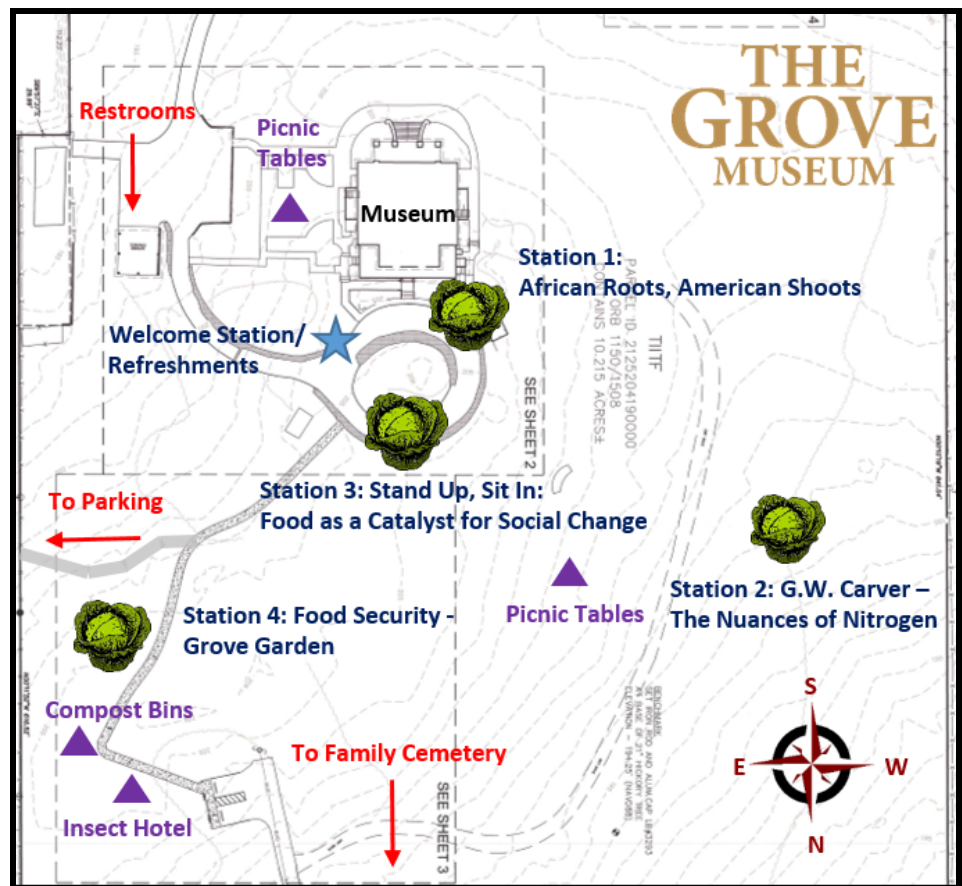


Backyard Discovery: Forgotten Foodways

Foodways are the intersection between food, culture, and history. This includes social and economic practices, as well as the production and consumption of food. A foodway isn't just about what people do and do not eat, it is about **why** they eat or do not eat a food, and all of the traditions and history that help define that culture. Does your family bake cookies every single year around the holidays? Do you sneak into the kitchen for a midnight snack with one of your parents or siblings? Then you have your own foodways!

As you explore The Grove Museum & participate in each activity, think about the foodways in your own life and what they mean to you.



