



# *American Indian Foodways and Recipes*

UNIVERSITY of NORTH CAROLINA  
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## *Prayer*

Oh Great Creator  
I am grateful to you  
for my life, for my home  
for my family, for my friends.

I am grateful for  
the food I eat  
and for my health.

Creator, grant me strength  
to do what I must  
to maintain my health.

*M.E. Farkas, 1996*

## *Southeast Indians: Subsistence and Material Culture*

The Southeast was one of the more densely populated areas of native North America at the time of European contact. Most groups resided in the piedmont, where they took advantage of extensive game resources, wild plant foods, and an abundance of arable land. The peoples of south Florida were an exception, as they adjusted to an essentially subtropical maritime way of life.

The primary division of labour was by gender. Women were responsible for cultivating the fields, gathering wild plant foods, cooking and preserving food, taking care of young children and elders, and manufacturing cordage, baskets, pottery, clothing, and other goods. Men assumed duties associated with war, trade, and the hunt; they were often away from the community for extended periods of time. Men also assisted in the harvest, cleared the fields by girdling trees, and constructed houses and public buildings. Both genders manufactured ceremonial objects.

The economic mainstay of the Southeast was corn. Several varieties were grown, including “little corn” (related to popcorn); flint, or hominy, corn; and flour, or dent, corn. Some varieties were baked or roasted on the cob; some were boiled into a succotash, a dish of stewed corn and beans; and still others were pounded into hominy or cornmeal in wooden mortars made of large upright, partly hollowed logs. Domesticated varieties of beans and squash were also important in the diet, as were wild greens. Fields were prepared with mattocks and hoes and planted by punching holes in the ground with digging sticks, inserting seed corn, and covering the holes with earth to form a mound about two feet in diameter; in some areas the soil was instead hilled into a series of linear mounds or ridges some three feet across. Typically, beans and squash were planted adjacent to the corn; the bean vines used corn stalks as trellises, while the broad leaves of squash shaded the soil, minimizing weed growth and conserving moisture. Most fields belonged to individual households, although some tribes also cultivated communal fields. Communally grown produce was given to chiefs for redistribution to the needy and for use in various ceremonies and festivals.

The importance of corn in the Southeast cannot be overemphasized. It provided a high yield of nutritious food with a minimal expenditure of labour; further, corn, beans, and squash were easily dried and stored for later consumption. This reliable food base freed people for lengthy hunting, trading, and

war expeditions. It also enabled a complex civil-religious hierarchy in which political, priestly, and sometimes hereditary offices and privileges coincided.

Other cultivated plants included the sunflower, which was processed for its oil; *Chenopodium* and orache, which produced starchy seeds and spinachlike greens; and tobacco. Many additional plants, such as wild grapes, plums, and perhaps walnut and pecan trees, were in a condition of incipient domestication; indigenous peoples exerted some effect on the propagation of these plants but did not fully domesticate them. Other important plant foods included berries, nuts, acorns, potatoes, zamia roots (similar to turnips), amaranths and smilax (providing shoots and seeds), and maple and honey locust sap. Two species of holly (*Ilex cassine* and *I. vomitoria*) were ingredients in a special decoction, the “black drink,” which was used to induce sweating and vomiting in ceremonial and medical contexts. The economic botany of the region also encompassed a vast array of plants used for cordage, clothing, dyes, fish poisons, medicines, building materials, and various tools and utensils.

Before European colonization, the only domesticated animal in the Southeast was the dog. In this region canines were used to a minor extent in hunting and as food but were probably most important as sentinels that warned of approaching strangers. In accounts of the Hernando de Soto expedition (1539–43), there are several references to small, fat, barkless dogs that were served to the Spanish visitors by their indigenous hosts. Some of the 300 or more trail hogs that were transported by de Soto to feed his troops escaped and became the ancestors of the modern razorback hog. The Spanish also brought horses to North America, but their use was primarily confined to the Southwest and Mexico; as a result, the Southeastern peoples generally obtained horses at a much later date, through trade with Plains tribes.

Most of the region teemed with wild game: deer, black bears, a forest-dwelling subspecies of bison, elks, beavers, squirrels, rabbits, otters, and raccoons. In Florida, turtles and alligators played an important part in subsistence. Wild turkeys were the principal fowl taken, but partridges, quail, and seasonal flights of pigeons, ducks, and geese also contributed to the diet. The feathers of eagles, hawks, swans, and cranes were highly valued for ornamentation, and in some tribes a special status was reserved for an eagle hunter.

In both salt and fresh waters a wide variety of fish were taken; fishing equipment included weirs (underwater corrals or pens), traps, dip nets, dragnets, hooks and lines, bows and arrows, and spears. Botanical poisons were administered in ponds and sluggish or dammed streams, creating a rich harvest of stunned, but edible, fish. Coastal groups gathered oysters, clams, mussels, cockles, and crabs, while those residing in the interior collected freshwater mussels and crayfish.

The peoples of the Southeast altered the landscape significantly by girdling trees and by the controlled use of fire. These activities created large areas of secondary growth that favoured certain types of berry bushes and other useful plants. The presence of this secondary-growth flora was essential for supporting the large populations of browsing deer, squirrels, rabbits, and wild turkeys on which people depended for sustenance. These environmental changes, combined with hunting, probably accelerated the decline of the wood bison and in some places other species; in areas with intensive corn cultivation, such as the lower Mississippi, early European explorers reported that game animals were scarce. In the central Southeast, however, native groups maintained an equilibrated balance with nature.

Source: <http://www.britannica.com/EBchecked/topic/667914/Southeast-Indian/57724/Subsistence-and-material-culture>



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## ***Creation Story: The Corn Woman (Cherokee)***

Cooking is an important part of life for the Cherokee woman. Not only is it necessary for life and nourishment, but it is part of the social fabric. Even in our traditional story of first man and first woman, Selu is known as "Corn Woman."

Selu lived with her husband, Kanati, and two sons. Everyday, she would go away from the house and return with a basket full of corn. The boys wondered where the corn came from, so they followed her one day. They saw her go into a storehouse, and they peeked in and watched her.

There they saw her place her basket and shake herself. The corn started falling from her body into the basket. They thought that their mother must surely be a witch and that they must destroy her!

Selu could read the boys' thoughts. She told them that after they put her to death, they would need to follow her instructions carefully so that they would continue to have corn for nourishment.

"After you kill me, you must clear some ground in front of our house. Drag my body in a circle seven times. Then, you must stay up all night and watch."

The boys did this, but they got the instructions backwards. They cleared seven areas of ground, and drug her body twice in a circle. Where her blood dropped, corn began to grow.

Because the boys were careless in listening to the instructions, corn must now be planted and taken care of in order for it to grow. And to this day, it only grows in certain spots and not the entire earth.

Visit any traditional Cherokee home and the woman of the house will provide a delicious meal. As a matrilineal society, it is the woman who carries the clan, gives nourishment to the growing baby, continues its growth by providing her milk, and continues to nourish all who come to her home by providing lovingly prepared food. Go to recipes for wonderful, traditional Cherokee meals.

Source: <http://www.cherokee-nc.com/index.php?page=107>

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## ***Fostering Foodways, Community, and a Sense of Place: An Interview with Enrique Salmón***

March 21, 2012 - Posted by Natasha Varner

In his new book, *Eating the Landscape: American Indian Stories of Food, Identity, and Resilience* (University of Arizona Press 2012), ethnobotanist Enrique Salmón artfully weaves personal narrative with stories of people maintaining and revitalizing traditional agricultural practices. Despite the cultural and geographic diversity of the region he explores, Salmón reveals common themes: the importance of participation in a reciprocal relationship with the land, the connection between each group's cultural identity and their ecosystems, and the indispensable correlation of land consciousness and food consciousness. Here, he talks about the ways in which traditional foodways can strengthen community, foster a sense of place, and perpetuate family stories.

**What inspired the phrase "eating the landscape" in the title of your book?**

The title came to me when I was deeply engaged in one of my many meditations over how to best translate an American Indian mental space regarding food into terms that might be understood by modern industrialized people. The land is a central component of American Indian worldview. It is constant and is the embodiment of our language, spirituality, identity, and history. The land, therefore, is a reflection of us. We are the land and it is we. It is also a living entity from which we emerged and is the living being that provides all our traditional foods. When we eat our foods we are not only eating our origins, but also our history, our identity, and everything that we hold dear.

**In the introduction to the book you talk about how your family and early life experiences shaped your interest in Indigenous foodways. Please share a bit about some of those early life experiences and how they drove you to do the work you do.**

The opening chapter of the book explains this well, but I would add that each time I prepare and eat one of those dishes from my younger days, every time I catch a whiff of a tamale or a pot of beans cooking on a stove my mind becomes flooded with a sea of delightful memories all related to my family and our recipes. I recall parties, celebrations, and all sorts of events that called for special foods. But I also recall many uneventful moments colored by simple foods such as a rolled up warm corn tortilla dripping with real butter. These are positive enduring memories and they are based in community and in a fondness for place. Both of these things, community and a sense a place are becoming increasingly absent from the lives of modern humans and lead, I believe, to a lack of empathy for each other and for all other living things. A big part of my work, I hope, will help people to peer into what is possible between humanity and the natural world, and perhaps alter their lives so that they might re-experience or newly experience some of that as well.

**You mention the Vandana Shiva dictum that eating is a political act and you add that eating is also a cultural act that reaffirms identity. Will you expand on both those thoughts and explain how the simple act of eating can carry so much cultural and political weight?**

We all choose to eat and to not eat certain foods. And each one of those choices is a reflection of the complexity of things that people believe in and how they are trying to carry on their lives. However, most of us do not have the time or do not bother to consider the processes that our foods have undergone before they arrive before us in a bowl or on a plate. It is important to think about who raised this food. Under what conditions did they grow this? Do the people who grew and harvested this food love what they do? Next, it is important to consider how the food was prepared. Whose recipe was followed? What additional ingredients went into this dish? Finally, and most importantly I believe, it is crucial for people to ask, is there a story that the food I am choosing to eat can tell me or is there a story that, by eating this food, I am perpetuating? It is at this moment when we as food consumers must decide if we will continue to perpetuate a story that commits additional harm to our natural world and to ourselves, or if we will embark on a story that not only nourishes us and our families, but also nourishes our landscapes.

**Would you talk more about the idea of food as story?**

Story is all that we are. All people are living various forms of a story that they tell themselves or are told to them by others. Either way, our daily choices impact our ongoing stories. *When family recipes are followed that is a way of continuing the story of the family and a cultural way of interacting with a landscape.* A recipe can embody everything that is important to a family and even a culture. Just recently a friend and her husband had come over for dinner. My wife and I prepared among many things, some guacamole. Our friend was overwhelmed by how good the guacamole was and asked for the recipe. I realized at that moment that I really never followed any recipes when I prepared dishes such as guacamole. What I normally do is retell myself stories from family events of the past. In those stories I single out how particular family members prepared their versions of the dish. In this process I am performing a sort of cultural and familial re-membering. This re-membering is a form of re-living my own, my family's, and my culture's legacy of story.

