

# Environmental Justice Webinar Series for Tribes and Indigenous Peoples


## **Food Sovereignty - Healthier Foods, Cultural Practices and Food Security**

February 16, 2023

\* Please note that this webinar will be recorded and posted.



# Panelists

- Tom O'Donnell, Land, Chemical and Revitalization Division, Region 3, U.S. EPA-NEWS (National Experienced Workforce Solutions)
  - Marc Anderson, P.E. (Seminole), Consulting Engineer
  - Jacque Salomon, Seeds to Inspire Foundation
  - Danny Gogal and Ericka Farrell, Office of Environmental Justice and External Civil Rights, U.S. EPA (Facilitators)
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The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic feel.

# Farm Food Loss and Sustainable Management of Food

Thomas O'Donnell, USEPA, Region 3

# Why Food Waste?

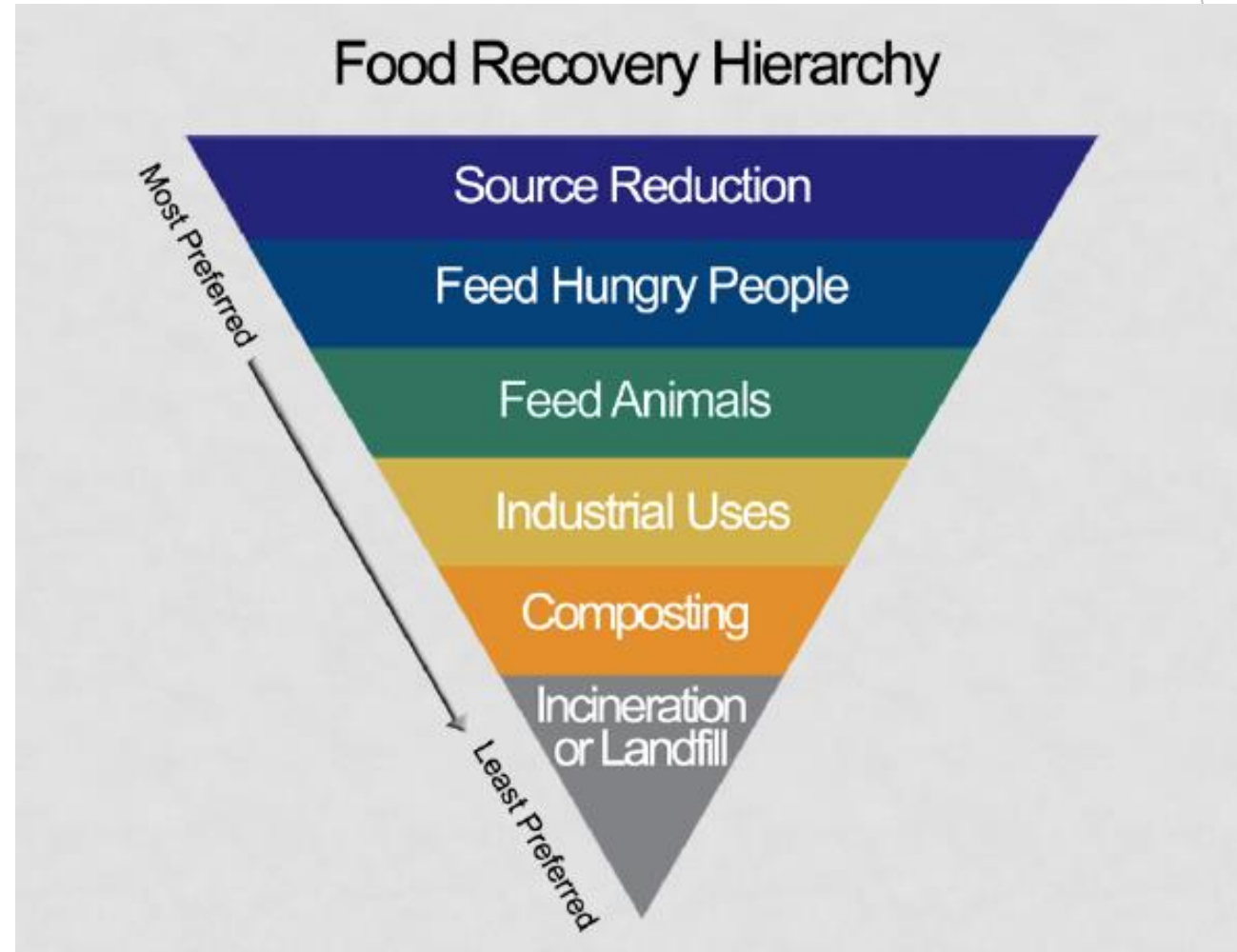
24.1%

Food in Landfills



# What we Learned

The heart of the problem opens new opportunities



# Reducing Food Waste can .....

Help People  
Save Money  
Conserve Resources  
Reduce Pollution  
Create jobs

# Where Does Food Waste Occur?

▶ Most from homes and restaurants

★ Losses at farms

# Farm Produce Not Eaten by People?

16-17 millions tons .....