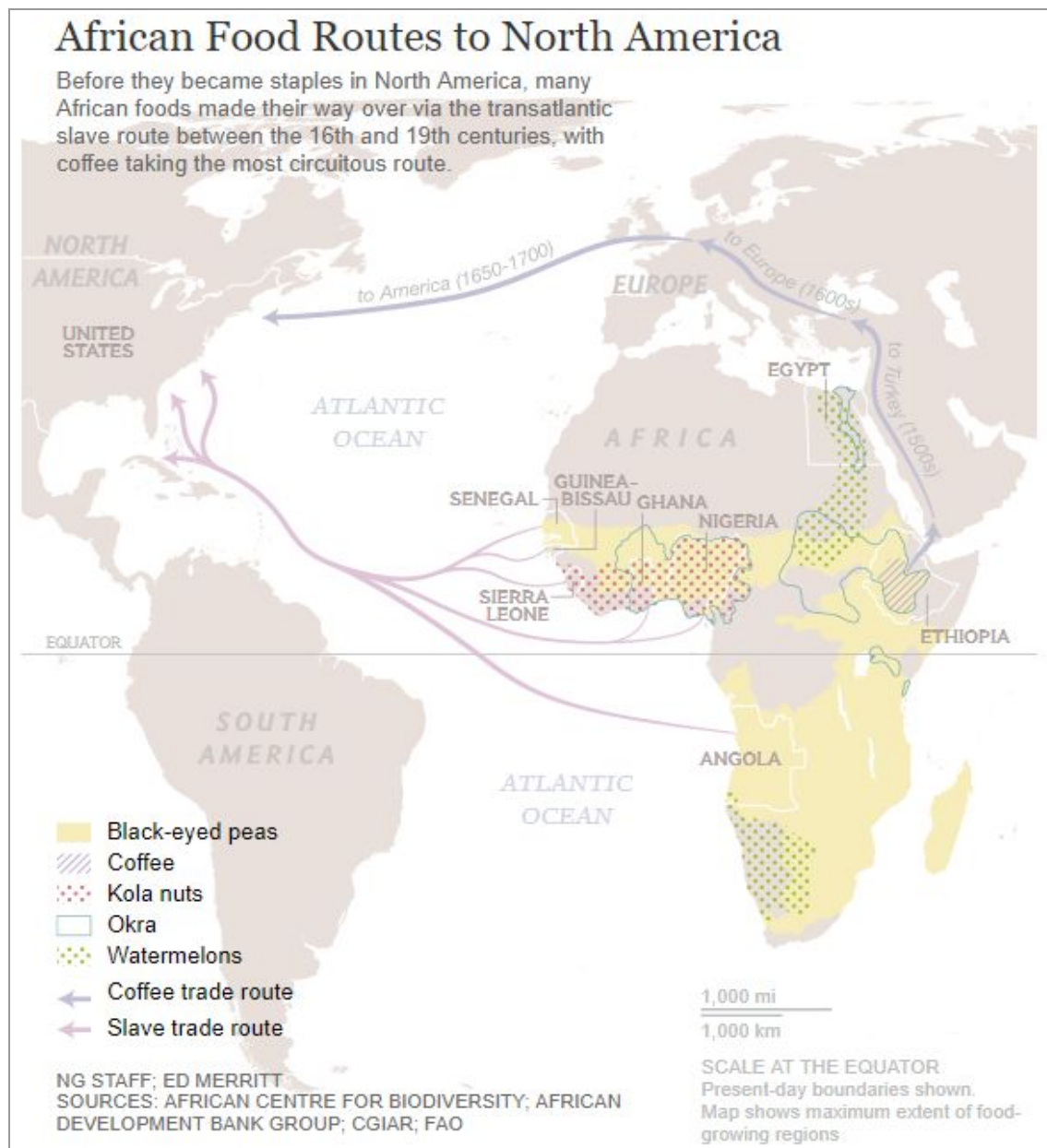
Parents and guardians document your child's discoveries by taking a picture on your camera or smartphone and sharing it with museum staff. You can use social media to connect to The Grove Museum online and share your discoveries on Facebook, Instagram, and Twitter @thegrovemuseum and #grovemuseum.



COMPARE:

African Roots, American Shoots

Okra, blackeyed peas, watermelon, coffee, and famous recipes using those ingredients like gumbo and hoppin john are beloved by most as traditional southern cuisine. However, long before their migration to North America and into the hearts of modern-day folks like us, those crops and recipes belonged to Africa. Brought to North America as part of the transatlantic slave trade, African crops and methods for preparing food traveled with enslaved Africans and took root in the southern United States.



For three centuries, Europeans kidnapped and forcibly transported Africans to the Americas. Enslavement is when a person is forced to work without choice or pay, and is considered the property of another person. The majority of enslaved people in the United States came from seven regions of Africa:

- Senegambia (Senegal, Gambia, Guinea, and Guinea-Bissau)
- The Rice Coast (Sierra Leone, Liberia, and part of Cote D'Ivoire)
- The Gold Coast (modern day Ghana and part of Cote D'Ivoire)
- The Slave Coast (Togo, Benin, and western Nigeria)
- The Bight of Biafra (southeastern Nigeria and southwestern Cameroon)
- West-Central Africa (Congo, Democratic Republic of Congo, and Angola)
- Southeastern Africa (parts of East Africa, Mozambique, and Madagascar)



<http://www.slavevoyages.org/>

With them, enslaved Africans brought their crops, recipes, and methods of food preparation. Enslaved Africans and their descendents grew their homelands' crops to supplement their allotted rations, prepared them for white slaveholders in kitchens across the south, and exchanged knowledge of agriculture with Indigenous populations. Their food and culture traveled far and wide, morphed to accommodate new crops, and generally became recognized as the "traditional southern cuisine" we know today.

See for yourself on the next page!

Can you guess which familiar ingredients in southern cuisine are described here?



Familiar Flavors

"Quilobo" is one variant of the Kimbundu word "quingombo," which is where the word "gumbo" comes from. Gumbo is one southern dish this crop frequently appears in.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Food on the Move

This crop spread from southern Ethiopia to Western Africa and into the central part of the African continent around 2,000 B.C. It has been a staple in African and African diaspora cooking for thousands of years.

This crop's first recorded use in the Americas came from Brazil in the 1500s. It finally made its way to colonial America at the start of the 18th century.

From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Across the Atlantic

Along the entire 3,500 mile African coast that was exploited by the transatlantic slave trade, this crop was grown and cooked with other vegetables or rice and made into soup.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World

This crop is _____.



Familiar Flavors

This vegetable is eaten on New Year's Day, along with black-eyed peas or field peas, and cornbread, as a good omen for wealth in the coming year.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Food on the Move

This crop, originally from the northern Mediterranean, is notoriously mistaken for an African plant because it is so deeply rooted in African American cooking. However, the true African roots of this food are in the preparation.

Using traditional African seasonings and preparation techniques, this staple plant replaced the myriad of leafy greens found on the African continent.

