

Understanding Access to and Use of Traditional Foods by Hopi Female Headed Households to Increase Food Security

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Abstract: Using a participatory action research approach based on the principles of Appreciative Inquiry, the experiences of single mothers in using and accessing traditional foods were determined. The use of traditional foods had positive impacts on a variety of community capitals: natural, cultural, human, social, and financial. Many important informal mechanisms are in place to make sure that single mothers can access traditional foods. But the use of traditional foods decreases with age. Ways to increase the use of traditional foods by younger single mothers are discussed.

Traditional food is a big part of health, because Hopi food has a pleasing taste, and it's much healthier than what we eat today. It serves as a way for paying back people that do good deeds for you. It links us to our family and villages in certain times when we have weddings; it links us together through weddings, harvest, dances; it teaches us and identifies what roles we have as a female. It also is a big part of passages of our life, through puberty and the way we teach our kids. It brings us together for baby namings and ceremonies. (Respondent from Village of Oriabi)

Goals of the Research

The purpose of this research is to find out the situation of families headed by single females in their ability to access Hopi traditional foods. These foods are important to nutritional well being and cultural participation and inclusion. Property on Hopi passes from mother to daughter, which includes the farming fields. The production of the Hopi dryland crops of corn, beans, squash and melons have been the duty of male farmers. Traditionally, if there is no husband present, other relatives will produce for the woman. Is this tradition changing within today's economic and

social setting? And what does that mean for families headed by females in the areas of health and participation in Hopi culture?

According to the 2000 U.S. Census, 574 families out of a total of 1,515 families on the Hopi Reservation (29.2% of the total) were headed by women. Of these 574 female headed households are below the poverty line (48%). In the total number of families, these female headed households below the poverty line account for 17.2% of families on Hopi. That compares to only 9.9 % in the same demographic area in Arizona (U.S. Census 2000).

The Women, Infants and Children program at Hopi currently serves 475 clients. Monthly assistance is \$98/month for one child. Vouchers are available for fresh vegetables at the Hopi Farmers Market held on Tuesday at the Hopi Health Care facility near First Mesa. However, the produce there comes up from Phoenix and the voucher is only good for \$30 for the year (Andrews 2005). This is not a farmers market that sells Hopi produced foods. Additionally, not everyone has transportation to travel to the market.

The crops produced at Hopi are in many cases unique and cannot be purchased from the outside. They do not show up on lists of products that can be purchased with food stamps either on or off the reservation. For example, blue corn can be purchased in various places, but Hopi women say that this corn, often produced from large scale farms, does not work well in making piki, a rolled wafer bread unique to Hopi. Piki made of store bought corn flour does not hold together. (Honanie 2005).

Participation in traditional culture is important at Hopi. Each village holds ceremonies of both a religious and social nature. Agriculture and survival are the center of these ceremonies, from the Buffalo dances of early winter to the basket dances after harvest. If you are Hopi you participate in various degrees. Food, especially corn, is essential in these ceremonies (Sokolov 1979). Guests must be fed and some corn is used in ceremonies.

Methodology

The training of Hopi people to conduct research is one of the goals of this project. A lack of trained individuals will often times limit the ability of the community to conduct inquiries into issues that concern them. By including the community representatives in all aspects of the work conducted in the grant, they increase their understanding of the whole process and have a large voice in shaping the study.

This study built on the experience gained by the authors in the Pu'tavi study of Hopi farmers. In that study, representatives from each mesa were recruited to help design the interview schedule, identify the sample through a quota sampling frame, write up the interviews in English (Hopi was the language primarily used in the interviews, as English has limited utility in that complex and diverse system), and code the interviews, transforming open-ended answers into generally dichotomous variables. They also learned how to use descriptive statistics and generate testable

hypotheses based on the data. One of goals was to increase the research capacity of the Hopi nation.

In the study of single mothers' access to and use of traditional food, we again recruited representatives from each mesa. We originally had five community representatives, but one, our only male, moved off the reservation. Our remaining representatives were from all three mesas, which meant that they knew the households in the villages, and could identify those where a single woman was raising children, even when those children were not her own.

All four Community Representatives took the Institutional Review Board examination offered on-line by Iowa State University. Because they would be handling confidential information, understanding the need for controls over the information was deemed necessary.