.....more than half was edible

a \$14 billion value

Fruits and Vegetables  
are lost the most

# Food Insecure People

31%

Problem: How can they get affordable  
fresh, nutritious produce where they  
shop?

How about the  
traditional farm  
gleaning and  
donation solution?

....the traditional homeland of the Nashoba, Nipmuc, Massachusetts, and Pawtucket Tribal Nations and Peoples. ....(BAG) is in the process of working to best honor the many Indigenous people who continue to call this land home.





# Urban Gleaning



- ▶ Refugee communities that participate in gleaning create a higher degree of food sovereignty.
- ▶ They harvest their native foods that they would not find at their grocery store
- ▶ Refugees are typically familiar with food insecurity and horrified by food waste.

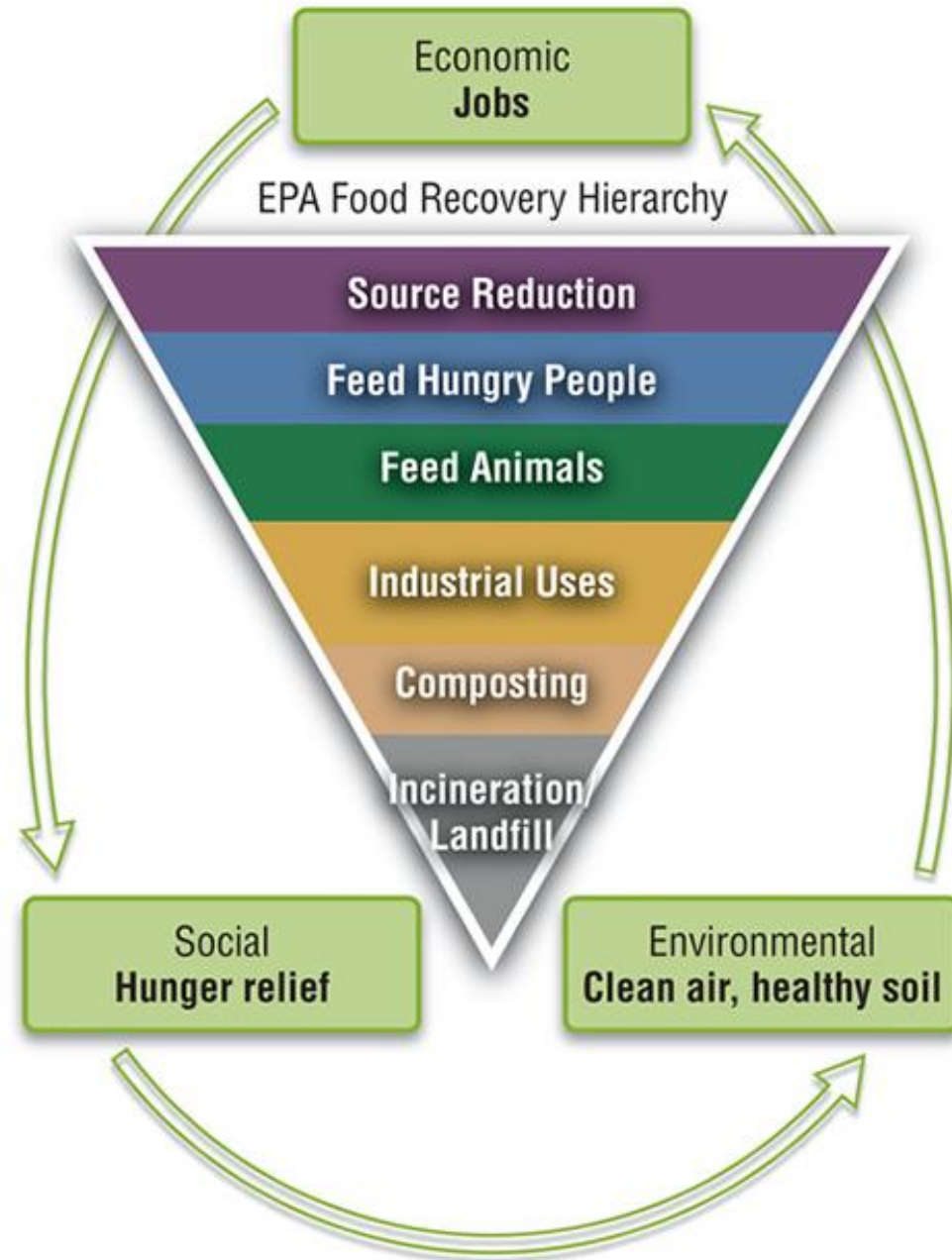


Recovered nearly  
21 million pounds  
of produce in 2022

## Edible Surplus Produce

unharvested	18,600 million pounds
gleaned	47.5 million pounds

# The Economic Lens



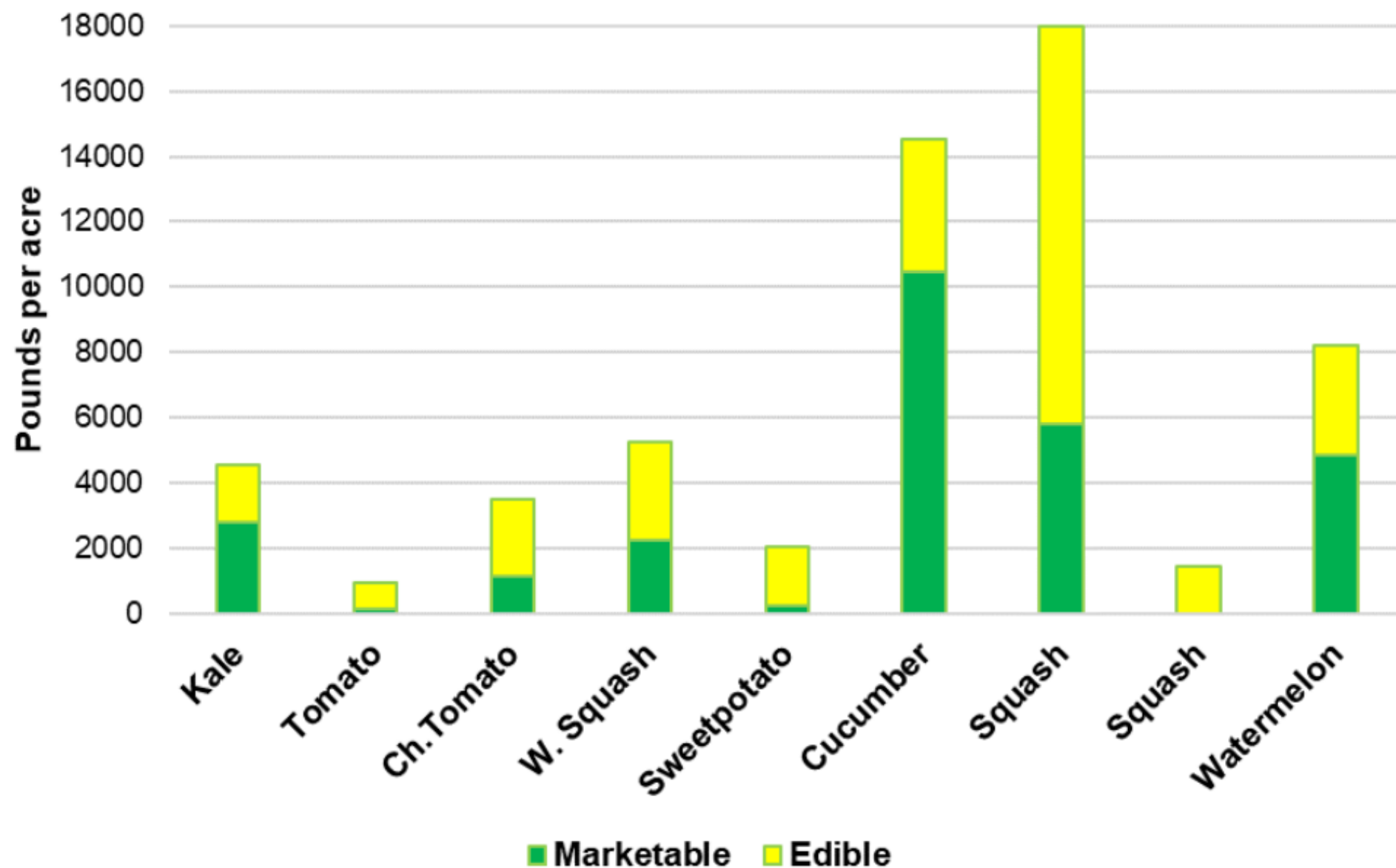
# More Farm Revenue Opportunities

1. Increase demand for produce
2. Improve processing
3. Consistent markets and prices
4. Alternative marketing
5. Consumer expectations