**There has been recent media coverage of an epidemic of starvation among the Raramuri, which seems to be an incredibly bitter irony for a culture so rich with knowledge of the land and food. What historical and contemporary circumstances have brought this about and is there hope for reclaiming the foodways that have sustained them for centuries?**

The Raramuri have been able to lead a resilient lifestyle on their landscape in the Sierra Madres of Chihuahua, Mexico for centuries. That resilience has been marked largely by their ability to absorb, learn from, and then adapt to the many shocks to their way of life. In the past, however, those shocks were temporally singular. There was the Spanish Entrada they were able to retreat from as a result of the rugged mountains and canyons of the Sierra Madre. Due to their isolation the Raramuri were able to withstand the disease episodes of the 17<sup>th</sup> and 18<sup>th</sup> centuries. They permitted only those European food plants that were adaptable to their agricultural system and ignored the ones that were not. In a similar fashion my people survived the Mexican revolution, increased colonization, the ejido system, and even modern tourism. However, recently there have been too many shocks arriving at once and they are proving to be insurmountable. Ongoing drought coupled with over-deforestation on the part of lumber companies is making it increasingly difficult to grow food. Then there is the additional threat of narco-traffickers who are forcing Raramuri off their agricultural areas and milpas that they have husbanded for centuries in order to make way for marijuana and opium growing. Under these conditions not even the most knowledgeable and experienced farmer can survive. If given the opportunity to return to their fields and milpas and to have time to understand the situation, I imagine the many Raramuri families would be able to survive. Unfortunately, this will not happen until the narco-traffickers and loggers have a reason to abandon the Sierra. And even then the damage to the land might be too much to overcome.

**Who are some of the people you've met or organizations you've encountered over the years that make you feel hopeful about the resurgence of traditional agricultural and culinary practices?**

Pretty much each individual and every organization that I mention in the book offers a story of hope. If they are given the opportunity to reach out and affect someone with their story that hope will multiply adding to the resurgence in traditional and decolonized foods that we are experiencing today. Of course, in my work I have had opportunities to come in contact with like-minded peoples in various parts of the world. I have met tribal people in Ethiopia working hard to hang onto and revitalize traditional foods such as teff. They do this in the face of economic hardship and government efforts to stifle their ancestral foodways. I am encouraged by the Maori educational program in New Zealand where a child can move from preschool all the way through a four year college degree all in their Maori language, customs, and food traditions. In northern California the Yurok and Kurok are embarking on a revitalization of their ancestral fishing practices as a result of changing water regulations that finally recognize the importance of free flowing rivers and salmon runs. I am encouraged by The Christensen Fund's grant making practices that assume that what is good for Indigenous people who are maintaining centuries-old land management practices is good for the land. The Indigenous Peoples Restoration Network (IPRN) is working in conjunction with the Society for Ecological Restoration to maintain a dialogue between Indigenous and western scientific ecologists. I could continue, as there are myriad projects, organizations, community gardens, CSAs, co-ops, and individual food providers who have decided that chemicals and GMOS are not the answer and that we need to rediscover sustainable agricultural methods. These people are only a small part of a larger collection of activists, dreamers, and change makers who together are rebelling against corporate foodways and are offering new ways to eat.

Enrique Salmón is an assistant professor in California State University East Bay's Department of Ethnic Studies. His book, *Eating the Landscape: American Indian Stories of Food, Identity, and Resilience*, is now available from the University of Arizona Press.

Mihesuah, Devon Abbott. *Recovering  
Our Ancestors' Gardens:  
Indigenous Recipes and Guide  
to Diet and Fitness.* Lincoln, NE:  
University of Nebraska Press,  
2005. Print.

Pages 15-37; 124-125;  
134-137; 152-155.

## The State of Indigenous Health

In a recent commentary, physicians Neal D. Barnard and Derek M. Brown stated that the federal government advocates a diet that is unlike the traditional diets of Native peoples: "For Native Americans, current federal dietary guidelines promoting a meaty, cheesy diet amounted to, perhaps inadvertently, the nutritional equivalent of smallpox-infected blankets."<sup>1</sup> Indeed many Natives devour the absolute worst in food choices offered by the American food industry because most Native consumers are not educated about how those foods are processed and with what ingredients. They fall prey to misleading ads that tell us these fried, salty, fatty, and sugary foods are good for us. In reality, problems such as heart disease, stroke, diabetes, and cancers that develop from ingesting dangerous foods can be compared to death from smallpox. The signs and symptoms may differ, but the ultimate outcome is the same.

An example of how out of step nutrition "experts" are with the needs of Natives is a study conducted in 1977 in *Gastroenterology* that revealed that 100% of Natives tested were lactose intolerant, which is a food intolerance to the sugar lactose that is found in milk products. Those suffering from lactose intolerance are deficient in the enzyme lactase. Food not digested by lactase in the stomach enters the colon where it produces uncomfortable bloating, cramping, and diarrhea. Almost 50 million Americans have lactose intolerance and it is estimated that 75% of American Indian adults have lactose intolerance. Yet the Dietary Guidelines advises that everyone eat two or three servings of dairy foods per day, despite the fact that other foods, such as green leafy vegetables and beans, also supply calcium.<sup>2</sup>

Not everyone can tolerate foods containing wheat or gluten, either. A condition known as celiac disease disallows the consumption of foods with wheat or gluten, in addition to barley, rye, and oats. Those who

eat these foods can suffer from bloating, diarrhea, headaches, and hives. If these problems are ignored, celiac disease can lead to dehydration, anemia, muscle spasms, bleeding, nerve damage, infertility, loss of appetite, fatigue, and impotence (see <http://www.celiac.com/> for detailed information). This is a tough problem for those who like foods containing gluten and wheat: bread, pasta, cookies, muffins, scones, pizza, pies, cobblers, ready-to-toast pastry, hamburger buns, and, well, this is a long list. But these ingredients also show up in seemingly unlikely foods such as soups, rice products, fudge syrup, chocolate milk mixes, laxatives, hydrolyzed vegetable protein, grain alcohol, vanilla, and candy.

Lactose intolerance and celiac disease might seem minor problems compared to other ailments that Natives must contend with. Using the Oklahoma Choctaws as an example, consider that almost every issue of the Choctaw Nation's newspaper (*BISHNIUK*) for the last ten years has had at least one, but usually two or three, articles about diabetes, obesity, eating right (usually a *wic*—Women, Infants, and Children—column that features recipes and nutrition information), and exercise. In response to this epidemic, the Choctaw Nation participates in the “Walk This Weigh” campaign and an annual Walk-Run for Diabetes Awareness, sponsored by the Choctaw Nation Health Care Center. It also sponsors a Youth Wellness Camp and funds a Diabetes Treatment Center that tests and educates Choctaws. In addition, a group of workers with the Diabetes Multi-Resource Task Force travels across the Choctaw Nation to test fifth graders for diabetes and to give presentations about healthy lifestyles.

There is good reason for publishing this information and opening more centers. At the 2002 Labor Day Festival in Tushkahoma, Oklahoma, for example, a test measuring fat content revealed that over half of 115 people participating were at risk for developing diabetes; of 344 who took a blood test, 35 people had blood glucose levels of 140 mg/dl. Of 64 diabetics tested for blood glucose level, 22 had levels above 200 mg/dl. Furthermore, the Native American Diabetes Initiative asserts that in some tribes, Type II diabetes has stricken half the tribal members.<sup>3</sup>

Diabetes is one of the most common ailments afflicting Native people. It is estimated that 17 million Americans, or 6.2% of the U.S. population, has diabetes, compared to 30% of American Indians, who are 25% more likely to develop diabetes than non-Natives. In February 2002,

the Choctaw Nation reported that in 2001, 831 new cases of diabetes were diagnosed, bringing the total number of Choctaws with diabetes in the service area to 3,800.<sup>4</sup> The number may be much higher, however, because many people with diabetes have not been diagnosed.

Diabetes mellitus occurs when the pancreas stops producing the hormone insulin or does not create enough for the body to function properly. Without insulin, the liver cannot absorb enough insulin to store and the cells cannot absorb enough to use for energy. The result is excessive glucose in the bloodstream and in the urine. There are two types of diabetes mellitus: Type I represents 5 to 10% of all cases of diabetes and occurs when the pancreas produces little or no insulin. The body must obtain energy from fat because it has no glucose to draw upon. As the fat is utilized and burned, the by-product ketone is produced, which leads to a dangerous condition called ketoacidosis that causes dehydration and high levels of blood sugar. Those who suffer from Type I diabetes usually depend upon daily insulin injections.

Type II usually affects those over forty and is often caused by overeating or an imbalanced diet, although genetics is also a factor. The insulin-producing cells in the pancreas produce insulin, but not enough for normal bodily functions, or there is inadequate tissue sensitivity to the insulin that is produced. Type II affects 90 to 95% of those with diabetes and can often be successfully treated by diet and exercise, although oral antidiabetic medications are sometimes required as well.

Symptoms of diabetes include frequent thirst, excessive hunger, skin ulcers, pain when walking, an uncontrollable urge to urinate, and fatigue, especially after a meal because the body is awash with sugar that it cannot process. A diabetic will also have numb or tingling feet and hands, cuts that heal slowly, blurry vision from too much sugar in the bloodstream that stretches the lenses, headaches, higher than normal blood pressure, breath that smells strongly because of the liver breaking down fat for fuel, and a leathery band of skin around the neck.

Those who suffer from diabetes have a higher chance of developing atherosclerosis and high blood pressure, which can lead to a stroke or heart attack. There also is a chance of developing retinopathy, an eye disease that can lead to blindness. Nerve damage can also result from

diabetes, which can cause blindness and sometimes the necessity for extremity amputations.

Diabetes does not just attack the elderly. Although an individual may think he or she is eating right and has no family history of diabetes, that person may be surprised to find they are diabetic because of the types and amounts of foods they ingest. Even if an individual is lean in comparison to most other people, that person may have a dangerous body-fat composition. Some apparently skinny people may carry too much fat in comparison to their muscle content.

Very thin people can create high glucose levels if they eat incorrectly. Many believe that consuming sports and fruit drinks and a fat-free diet can make them immune, but even strong athletes with little body fat and high metabolisms often take in a tremendous amount of calories in their diets. All that sugar and carbohydrate can be turned into more glucose than their bodies can handle. A test can tell you quickly: A blood sugar level greater than 125 is considered diabetic. Abnormal blood-fat levels can put a person at risk, so it is crucial to have a lipid screening. A person is in potential trouble if their triglyceride level is high and their HDL cholesterol level is low.

A major contributing factor to developing diabetes is obesity. Gaining eleven to eighteen pounds doubles the risk of developing Type II diabetes. Just gaining ten pounds increases one's risk of heart disease and gaining twenty pounds doubles a woman's chances of developing breast cancer. Although genetic background might account for a predisposition to obesity, the major culprits in determining its expression in an individual are overeating and underexercising. Many Natives pay little attention to what they put in their mouths and take advantage of the American culture that presents food in extra-large sizes, in cheese-filled crusts, in easy-to-microwave containers, in lattes with heavy cream, and in fast-food shops. The serving sizes of French fries have increased, as have the sizes of movie popcorn bags and buckets. Restaurant portions and bottles of soft drinks are often large enough for three people and are relatively cheap, mainly because they are made with trans fats and high-fructose corn syrup. *Outside* magazine recently cited a study by psychologist Paul Rozin, who found that despite the French propensity for fatty foods, only 7.4% of the French population is obese compared

to 22.3% of the American population. He found that a regular serving of fries is 72% larger in the United States than in France, a pizza is 32% larger, an average chocolate bar is 41% larger, an average cola is 52% larger, an average hot dog is 52% larger, and an average serving of ice cream is 24% larger.<sup>5</sup>

Corn is produced on such a large scale that it can be sold cheaply as sweetener, for high-fat and high-calorie snacks such as corn chips and as feed to create fatter pigs and cattle. Unless one is a hunter who eschews deer blinds, stands, and ATVs and walks to stalk game, or is skilled with a blow gun and can track squirrels, rabbits, and birds for hours, or is a devout gardener who eats only what is grown in the home garden, we rarely have to use many calories to acquire our meals. Americans have adopted a sedentary lifestyle and watch hours of television and play videogames every day.