From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Across the Atlantic

Although this specific plant hails from Europe, it has become ubiquitous in the southern dishes we know and love. These dishes have their origins in meat and fish stews like Nigeria's eyo, Benin's sauce feuilles, and Senegal's soupikania, all of which are made with foraged greens.



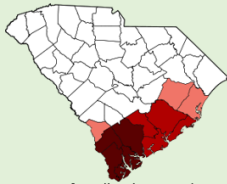
From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World

This crop is _____.



Familiar Flavors

Originally grown in the sustenance gardens of enslaved plantation workers, slaveholders capitalized on the knowledge and agricultural skills of their bondsmen and turned this crop into a lucrative export along South Carolina's coast. By 1720, this crop was the colony's most valuable export.



South Carolina's Lowcountry region is well suited for this crop.

From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Food on the Move

Although Asia usually gets credit for this crop, it was among the many plants that accompanied enslaved Africans from the Upper Guinea Coast to the Caribbean, Brazil, and the United States.

Higher-yielding Asian cultivars would eventually replace African varieties of this crop on U.S. plantations. However, genetic research has shown that North American heirloom varieties are most closely related to their African cousins.

From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Across the Atlantic

Africa's indigenous variety of this crop (*Oryza glaberrima*) is thought to have been domesticated along the upper Niger River around 1500 B.C. It spread across the Upper Guinea Coast and was farmed by peoples living along the Gambia, Casamance, and Geba rivers.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World

This crop is _____.



Familiar Flavors

It wasn't long before akara was a recognized part of southern cuisine outside of the enslaved community. This dish was included in the first Southern cookbook, *The Virginia Housewife* by Mary Randolph in 1824. However, you might be more familiar with this plant as a main ingredient in Hoppin' John.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Food on the Move

This crop was first domesticated in West Africa approximately 5,000 years ago, where it was often planted to enrich the soil and help with weed control between fields of other crops.

Introduced to the United States through the transatlantic slave trade in the 17th century, this plant was one of the crops promoted by George Washington Carver for enhancing soils across the southern states.

From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World



Across the Atlantic

A fritter made with this crop, known as akara, was developed along the lower Guinea Coast among the Igbo, Yoruba, and Fon peoples. It is also commonly cooked in stews with meat, rice, onion, and vegetables across the African continent.



From Afroculinaria.com, The Southern Foodways Alliance, Science Magazine, & In The Shadow of Slavery: Africa's Botanical Legacy in the Atlantic World

This crop is _____.

*Answers are on the last page



EVALUATE: The Nuances of Nitrogen

In the first activity you learned how African crops and ways of preparing those crops traveled to the United States and became the southern cuisine we know today. To succeed, African agricultural practices adapted to accommodate the new plants available in the Americas. Following **emancipation**, the freeing of enslaved workers, one hard working **botanist** (a scientist who studies plants) and one special South American crop changed the way southern farmers replenish nutrients in their soil. That botanist was George Washington Carver.

George Washington Carver

Served as head of the Agriculture Department at Tuskegee Institute (now Tuskegee University) and taught there for 47 years.



Carver was born in 1864, the year before slavery was abolished. Because of segregation, he wasn't allowed to attend the school in his hometown. Carver walked 10 miles to attend the segregated school for black children.



Carver urged farmers to restore nitrogen to their soils by practicing crop rotation: alternating cotton crops with plantings of legumes like peanuts, soybeans, and cowpeas.



Although he was initially barred from attending college, he persisted. Carver became the first black student and graduate of Iowa State University.



He earned a Bachelor of Science Degree and a Master of Science Degree.

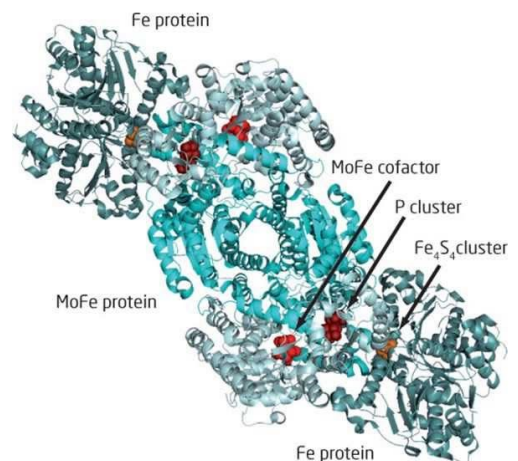
Why peanuts? All organisms use the ammonia (NH_3) form of nitrogen to build amino acids, proteins, and other nitrogen-containing components necessary for life. 80% of the planet's nitrogen is locked up as a gas in the atmosphere where plants and other organisms can't use it.



A very special group of microbes called **nitrogen fixing bacteria**, are able to harness that nitrogen and turn it into a chemical form that plants and other microbes can use. These chemical forms are called **bioavailable** (*bio* meaning life, *available* meaning easy to get). Some of these microbes form partnerships with plants like iron clay peas and peanuts to create nodules (bumps) on the roots that fix nitrogen from the atmosphere.

These special plants can be planted in rotation with other crops to replenish nitrogen and improve the soil. Nitrogen fixing bacteria are able to do their amazing feat, because of a special enzyme called **nitrogenase**, which is **sensitive to oxygen** and tightly contained in the root nodule.