# Shared-Revenue Model

Sell what we can and donate the  
rest

**Estimated usable pounds available per acre**



# Proof of Concept

## Round 1:

### Food Recovery Network

- Find Farmers
- Find Vehicle Drivers
  - Find Buyers
- Use GoForager.com App

## Round 2:

### 4-Roots

- More Growers
- More Drivers
- More Buyers
- New Markets
- Improved GoForager App



# FOOD SOVEREIGNTY

Restoring Our Relationship with the World Around Us



*Corn Mother by Julie Komenda*

Marc Anderson, P.E. (Seminole)

[marcbowlegs@gmail.com](mailto:marcbowlegs@gmail.com)







“Food sovereignty is an affirmation of who we are as Indigenous peoples and a way, one of the most surefooted ways, to restore our relationship with the world around us.”

“How can you call yourself sovereign if you don’t grow your own food?”

Winona LaDuke (Anishinaabe)



# OBJECTIVES

- Restore Indigenous food sources.
- Reclaim ancestral nutrition, stewardship of natural resources.
- Empower ourselves for individual/public health.
- Reduce pollution, greenhouse gas emissions, food/packaging waste.
- Eliminate dependance on supply chains.
- Prepare community for emergencies, climate resilience.
- Promote economic development.





HOW DO WE START?