Our understanding of asset-based community development and the importance of building the future on what has worked in the past, we determined to use an Appreciative Inquiry approach to understanding food security through the strengths of the Hopi single mothers. Thus our conversations with stakeholders focused on discovering what is working and how to make it work better for a more positive future.

We held several meetings with stakeholders on the reservation involved in Food Security and child well-being to get their input into our study and to frame the issues. The core team included

- Hopi Pu'tavi Project, Inc.
- Community Representatives: Ms. Iva Honyestewa, Ms. Harrissa Koiquaptewa, Ms. Leona Sakeva, and Ms. Antoinette Honie
- Leigh Kuwaniwisima – Director – Hopi Cultural Preservation Office
- Brenda Patterson – Director – Hopi Office of Youth Affairs, the Natwani Coalition
- Priscilla Pavatea – Director – Hopi Office of Range Management, Micah -Natural Resources Planner
- Cornelia Butler Flora – Director – North Central Regional Center for Rural Development, Iowa State University
- Matt Livingston – Associate Agent – University of Arizona Cooperative Extension Hopi Office

After intense discussions, the representatives, in conjunction with the core team, decided the major areas to cover – the meaning of traditional food, the uses of traditional food, the range of traditional foods, acquiring the ingredients to traditional foods, the preparation of traditional foods, and learning and teaching about traditional foods, as well as what needed to be done to increase single mothers' use and access of them. From that outline, the representatives prepared and pre-tested questions that substantially improved the interview schedule.

The community representatives were full partners in designing the sample frame and the number of interviews to be done. We again used quota sampling. They felt that because tradition is so important with traditional foods that they would sample elders who raised children as single heads of households, middle age women raising other women's children, and young women with children. The study defined the Hopi single parent, female headed household to mean a mother, female relatives (i.e. sisters and aunties), and grandmothers raising children and being the

primary person responsible for their care. The female could be living within a larger extended family setting. Also included are women who had been living on their own with their children but very recently had a male included within the household. All interviews were done on the Hopi Indian Reservation in northeastern Arizona.

The representative almost always interviewed in pairs to ensure quality control and accurate data. One hundred interviews were conducted by the community representatives over a period of nine months from October 2005 to June 2006. During the 2-month period of February and March no interviews were conducted due to ceremonies taking place in the Hopi Villages. The 100 women interviewed were from the 12 villages on Hopi. The oldest women were 87 years old and the youngest age 18. Fourteen percent were from First Mesa, 35% from Second Mesa and 51% from Third Mesa. The representatives typed up the verbal answers to the questions after each interview, providing a rich source of qualitative data.

While the university researchers designed the coding scheme in the former study, in this study the representatives learned how to set up the code book in SPSS for windows. The survey was conducted as a conversation then coded as to whether something was mentioned or not mentioned. Thus the responses relate to *salience*, not agreement or disagreement with the statement. The representatives coded the data, check it for errors, and ran the marginal values of the variable.

After looking at the data, they decided that age was probably the most important variable that impacted access and use of traditional food, so they derived age categories with which to run cross tabulations. They then produced the cross tabulations and their level of significance for the dependent variables around access to and use of traditional food, and discussed their findings. In the course of this intense analysis, we lost two more representatives. The remaining two representatives then divided up the data and wrote up their analysis of the findings. The two other PIs offered advice, instruction, and encouragement, and helped organize the data presentation.

Preliminary Results

The first question asked was, “What does Hopi Food mean to you?” Most of the women had to wait and think before they answered the question.

The majority (60%) of the respondents spontaneously told us that traditional food is good for you, is healthy food, and is for ceremonies and initiations. A similar number told us traditional food is home-grown. Only 14% of the respondents did not mention at least one of these three meanings.

Harrissa states, “There is a definite need to educate and make aware how important these traditional teachings are to us as Hopi. One only knows the importance of Hopi traditional foods and its purposes when you learn and understand the whole meaning of Hopi. So, passing on the tradition is the first important thing.”