Nitrogenase Complex



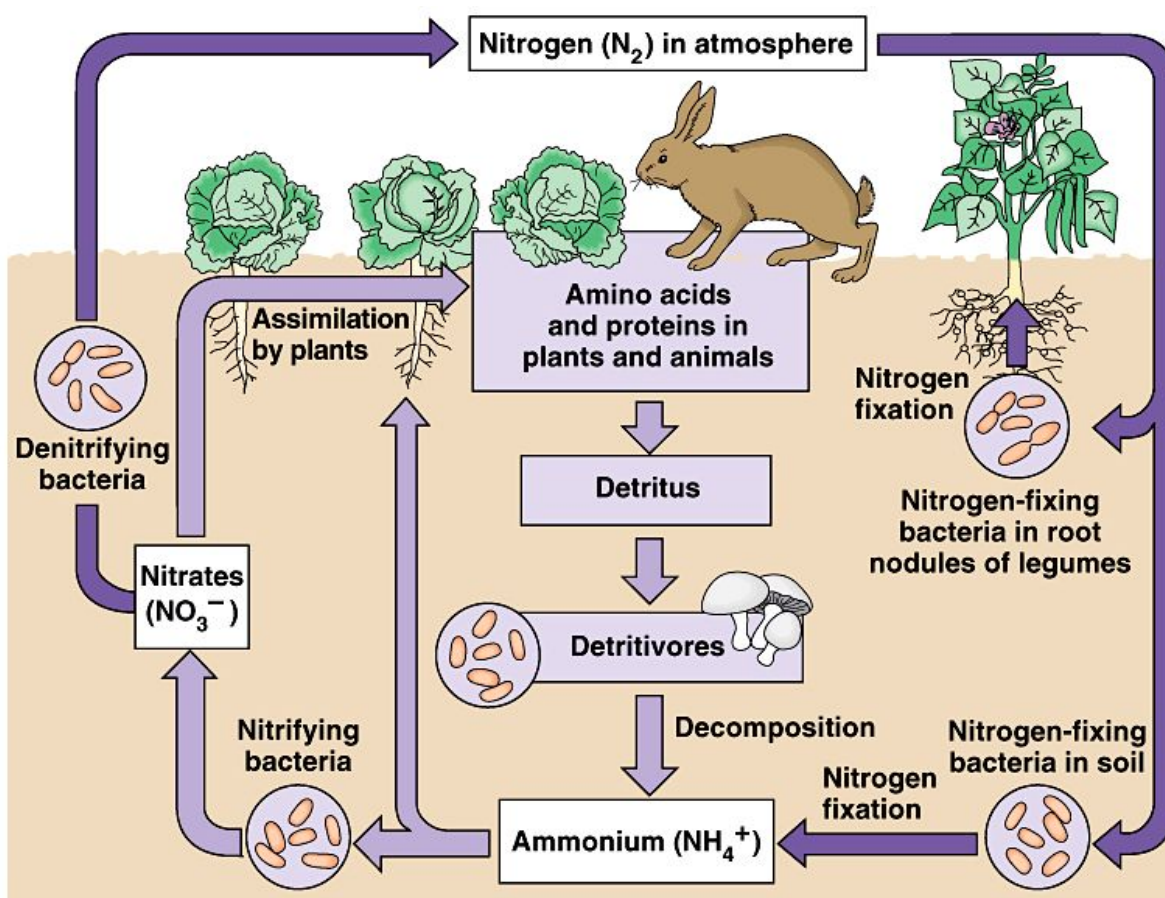
Why do think the root nodule that is cut open in the picture above turned pink?

If you were trying to explain this concept to a friend, what in your own body could you use as an analogy to help them understand?

Beyond Crop Rotation

Crop rotation (alternating) was well known to Indigenous people and subsistence farmers across the U.S. Even though they may not have understood the science behind it, they saw results and knew it worked. In the cash crop market, crop rotation was seen as too expensive. Carver not only advocated for improving soil quality using peanuts, he invented 300 uses for his favorite plant, making crop rotation with peanuts a financially feasible option for farmers.