# FOOD TANK

**“Our food system is broken....There’s only one way to fix this problem—  
and it starts with you and me.”**  
*Dani Nierenberg*

## **28 Organizations Promoting Indigenous Food Sovereignty:**

<https://foodtank.com/news/2020/08/28-organizations-promoting-indigenous-food-sovereignty/>



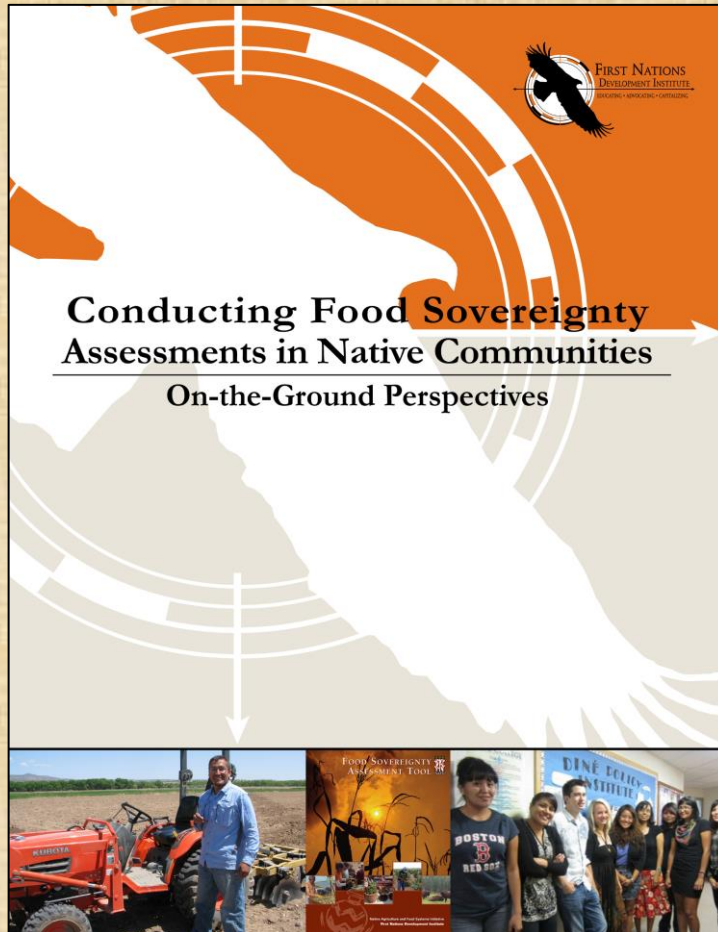
## **123 Food and Agriculture Organizations to Watch in 2023:**

<https://foodtank.com/news/2022/12/food-and-agriculture-organizations-to-watch/>



# FIRST NATIONS DEVELOPMENT INSTITUTE

Programs include Nourishing Native Foods & Health, which produced *Conducting Food Sovereignty Assessments in Native Communities (2014)*.



Features results of case studies of the:

Cochiti Pueblo;  
Diné Policy Institute; and  
Mvskoke Food Sovereignty Initiative.

<https://www.firstnations.org/>

2007 Community Food Assessment  
Mvskoke Food Sovereignty Initiative

Creek Indian Community

Who are the members of this community?

About you: ☐ Male ☐ Female Age \_\_\_\_ ☐ Mvskoke Creek ☐ Other Native American ☐ Non-Native

About your household: Number living at home \_\_\_\_ Adults \_\_\_\_ Children \_\_\_\_

How many are employed? \_\_\_\_ Are there grandparents caring for grandchildren? ☐ Yes ☐ No

Household Income: ☐ Below \$14,000 ☐ \$14,000-\$24,000 ☐ \$24,000-\$34,000 ☐ Above \$34,000

Married ☐ Separated ☐ Widowed ☐ Divorced ☐ Never Married ☐

What foods do you eat?

How many times a day do you eat fruit and/or vegetables? ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ more than 5

Are most of the fruit and vegetables ☐ Canned ☐ Frozen ☐ Dried or ☐ Fresh?

What do you usually have to drink? ☐ Soft drinks ☐ Water ☐ Coffee ☐ Tea ☐ Juice ☐ Other

Does your family grow any of the food that you eat? ☐ Yes ☐ No

Does your family eat food produced in the community? ☐ Yes ☐ No

Would you prefer to eat food produced in the community? ☐ Yes ☐ No

Do you eat more meat than fruit and vegetables? ☐ Yes ☐ No

Are you concerned about the chemicals, hormones, etc. used in food production? ☐ Yes ☐ No

Would you like to know where and how your food is produced? ☐ Yes ☐ No

Are you concerned about the costs of food? ☐ Yes ☐ No

Are you concerned about contamination of food? ☐ Yes ☐ No

Are you concerned about the freshness of food? ☐ Yes ☐ No

Are you concerned about the nutritional value of food? ☐ Yes ☐ No

Name three foods that are a regular staple in the diet of your family:

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

Name three foods that you would consider to be "traditional" Mvskoke foods.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

Name three foods that you would add to your diet if they were more affordable and accessible.

1) \_\_\_\_\_

2) \_\_\_\_\_

2007 Community Food Assessment  
Mvskoke Food Sovereignty Initiative

Creek Indian Community

Where do you get most of your food?