The knowledge that Hopi traditional foods mean survival and energy is passed on to generations and told over and over; that as they can be dried and stored for later use, these foods will help overcome starvation later on in our life. We were always told that if we are picky and don't like our traditional foods, then we will starve, and those that learn to like it and eat it will not. It also gives us a good source of energy. Many of our ancestors and elders would run and walk for miles just to get to their fields. They were very strong, because of the foods they ate. They didn't have any preservatives and they didn't add ingredients that would make them sick. So the energy was there for them to travel distances on foot. But today our children have become used to more modern foods and drinks that make them obese, sick, and many times hyperactive; they are not as healthy and energetic as most of our grandmothers and grandfathers. So, many times when we are told that it means survival and provides energy, the younger generation often think that a stock of BooKoo energy drink and a supply of hot Cheetos is enough for them to survive on and will give them the extra energy to stay awake all night for the butterfly dances the next day.

If this knowledge is not passed on, it is another step to why many of us will not know why it is important for us to hold on to these traditional foods and why we make and eat them for specific occasions.

One-third of the sample said that traditional food meant survival. Older women were more likely to mention survival and energy than younger women. Only 13% of the women under 25 mentioned traditional food as a source of energy and survival.

The first and foremost important source of traditional Hopi food is corn. It is the main ingredient for all of the Hopi traditional meals and is used in all Hopi traditional ceremonies. Some women mentioned how traditional food identifies who they are. Sixty-eight percent mentioned the importance of corn and/or traditional food to their identity as Hopi. Older women were more likely than younger women to mention either as a source of identity. Fifty-seven percent mentioned that corn is important to Hopi Identity. Older women (over 35) mentioned this more often than younger women, 64.3% compared to 18.8%.

“Corn is very important to me because it is considered our main source of food. It is healthy; (it is) considered our mother. Corn meal is used to communicate with our creator father, our healer, our teacher in every part of our lives. Our whole teachings include corn from birth until we leave the earth.”

Favorite foods reflect the symbolic importance of corn. Noqkwivi (hominy stew) and Poovol piki (corn meal dumplings called blue marbles) were the most often named favorite; 84% named at least one of the two as their favorite food. Piki bread, made with blue corn, was named as a favorite food by 60% of the sample. 90% of the women mentioned at least one of these three as their favorite food.

Beans are another important source of traditional Hopi food. Each type of bean has its purpose for certain ceremonies throughout the Ceremonial Calendar year.

The survey itself revived enthusiasm for traditional food. For example, a 41-year old woman from Kykotsmovi who knew a lot about the wild foods and medicine mentioned how her mother, who is a healer, was teaching her these things and what kind of herbs or food to use for healing. She was very excited because she knew a lot and was willing to share with whoever wanted to learn.

Both young and older women gather wild herbs. There are some women who want to learn about the wild foods and where to get them. Seventy percent of the women, regardless of age, like to gather the wild Hohoysi tea. There are some people who don't know some of the wild foods. Their use is based on knowing what these wild foods and plants look like and where to find them. There are different seasons for each of these wild foods, depending on the moisture and rainfall.

Wild spinach is another favorite food that is gathered by 61% of the women. There are two different Hopi names for wild spinach.

Iva states, "Doing the interviews got the women thinking about what they know and don't know. When I started doing the interview, it got me thinking of all the Hopi foods I used to eat but don't eat as much now. I started cooking some of these foods. It made me realize that we need to continue this because that is what we are taught. Some day we will come across starvation time. These foods are what will save us. We have to continue eating and cooking the corn and wild foods."

One respondent said, "It is very precious to us, this was given to our ancestors by this someone. They say that we are going to survive on this food, especially the corn because that is who we are, everything has to do with corn." "It means that it's a big part of our culture. In some instances it has a spiritual meaning; in the ceremonies when we have to pay during ceremonies, it's spiritual to us. It's a big part of who we are – Hopi," replied a respondent from the Village of Oriabi.

A smaller portion of women under 35 indicate cultural and spiritual connections to traditional foods. Only about a third of this group focuses on the cultural and spiritual relationship with traditional foods.

The ties between Hopi and the crops they have planted and harvested for centuries is a very deep one because their lives have literally depended on a successful harvest. Praying brings the rain, and the rain waters bring the corn, beans, squash and other crops that they grow in a dryland planting system. Half of the single mothers said they use prayer to ensure a good crop. Tradition dictates that Hopi store as much corn as possible for the years there is a small harvest or no harvest. By participating in ceremonies and everyday practices people believe they help insure a greater likelihood of a good crop. The ceremonies go on through out the year.