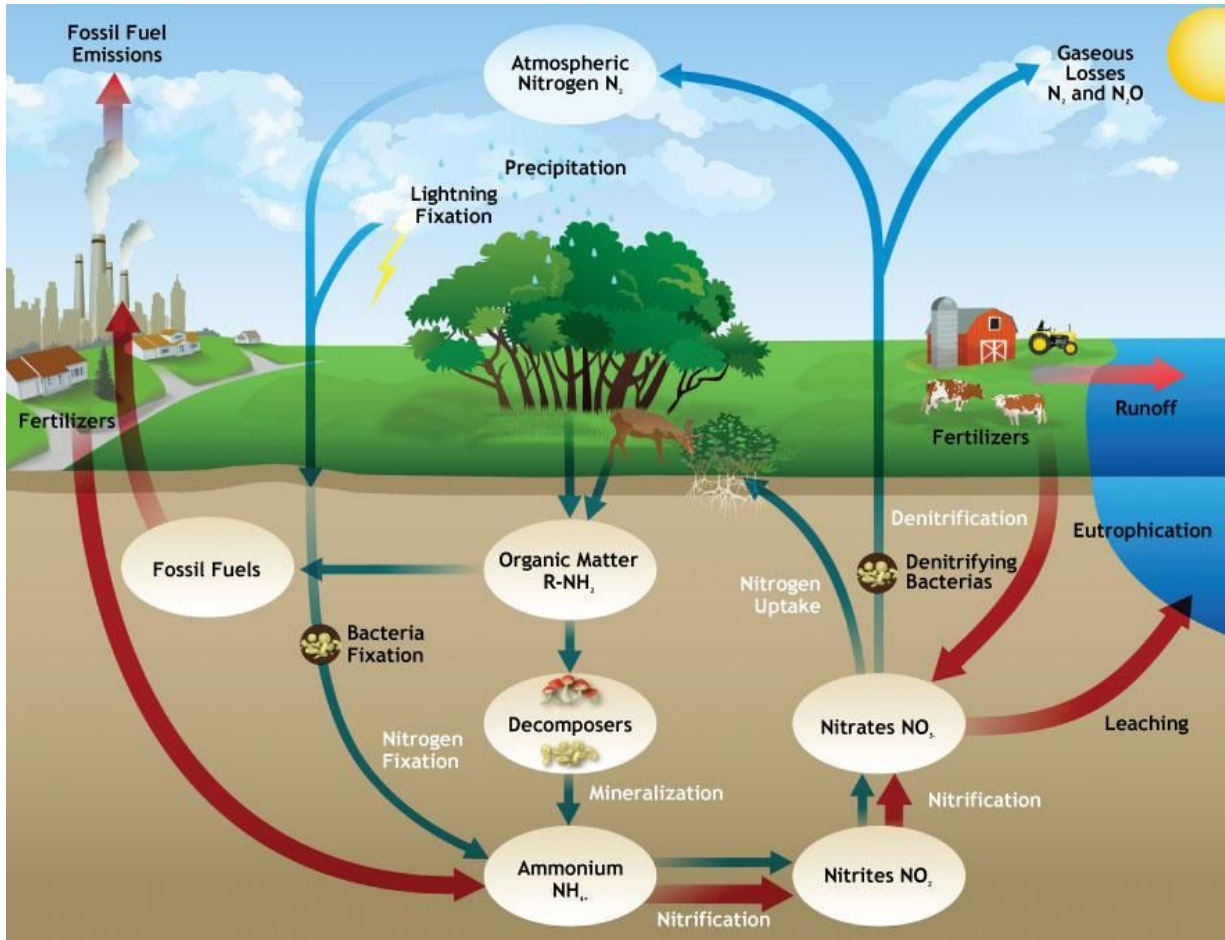
Nitrogen in the Days of GWC. Before 1910 the only place that farmers could get nitrogen for their crops was with the help of nature. The nitrogen cycle is pictured below.



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In the year 1910 the German chemists Fritz Haber and Carl Bosch debuted a new invention: a chemical process that would do the work of nitrogen fixing bacteria.

Nitrogen After 1910. The Haber-Bosch process converts atmospheric nitrogen (N_2) to bioavailable forms using high temperatures and pressures. This marked the dawn of artificial fertilizers. For the first time ever, farmers didn't have to rely solely on nature to provide nutrients for their crops. It wasn't long before nitrogen fertilizers were being used far and wide. This, paired with the burning of fossil fuels changed the entire nitrogen cycle. Today, the nitrogen cycle has expanded to include industrial nitrogen production, as pictured below:



Nitrogen Cycle in the Environment, <https://steemit.com/steemiteducation/@zakia/nitrogen-cycle-in-environment>

Navigating Nitrogen

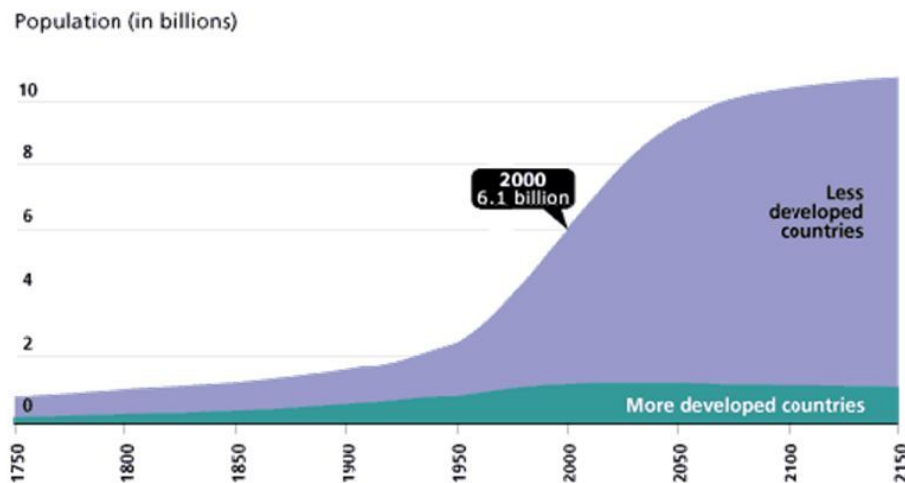
On the one hand, synthetic nitrogen fertilizers allowed people to grow more crops faster. Fewer people died of starvation, particularly in developing countries. However, if the nitrogen fertilizer isn't used up fast enough, it gets washed away in the rain and ends up in waterways. This can cause **eutrophication**, a cycle where algae grows, eats up the oxygen in the water and makes the river, lake, stream, or ocean unlivable for other creatures.