Grocery store ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Discount store ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Wal-Mart ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Garden ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Farm ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Fast food ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Restaurants ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Elderly Nutrition ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Farmers' Market ☐ Local ☐ 10-15 miles ☐ 15-20 miles ☐ 20 miles or more

Would you purchase at a Farmers' Market if one was nearby? ☐ Yes ☐ No

Would you join a community food co-op if available in your community? ☐ Yes ☐ No

How do you purchase most of your food? ☐ Cash ☐ Check/debit card ☐ Credit card ☐ Food Stamps ☐ Charge

When do you buy most of your food? ☐ Daily ☐ Weekly ☐ Monthly

Do you stock emergency foods? ☐ Yes ☐ No

Are you concerned about the consistent supply of foods? ☐ Yes ☐ No

Health and Traditions

Which health problems are present in your household? ☐ Diabetes ☐ Overweight ☐ Heart disease

Would better food impact better health for you and your family? ☐ Yes ☐ No

Are foods an important part of your church, grounds or community activities? ☐ Yes ☐ No

Would you be interested to preserve cultural food traditions? ☐ Yes ☐ No

Does your family grow a garden? ☐ Yes ☐ No Does your family have land/acreage? ☐ Yes ☐ No

Would you grow a garden if it was tilled? ☐ Yes ☐ No

Do you know how to ☐ plant, ☐ cook and/or ☐ preserve food crops?

Do you save seeds to use the next season? ☐ Yes ☐ No

Would you like to have a community garden nearby? ☐ Yes ☐ No

Would you help in a community garden? ☐ Yes ☐ No

Do you feel that agriculture and food traditions have been lost in your community? ☐ Yes ☐ No

Are there people in your community who have knowledge of food traditions? ☐ Yes ☐ No

Would you devote time and energy to learning about food traditions? ☐ Yes ☐ No

Would you be willing to teach food or gardening classes? ☐ Yes ☐ No



# MVSKOKE FOOD SOVEREIGNTY INITIATIVE COMMUNITY FOODS PLAN OF ACTION

Access resources that will stimulate local food production.

Identify resources for farming equipment, supplies & labor.

Provide a tilling service to families & communities.

Establish and assist communities in establishing community & family gardens.

Establish and assist communities in establishing farmers' markets.

Take our programs into the communities, especially rural communities.

Provide educational programs to teach organic gardening methods.

Create a Native food cookbook to encourage using traditional (whole) foods.

Provide cultural educational programs celebrating Mvskoke food heritage.

Record as much traditional knowledge as possible.

Host or assist communities in hosting monthly traditional meals.



# ACTIVITIES FOR CONSIDERATION

Farmers' market

Traditional food cooking classes

Food preservation classes

Organic gardening classes

Container gardening classes

Garden tilling service

Wild food identification classes

Youth and Elder garden project

Native foods cookbooks

Food history and culture classes

Seed saving service and exchange

Seed donations

Greenhouse

Community food co-op

Monthly traditional meals

Weekly traditional meals

Healthy alternatives for party foods

Community fish farm

Hunting classes

Fishing classes

Community garden

Bow making classes

Nutrition classes

Fruit tree donations

Container garden donations

Community compost

Compost classes

Grape growing classes

Berry growing classes

Vegetable growing classes

Food fair event

Community gardening/food library



# THE FRUIT TREE PLANTING FOUNDATION

Plants fruit tree orchards on public lands throughout the world and provides training in their care. In 2022, FTPF planted and distributed 37,236 fruit trees in the United States, Uganda, El Salvador, Guatemala, Brazil, and Peru.





# WORK WITH YOUR KITCHEN





# PROVIDE COMMUNITY TASTINGS





# DECOLONIZING NUTRITION EDUCATION

Lois Ellen Frank, Ph.D. ([nativecooking@gmail.com](mailto:nativecooking@gmail.com))



## Addressing Diabetes Among Native Americans by Decolonizing Nutrition Education

Lois Ellen Frank, PhD ([nativecooking@gmail.com](mailto:nativecooking@gmail.com)) Physicians Committee for Responsible Medicine, Washington, D.C., and Red Mesa Cuisine, Santa Fe, N.M.

### Abstract

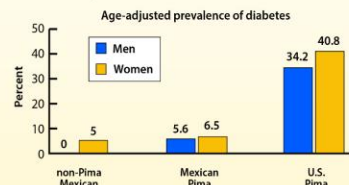
Native Americans have the highest rates of diabetes in the U.S. across all age groups. Re-indigenizing Ancestral foods can help Native communities reclaim health through the revitalization of Traditional Ecological Knowledge (TEK) and the inclusion of Ancestral knowledge in nutrition education. Understanding the history of Native American cuisine and how it has changed over time is a vital part of this effort to decolonize nutrition education and restore health. CDCES who work with Native Americans are encouraged to 1) recognize and celebrate plant-based Indigenous foods that promote health and 2) form reciprocal alliances that prioritize Indigenous agenda(s). A diabetes nutrition curriculum for Native Peoples is a useful resource available free to CDCES.