According to the National Center for Chronic Disease Prevention and Health Promotion, in 1999, an estimated 61% of U.S. adults were either overweight or obese, defined as having a body mass index (BMI) of 25 or more. Just one year later, in 2000, 38.8 million American adults were obese, defined as having a body mass index score of at least 30. The Behavioral Risk Factor Surveillance System shows that, in 2002, half the adult population in fifty-one states was overweight or obese, up from twelve states in 1992. There are almost twice as many overweight children and almost three times as many overweight adolescents today as there were in 1980. The number of those who are "severely obese" (with a BMI of 40 or more) is growing twice as fast as the number who are "obese." Obesity is indeed an epidemic and, sadly, obese children usually grow into obese adolescents and 80% of obese teenagers will develop into obese adults.<sup>6</sup>

Although guidelines have been established for determining obesity from the body mass index, this can still be somewhat confusing, however, because some people are quite muscular, and since muscle weighs more than fat, they might weigh more than the height-weight charts suggest that are geared toward a "normal" population. Calculate your BMI and read more about the difference between overweight and obesity at <http://www.halls.md/body-mass-index/bmi.htm> and the Centers for Disease Control's *Nutrition and Physical Activity, Obesity and Over-*



weight: *Body Mass Index (BMI)* and <http://www.obesity.org/subs/about.shtml>.

Men can calculate their BMI (body mass index) by dividing their weight in pounds by height in inches, squared. Then multiply by 705. If your BMI is over 25, you may be overweight, and a score over 30 indicates that you are obese. There is an obvious problem with this, just as there is a problem with muscular women who apply to be airline attendants but who are considered "overweight": muscle weighs more than fat. Many fit people would be considered overweight or obese.

Men can check their body fat content by measuring their waist at the belly button (although the underwater method is the most accurate). If it is more than forty inches, then you are carrying too much fat. A woman is carrying too much fat if her waist is over thirty-five inches. You can check the fat on your thigh by sitting in a chair with your feet on the floor. Pinch the skin on the top of a thigh and if the width of that pinch is more than an inch, you have too much fat.

Obesity is now so pervasive that consumers can buy items to fit their bulk: larger caskets, chairs, stronger beds, washcloths on "sticks," and plus-size clothes. A notable example of how Natives are affected by this deterioration of health is found in the 1994 journal *Diabetes Care*, which reveals that Pimas in Mexico who ate more of a traditional diet were less fat and suffered less from diabetes than Pimas living in Arizona who ate a Westernized diet of fatter foods.<sup>7</sup>

Physical problems associated with obesity are numerous. Overweight children and adults are prime candidates for cardiovascular disease, diabetes, high cholesterol levels, hypertension, orthopedic disorders, pancreatic disorders, respiratory diseases, and various cancers. Obesity also causes a variety of other problems, such as low self-esteem and lack of confidence, and it attracts stereotyping.

Alcoholism is another by-product of colonization. In fact, alcohol abuse is the most widespread form of drug abuse in the country. A disease, alcoholism has touched most Natives, either because they personally drink too much or they have family or friends who do. Alcohol can cause cancer, can damage internal organs, can cause problems with memory, concentration, judgment and coordination, can lead to bleeding gastritis, impotence in men, and can damage fetuses and, therefore,

the baby—a condition referred to as Fetal Alcohol Syndrome. If alcohol is consumed in cold weather, hypothermia can result from the dilation of the blood vessels, allowing heat to escape the body. Overconsumption of alcohol can lead to liver failure, which means it can no longer process nutrients, and the heart can become weak and damaged. Alcohol inhibits the absorption of medication and adds a significant amount to the drinker's daily caloric intake, and it is not just the alcohol itself that can destroy the body; alcohol impairs judgment, which has resulted in thousands of vehicle (car, boat, and motorcycle) accidents and homicides.

Tobacco, while not a food, is often associated with food. Some people smoke continually, some only sporadically, maybe to curb their appetites, or they smoke after a meal. Smokers have difficulty breathing and may find walking—and certainly running—difficult. Tobacco is indigenous to the New World, but Indigenous people did not smoke themselves to death. Depending on the tribe, tobacco was (and is) associated with religion and ceremonies. "Indian Tobacco," that tobacco without any additives (carcinogenic substances, tar, and nicotine found in commercial cigarettes), is the common name for the plant *Lobelia inflata* (although it is also known as asthma weed, gagroot, pulseweed, emetic herb, frengiotu, lobelia, wild tobacco, and vomitroot). Lobelia is used for medicinal purposes, as an antispasmodic herb and as a respiratory stimulant for conditions such as bronchial asthma and chronic bronchitis. The dried herb and the seed also can be used as an antiasthmatic, diaphoretic, diuretic, emetic, expectorant, and nerve and can be used to treat asthma, bronchitis, whooping cough, and pleurisy. The plant can be used externally in treating rheumatism, boils, and ulcers. Excessive use, however, can cause nausea, vomiting, and respiratory failure.<sup>8</sup>

The use of commercial tobacco today is a huge threat to Natives. Not only is it addictive, tobacco smoke also contains almost four thousand chemicals, and for every cigarette smoked, that smoker can expect to lose approximately 5.5 minutes of life expectancy. Smoking cigarettes and cigars is the major cause of lung cancer. It reduces fertility, severely damages the fetus, and causes cancers of the pancreas, bladder, mouth, esophagus, and cervix. Even if you do not smoke, but someone in your

household does, you are still vulnerable to these problems because of second-hand smoke. Dipping snuff can cause a variety of cancers as well.

All the ailments discussed here should provide enough evidence to convince most people who eat poorly to consider a traditional diet, or at least to incorporate parts of a traditional lifestyle into their current unhealthy one. On a positive note, many people are acutely aware that numerous health problems arise from a poor diet and lazy lifestyle. Most people who are overweight, or those who suffer physical ailments because of poor lifestyle habits, are aware that their diets have in large part contributed to their situations. *Parade Magazine* tells us that in 1993, one American out of five was on a diet to lose weight. Ten years later, that has risen to one in three. *U.S. News and World Report* states that at any time, 29% of men and 44% of women are dieting.<sup>9</sup>

But instead of getting thinner and fitter, we are becoming fatter and sicker.

# 2

## Traditional Diets

Think of Thanksgiving dinner: turkey; corn-bread stuffing; salad of red, green, and yellow vegetables; green beans; squash; tomatoes; corn bread; cranberry sauce; baked beans; maple syrup; mashed potatoes; appetizers of smoked salmon and peanuts; and desserts of peanut brittle, pecan, sweet potato, and pumpkin pie.

What all these foods have in common is that they are indigenous to the Western Hemisphere. The "Americas," as we now call them, has provided the world with at least half the plant foods we know today. This "New World" was home to a plethora of fruits and vegetables, including those mentioned above, and tomatoes, an array of chili peppers that span the heat index, beans of many kinds, cherries, acorns, piñon nuts, black walnuts, hickory nuts, vanilla, avocado, yellow and red bell peppers, manioc, raspberries, strawberries, blueberries, cactus, guava, papaya, passion fruit, pineapples, artichoke, and cacao (those golden-green pods that, mixed with sugar and other ingredients, give us chocolate). Corn played the major dietary role for many of the New World tribes. By 1492, Indigenous peoples were cultivating at least two hundred types of maize, some of which Columbus took with him back to Europe. From there, maize was taken to the Mediterranean; the Venetians took it to the Near East, then to other places around the world.

In South America, a variety of foods unfamiliar to most of us supplied Natives (most notably the Peruvians) with adequate nutrients: grains with twice the protein content of white rice or corn; potatoes with a naturally buttery taste; tubers that were pink, yellow, and red striped; purple, white, and yellow roots with a taste like celery, cabbage, and chestnuts. Incredibly, Natives of the Andes cultivated almost three thousand types of potatoes. The conquistadores, in their religious and economic zeal, destroyed those crops in favor of more European traditional crops of wheat and barley. Fortunately, there is a resurgence of some of these

foods in the produce aisle: cherimoya, tamarillo, quinoa, and pepino dulce.<sup>1</sup>

Some scholars argue that the basis of the Native diet was "guts and grease." This is debatable, considering the sheer variety of vegetable matter available to some groups. While some tribes may have depended on animals for the vast majority of their diet (such as Arctic and Plains tribes), not all of them did.<sup>2</sup> Still, although during times of difficult hunting tribes would depend on vegetables, fruit, nuts, and seeds, most Native people were not vegetarians. Depending on where they lived, Natives consumed alligators, bears, beavers, buffalo, caribou, deer, moose, ducks, elk, rabbits, a variety of fish (salmon, smelt, bass, trout, sturgeon, etc.), geese, insects, opossums, raccoons, squirrels, turtles, seals, shellfish, and whales, to name a few.

Tribes also included a variety of "wild plants" in their diets: arrowroot, bearberry, black birch, black mustard, bulrush, buttercup, cattail, chokeberry, chokecherry, coltsfoot, common plantain, dandelion, elderberry, evening primrose, great burdock, lamb's quarters, milkweed, mint, ostrich fern, purslane, stag sumac, stinging nettle, thistle, watercress, wild rose, wintergreen, wood sorrel, yellow clover, and yellow water lily. These plants were usually eaten raw, cooked, as a beverage, or mixed in soups and stews.

Natives used a number of herbs for medicines, many of which are the basis for modern medicines. Earache, for example, was treated by the Kickapoos with boiled and strained mesal beans poured into the ear; Sioux tribes used boiled white milkwort; and Winnebagoes used boiled yarrow. Fevers were treated by Choctaws with bayberry tea, while Delawares and Alabamas boiled and drank dogwood bark. Pomos boiled the inner root bark of the western willow; the Natchez used red willow; and Pimas, Mohegans, and Penobscots also used willow for fevers and chills. Onondagas drank pennyroyal tea, while Mescalero Apaches used another variety of pennyroyal by inhaling crushed twigs. Navajos used fendler bladderpod tea, saltbrush, and crushed snakeweed to treat insect bites and stings. Dakotas and Winnebagoes placed crushed bulbs of garlic and onions on wounds.<sup>3</sup>

The addition of these foods and herbs to the world's diets and medicine chests fantastically altered the human population. Ironically, the

Indigenous population of the Western Hemisphere plummeted dramatically while the population of the world doubled between 1650 and 1850; then doubled again in the next one hundred years. In the area we know as the United States, from 1492 to 1750, the non-Native population grew to 2 million; by 1900, that had grown to 83 million. In 1492 Europe, the population was approximately 70 to 88 million; then by 1900 had exploded to 435 million. Much of this can be attributed to food, most notably because of corn that is now grown around the world; peanuts that became popular in Africa and China; sweet potatoes that were grown in Africa, Southeast Asia, and China; and manioc, that tropical shrub root that grows in harsh environments, especially in Africa. Of course, vaccinations, better health care, and sanitary conditions also contributed to population increase. The Indigenous peoples were not so fortunate. In the Western Hemisphere, their numbers decreased from 72 million in 1492 to 4.5 million in 1700. In the area we know as the United States, their numbers dropped from 5 million to 600,000 in 1800 to less than 125,000 in 1900 from disease, warfare, removal, and relocation, destruction of life ways, fertility decline, and other factors.<sup>4</sup>

#### Religious Significance of Food

Many tribes' cosmology places food in important positions. Numerous tribes in the Northeast and Southeast still observe the Green Corn Ceremony each year as the corn matures. The ceremony is a combination of thanksgiving and renewal because of the promise of corn for the year and seeds to plant the following spring. For Navajos, the word *mother*, or Changing Woman, represents the three major elements of Navajo subsistence: corn, earth, and sheep. This self-renewing entity symbolizes the growth, death, and rebirth of corn. Changing Woman is young in spring, is harvested in the summer, grows old and fades in the fall, dies in the winter, and then sprouts (is reborn) the next season.