The use of traditional foods in Hopi ceremonies is very important. Certain products are required for the preparation and performance on necessary rites. It would be unheard of not to have certain corns and beans in weddings, namings, and initiations. Families need these materials to participate.

See Table 1, The use of traditional foods and ceremonies varied by village.

Many of the villages still have their ceremonies and different initiations for which a lot of these traditional foods are prepared. There are certain foods made for certain ceremonies throughout the mesas and the villages. Respondents stated that Shungopavy is one of the few villages that still practices most of the sacred religious ceremonies and initiations, followed by Kykotsmovi and Hotevilla. But single mothers in Kykotsmovi were the most likely to mention use of traditional food in ceremonies, even though it is known to be a Christian village, rather than a traditional Hopi village. Hotevilla was the only village on Third Mesa that once held many of their sacred religious ceremonies and initiations and slowly ceased carrying out most of them, although it is still considered an active traditional village.

Moencopi, the sister village of Orayvi, is still strongly active in many of the traditional ceremonies and in producing traditional foods. The Tewa, who helped protect the Hopi fight the Spaniards, and protect Hopi lands from outsiders, brought their culinary traditions with them, later adapting to Hopi foods and traditions. However, they still have their traditional Tewa ceremonies and speak fluent Tewa.

All of the sacred ceremonies and initiations have ceased in Orayvi Village, leaving only the yearly Bean Dance Ceremonies, and occasional Night Dances, Summer Day Dances, Social Dances and Women's Basket Dance. So, many of the women there do not prepare traditional food as often as the women from Shungopavy or other villages that still have most of their ceremonies. Many of the women mentioned that they still cook and eat traditional foods more than any other as part of their daily diet.(see Table 1).

As children, Hopi learn how important corn is to their culture. Corn symbolizes Hopi identity and its culture and traditions.

Age and traditional foods

Age is a key factor in the use of and attitudes toward traditional Hopi foods. The average age of the interviewees was 52 years, born in 1954. The age range is from 18 to 87 years. The youngest was born in 1988 while the oldest was born in 1919.

64% Seventy-eight percent of the women over 35 mentioned how important corn is to Hopi identity, compared to only 19% of 52 years reported that age is related to access and use of traditional food, and 62% of all women under 35. Reasons for this may include not passing on tradition, living off the reservation, recently returning back to the reservation, or just a lack of personal interest.

The majority believe that there is a relationship between their age and the access to, and use of, traditional Hopi foods. Fifty-eight percent of older women reported that age is related to access and use of traditional food, and 36% answered that age is related to use of traditional foods. As age declines, single mothers are less likely to relate their age to use of traditional food. Many of the elders passed on the traditions at an early age and had to use and prepare these foods as part

of their daily lifestyle and were not given an option to do it or not. The older women knew what had to be done and they did it.

So for many of the older generation I think age was an important factor. In today's society women no longer feel that having access and use of traditional foods is as important as having a brand new wardrobe for work or getting your 13 year-old a brand new cell phone. Perhaps maybe because so'oh (grandmother) is still around to do it or they can always get it from someone they know.

Sources of Traditional Foods for Single Mothers

Getting sufficient Hopi traditional foods depends on having a network of family available for most of the individuals. There are also other ways of obtaining these foods. One way is by helping others who have harvested corn in cleaning and preparing it for storage. The ladies who help will usually be given some of the crop. At religious ceremonies the kachinas will give some foods away to the people attending. Trading for food occasionally happens too. Purchasing foods is another way to obtain Hopi foods.

Relatives

By far the most important source for traditional foods is having relatives give them the products they need. 79% of the sample, with no significant difference by age, volunteered that they received traditional food from relatives.

