artman  
 Krystal L. John  
 Peggy A. Van Gheem  
 Lydia M. Witte

Law Office



Elena Hill  
 Via e-mail to ehill2@wisc.edu

June 26, 2024

*Regarding: Community Support – Oneida Nation*

Dear Ms. Hill:

You have requested the Oneida Business Committee consider approval to conduct research regarding your master's thesis titled "Seed Selection Techniques Used by Oneida Community Seed Keepers". You have identified that you will be utilizing semi-structured interviews with individuals to gain insight on their processes of growing, harvesting and seed selection regarding corn, beans, squash and tobacco. Interviews will be open and not anonymous. You have also indicated a desire to share the interviews with the Oneida Nation.

This is growing area of knowledge and activity within the Oneida Nation Reservation by members as well as the ongoing activities of Tsyuahehkwé Farm. Understanding how seed knowledge is growing and transferring within the Oneida Nation Reservation will be helpful in identifying future programming and services and how current programming and services should shift to meet the needs of this part of our community. I am recommending you share your interviews with the Oneida Nation Museum for their collections. The Museum is an open resource for the community.

On June 26, 2024, the Oneida Business Committee reviewed the draft thesis proposal and took the following action.

Motion to approve research request, consistent with resolution # BC-05-08-19-A, Research Requests: Review and Approval to Conduct, and, in accordance with:

- a. Resolve #2(3), Ms. Hill is required to submit the final paper draft for review;
- b. Resolve #2(4), Ms. Hill is required to submit a copy of the published work and can request to present the research findings to the Oneida Business Committee; and
- c. Resolve #5, any further use of this research information is not subject to authorization by the Oneida Business Committee.

Congratulations on reaching this stage in your studies. The Oneida Business Committee looks forward to your final paper and hearing your results. If you have further questions, please contact me.

Sincerely,

ONEIDA LAW OFFICE

By: \_\_\_\_\_

Jo Anne House, Chief Counsel  
 Wisconsin State Bar No. 1021514



- ii. Commercial vs traditional\*\*
- b. Can you walk me through how trouble-shoot circumstances that are less than ideal?
  - i. How do you build resilience into your seed keeping process?
    - 1. *Define resilience in this context*
    - ii. Ex. Probe: How do you know how many ears/pods/fruits to save for the subsequent season's planting? Do you consider climate change, natural disasters, genetic diversity, etc.
- 4. **What characteristics do you look for in the plant/ear/pod/flower/seeds when selecting seeds/fruit for eating vs saving?** (Related to Q2)
  - a. Do you have any goals in mind for any of your varieties when making selections for seed?
    - i. Ex. Probe: Are there any varieties where you select for certain characteristics? How do you decide if an ear/pod/squash is to be eaten or saved for seed? Uniformity, culinary (taste), braidability, resilience/adaptability (climate, environment, stress), ease of shucking/threshing, visual appeal, yield, etc.,.
    - ii. Commercial vs traditional \*\*

5. **\*\*If the seed keeper does not plant/keep traditional varieties alongside commercial varieties**
- a. How do you feel traditional seed varieties should be treated by those who steward them?
    - i. Ex. Probe: Should everyone have access? Can we use chemical inputs on them? Should we be planting them every year? Should we be maintaining the looks of a traditional variety or allowing adaptation and changes?
  - b. How do these processes differ from how you would treat a commercial heirloom or hybrid variety from a catalog or store? (only if not touched upon in questions above^)
    - i. *In this context, we are using heirloom and hybrid as examples of commercially developed and available seed varieties. Heirloom seeds being able to be saved for the following year whilst still growing true to type and hybrid seeds not.*
6. (\*If not already addressed in previous answers) **Who and/or what resources contributed to developing and/or learning this entire process?**
- a. What led to you first being interested in learning these skills?
  - b. How did you determine which processes were appropriate for each specific crop/variety?

- c. Why do you feel it is important for Indigenous people to learn these sort of seed keeping techniques?
- 7. Have you or do you plan on passing down your varieties and/or knowledge/skills/experience to anyone?**
- a. Ex. Probe: To whom (family, community, friends)? What is your motivation?  
What is the teaching style?
- 8. Is there anything that we didn't touch upon in the previous questions that you think is important for me to know or that you would like to share?**

“Thank you so much for taking the time to share your knowledge and stories with me. Please feel free to email me or call me if something comes to you later that you would like to also share.”