Other tribes have similar stories about food. Old Salt Woman among the Cochitis provided the salt for Great Salt Lake and the people who use salt for their food. Cherokee women believe they came from Corn Mother or Selu. For the Tewa Pueblos, the first mothers were known as Blue Corn Woman and White Corn Maiden. Cheyennes believe their food is supplied by a female who takes the shape of an elder. Penobscots

say First Mother renews herself each year with corn for her people. White Buffalo Woman of the Sioux ensured that her people would have bison to eat and to use for clothing and tools, and the Sioux honored the bison by using every part of its body for food, shelter, and tools.

Indeed, among most tribes there was much ceremony associated with food production, cultivation, and distribution. Food was and still is a focal point of a society's survival, permeating daily activities, song, and celebration, as reflected in this Hopi song:

Oh, for a heart as pure as pollen on corn blossoms,  
 And for a life as sweet as honey gathered from the flowers,  
 May I do good, as Corn has done good for my people  
 Through all the days that were.  
 Until my task is done and evening falls,  
 Oh, Mighty Spirit, hear my grinding song.<sup>5</sup>

#### Choctaws and a Cornucopia of Food

A Story: A long time ago there was a small Chahta boy named Achafa Chipota who, despite his stature, ran faster and had better aim with his bow than any other child. One day, Achafa Chipota accompanied his father and group of hunters on a trip to find game. He quickly proved himself to be tough and ready to work hard. He killed several rabbits and squirrels for the hunters to eat. One morning as he was hunting small game, he came across a large hog—a *shukhusi*—and he managed to kill her by shooting her through the eye with his small arrow. He then discovered that *shukhusi* had a family of small piglets, whom he took with him on the rest of the hunt and then back to his home.

He cared for the piglets as they grew into hogs. Then they reproduced. One time a Mjko (district leader) came to his house for a meeting and Achafa Chipota's parents did not have enough food. Achafa Chipota surprised them by killing one of his hogs to cook along with the acorns. Normally, his mother would have served bear meat. The Mjko was delighted with what he called the sweet meat. The Mjko then renamed Achafa Chipota *Pelichi Shukhusi*—the tamer of pigs—and he was given the task of instructing Choctaw families how to raise hogs.

Another Story: One time shortly after Achafa Chipota became Pelichi Shukhusi, two hunters became lost in the woods. They were cold and hungry with only one little rabbit to cook for dinner. As they watched the rabbit cook, they heard a woman crying. They rushed through the woods to find a young woman dressed in white, sobbing. They led her back to their fire and asked who she was and why she was out in the cold woods alone. She explained that she was the daughter of Hashtali (Sun Father) and Moon Mother, and while she was on an errand for them, she ran out of food and became too weak to continue. They took her to their camp and gave her their small rabbit, but she took only one bite and then told them they would be rewarded for their kindness. She told them to return the next morning to where they found her and then she vanished. The surprised hunters then ate the remainder of the rabbit and waited through the night to return to where they found her.

Upon returning to the site, the two hunters found in the snow a green plant over six feet tall with a golden tassel at the top. The leaves were long and within were long fruits. The hunters took one of the fruits and peeled back the green covering to see what looked like small seeds set in neat rows. They took a bite and realized that the strange food would taste better cooked. They took the remaining five ears home and planted the kernels in the spring. In the fall, they had a crop of the new food they called *tanchi*. Shortly afterwards, Chahta families planted *tanchi* every spring, harvested it in the fall, and learned to dry the kernels and to cook *tanchi* in a variety of ways. Chahtas liked *tanchi* so much that *tanchi* and pork replaced their previous favorite dish of bear meat and acorns.

The story about *shukhusi* was created after contact with Europeans because pigs were only brought to the Southeast by Hernando De Soto when he landed at the Atlantic Coast of Florida in 1539. But as with Apache groups, who have stories that say horses were always a part of those cultures, and Navajos, who have similar stories about sheep, Chahtas have stories that imply pigs and hogs were always with them. These stories tell of how quickly these animals and food sources became important to the tribes.

Combining Choctaw stories with those of non-Native observers, we find that, while in Mississippi, the tribe raised or had access to a cornu-



copias of food. Chahtas cultivated or foraged for *tanchi* (corn/maize),<sup>6</sup> *isito* (squash), *tobi* (beans), *shukshi* (watermelon), *nusi* (acorns; acorns are a food used by many tribes in bread and stews, although they must go through a difficult processing so they will not taste bitter or give the eater abdominal distress), *tobe hollo* (peas), *shachuma* or *hatofalaha* (onions), and *ahe* (potatoes and sweet potatoes.) There were also *isht ati-aka* (fruits), such as *takkonlushi* (plums), *hashi* (sunflowers), crabapple, *ukof* (persimmons; often mixed with *wak nipi*—beef—or *isi nipi*—deer meat—in a stew), *paki lusa* (large black grapes), *itaikichi ani* (cherries), *bihi* (mulberries); and *ani* (nuts), such as *uksak* (hickory), *fala* (pecans), and *uksak hahe* (walnuts; John Swanton states that walnuts were not used much for food, but considering their flavor, this is a surprising comment).<sup>7</sup> Bernard Romans, a surveyor and mapmaker who traveled through Chahta country in the late 1770s, states they grew *tohe* (cabbage), *hatofalaha* (leeks), and garlic, but claims that they only grew these crops for trade, along with *okfochush kanihmi* (ducks) and *shukhusi* (hogs). Considering that Choctaw stories tell us they did indeed use hogs, it stands to reason that the people also ate the crops they cultivated.

Chahtas also ate *akaka chaha* (turkeys) and *nita* (bears). Gideon Linceum (1793–1874), a nineteenth-century physician and naturalist, wrote his observations and information gleaned from Chahta informers from 1823 to 1825. He writes in his *Linceum Manuscript* that Chahtas who lived in Louisiana smoked out hibernating *nita lusa* (black bears) from hollow trees and caves and shot or speared them. They boiled the *nita nia* (bear fat) and *nita nipi* (bear flesh) and then stored it in deer bladders or plugged deer heads. The bear oil could be used for cooking, curing, or rubbing on rheumatic parts of the body. They also fished (he mentions the *nakisitalali*—catfish that were broiled) using bone and later metal hooks and gathered *oka fulush* (mussels). He reports that Chahtas ate *hachunchuba* (alligators), *yannash* (buffalo; far west of the Mississippi River), *chukfi haksobish falaia* (long-eared rabbit, perhaps the jackrabbit), *shuntulo* (larks), *kofi* (quail), *hachitaki* (this word, properly spelled “hachotakni,” refers to a loggerhead turtle but Linceum calls them hard-shelled turtles), and *habwa* (soft-shelled turtles).<sup>8</sup> Other tribes in the Southeast, including Cherokees, Chickasaws, Muscogees,

and Seminoles also had access to many of these plants and animals and they prepared them in similar ways.

Traditionally, Chahtas followed a thirteen-month calendar that reflected how they produced, gathered and cultivated food:

*Hvsh Hoponi* (Month of Cooking) was when the gardens had to be harvested and the food stored in some way, either dried or cooked. Many foods were made into “breads” that included acorns, beans, berries, nuts, onions, peas, persimmons, squash, and sweet potatoes. *Banaha*, for example, was and still is made by mixing boiling water and cornmeal, and sometimes beans, into a firm dough. This dough would be shaped into small rolls, then placed in corn shucks, tied with strips of shuck, then cooked under hot ashes. For a different flavor, hickory or chestnut oil might be added to the cornmeal. This could be stored for months and reheated.

Squash, corn, and beans are also known as the “Three Sisters” because these three vegetables often are grown together. Climbing or pole beans wrap upward around the corn stalks, while the large squash leaves help to keep competitive plants out and shade the ground, and therefore provide moisture and protection for the corn roots. For many tribes there is much spiritual significance associated with corn. Hopis, Navajos, Cherokees, Iroquois, and Apaches, for example, have creation stories that focus on corn and numerous tribes knew the convenience and practicality of cultivating the three plants together. A properly maintained garden of Three Sisters can help ward off nighttime visitors such as raccoons, deer, and rabbits because of the densely grown vegetation (although I have found that prairie dogs and moles are apparently undeterred even by fencing that extends two feet under the ground), and it provides a shelter for birds. I have discovered that sparrows, yellow finches, woodpeckers, Steller’s and piñon jays, and nuthatches especially enjoy the damp shade from the Flagstaff sun when the soaker hose is turned on.

Corn can be made into a variety of dishes. *Tamifula*, for example, is made several ways, generally with finely ground and shifted corn (that has been previously soaked to loosen the hulls), water, and wood-ash lye that is garnered by pouring cold water over clean wood ashes;

the water drips into a trough and is collected. The high alkaline lye from the ashes contributes to the nutritional quality of the dish. The mixture is boiled from a few hours to all day. Variations include adding beans or cracked hickory nuts. *Tash pishofa* (also seen as *pashofa*, *tash lubona* or *tash hoshponi*) is unground, boiled corn. *Tan hlabo* can be made from green corn. The kernels are cut from the ear and boiled with lye and any kind of meat until the meat falls off the bone. *Walakshi* (also seen as *walusha*) are dumplings made from cornmeal, grape juice, and/or peaches and mixed with boiling water. Hickory nuts were harvested in the summer and sometimes the oil was used to flavor dishes containing corn.

Chahtas used corn in a variety of other ways: roasted on the cob, ground into flour, and crushed into mush to mix with fruits and meats. One way of preparing *tanchi* was to dry out the kernels with hickory smoke to keep out insects. In winter the cracked corn could be cooked with meat. Some Chahtas carried a bag of cracked corn with them when they traveled, presumably needing strong teeth to eat it (think of Corn Nuts), or they might carry finely ground corn to mix with water in a hurry. It was observed by a Frenchman in the late eighteenth century that Chahtas would serve cracked corn softened with milk and honey as a cold meal. Husks and stalks were burned for fuel, while dolls, masks, and mats and were made from the husks. Surplus corn was stored by hanging the husks in storage pits. Swanton cites a Chahta source, Simpson Tubbee, as saying that "Indian flint" or "flour corn" contained both white and blue kernels and was used for roasting. Some corn was used for popping.

Potatoes were preserved by cutting them into thin slices and drying them over a hickory fire. The result would have been similar to today's potato chip (without the frying, however). Those who preserved potatoes in this manner were called the *Ahi apet okla* ("potato-eating people").

*Hvsh Kyf* (Month of Sassafras) corresponds to our current December and early January in which the tree sap is now mainly in the roots. Chahtas dug buckeye, sassafras, snakeroot, and witch hazel that were used for medicines, while dyes were made from indigo, native to the

Western Hemisphere, in addition to maple, pokeroot, puccoon, and walnut.

*Hvsh Chvyskono* (Month of Little Famine) is our January and *Hvsh Chvfo Chito* (Month of Big Famine) February. As one might expect, by this time the food supplies had dwindled and game animals were difficult to find.

*Hvsh Mathi* or *Mahili* (Month of the Winds) saw warmer winds from the southeast, and patches of green began to show. Poke salet, sheepshank, sour dock, lambs quarters, and wild onions were available for harvesting.