Take a look at the graphs and diagrams on this page. One shows how the world population has changed over the past ~300 years (including predictions out to the year 2150). The other outlines the process of eutrophication.

World Population Growth

Human Population: Fundamentals of Growth Population Growth and Distribution

World Population Growth, 1750–2150

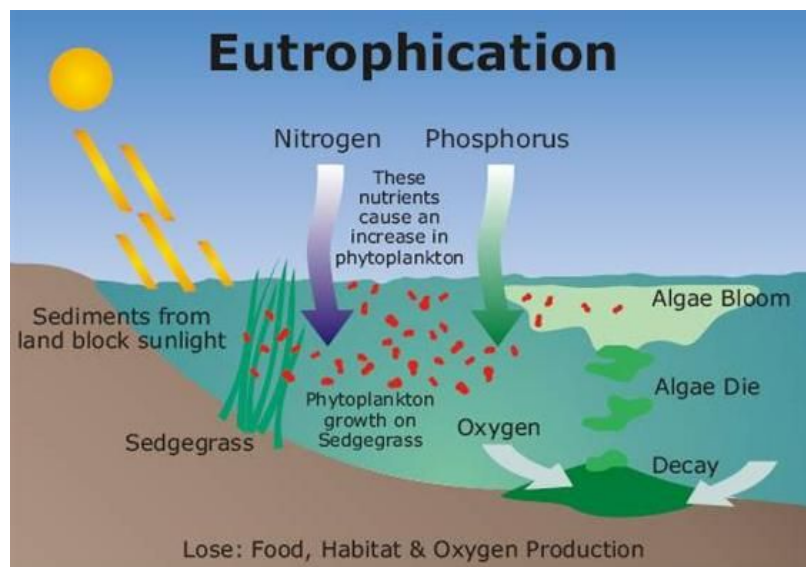


Source: United Nations, *World Population Prospects, The 1998 Revision*; and estimates by the Population Reference Bureau.

Use the information you learned about nitrogen fixation, along with these figures to fill out the table of pros and cons on the next page.

What are some reasons synthetic nitrogen fertilizer has made our world a better place? Has it caused harm as well?

When formulating your answers, think big picture: Can population growth be good and bad? What about algae blooms?



Weighing the Pros and Cons

PROS	NEUTRAL	CONS

IMO (In My Opinion): **Has harnessing the power of nitrogen made the world a better place? Or, should we kibosh the (Haber) Bosch?**



ANALYZE: Stand Up, Sit In

So far you've learned that foodways is part history, part geography, and part science. Food can also be a **catalyst** (something that speeds something else up) for social change. During the Civil Rights Movement some of the first places to be boycotted for the unfair practice of segregation included grocery stores that did not hire African American clerks and lunch counters (restaurants) that did not serve Black customers. **Access to food, food in public spaces, and the economics of food were the key issues.**

Feeding the Revolution

Dr. Fred Opie, a professor of history and foodways at Boston College explains: "Food starts movements and food sustains movements." From the "Don't Buy Where You Can't Work" boycott of the 1920's to the "sandwich brigade" a multi - denominational, interracial group that prepared \$40,000 worth of boxed lunches to feed protesters during the 1963 March on Washington, food has been an integral part of the Civil Rights Movement.



"A group of 15 African Americans and one young white man failed yesterday to get food service at the Tallahassee McCrory's store lunch counter."

