



# Tribes and Climate Change Program

## Tribal Profile

### Southwest Region- Diné (Navajo) Nation

#### North Leupp Family Farms



## INTRODUCTION

Food plays a vital role in forming identity, community development, sustenance, and spirituality in the day-to-day lives of Native people and their communities. Not only are certain foods central to the ceremonial and belief systems of many Indigenous nations, but these communities also face unique challenges as they try to provide healthy and culturally relevant food options to their people. The increasing impacts of climate change events, such as megadroughts and high precipitation events have led to increased flooding and erosion (STACCCWG, 2021). Issues of hunger, food insecurity, human health, lack of access to traditional food sources, and geographic isolation pose additional difficulties to obtaining fresh and nutritious foods for the largely rural Diné Nation.

For the Diné Nation, there are currently 13 grocery stores, and despite having the largest Native American land base of over 17 million acres spanning across three states and a population now surpassing 250,000, obtaining nutritious food is challenging to come by (Navajo Nation Division of Community Development, 2019). As a result, the USDA classifies most of the Diné Nation as a food desert. A food desert is an area where people have limited access to various healthy and affordable food. High rates of nutrition-related diseases are another challenging aspect. The nation faces a health crisis due to extremely high rates of nutritional-related illnesses, including obesity, diabetes, heart disease, hypertension, and cancers (Diné Food Sovereignty Report, 2014).

Recognizing the loss of self-sufficient food systems contribute to the various issues Diné communities face today, [North Leupp Family Farms](#) (NLFF) works to support local farmers in reclaiming their local food system. North Leupp Family Farms is a 501 (c) (3) non-profit corporation functioning as a small farmers' cooperative with approximately 100 acres of agricultural land. The land is cultivated by approximately 30 farmers each growing season. The mission of NLFF is "to develop solutions to address shortages in community food systems, encourage healthier lifestyles, and promote, and improve food security through partnerships" (North Leupp Family Farms, Inc.).

North Leupp Family Farms is located near the Little Colorado River in Leupp, Arizona, in the southwest portion of the Navajo Nation. When visiting the farm, you are greeted with a prominent view of Dook'o'oslííd (San Francisco Peaks) and elderly cottonwood trees standing in the distance. Visitors might wonder how a community can grow enough food to feed their families in this arid climate, and like most rural communities in the nation, Leupp is a region where resources are scarce.

When asking farm manager and board president Stacey Jensen about the impacts climate change has on the farm and resources, he explains native plants that were once abundant in the area are disappearing due to drought and overgrazing. In addition, he has noticed a decrease in rain and snow since he was a child, which continues to challenge farming and growing in the desert. As a result, farming techniques have changed due to a lack of water accessibility, and the people have to adapt.

## TRADITIONAL AGRICULTURAL PRACTICES AND SUSTAINABLE PRACTICES

The inaccessibility to nutritious food on the Navajo Nation is correlated to the loss of knowledges about the historical traditional Diné foods. The loss of intergenerational sharing, teaching, and learning how to grow and harvest traditional crops is compounded by the difficulty of procuring land and potable water. This is largely due to the complicated network of Tribal and federal land policies and climate change impacts, such as the megadrought the southwest is experiencing (Williams, A.P. et al. I, 2022)

Stacey Jensen explained that initiating and procuring land to start a cooperative farm required gathering support and trust from local governances, tribal enterprises, and the Navajo Nation government. But, he says, "although it may seem an insurmountable task and when you feel like giving up, just keep pushing through because that is when things start to fall into place and gets the ball rolling." NLFF and the Leupp community desired to keep their traditional farming practices alive, which led them to retain water and land rights.



View of Dook'o'oslííd (San Francisco Peaks) during the winter season. Photo Credit: NLFF, Inc.



Seed storage and the start of the growing season. Photo Credit: NLFF, Inc

Historically and currently, the Diné live off the land and live a sustainable subsistence way of life using traditional agricultural methods. Stacey Jensen defines their methods as “drought-tolerant farming,” and encourages to grow plants proven to conserve water and thrive in the arid region, primarily traditional foods such as Navajo blue corn, squash, beans, and melons.