*Hvsh Bissa* (Month of the Blackberry), *Hvsh Bihi* (Month of the Mulberry), and *Hvsh Takkon* (Month of the Peach) tell us what fruits were picked during these times.

*Hvsh Watullak* or *Hvsh Watonlak* (Month of the Crane) is named after a white crane that lived in Mississippi; the squab (baby bird) was a favorite food, especially when mixed into a stew with corn and greens. Late July and early August was *Hvsh Luak Mosholi* (Month of the Fires All Out) when corn reached its roasting stage and the tribe danced the Green Corn Dance. The Green Corn Festival lasted several weeks and was a time for thanks. The tribe had become so dependent on *tanchi* that the Chahtas performed the Green Corn Dance every year when *tanchi* reached the roasting stage. The Chahtas continued to perform the Green Corn Dance well after they had been introduced to Christianity, and like many other Natives today, some Chahtas continue to dance every summer.

*Hvsh Tek Ihvshi* (Month of the Woman) was when young women were courted (although they were presumably courted during other times, as well). This time was after the Green Corn Dance, the weather was good, and heavy work for preparing for the year was not yet required.

*Hvsh Koinchush* (Month of the Wildcat) and *Hvsh Koichito* (Month of the Panther) are named after two large felines that were more populous than they are now. At this time, the mother cats were easier to kill because their kittens had started to wander more and the mother



was with them. Their meat was dried into jerky and reportedly lasted through the winter.

#### Foods of the Western Hemisphere Peoples

Other tribes had diets that were different in content from the Choctaws, but they were just as varied. Plains tribes (Arikaras, Assiniboines, Blackfeet, Cheyennes, Comanches, Crees, Crows, Dakotas, Gros Ventres, Hidatsas, Ioways, Kiowas, Lakotas, Mandans, Missourias, Nakotas, Ojibwas, Omahas, Osages, Otoes, Pawnees, Poncas, Quapaws, Tonkawas, and Wichitas) consumed plants such as beans (some taken from mice nests), buffalo berries, Camas bulbs, chokecherries, currants, hackberries, plums, and turnips, and animals such as antelopes, beavers, buffalo, deer, ducks, elk, muskrats, prairie dogs, rabbits, raccoons, porcupines, prairie chickens, skunks, and wolf pups. Bison supplied a variety of dishes: boiled meat, tripe soup, perhaps thickened with brains, roasted intestines, and jerked or smoked meat. Raw kidneys, liver, and tongue sprinkled with gall or bile were eaten immediately after a kill. One version of Plains pemmican consisted of thin strips of meat, marrowfat, and chokecherries pounded together.

Richard Irving Dodge, a career officer who in the late 1870s wrote his decidedly one-sided ideas about Natives in *The Plains of North America* and *Their Inhabitants*, had some interesting observations about Plains wildlife. A hunter with no apparent concern for environmental management, Dodge tells about the plethora of animals he killed in a two-week period in 1872: badgers, various birds (cranes, doves, grouse, hawks, herons, meadowlarks, owls, robins, quail, turkeys), buffalo, deer, ducks (teal, mallard, shovel-bill, widgeon, "butter-ducks," sheldrakes), elk, raccoons, and rattlesnakes. He also encountered bears (blacks and grizzlies), cougars, pumas, and panthers.<sup>9</sup>

Depending on where they lived, Natives of what we now call Texas had numerous choices of plants, animals, and insects. Acorns, currants, grapes, juniper berries, mulberries, pecans, persimmons, and plums grew in many locales. Atakapans and Karankawas along the coast ate bears, deer, alligators, clams, ducks, oysters, and turtles, extensively. Caddos in the lush eastern area grew beans, pumpkins, squash, and

sunflowers, in addition to hunting bears, deer, waterfowl, and occasionally buffalo. The Coahuiltecos of south Texas and northern Mexico ate agave, cactus bulbs, prickly pear cactus, mesquite beans, and anything else edible in hard times, including maggots. Jumanos along the Rio Grande in West Texas grew beans, corn, squash, and gathered mesquite beans, screw beans, and prickly pear. They consumed buffalo and cultivated crops after settling on the Brazos River, in addition to eating fish, clams, berries, pecans, and prickly pear cactus. The Wichita Confederacy tribes occupied north-central Texas and gardened corn, beans, and squash along the many waterways.

Tribes in the vast area of the Northeast had access to numerous plants and animals, depending on the environment. Abenakis had a comparatively short growing season and did not depend on crops like their neighbors to the south. They fished for fish such as eel, shad, salmon, sturgeon, and smelt; hunted bear, caribou, and deer and gathered nuts, berries, and potatoes. Anishinaabes cultivated small gardens of Three Sisters, fished, gathered wild rice, and collected maple sap to boil down into sugar. Mahicans depended on the same crops, in addition to gathering water lily roots, mushrooms, berries, maple sap, deer, turkeys, and fish. Menominees also planted crops but to a lesser extent; instead, they gathered wild rice, fished, and hunted bison and deer. The Kaniengehawas, Oneidas, Potawatomies, Senecas, and Onondagas grew corn, squash, and beans in addition to hunting and gathering. The Hurons in the Georgian Bay of Lake Huron gathered artichokes and berries and fished and hunted for bears, deer, and beaver, but they mainly depended on corn, a crop they cultivated in large amounts. Because of the very real chance of losing their crops each spring from frosts, Hurons planted enough for almost half-a-million bushels a year and stored most of it for times of famine. They also had access to brill, carp, goldfish, pike, sturgeon, and whitefish in Lake Huron, and numerous animals: bears, beaver, elk, foxes, hedgehogs, lynxes, martins, moose, mule and white-tailed deer, mink, otters, porcupines, sables, turkeys, weasels, and wood rats. Winnebagos consumed a wide variety of foods, as did the Passamaquoddys, who ate a bit of everything including cultivated crops, wild plants, game animals, fish, and marine mammals.

California tribes had a variety of foods available year round, depend-

ing on their environment. Along the coasts of California and north into Canada, the environment supplied a plethora of flora and fauna (both land and sea) and supported hundreds of thousands of people. Even those inland had a variety of foods to utilize. The Cahuillas who lived south of the San Bernardino Mountains ate antelope they boiled, roasted, or sun-dried, several types of acorns, cacti, deer, piñon nuts, rabbits, reptiles, screw beans, and fish, while the Chumash along the Pacific Coast also ate fish, shellfish, and marine animals. Hupas in the Hoopa Valley consumed a variety of fresh water animals such as eels, sturgeon, and trout in addition to deer, elk, berries, nuts, roots, and acorns. Costanoans of the San Francisco area speared fish, gathered shellfish, and ate beached whales in addition to gathering acorns and a variety of fruits, insects, and honey. They practiced controlled burning, which allowed for the more effective growth of plants, and expanded the grazing area for animals. Although Kuroks, in the middle area of the Klamath River, had access to hundreds of plants and animals, they had taboos against eating bats, blue jays, caterpillars, coyotes, dogs, eagles, foxes, frogs, gophers, grasshoppers, hawks, lizards, meadowlarks, moles, owls, ravens, snakes, vultures, wildcats, and wolves. Shastas on the California-Oregon border used venison almost daily and fished for eels, salmon, and trout and gathered acorns, berries, seeds, bulbs, and nuts.

Those living along the Northwest coast such as the Bella Bella, Bella Coola, Chinook, Coosans, Haida, Kwakwaka'wakw, Makah, Nootkans, Quileutes, Salish, Tillamook, Tingit, and Upper Umpqua were supported by a vast amount of foods from the ocean and the lush land. Salmon was a major source of food, along with other fish such as trout, halibut, and herring, followed by acorns, hundreds of different plants, marine mammals (whales, otters, seals), bears, beavers, lynx, deer, and small game such as rabbits and hares.

Plateau tribes such as the Cayuse, Coeur d'Alene, Colvilles, Kalispels, Klikitat, Kootenai, Lillooets, Modocs, Nez Perce, Okanagons, Sanpouls, Sinkiuse, Spokane, Thompson, Umatilla, and Yakimaate fished for salmon, trout, whitefish, and mollusks and made use of camas bulbs, wild water lily seeds (used for flour), berries, deer, elk, antelope, moose, bears, and rabbits. Colville and Sinkiuse males fished for four types of

salmon from May to October, while the women cleaned them. They normally acquired enough fish to dry and store for the winter.

The subarctic area that spans the continent provided tribes such as the Beavers, Carriers, Chilcotins, Chipewyans, Cree, Ingaliks, Kaskas, Kutchins, and Tanainas around Cook Island with salmon, catfish, trout, whitefish, beluga whales, seals, otters, bears, beavers, berries, camas bulbs, caribou, hares, moose, and roots. To the north, in the vast arctic region that stretches twelve thousand miles from the eastern Aleutian Islands to Greenland, Inuit peoples ate according to the environment: inland, mountain, or coastal. They consumed salmon, seals, caribou (and the partially digested greens in their stomachs), moose, squirrels, walrus, narwhals, shellfish, berries, wolverines, and foxes, polar bears, narwhal and beluga whales, cod and other Arctic fish, ptarmigans, owls, and guillemot eggs. Although they ate mainly meats, historically those meats and fish were not polluted, and they did not mix sugar and processed foods into their diets.

Food may have appeared to be less abundant in the Southwest than in other parts of the Americas, but to those who knew how and where to look, the sometimes hard environment supplied a variety of foods for the many tribes such as the Cocopahs, Navajos, Apaches — Chiricahuas, Jicarillas, Lipans, Mescaleros — Havasupais, Hualapais, Yaquis, and Pueblo mas, Queegans-Yumas, Tiguas, Tohono O'odhams, and tribes — Acomas, Cochitis, Hopis, Isletas, Jemez, Lagunas, Nambes, Picuris, Sandias, San Felipe, San Ildefonso, San Juans, Santa Clara, Taos, Tesuque, Zias, and Zunis.

Natives foraged for piñon nuts, cacti (saguaro, prickly pear, cholla), century plant, screw beans, mesquite beans, agaves or mescales, insects, acorns, berries, and seeds and hunted turkey, deer, rabbit, fish (saltwater varieties for those who lived by the Gulf of California) and antelope (some Apaches did not eat bears, turkeys, snakes, owls, coyotes or fish). More sedentary tribes irrigated and cultivated the land for corn, cotton, pumpkins, sunflowers, beans for themselves and to trade to other tribes for meats besides the game they hunted. Apaches, however, looked for food constantly, which put them on the move. The Apache tribes utilized an array of foods, ranging from game animals to fruits, nuts, cactus, and rabbits, and they sometimes cultivated small crops. Some used corn to

make *tiswin* or *tulutpai*, a weak alcoholic drink. Cultivation of crops in the arid Southwest is nothing recent. Even three thousand years ago, the Anasazi, the Hohokam, and Mogollon grew corn and squash, and evidence tells us that the Hohokam, at least, dug irrigation canals eight feet deep and thirty feet wide; some of the canals were twenty miles long.

Depending on where they lived, Great Basin tribes — Paiutes, Shoshones, Utes, and Washoes — consumed roots, bulbs, seeds, nuts (especially acorns and pinons), berries (chokecherries, service berries), grasses, cat-tails, ducks, rabbits, squirrels, antelope, beavers, deer, bison, elk, lizards, insects, grubs, and fish (salmon, sturgeon, perch, trout in the Snake and Columbia Rivers and tributaries), in addition to the larvae and pupae of brine shrimp.