### National Diabetes Statistics Report From 2020

- American Indians/Alaska Natives account for 14.7% of the prevalence of diabetes in the U.S. (2020).
- The CDC noted that American Indians/Alaska Natives were not well represented due to small population size, so this statistic likely under-represents the actual prevalence.
- Compared to Caucasians, end-stage renal disease prevalence is about 1.4 times greater in Native Americans.
- In 2018, American Indians/Alaska Natives were 50% more likely to be diagnosed with coronary heart disease than their white counterparts.
- American Indian/Alaska Native adults were 10% more likely than white adults to have high blood pressure, as compared to non-Hispanic whites, in 2018.
- American Indian/Alaska Native adults are more likely to be obese than white adults and more likely to have high blood pressure.

Citation: U.S. Department of Health and Human Services. (2020, August 28). National Diabetes Statistics Report, 2020. Centers for Disease Control and Prevention. <https://www.cdc.gov/diabetes/pdf/data/statistics/national-diabetes-statistics-report.pdf>

Fig. 1: Pima in Mexico and U.S. have the same genes, very different rates of diabetes.<sup>1</sup>



### Food Is More Than Just Something to Eat:

Food is medicine.

Food is a Native American sovereign right.

Food is the key to Native American health and wellness.



Corn is a creation.

Corn is a gift from creator.

Corn is a storyteller.

Corn is ceremony.

Corn is song.

Corn is prayer.

Corn is maiden.

Corn is Mother.



Corn is sister.

Corn is healer.

Corn is medicine.

Corn is sustenance.

Corn is food.

Corn is cuisine.

Corn is art.

Corn is the essence of life.

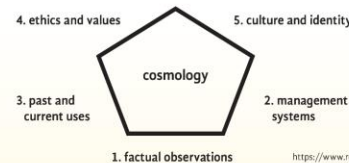
For Native Americans corn has many layers of meaning.

### Four Periods of Indigenous Foods

- Pre-contact Period Foods: Ancestral cultivated and wild plants and animals (approximately 10,000 B.C. to A.D. 1492).
- First Contact Period Foods: Foods introduced by Europeans upon contact such as domesticated animals, dairy products, and wheat flour (A.D. 1492 to the 1800s).
- Government Issue Period Foods: Commodity foods introduced by the U.S. government during the Reservation period and still being distributed today including flour, lard, canned meats, and cheese that promote a high-fat diet not Indigenous to Native communities (beginning in the middle to late 1800s during the relocation period).
- New Native American Cuisine: Foods sharing components of the previous three categories that are innovatively combined or "fused" into a new Native American cuisine where Native communities reclaim and revitalize plant-based foods for health and wellness (where we are now).

### Traditional Ecological Knowledge or TEK Model in Indigenous Communities

Traditional Ecological Knowledge (TEK) describes Indigenous forms of traditional knowledge regarding sustainability of local resources. TEK refers to a cumulative body of knowledge, belief, and practice, evolving by the accumulation of TEK, and is handed down through generations through traditional songs, stories, and beliefs. This includes knowledge about agriculture, harvesting techniques, gathering and growing food, and food practices. TEK involves the relationship of living beings with their traditional groups with their environment.



[https://www.researchgate.net/figure/The-six-faces-of-traditional-ecological-knowledge\\_Fig1\\_42763403](https://www.researchgate.net/figure/The-six-faces-of-traditional-ecological-knowledge_Fig1_42763403)

### By going back to the Ancestral past, Native Americans can move toward a healthy future.

By using ancient Ancestral foods in contemporary kitchens, Native communities are creating a new Native American cuisine. Foods of the past promote health and wellness, and solve contemporary health problems, including diabetes.

### Native American Food Sovereignty

- A form of food justice.
- Food security.
- Environmental justice.
- Dependent on Traditional Ecological Knowledge (TEK).
- Communities can produce, grow, and harvest their own food and buy these foods from Native vendors and growers.
- This reconnects Native American communities to their land, community, and culture.

### The Magic Eight:

Corn Beans Squash Tomatoes  
Chiles Potatoes Vanilla Cacao

Foods that Native People gave to the world that didn't exist prior to 1492 outside of the Americas.



### Vision for the Future: New Native American Cuisine

- Foods that share components of the previous historic periods.
- Foods are combined or "fused" into a new Native American cuisine.
- Foods that are based on Native American Ancestral foods of the past.
- Foods that reclaim Native American health and wellness.
- Food as Medicine** for Indigenous well-being.
- Each Native community defines what foods are Indigenous to their specific bio-region.
- Understanding what foods are available to each community.
- Create a diet designed to fit individual community's needs that is healthy for their community members.



### Indigenous Partnerships

Short- and long-term reciprocal alliances between Indigenous groups, Native American tribes, communities, and organizations and other ethnic or Euro-American groups, organizations, institutions, and individuals where Indigenous agenda(s) take priority.