Purchase

Most Hopi do not believe in buying or selling of traditional foods. Sharing what you have, especially with relatives, is important. There is some buying and selling that goes on at Hopi but it is generally limited to between reservation residents. Selling off the reservation is very rare. The survey conducted by the Hopi Pu'tavi Project in 2003 with Hopi male farmers shows the same result – buying and selling traditional Hopi foods off the reservation rarely happens (Moon, Livingstone, Flora 2004). The Summer 2006 price on the reservation for a 25-pound bag of shelled blue corn was \$40.00, or \$1.60 per lb. During times of poor harvest, most ladies will not sell any corn.

Almost half of the single women, 49 out of 100, buy some traditional food. Older women are more likely to buy traditional food than younger women. Younger women may be given the appropriate kind of corn by relatives to make piki in their grandmother's piki house, and sell it to older women in their village, who use it for ceremonies and traditional meals. Of the 49 women who buy traditional foods, 44 are above 35 yrs of age.

Purchasing food products and seeds turns out to be the second most important way of obtaining traditional foods for these households, 35% of the sample, with no significant difference by age. Slightly over half of the sample purchase traditional food, with no significant difference by age. This happens in families where a husband is present to farm, but to a lesser degree. In a 2004 survey of Hopi farmers, 20.8% of respondents said they buy traditional foods on the reservation.

Helping Others and Reciprocity

Some women mentioned helping others to get their foods at harvest. Others trade what they grow for something they didn't grow. It's Hopi tradition to share what you've grown. The boys and men are taught to always give what they harvest to their grandmothers and aunts.

When corn is brought from the field to the house it is sorted and prepared for storage. Often people will come to assist if there is a lot of corn. In return they will be given some as a thank you for their help. Those that participate in planting and harvesting also get traditional food by participating in ceremonies. Young women are less likely to engage in either of these reciprocal relationships. Only 6.3% mentioned getting traditional food by participating in ceremonies and traditional weddings, baby naming, etc. compared to 36% of the older group of women.

Women receive traditional food when they participate by helping out during these functions. Once you learn how to cook these traditional foods, you go out and help others that are getting married or having a baby, so help will come to you in return when you have a wedding or a baby. It is your duty to go out and help. This is where reciprocity comes in. To get support you have to go out and give support. "This is what our children don't understand, so they don't go out and help our elders when they need it."

Preparing traditional crops

Over half of the single mothers are involved in planting and three-fourths of the single women are involved in harvesting and storing of the corn. The women surveyed mentioned 8 different types of corn. Some women are involved in the whole process of preparing the soil, planting, weeding, and harvesting.

Materials from the corn plant are used in preparing Hopi traditional foods, including corn husk (87%) and green leaves (41%). Other parts of the corn used include the corn cob, cornsilk, corn smut and pollen, which were mentioned by a smaller number of survey respondents.

Over three-fourths of the single women are involved in preparing the traditional foods. Women over 35 are statistically significantly more involved than the younger women.

Ninety percent of the sample use rock salt and ashes when preparing traditional Hopi foods. Traditionally the nephews are the ones who go get salt for their aunties and grandmothers. In our sample 41% got salt from nephews, 30% purchased salt from the Zunis, and the Katsinas gave salt to 20%. Nine percent make their own ashes from the dried bean leaves, corn cobs, or salt bush.

Almost all parts of the corn plant are used by Hopi cooks in food preparation. These parts include the cornhusks, the cob, pollen, green leaves, corn silk, and smut. The husks are used in Hopi cooking much like they are used in tamales. Knowledge of the use of these materials is part of Hopi culture and cooking. However, with the exception of cornhusk and to a lesser extent, green corn leaves, the number of interviewees mentioning these item was very low. Saving

cornhusks is something 87% of respondents do and there is no difference for doing this related to age of the respondent. Only 41% mentioned green corn leaves. In the above and below age 52 group there is no difference in use. In the above 35 age group mentioned corn leaves compared to only 18.8% in the below 35 age group.

Learning how to prepare traditional food

The family is important in passing on how to cook traditional food; 90% were taught by their female relatives (64% by their mothers and 46% by their grandmothers), 29% by male relatives and 7% said that, in addition, they taught themselves to cook traditional food by watching others and through cookbooks. Over one-fifth of the women added to their learning from relatives by teaching themselves.