Indigenous peoples in Mexico ate, and still use, the maguey slug or agave worm. Spaniards who landed on the shores of Cuba were introduced to cassava bread, a dish made with cassava (also known as manioc and tapioca) that contains cyanide and is poisonous until the roots are either boiled and mashed, or grated and mashed. Then the pulp was shaped and baked and could be dried for later use. Reportedly, the Spanish enjoyed this bread and the French were even more enthusiastic, often using cassava bread instead of wheat bread. Cassava, starchy and high in calories, is not particularly nutritious.<sup>10</sup>

Conquistadors reported their surprise at the neat and orderly town of Tenochtitlan and not least among their surprises was the food offered. Meals consisted of tortillas made from boiled dried maize that were then rolled into a paste and formed into a thin cake and cooked, then served with tomato or pepper sauce and beans. Tortillas could be used as a wrap for tomatoes, fish, or meat then rolled in a cornhusk and steamed. Another meal might consist of maize porridge and tamales, garnished with frogs, tadpoles, newts, white worms, or meat of iguanas, turkeys, or dogs.<sup>11</sup>

Incas in Peru had access to numerous foods from the water and land. The first explorers stated that they encountered animals such as bears, deer, ducks, foxes, guanacos, guinea pigs, and llamas, in addition to vegetables such as avocados, beans, chili peppers, maize, manioc, peanuts, potatoes, squashes and sweet potatoes. Like Choctaws, the Peruvians also grew and dried potatoes (creating *chuñu*) by leaving the harvest in the cold

air overnight then mashing out the moisture. This process was repeated for up to five days, until the potatoes had dried and were ready to be stored.<sup>12</sup>

Although tribes had hundreds of foods in their environments, they were not accessible at all times. The seasons, weather, drought, pestilence, and overhunting, intensive gathering, and overfishing all played a role in what was available. There were, of course, no grocery stores and people had to rely on themselves and each other for sustenance. As discussed in the next chapter, tribal members expended a tremendous amount of energy (calories) just to acquire enough energy and nutrients to survive.

## Elk Stew

*This is a family favorite. We take it to potlucks and parties and, every time, the pot is emptied almost immediately. Deer and moose can be substituted. Beef does not taste as good as venison.*

### INGREDIENTS:

- 1 pound elk meat (the "jerky" cut works best, although roast is fine), cut into small cubes or slices
- 1 chopped green bell pepper
- 1 chopped bunch little onions (discard green stems)
- \*1 clove garlic
- \*1 bunch celery with leaves
- 5 cups cooked pinto beans
- 1 cup cooked hominy (optional)
- 1. jalapeño (optional)

\*3 cans low-sodium chicken broth or water, although broth is more tasty

salt and pepper to taste

Sauté elk, bell pepper, onions, jalapeño, and spices with 3 tablespoons of vegetable oil. After meat is browned and vegetables are soft, place in a slow cooker with beans and chicken broth. Slow cook on high for 8 hours. Then switch to low-cook for at least 2 hours. We make the stew around 6:00 P.M. and cook it on high until around 2:00 A.M. (yes, you have to get up in the middle of the night; or, start earlier) then slow cook until lunch the next day.

## Eileen's Acorn Squash—Pumpkin Soup

By Mary Jo Tippeconnic Fox (Comanche)

*A recipe given to me by Eileen Luna Firebaugh (Choctaw-Cherokee)*

### INGREDIENTS:

- 2 acorn squash or 1 large pumpkin
  - 1 tablespoon oil
  - ½ cup minced onions
  - 1 red bell pepper, seeded and chopped
  - 2½ cups vegetable stock or water
  - ½ cups maple syrup or honey (optional) chopped pecans (optional)
- salt and pepper to taste

Contemporary version of recipe uses 1 cup orange juice, 1 teaspoon ginger, and ½ teaspoon cumin or 1 teaspoon allspice for sweetening.

Bake squash or pumpkin (about 45 minutes at 400 degrees). Scoop out the squash or pumpkin and mash well. Heat oil and sauté onion and bell pepper. Add stock and all remaining ingredients and bring to boil and simmer for 35 minutes. Sprinkle chopped pecans on top.

## Choctaw Stew

*Every Sunday in winter my dad would announce that he was making "Choctaw Stew." I never knew what the significance of this stew was other than the makings are very simple and Indigenous, but he said that as he grew up in McAlester and Muscogee, his mother also made it at least once a week. The base of the stew is rather boring to my taste, so the ingredients labeled "optional" are my additions.*



## Vegetable Sauté

*This is a quick and easy way to eat your vegetables. Take any combination of vegetables (or just one vegetable).*

### INGREDIENTS

- 2-3 yellow squash, sliced lengthways
- 2-3 zucchini, sliced lengthways
- 1-2 cups sliced mushrooms
- 3 large sliced tomatoes
- \*1 cup broccoli florets
- \*1 cup cauliflower

Cover a nonstick pan with vegetable spray or a few tablespoons of vegetable oil. Cover the pan with a layer of vegetables, sprinkle with a favored condiment such as pepper, garlic, oregano, and so on, then cook over medium heat and turn after 10 minutes. Turn to low, cover and simmer until vegetables are tender. These vegetables also work well in a small, electric grill. Spray the thin-sliced vegetables with cooking spray and sprinkle with spices before cooking.

## Sweet Taters

*My daughter loves sweet potatoes and this is the way she eats them. Although she insists on using a sprinkle of brown sugar, I refuse to argue with a kid who loves a food so full of vitamins A and C plus niacin and potassium.*

### INGREDIENTS

- 1 sweet potato
- 1 tablespoon brown sugar

Scrub the skin of the potato (no need to peel it) and poke a few holes in it with a fork. Wrap in foil and bake at 350 for 30 minutes, or microwave

(without foil) for 7-10 minutes or until soft. Cut open and sprinkle with brown sugar. I think the potato is sweet enough by itself.

## Boiled Okra Soldiers

**By Pamela Jean Owens (Cherokee)**

*Okra is indigenous to Africa. It is a good source of copper, niacin, phosphorus, potassium, protein, riboflavin, zinc, and a very good source of calcium, fiber, folate, magnesium, vitamins A, C, B<sub>6</sub>, and thiamin. It is low in saturated fat, sodium, and cholesterol. This dish is called "okra soldiers" because the children get to eat them with their fingers and line the caps up around the edge of the plate. The one with the most caps wins. Many adults like fried okra better, but this is much healthier and, besides that, slimy, boiled okra is fun to eat. You can think of each cap as what is left of a cavalry soldier who lost.*

### INGREDIENTS

- \*freshly picked tender okra

This okra recipe does need seasoning with butter, and usually salt and pepper. Aunt Jean would add a little sugar too. Adults like to put pepper sauce on it (that is, vinegar that you keep in a bottle with hot peppers soaking in it). Kids usually think that it is too sour. Okra tastes really good as the green part of a meal with black-eyed peas and corn bread as the main course and fruit of some kind for dessert. Fresh sliced tomatoes make a good salad, along with raw carrot sticks or raw slices of small, yellow crooked-neck squash.

Pick the okra as close to time to cook it as possible. Wear gloves and use scissors or a sharp knife; okra is prickly. Wash it well. Leave it whole and do not cut the tops off. Pick as much as you think everyone you are feeding will eat, but do not leave any large pods on the plants or they will just get tough and you will not get to eat them later. It is hard to

have too much of this anyway. If you buy it at the market, try to cook it right away. Refrigerate it in the meantime but do not wash it until you are about to cook it.

Cover the whole okra with water in a saucepan. Put a bit of salt in the water. Bring it to a boil and cook until done. You can use more water and leave the lid off, or use less water and put the lid on, over a lower fire. It will look slimy when it is ready. Do not worry about overcooking; it does not really change much if you keep cooking it after it is done. Drain off the water and serve with some butter on top. Do not throw the water away until you check with the old people. They may want it for dessert (see below).

## Mamaw Helton's Creamed Corn

As she told it to Pamela Jean Owens

### INGREDIENTS

Very fresh sweet corn on the cob, shucked

A little butter, salt, and pepper to taste is optional. Something to sweeten it can be added. However, if it is needed, then the corn probably is not fresh enough in the first place.

Tools needed: Skillet, very sharp knife, cutting surface, spoon (wooden is best)

Pick enough corn for the crowd you are having and the time you have to prepare it. It is not possible to have too much. Shuck and wash, removing as many threads as you possibly can. They get stuck in the elders' teeth and the point of this dish is to make corn for the old people (some of whom do not have many or very good teeth any more) and the littlest people (who may not have many teeth yet). The problem is that it is so delicious that everyone else will want some too.

Stand an ear of corn on end on your cutting surface, biggest end flat on the surface and small end up.

Take a sharp knife and start cutting down the kernels, starting at the smaller end, but cut off just the tops, not the insides of the kernels.

As you go, you will have to scrape the corn off the knife and stop to scrape it into your skillet so that you keep having room to work. Be careful because it is easy to cut yourself. Give the children something else to do so they do not come stick a finger in to taste while you are cutting. Sending them to pick something else from the garden or to shuck peas are good ways to keep them out of the way of the knife.

When you have gone all the way around the ear, go back to the top and scrape the inside of the kernels out, going all the way down and as deep as you can, but scrape, do not cut. Again, go all the way around doing this until you cannot get any more corn out.

Put it all in the skillet and stir it up. Cook it very slowly, stirring a lot. You may need to add a little bit of water to keep it from sticking as you cook, and to keep it from drying out, but do not let it get runny. You want to cook it down so it comes out creamy.

Cook it down really well, then season with salt and pepper and butter, to taste.

Remember, fresh is very important in the corn.

That's it. Now eat it while it's hot.

## Osage Yonkopin (*Tse-wa-the*)

By Andrea Hunter (Osage)

Yonkopin and chinkapin are both *Native terms for the Nelumbo lutea plant, also known as American lotus. Nelumbo means "sacred bean."*

### INGREDIENTS

*Chinkapin*, roots and seeds

The roots look like long sweet potatoes and the seeds like small round chestnuts. Large quantities of *yonkopin* roots are pulled up in the fall and eaten raw or boiled if they have been dried. The *yonkopin* seeds are



## BREADS

### Choctaw *Banaha*

*Corn and most of the dishes we can create with corn are at the top of my list of food favorites. What I like the best about tamales is the corn, not the filling. Banaha is similar to a tamale, but with no filling.*

#### INGREDIENTS (FOR PURISTS)

- 2 cups cornmeal
- 1½ cup boiling water
- 1 teaspoon baking soda
- 1 teaspoon salt
- corn shucks

Boil corn shucks for 10 minutes. In a large bowl, mix together the cornmeal, soda, and salt until it is doughy. Roll into long shape that will fit into the corn shucks. Wrap the shucks around the dough and tie with a shuck string; then boil in pot of water for 30–40 minutes. We eat it with salsa on top.

To make *banaha* more interesting, I add a variety of things to the cornmeal mixture: chopped onions, spinach, garlic, pepper. I prefer to boil the *banaha* in unsalted chicken broth, instead of water, for added flavor.

### Corn Bread

*Corn bread is our family favorite and it goes with almost everything. When baked with meat it is a meal by itself. It can also be eaten with yogurt as a dessert.*

#### INGREDIENTS

- 1½ cups cornmeal
- \*2 chicken eggs (or duck eggs for thicker consistency)
- \*1 cup skim milk (or goat milk for thicker consistency)
- 1 cup cooked sweet corn (drained)
- ¾ teaspoon salt substitute
- 4 teaspoons baking powder

#### OPTIONAL

For variety, add chopped green chilies, ham, apples, cheese, or bacon (not the fat part)

Mix ingredients in large bowl. Pour into 12 × 8 pan, greased with nonstick vegetable spray. Bake 25 minutes at 400 degrees or until knife comes out clean.