Melissa K. Nelson, PhD, an Indigenous Scholar and Professor, School of Sustainability, College of Global Futures, at Arizona State University 2020, and the Founding Executive Director/CEO 1993-2021, President Emerita, 2021

### Native Food for Life Online

- Six 1-hour lessons designed for Zoom or other online platforms.
- Features Native American dietitians, health educators, and chefs.
- Up-to-date evidence-based nutrition lessons.
- Plant-based cooking skills.
- "Challenge of the week" to try out healthy new habits.
- Training for trainers and health educators.
- With support from Sun Life Financial, no cost to organizations or participants!

To obtain a schedule and registration info, email [NativeFoodforLifeOnline@gmail.com](mailto:NativeFoodforLifeOnline@gmail.com).

### Key factors that explain higher rates of diabetes among Native Americans:

- Genetics have long been blamed but actually have a small role (Fig. 1).<sup>1</sup>
- Hunger/food insecurity is prevalent.
- Weight and obesity are more common.
- Government food assistance programs provided and continue to provide foods that are not traditional, such as blocks of cheese and powdered milk. Lard was provided until around 2010.

<sup>1</sup>Schultz, L. O., Bennett, P. H., Ravussin, E., Kido, K. K., Esparza, J., & Valencia, M. E. (2006). Effects of traditional and western environments on prevalence of type 2 diabetes in Pima Indians in Mexico and the U.S. Diabetes care, 29(9), 1866-1871.

### "Indian Taco" is an example of a government-issued dish

A Native American contemporary dish featuring frybread, meat (usually ground beef), beans, cheddar cheese, lettuce, tomato, and green chile.





# INDIGENOUS FOODS - HISTORY & FUTURE

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Courtesy of Lois Ellen Frank, Ph.D.



## **The Magic Eight:**

<b>Corn</b>	<b>Beans</b>	<b>Squash</b>	<b>Tomatoes</b>
<b>Chiles</b>	<b>Potatoes</b>	<b>Vanilla</b>	<b>Cacao</b>

Foods that Native People gave to the world that didn't exist prior to 1492 outside of the Americas.



Courtesy of Lois Ellen Frank, Ph.D.

## **Domesticated Crops –**

Including Corn, Beans, Squash, Chiles, Tomatoes, Potatoes, Cassava, and many others.

## **Wild Foods Included:**

**Wild Vegetables** – Including Carrots, Celery, Onions, Garlic, Turnips, all types of Salad Greens, Wild Spinach, Wild Mache Lettuce, Fiddlehead Ferns, Purslane Greens, a variety of root vegetables, all kinds of Cacti including Cholla Buds, Nopal Cactus leaves and Prickly Pear fruits, Saguaro Fruits and Seeds, Ocotillo Cactus, Agave, different types of Seaweed, Sea Beans, Wild Mushrooms, all types of Medicinal Plants and many more.

**All Types of Fruits** - Wild Strawberries, Wild Blackberries, Red and Blue Huckleberries, Blueberries, American Red Raspberry, Chokecherry, Wild Cherry, Wild Currents, Wild Grapes, Saguaro Cactus Fruits, Banana Yucca Fruits, Avocados, Bananas, Mangos, Coconuts, and many more.

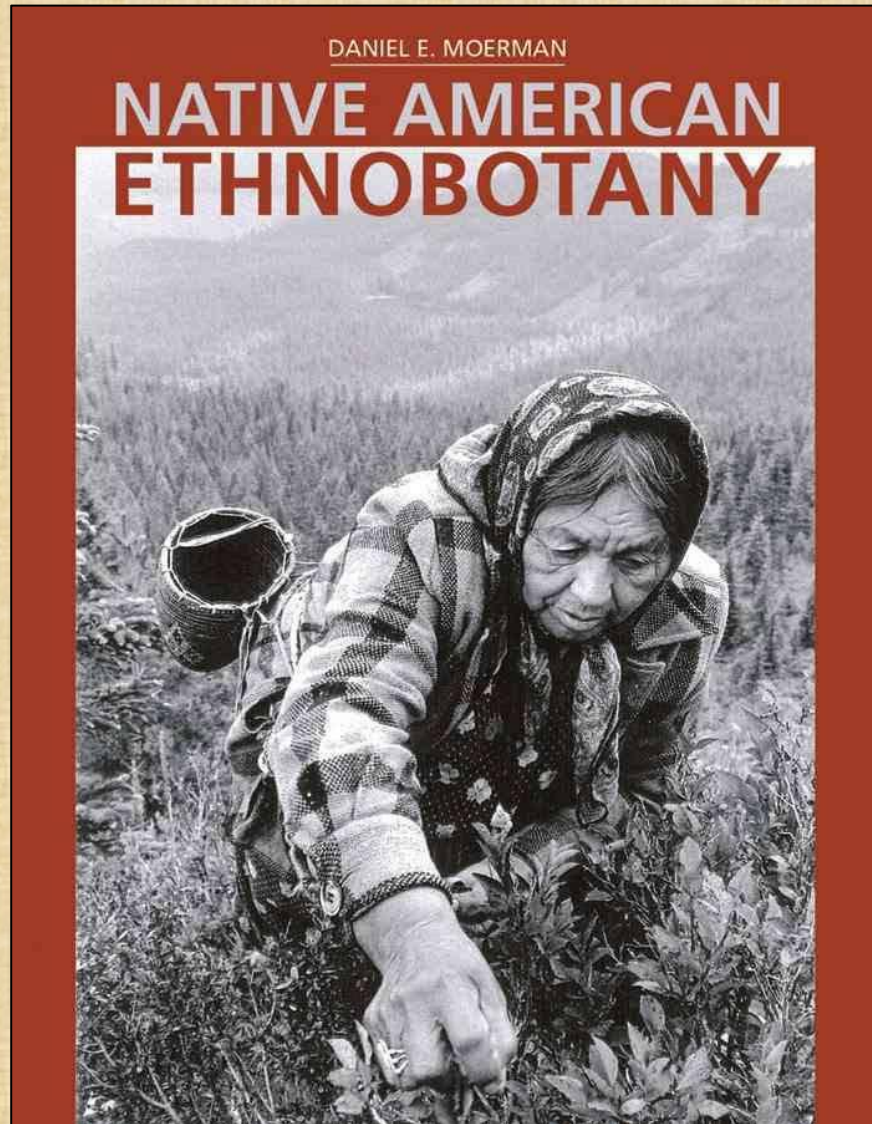
**Grains and Nuts** – Wild Rice, Sunflower Seeds, Piñon Nuts, Acorns, Pecans, Mesquite Beans, Cattails, Amaranth, Quinoa and many more.