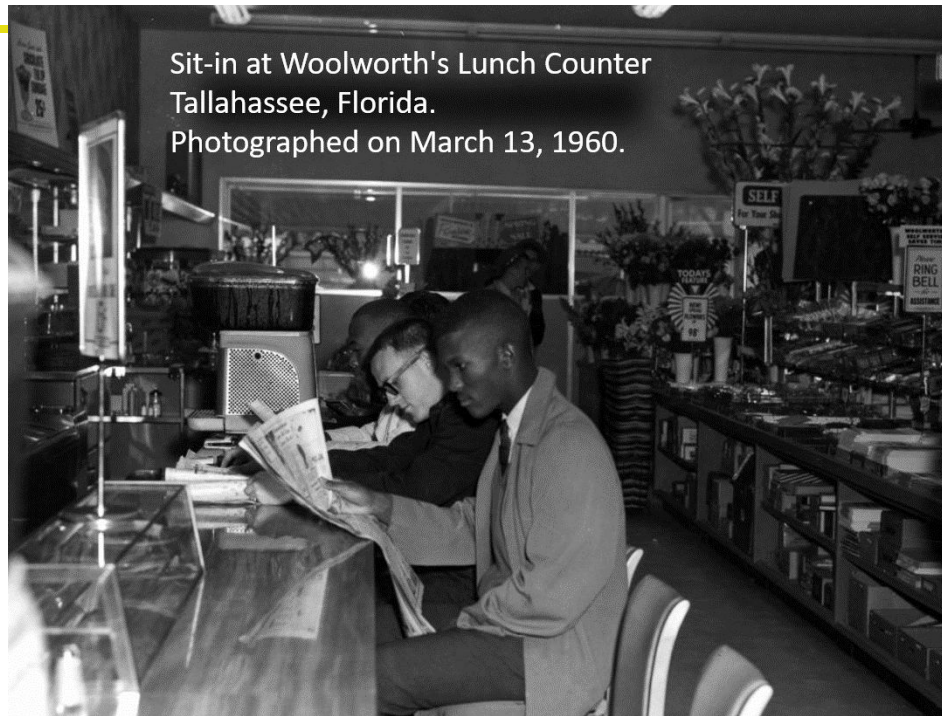
Photographed on October 25, 1962

Food for Thought:

Of all the segregated spaces in the United States, why might lunch counters and stores be important places for demonstrations?

Food for Thought:

Even if you aren't growing or preparing your own food, what are some ways you can use your food choices to send a message?



A food service crew prepares box lunches for the 1963 March on Washington. Courtesy of the National Archives.



Food for Thought: What food or food traditions help you tell the story of who you are?

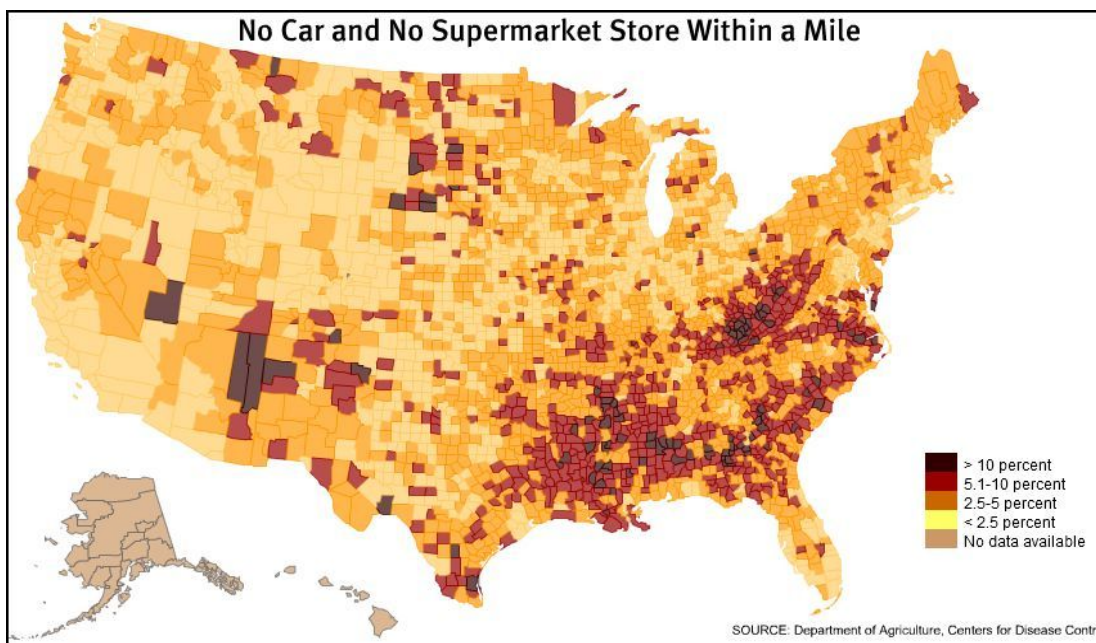
Food Security: Planting Grove Garden

Foodways are closely linked to **food security**. Food security is when everyone has physical, social, and economic access to enough safe and nutritious food to keep them healthy at all times.