### Corn, Bean, and Turkey Bread

#### INGREDIENTS

- 4 cups corn meal
- 1 pound lean ground turkey
- 2 cups hot water
- 2 cups cooked and drained pinto beans
- ½ teaspoon baking soda
- ½ cup chopped sweet onions
- \*salt, pepper, garlic to taste

Sauté the turkey along with spices. Mix the turkey with the other ingredients, form into desired shape (balls work best), and drop into boiling water. Cook approximately 30–40 minutes. Using a spaghetti pot with a colander that fits into the pot makes it easy to drain—just lift the colander out after cooking and hold over the sink to drain.

### Osage Persimmon Cakes

(*Wah-zha-zhe wa-dsiu-e cta-i<sup>n</sup>-ge*)

By Andrea Hunter (Osage)

INGREDIENTS  
persimmons  
buffalo grease

Go to the woods and collect as many persimmons as you can. Build a fire. Using a small woven screen made from saplings, separate the seeds from the pulp. Do this by grating the persimmons against the screen, causing the seeds to fall through the screen and leaving the pulp behind. Mold the persimmon pulp into small cakes. Take a wooden drying board, about 9 inches wide and 18 inches long, with a handle, and apply buffalo grease. Layer 3 or 4 persimmon cakes on the drying board and hold over an open fire until the first persimmon cake layer is about cooked. Then remove the cakes and cool. When the cakes are completely cooled, they can be stored. These cakes will last until the next season.

## DRINKS

### *Abuske*

By Susan A. Miller (Seminole)

*This is a Seminole and Muscogee corn-based drink.*

Boil young corn on the cob for a few minutes. Cut the kernels from the cob and spread them evenly on an old window screen (do not use screens made of copper or aluminum, or galvanized with cadmium or zinc), leaving space between kernels. Cover with several layers of cheesecloth and place in an abandoned car to dry. When the corn has dried, heat clean wood ash in a cast iron skillet until it is nearly hot enough to smoke, add the corn to the ash, and stir constantly until the kernels turn brown. Sift away the ash, but do not wash the corn. The ash adds calcium and trace minerals, helps free the corn's niacin for absorption by the body, and is believed to have a positive effect on the balance of the corn's amino acids. Grind the corn to a fine flour. (A courser meal may be cooked and eaten as a side dish.) Stir the corn flour into cold water. Flavor with honey, if desired. This refreshing drink has a comforting taste and provides a pleasant burst of energy.



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## Seasonal Greens

---

6 C. ham-flavored broth (recipe follows)  
4 lbs. Collard, turnip or mustard greens, stemmed and washed  
salt and freshly ground pepper to taste

In a large stock pot, bring broth to a boil. Meanwhile, slice greens into 1" ribbons. Wash thoroughly and drain. Add to the broth and cook, stirring often, until tender, about 20 minutes. Add salt and pepper. Transfer the greens to a serving bowl along with some of the broth. Yields 12 servings.

**Collard greens are particularly popular in Southern cooking. Choose healthy-looking greens with no brown spots.**

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**Per Serving: 74 calories, 1 g. fat, 6 g. protein, 499 mg sodium, 5 mg cholesterol**

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## Ham Flavored Broth

---

1-1/2 qt. Defatted reduced sodium chicken broth  
1/2 lb country ham, cubed or smoked ham hock Or smoked turkey breast  
1 Vidalia onion, chopped  
2 tsp. Black peppercorns

In a soup pot, combine broth, ham, onion, peppercorns and 2 cups water. Bring to a boil, reduce heat and simmer, covered for 1 hour. Let cool. Strain and refrigerate the broth until cold. Skim the fat from the surface. Makes about 12 cups.

**This delicious and healthy broth is excellent for seasoning almost any vegetable. Try it for seasoning dry beans & peas, cabbage, kale & mustard greens, and fresh string beans.**

---

**Per Serving: 55 calories, 2 g. fat, 7 g. protein, 226 mg sodium, 10 mg cholesterol**

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### KITCHEN EQUIPMENT NEEDED

Large mixing bowl  
Colander  
Crock pot

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### Optional Quick Soak Method

Put beans in large pot,  
cover with 1 inch of water.  
Bring to a boil for two minutes.  
Turn off and remove from heat.  
Let sit for one hour.

### Cuban-Style Black Beans

At step 4, in addition to 1 large diced onion, add 3 bay leaves, and 3 diced garlic cloves.

1 hour before beans are done, quickly stir in:

- ❖ 2 teaspoons salt
- ❖ 1 large bell pepper, chopped
- ❖ 1 1/2 teaspoons cumin
- ❖ \*\*1/2 teaspoon cayenne pepper, or to taste
- ❖ 1/2 teaspoon dried oregano

\*\*Can substitute 1 minced jalapeno pepper

Garnish with sour cream, plain yogurt, diced tomatoes, salsa and or grated cheese.

### INGREDIENTS

- 1 (1-pound) bag dried beans (pinto, black, garbanzo, etc.)
- 1 onion, chopped (optional)
- Salt and pepper to taste
- Water

### DIRECTIONS

1. Put dried beans in the colander and rinse; remove any broken or discolored beans.
2. Put dried beans in a large mixing bowl, add water to cover beans then add an additional 2 inches; cover with plastic wrap and put in refrigerator overnight.
3. Drain beans and place in slow cooker with water to cover plus 2 inches.
4. Add onion if desired.
5. Cook on low for 8 hours or until tender.
6. Add salt and pepper to taste.
7. Drain if desired.

### NOTES

Cooking dried beans may seem like a lot of trouble, but it only takes a few minutes of prep time and you have a very low-cost, nutritious side or main dish.

Add a dried or fresh Bay Leaf for a great flavor addition to dried beans.

Pinto beans can be mashed to make refried beans with no added fat. Refried beans can be used in tacos, taco salad or as a main dish substitute.

Canned beans may have a lot of added salt. Cooking dried beans allows you to control the amount of salt you add.

Experiment with adding different spices such as cumin with pinto beans, chili powder with kidney beans or curry powder with garbanzo beans.

You can freeze some of the beans in sealable, plastic bags for future use.

### NUTRITION INFORMATION PER SERVING (Makes 10-12 half-cup servings)

Made with pinto beans and 1 teaspoon salt.

Calories 110 | Total Fat 0 g | Saturated Fat 0 g | Protein 7 g  
Carbohydrates 20 g | Fiber 7 g | Sodium 170 mg



Cook Smart | Eat Smart

# Roasted Sweet Potato Wedges

**KITCHEN EQUIPMENT NEEDED**

Knife  
Cutting board  
Measuring spoons  
Large mixing bowl  
Vegetable peeler or paring knife  
Mixing spoon  
Baking sheet



## INGREDIENTS

- 2 (8-ounce) sweet potatoes, peeled
- 1 tablespoon olive oil
- ½ teaspoon curry powder
- ¼ teaspoon ground cumin
- ⅛ teaspoon ground cloves
- ½ teaspoon salt
- ¼ teaspoon pepper

## DIRECTIONS

1. Preheat oven to 425 degrees F.
2. Cut sweet potatoes in half lengthwise; cut each half into 6 wedges.
3. Combine sweet potato wedges, olive oil, curry powder, salt, cumin, pepper and cloves in a bowl.
4. Toss gently to coat.
5. Place wedges on a baking sheet so they do not overlap.
6. Bake at 425 degrees until very tender.

## NOTES

This recipe works well as *hands-on* or *demonstration*.

This is an example of one variation of roasted vegetables.

Additional spices such as cinnamon and chili powder can be substituted for a flavor variation.

Baking potatoes can also be used, although you will lose some of the nutritional value that sweet potatoes bring to this recipe.

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## NUTRITION INFORMATION PER SERVING (Makes 4 servings)

Calories 140 | Total Fat 3.5 g | Saturated Fat 0 g | Protein 2 g  
Carbohydrates 26 g | Fiber 4 g | Sodium 300 mg





## Quinoa Corn Salad

*makes 4 servings*

### Dressing:

- 3 TBS fresh lemon juice (juice of one small lemon)
- 2 TBS olive oil
- 2 TBS fresh cilantro or parsley, chopped
- 2 stalks scallions, chopped
- 1 tsp minced garlic
- 1 tsp cumin

- 1/4 cup quinoa (rinsed under water) or bulgur
- 1/2 cup chicken or vegetable broth
- 1 can black beans, drained and rinsed
- 1 tomato, seeded and diced
- 1 cup fresh or frozen corn (use three ears if fresh corn)

- 1) Cook quinoa or bulgur in broth for 12-15 minutes, until liquid is absorbed.
- 2) While grain cooks, mix dressing ingredients in a large bowl.
- 3) Add drained and rinsed beans, tomato and corn.
- 4) Cool grain to room temperature, then mix with other ingredients; chill until ready to eat.

This salad is best in the summer, with fresh tomato and corn. If you use quinoa, rinse it first in a strainer to remove any traces of saponin, a bitter coating found naturally on quinoa.

## Bulgur & Black Bean Salad

*makes 4 servings*

- 1 orange (or lemon), grated rind and juice (grate rind first, THEN juice it!)
- 1 cup uncooked bulgur
- 1 can black beans, drained and rinsed thoroughly (14-15 oz can)
- 1 red bell pepper, chopped in small pieces
- 6 stalks green onions, chopped in small pieces (green & white parts)
- 4 TBS fresh parsley, chopped
- 2 tsp vinegar
- 2 TBS canola or olive oil
- 1/2 tsp ground cumin

- 1) Put 1 cup bulgur and 2 cups water in covered sauce pan. Bring to boil then simmer 12-15 minutes until excess liquid is absorbed.
- 2) Scrub orange, then grate the rind off (I use a cheese grater). Cut orange in half and squeeze juice into a large mixing bowl.
- 3) Add orange rind, vinegar, oil and cumin to the orange juice in the bowl.
- 4) Chop all the vegetables while the bulgur is cooking.
- 5) Throw vegetables and rinsed beans in the bowl and mix. Add cooked bulgur and mix again.

Use cooked bulgur or brown rice, leftover from last night's dinner. Or use whole-wheat couscous. Add any vegetables you want. Use a lemon instead of an orange. It's up to you.

**Quick and Easy Whole Grain Recipes from The Whole Grains Council**

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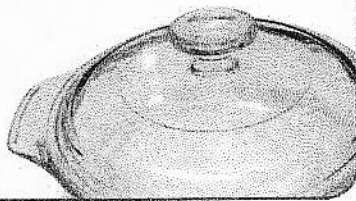


Cook Smart | Eat Smart

# Microwave Baked Apples

## KITCHEN EQUIPMENT NEEDED

Apple corer or paring knife  
 Cutting board  
 Measuring spoons  
 Small mixing bowl  
 Spoon  
 Microwave safe  
 deep casserole dish with lid



## INGREDIENTS

- 2 apples
- 2 tablespoons brown sugar
- 2 tablespoons raisins
- 1 teaspoon ground nutmeg
- 1 teaspoon ground cinnamon
- 2 teaspoons butter (optional)

## DIRECTIONS

1. Core the apple leaving the bottom intact.
2. In a bowl, mix brown sugar, cinnamon, nutmeg and raisins. Spoon the sugar mixture into the apples and set a teaspoon of butter on top of each apple.
3. Place the apples in a deep casserole dish and cover with the lid.
4. Microwave for 3½–4 minutes or until tender. Let the apples sit for 2 minutes before serving.

## NOTES

Dried cranberries or cherries can be substituted for raisins.