The women participated in preparing traditional foods from an early age, although 10% of the single mothers learned after the age of 18. (See Graph 1)

How does age affect the teaching of others? The respondents were asked who they had taught. A large minority, 44%, indicated that there is a need to teach the youth traditional cooking. Fewer people mentioned that they were doing that outside of their own children. When asked who they teach, most named their daughters. On the whole, about 69% indicated they taught their daughters traditional Hopi cooking.

The others who might learn cooking are granddaughters and nieces. Neither of these two groups is more than a third, with nieces being less than a third. Because women below 35 years of age generally do not have grandchildren, teaching them does not happen. They will teach their nieces although the percentage is small, only 18.8%.

Age and Time off of the Reservation

Time living off the reservation does not show any effect in purchasing traditional foods or receiving it from relatives. The only notable exception is for women who lived more than ten years off of the reservation and are under 35 years of age. None of the women in this group purchase food. They do receive food from relatives.

Two young women lived in the city through their childhood and then moved home to Hopi. They didn't know much of the traditional foods, but were eager to learn more on the history, foods and teachings. One told the interviewers that all her uncles are now city people and don't farm the fields. No one is farming the fields and they didn't teach the women how to do it. When they come home for ceremonies, their neighbor provides them with the Noqkwivi stew. They would just cook the side dishes. Now they are eager to learn more.

Over half of the single women are involved in planting.

Conclusions

Our preliminary results show that traditional foods are part and parcel of Hopi life today. They are very necessary for cultural and spiritual purposes. It is important for women in their relationships to the greater Hopi community and especially across inter-generational family relationships. Sixty-four percent say that they get traditional food the same way their mothers and grandmothers did.

Harrissa summed up her experiences in the design, implementation and analysis of the survey.

This particular survey has given me the opportunity to get a full understanding of how important traditional food is to us as Hopi women. I've come to really appreciate everything that my family talked to us about and taught me. As a young girl growing up I didn't think it was all that important and would be useful to me when I become an adult and a mother. In working with this survey I began to recollect everything that I was told and taught as a child. Part of me listened and held on to this information. I realize now how precious Hopi life is and how important it is to learn it at a very young age. Today, many of our children and young adults have little or no understanding of our history, culture, language and prophecies so many of them have no appreciation and respect for Hopi Tradition.

In my perspective a Hopi woman must have the knowledge and understanding of our traditional Hopi foods and the purpose it serves to really value the importance of why we need to have access to certain things. In a traditional Hopi family, the men have the responsibility to plant and provide corn and beans and other crops for his family to eat when it is fresh, prepare for ceremonies, store for later use and also for his family to survive on whenever we reach starvation. Something that we are taught early on in life by our elders is that someday we will be able to survive on our Hopi foods. Also, for many Hopi women, traditional food identifies her roles and responsibilities. Without it she may not feel complete.

So, if there is no husband and father to provide for the family, what other alternatives are there to gain access to these foods for the family?

In my observations while doing the survey, the elderly population generally talk about the history of our ancestors. They basically worked hard to stay on this land and survived on wild greens and what they planted and harvested. This traditional way of gathering wild greens and farming lifestyle is passed on by generation to generation so that it will not be forgotten. I could feel the happiness as they started to reflect on their childhood but it was quickly erased by sadness as they talked about how we are losing our tradition and how today's youth are being caught up in modern day society. To them young people have become lazy, making it difficult to pass on the tradition of our ancestors. The young people say that a life of the Hopi is not easy. Over half the women mentioned the importance of Hopi food in passing on tradition, so there are still a number of women that know the importance of passing on our tradition to the younger generation. Women under 35 are significantly less likely to mention the importance of traditional food in passing on tradition than are older women.

The study revealed an awareness of the importance of traditional food, but also some breaks in passing on the tradition. Fifty-four percent of the sample mentioned the importance of traditional food in passing on traditional ways.

Iva states, “Passing on the tradition depends on how much you were pushed by your parents to learn these things. In our days – 1980s – I believe we still were being pushed to participate and learn. Now, I see it as an individualistic thing where if you want to learn you will get involved. The younger generation now say, ‘Things are changing and now it’s up to us if we want to do these things.’ There are still some families pushing to hang on to the old teachings. It is important to know who you are, where you came from, and where you are going. Today, we’re getting so use to the modern ways. It’s scary to see 20 years from now how our ceremonies will be or if they will be passed on. You see a lot of Hopi people sitting watching television all day, children playing computer games, getting involved in drugs alcohol, not wanting to participate in the teachings, and ceremonies.”