The Diné culture is kept alive through community involvement and is a valuable asset to NLFF. A cooperative and cohesive approach makes the farm successful and allows for intergenerational knowledge sharing between farmers and families. The Diné word: “K’e” is defined as the kinship system and how Diné people relate to one another. Stacey Jensen also defines it as how we protect, preserve, and nurture our relationships. Stacey explains, “K’e is not only how you identify yourself as a Diné person and with your relatives, but how you interact with the insects, critters, soil, and climate.” Farming with and next to each other on the farm is building a sustainable future and launching an imaginable path toward a sustainable food system on the Diné Nation that is resilient and incorporates intergenerational healing and reclamation of Diné cultural values.

### YOUTH INVOLVEMENT AND OUTREACH

NLFF and its partners (Star School, Leupp Public School, USGS, local knowledge holders) provide continuing education to the local communities on traditional crop cultivation using organic farming techniques, as well as traditional culinary methods to prepare Navajo foods, such as kneel-down bread and corn. In addition, NLFF strives to engage students from local schools

by inviting them to the farm and learn about the fast-disappearing art of traditional Navajo agriculture. Planting seeds, harvesting, and culinary practices are demonstrated and taught on-site to the youth. The farm also encourages college students from other states and countries unfamiliar with the Diné way of life to intern and learn from the older farmers and tribal members. College interns take time out of their busy academic lives to reconnect to nature and experience the hard work it takes to cultivate food in the area.

### ADAPTING TO EXTERNAL FORCES (CLIMATE CHANGE, COVID-19, MENTAL HEALTH)

While a local food system may appear to be a reasonable component of Diné sovereignty, historical forces, such as the underlying federal laws and allocation of land, water, and natural resources, have discouraged this vision from becoming a reality. However, more recent forces, such as increasing climate stressors (drought, water availability, soil health), the [Coronavirus pandemic](#), and the mental



Elementary school garden built by the farm located at Leupp Public School. Photo Credit NLFF, Inc.

health of the older and younger generations, have led to a revitalization of traditional Diné farming.

Navajo communities have been dealing with water loss since the drought began 20 years ago. As a result, many native communities are concerned with how water will be appropriated to their communities. Dealing with drought and water rights allocation encouraged NLFF to consider how they use their water and land to withstand such daunting pressures. The farm's conservation of water, land, and ecological health is the approach to ensure their community members have food and clean water for many generations to come.

The farm's mission is to conserve and promote sustainable farming practices that keep the water and land clean. NLFF switched from a diesel-powered deep-well pump to solar energy (clean energy); this benefits farmers participating in the annual growing season because they no longer need to pay for diesel gas. NLFF promotes seed saving to prolong the genetics of the traditional foods many Diné families are accustomed to growing and eating. In addition, as climate change and drought continue to hinder crop production in the southwest, the traditional crops NLFF has been growing will prevent catastrophic crop failure because of how adaptable the seeds are to the area.

Undoubtedly, the pandemic has amplified feelings of anguish and contributed to physical and psychological distress. Most of the world experienced economic shutdown, home quarantine, social isolation, and grieving the loss of a loved one. For many families in the community, engaging with the outdoors and farming activities helped reduce some emotional trauma and stress by enhancing self-awareness and re-engaging with their community in a safe outdoor environment. While everything else was closing and shutting down around them, the farm stayed open to the public as a form of therapy, and in turn, farmers were able to feed their families and relatives.

## CONCLUSION

The next steps for North Leupp Family Farms include scaling up crop production and the farmer's market. A mobile farmers market is one idea to increase access to food. The farm wants to provide for other Diné communities within a 100-mile radius of Leupp, Arizona. The farm will also continue to assist emerging farming businesses on the reservation through training workshops and employee capacity building. It will take funding and ongoing support from local governance and the Navajo Nation government to train tribal members interested in growing food or developing their local farms. As climate stressors inevitably increase worldwide in the coming years, challenges to traditional agriculture will likely prompt more climate change induced adaptation and mitigation on and off the Navajo Nation. It is crucial for small farms to gain support and inclusion when thinking about establishing a sustainable food system. The cooperative approach taken by North Leupp Family Farms has increased community engagement and intergenerational knowledge sharing. The farm's initiative and framework offer a solution to preserve Diné livelihood and teachings.

## CITATIONS:

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