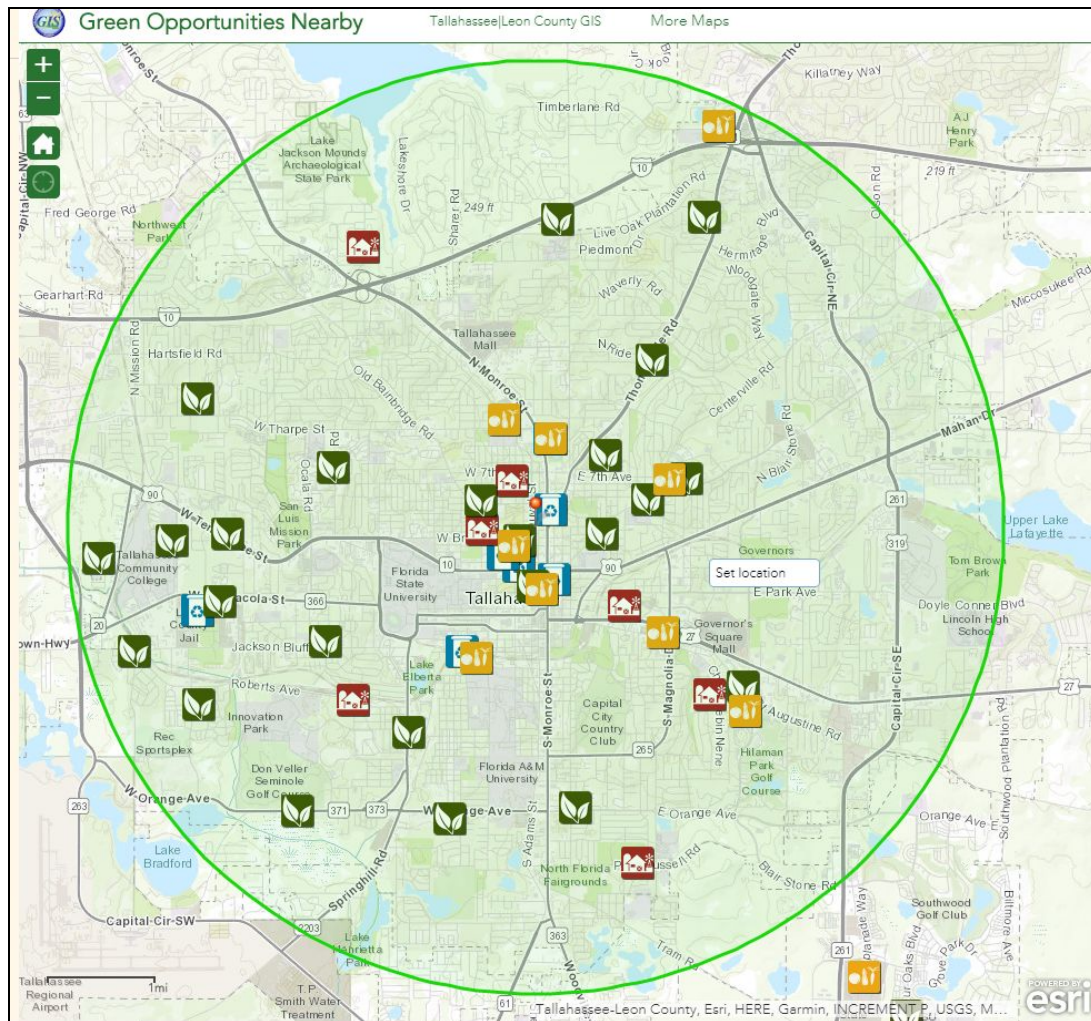
Take a look at the food security wheel on this page. As you can see, food security isn't just

about having enough food, it's about having the right food as well as being able to get it. Maybe the store has plenty of fresh fruits and vegetables, but your family doesn't have a car and the store is far away. Maybe you need special foods because of an allergy or medical condition. Those things all affect food security too!

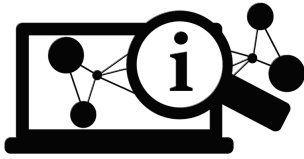
The United States Department of Agriculture (USDA) defines an **urban food desert** as a low-income urban area that is more than one mile from a grocery store or supermarket that supplies fresh fruits and vegetables. It is estimated that over 23 million Americans live in a food desert.



One solution to issues of food security is **community gardens**. Both Leon County and the City of Tallahassee have community garden programs available for the public. Leon County's Office of Sustainability's website also has an interactive map showing the locations of existing community gardens, local farms, and farmers markets. Within 5 miles of The Grove Museum, there are 25 community gardens, 9 farmers markets, and 7 regional farms!



We hope that planting a garden with us here at The Grove Museum, will inspire you to start your own garden or get involved with one of the existing gardens in town. If you'd like to some of the vegetables we plant once they are ripe, just come back and visit us during regular hours. And you are always welcome to help weed! **Remember, tending the garden is just as important as planting the seed.**



CONNECT:

Ready to learn more? Check out these awesome resources for more information about foodways, gardening, and the Civil Rights Movement!

Books

- The Cooking Gene: A Journey Through African American Culinary History in the Old South by Michael W. Twitty
- Southern Food and Civil Rights: Feeding the Revolution by Frederick Douglass Opie
- African American Foodways: Explorations of History and Culture by Anne L. Bower
- Slavery in Florida: Territorial Days to Emancipation by Larry E. Rivers

Web Resources

- Africulinaria: Exploring Culinary Traditions of Africa, African America, and the African Diaspora. Michael W. Twitty: <https://afroculinaria.com/>
- The Southern Foodways Alliance: <https://www.southernfoodways.org/>
- Our World in Data: How many people does synthetic fertilizer feed? Hannah Ritchie. November 07, 2017: <https://ourworldindata.org/how-many-people-does-synthetic-fertilizer-feed>
- American Rice: Out of Africa. Erik Stokstad. November 16, 2007: <https://www.sciencemag.org/news/2007/11/american-rice-out-africa>
- Rice Reveals African Slaves' Agricultural Heritage. Virginia Gewin. January 12, 2017: <https://www.sapiens.org/culture/african-rice-new-world/>
- Sustainable Tallahassee: Community Gardens: <https://sustainabletallahassee.org/CommunityGardens>
- Leon County Growing Green: Green Opportunities Nearby GIS Portal: <http://tlcgis.maps.arcgis.com/apps/MapJournal/index.html?appid=f141fdd834b24f1e82faa0c58a70b25b>
- Damayan Garden Project, Inc.: <http://www.damayan.org/>

Answers to African Roots, American Shoots: Okra, Collards, Rice, Black-eyed Peas