Apple-pie spice or pumpkin-pie spice can be substituted for nutmeg and cinnamon.

Any variety of apples such as Golden Delicious, Fuji, Granny Smith, Gala or Braeburn can be used.

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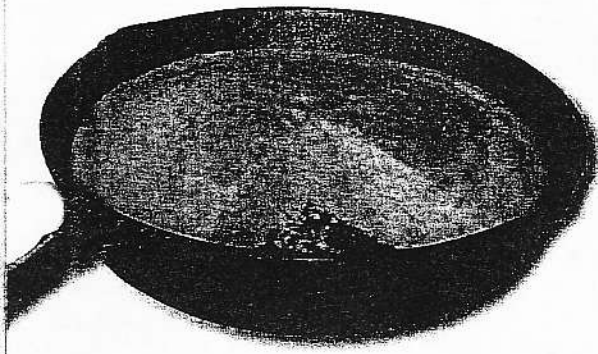


## NUTRITION INFORMATION PER SERVING (Makes 2 servings)

Made without butter.

Calories 130 | Total Fat 0 g | Saturated Fat 0 g | Protein 1 g  
 Carbohydrates 35 g | Fiber 4 g | Sodium 5 mg





## Cornbread

### INGREDIENTS

- 1 cup all-purpose flour
- 1 cup yellow corn meal
- ½ teaspoon salt
- ¼ cup sugar (optional)
- 4 teaspoon baking powder
- 2 eggs
- ¼ cup oil (less if desired)
- 1 cup skim milk
- Non-stick cooking spray

### DIRECTIONS

1. Preheat oven to 425 degrees F.
2. In a medium glass bowl, combine all the dry ingredients; then add the eggs, oil and milk.
3. Stir until ingredients are just mixed; do not over mix.
4. Pour into a 10-inch iron skillet or baking pan that has been sprayed with non-stick cooking spray.
5. Bake for 25 minutes or until cornbread pulls away from the edge of the pan.

### NOTES

- This is a classic quick bread. Be sure not to over-mix or you will have tunnels in the final product.
- For a traditional cornbread, eliminate the sugar.
- The recipe can be modified by adding canned, creamed corn, peppers, cheese, etc.

### NUTRITION INFORMATION PER SERVING

(Makes 8 servings)

Calories 210 | Total Fat 9 g | Saturated Fat 1.5 g | Protein 5 g | Carbohydrates 26 g  
Fiber 2 g | Sodium 430 mg

## Breakfast Muffins

### INGREDIENTS

- ¼ cup walnuts, chopped
- ¼ cup raisins
- 1 cup Grape Nuts cereal
- ½ cup all-purpose flour
- ½ cup whole-wheat flour
- ½ tablespoon baking powder
- ½ teaspoon baking soda
- ½ teaspoon salt
- ¼ cup sugar
- 1 large or 2 small bananas, mashed with fork
- 2 eggs or 3 egg whites
- 1 cup unsweetened apple sauce
- ½ cup skim milk
- Non-stick cooking spray

### DIRECTIONS

1. Spray muffin pan with non-stick cooking spray or use paper muffin cups.
2. Preheat oven to 350 degrees F.
3. In a small bowl, mix mashed bananas, eggs, apple sauce and milk.
4. In a large bowl, mix walnuts, raisins, cereal, flours, baking powder, baking soda, salt and sugar.
5. Add the banana mixture to the dry ingredients and mix until just combined.
6. Spoon batter evenly into muffin pan using an ice cream scoop or small measuring cup.
7. Bake for 20 minutes, then remove from pan immediately and let cool.

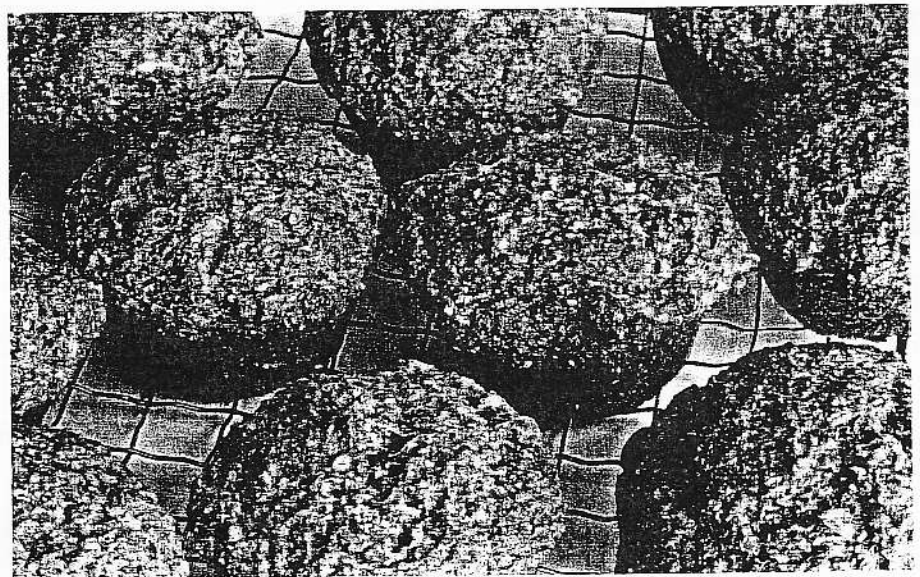
### NOTES

- This is a classic quick bread technique where the dry ingredients are combined, the wet ingredients are combined, and then they are mixed together.
- Too much mixing will cause tunnels to form in the muffins. Mix only until all ingredients are just combined.
- The apple sauce in this recipe can be replaced by crushed pineapple in its own juice.
- The apple sauce (or pineapple) replaces the oil in this recipe.
- This is a basic muffin recipe that can be changed by using different types of nuts or dried fruit.
- These muffins will keep 1–2 weeks in the refrigerator.

### NUTRITION INFORMATION PER SERVING

(Makes 12 servings) Made with egg whites.

Calories 130 | Total Fat 2 g | Saturated Fat 0 g | Protein 4 g | Carbohydrates 29 g  
Fiber 3 g | Sodium 280 mg



# Bison Chili:

## Ingredients:

1 onion, chopped	3-4 (14.5 oz.) cans diced tomato
1 bell pepper, chopped	4 oz. chopped green chilies
1-2 stalks celery, chopped	1-2 tablespoons chili powder
1 tablespoon garlic, minced (1-2 cloves)	1 teaspoon cumin
1 tablespoon olive oil	½ - 1 package chili seasoning (optional)
1 ½ cups water	1 pound bison ground beef
1 can black beans, drained and rinsed	Red pepper flakes, salt, & pepper to taste
1 cup frozen corn	
1 can kidney beans, drained and rinsed	
1 can pinto beans, drained and rinsed	

## Preparation:

In a medium saucepan, cook ground bison until brown. Add onion, garlic, bell pepper, and celery. Add the remaining ingredients. Bring to a boil; reduce to low heat. Cover and simmer.

## TIPS:

- To decrease intestinal gas from beans, peas, & lentils:** Drain and rinse canned beans. That will get rid of some of the gas-causing raffinose sugars (and almost half of the unwanted sodium).  
<http://www.med.umich.edu/umim/clinical/pyramid/legumes.htm>

**Recipe Source:** Celia Hammonds and Janice Fields

**Today's bison donated by Ronald Hammonds**

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## Crunchy Pumpkin Pie

With only a small amount of oil in the crust and skim milk in the filling, this delicious pie is a heart healthy treat.

### Ingredients

FOR CRUST	FOR FILLING
1 C quick cooking oats	1/4 C brown sugar, packed
1/4 C whole wheat flour	1/2 tsp ground cinnamon
1/4 C ground almonds	1/4 tsp ground nutmeg
2 Tbsp brown sugar	1/4 tsp salt
1/4 tsp salt	1 egg, beaten
3 Tbsp vegetable oil	4 tsp vanilla
1 Tbsp water	1 C canned pumpkin
	2/3 C evaporated skim milk

### Directions

1. Preheat oven to 425 °F.

#### To prepare crust:

- Mix oats, flour, almonds, sugar, and salt in small mixing bowl.
- Blend oil and water in measuring cup with fork or small wire whisk until emulsified.
- Add oil mixture to dry ingredients and mix well. If needed, add small amount of water to hold mixture together.
- Press into 9-inch pie pan, and bake for 8–10 minutes, or until light brown.
- Turn down oven to 350 °F.

#### To prepare filling:

- Mix sugar, cinnamon, nutmeg, and salt in bowl.
- Add egg and vanilla, and mix to blend ingredients.
- Add pumpkin and milk, and stir to combine.

#### Putting it together:

- Pour filling into prepared pie shell.
- Bake for 45 minutes at 350 °F or until knife inserted near center comes out clean.

**Yield:** 9 servings

**Serving size:** 1/9 of a 9-inch pie

**Source:** National Heart Lung and Blood Institute

**Each serving provides:** Calories: 169, Total fat: 7 g, Saturated fat: 1 g, Cholesterol: 24 mg, Sodium: 207 mg, Total fiber: 3 g, Protein: 5 g, Carbohydrates: 22 g, Potassium: 223 mg

## Pear Yam Salad

This recipe is a fall favorite. The slightly sweet spicy dressing mixed with the toasted pecan flavor makes the yams and pears perfect partners.

### Ingredients

2 lbs. sweet potatoes (yams), peeled and cubed	1/3 cup raisins
3 fresh pears	1/3 cup light mayonnaise
2 tbsp. lemon juice	1 tbsp. honey
1/4 cup toasted pecans	1/2 tsp. ground ginger
1 cup chopped celery	Salt to taste

### Directions

- In a saucepan, cook the yams for 8 to 10 minutes in boiling water just until tender. Do not overcook.
- Drain; set aside to cool.
- Core pears and cut into chunks.
- Toss pears with lemon juice and mix with cooled yams in a large bowl.
- Add pecans, celery and raisins, mixing gently.
- In a small bowl, mix together mayonnaise, honey, ginger and salt.
- Pour dressing over yam-pear mixture, mixing gently to coat the salad.
- Serve immediately or refrigerate.

**Yield:** 8 servings

**Source:** [sweetpotato.org](http://sweetpotato.org)

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# ***LOW GLYCEMIC FOODS INFORMATION***

## **What is the glycemic index?**

- The glycemic index reflects how much a food raises blood sugar.
- Low glycemic foods are healthier than high glycemic foods.

## **Why should the elder population eat foods with a low glycemic index?**

- It helps people lose and manage weight
- Reduce the risk of heart disease and diabetes, which is most common among individuals ages 65 and older
- Improve diabetes management
- Improve blood cholesterol levels

## **What are some health foods to eat that have a low glycemic index?**

### **For Breakfast:**

Multi grain bread  
Whole grain  
All-bran cereal  
Low-fat yogurt

### **For Snack:**

Peanuts  
Apples  
Peaches  
Pears

### **For Dinner:**

Protein enriched Spaghetti  
Whole grain macaroni  
Cooked Carrots  
Yams or Sweet potatoes

### **To Drink:**

Soy or skim milk  
Pure fruit juices that are not concentrated  
Water

## **Other healthy foods include:**

Kidney beans  
Black-eyed beans  
Peppers  
Spinach  
Summer squash  
Zucchini  
Brussels sprouts

Cauliflower  
Celery  
Cucumbers  
Egg plants  
Green beans  
Lettuce  
Peas

Tomatoes  
Broccoli  
Collards  
Turnips  
Cabbage  
Rutabagas  
Winter squashes

## **Healthy Fruits:**

Plums  
Grapes  
Pears

Bananas  
Oranges  
Lemons

Grapefruit  
Mandarins  
Pomegranates