Bibliography

Sokolov, Raymond, *Breakfast at Shungopavi*, **Natural History**, 88, no. 9; 1979, p. 122-128.

Honanie, Gayl, Director, Hopi Environmental Protection Office, personal communication

Andrews, Malinda, Director, Hopi WIC, personal communication

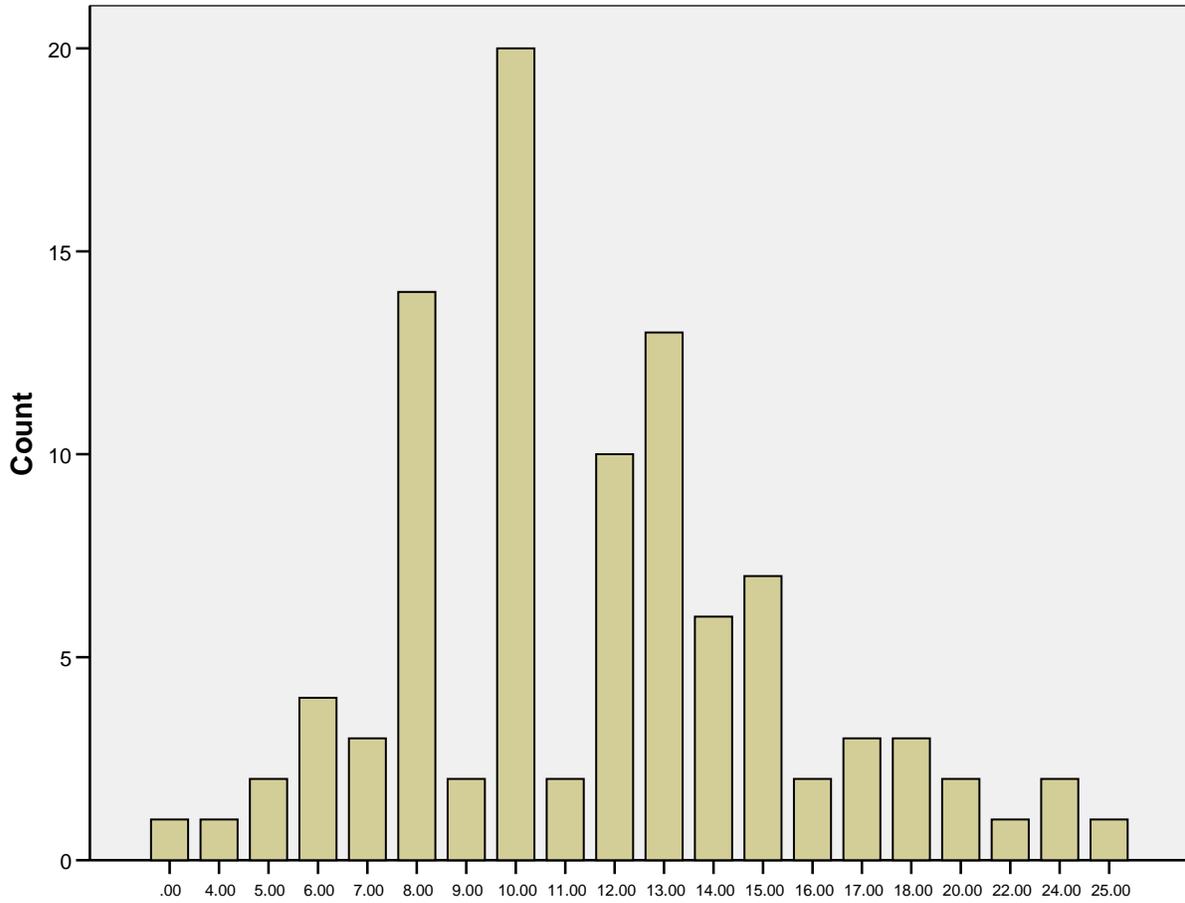
Livingston, Matthew, Flora, Dr. Cornelia B. & Moon, Debra -- Hopi Farmer Survey – 2002-2004.

Moon, Debra, **Hopi Community Food Project USDA CREES in partnership with the Hopi Tribe and Hopi Community through The Hopi Pu’tavi Project, Inc.**, Report to USDA. 2004.

U.S. Census 2000.

TABLE 1. Village: Traditional food is for ceremonies and initiation Crosstabulation

Village	Count	Traditional food is used	Total
Village	% within	for ceremonies and	
		initiation	
Kyktosmovi	8	88.9%	9
Tewa	5	83.3%	6
Lower Moencopi	5	83.3%	6
Shungopavi	14	77.8%	18
Mishongpovi	5	71.4%	7
Sichomovi	3	75.0%	4
Hotevilla	8	66.7%	12
Sipaulovi	4	40.0%	10
Oraibi	4	33.3%	12
Bacavi	2	33.3%	6
Upper Moencopi	2	33.3%	6
Walpi	0	0%	4
Total	60	60.0%	100



Graph 1. Age when first began preparing traditional Hopi food

00 means "In their mother's womb – a very early age."

Appendix 1

Cooking Times for Traditional Hopi Foods

Prepared by Harrissa Koiyaquaptewa & Iva Honyestewa

Times include prep time, shelling, grinding corn, and baking corn for mill. Heating stones.

- Lengi – Cow or Sheep Tongue (Prep ½ hour, 1 hour cooking)
- Tsiliktuki – Dried red chili pods fried in oil (20 minutes)
- Noq'kwivi – Hominy stew (12 hours)
- Pik'ami – Sweet corn pudding made from wheat and corn flour (14 hours)
- Pövölpiki – Small round dumplings made of blue corn flour (3 hours)
- Hurusuki – Blue corn flour mush (3 hours)
- Mori – Beans boiled (2-3 hours)
- Sakwa nu wiipal – Egg gravy made with blue corn meal - 30 minutes
- Tangu'viki – A meatless tamale made with blue corn meal wrapped in untied corn husks (2 hours)
- Sakwapviqaviki – Hopi style blue corn tortilla made with a small amount of blue corn flour mixed with commercial white wheat flour (1 hour)
- Patnga – Boiled squash (30 minutes)
- Patnga – Fried squash (30 minutes)
- Paatupsuki – Beans and hominy boiled together (7 hours)
- Sowitangu'viki – White corn tamales wrapped in corn husks and baked over a rabbit roast (2 hours)
- Pölaviki – Yeast bread (6 hours)
- Crumbled piki salted and browned over a fire or oven – piplapkutuki (15 minutes)
- Wafer bread made from blue corn flour – Piiki (5 hours)
- Lima beans with bacon – Hatiko (1 1/2-2 hours)
- Parched corn made from dried corn kernels – kutuki (2-3 hours)
- Watermelon with piiki (10 minutes)
- Crumbled piiki salted and browned over a fire or oven with corn gruel, made from white or blue corn flour and boiling water – piplapkutuki/wutaqa (30 minutes)
- Souffle' with corn flour added – sakwanööpiki (30 minutes)
- Fry bread made with a small amount of blue corn flour mixed with commercial white flour – sakwa Wíviqaviki (1 hour)
- Pancakes made from blue corn flour, beaten eggs and baking powder (30 minutes)
- Dumplings made of blue corn flour – atsmiviki (3 hours)
- A tamale like food made from blue corn flour, sweetening, and boiling water, wrapped in corn husks – Somiviki (5 hours)
- Fried squash with green chili (30 minutes)
- Blue corn flour batter wrapped into a crescent shape in dried corn plant leaves – tsukuviki (5 hours)
- Möha (Milk weed) with spam – Green boiled plant leaves with spam (1 hour)
- Corn gruel, a gruel made from blue or white corn flour and boiling water – wutaqa (15 minutes)
- Boiled spinach weed – Wiwàakwivi (4 hours)
- Roasted rabbit – sowitpe (3 hours)
- Scraped fresh corn that is boiled and resembles creamed corn – kya'asomkwivi (3 hours)

Spices used:

- Fatigue marigold – Tu' its' ma'
- Oregano – Nana kof si
- No ong tus havu
- Chili – Stii li
- Salt – oo gna
- Taguna – from the carrot family