**Medicinal Plants** – Arnica, Barberry, Chia, Common Mullin, Creosote Bush, Desert Sumac, Epazote, Four-o'clock, Globe Mallow, Golden Rabbitbrush, Horehound, Navajo Tea/Cota, Osha, Rocky Mountain Beeplant, Sagebrush Sand Verbena, Threeleaf Sumac, Wolfberry, Wormwood, and many more.

Courtesy of Lois Ellen Frank, Ph.D.



# NATIVE AMERICAN ETHNOBOTANY



Descriptions of Indigenous use of plants for food, medicine, fiber and dyes. Information is sorted by Tribe, by plant, and by use.

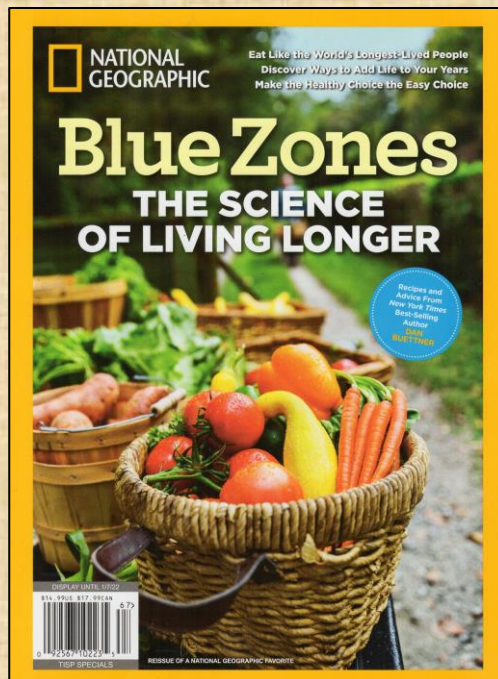
Database was digitized by the University of Michigan-Dearborn:

<http://naeb.brit.org/>



## NICOYA, COSTA RICA

### THE INDIGENOUS BLUE ZONE



## » TOP LONGEVITY FOODS *From Nicoya*

» **MAIZE NIXQUEZADO** Nicoyans make their own tortillas daily and eat them at breakfast, lunch, and dinner. They soak the corn in lime and water (calcium hydroxide) and then grind it into flour, which releases niacin locked up in the corn; increases the body's absorption of calcium, iron, and minerals; and reduces the risk of mold toxins.

» **SQUASH** Available in several varieties and called *ayote* or *calabaza* in Nicoya, these prolific hard-shelled squash are related to pumpkins and winter squash such as butternut, Hubbard, and spaghetti squash. All belong to the botanical family Cucurbitaceae, known for providing high levels of useful carotenoids.

» **PAPAYAS** Papaya trees grow almost like weeds in Nicoya, so people there eat this fruit, both green and ripe, almost every day. The papaya's rich orange flesh contains vitamins A, C, and E, plus papain, an enzyme that counters inflammation.

» **YAMS** A staple for at least the past century, Nicoya yams are botanically unrelated to North American sweet potatoes, although they are similar in appearance. They are, in fact, true yams. Their flesh is firm and white, even when cooked, and they are a rich source of vitamin B<sub>6</sub>.

» **BLACK BEANS** Nicoyans eat beans and rice every day, often at every meal. The black beans they depend on contain more antioxidants than any other

type of bean and are arguably the best in the world. Paired with corn tortillas and squash, they make the perfect food.

» **BANANAS** In all of their shapes and sizes—large and small, plantains, *cuadrados*—bananas are a rich source of carbohydrates, potassium, and soluble fiber. They are nearly a staple food in Nicoya. The sweet varieties are picked fresh, peeled, and eaten—the go-to snack. Some types, like the plantain, do not sweeten as they ripen. Instead, they are boiled or fried and served like a potato.

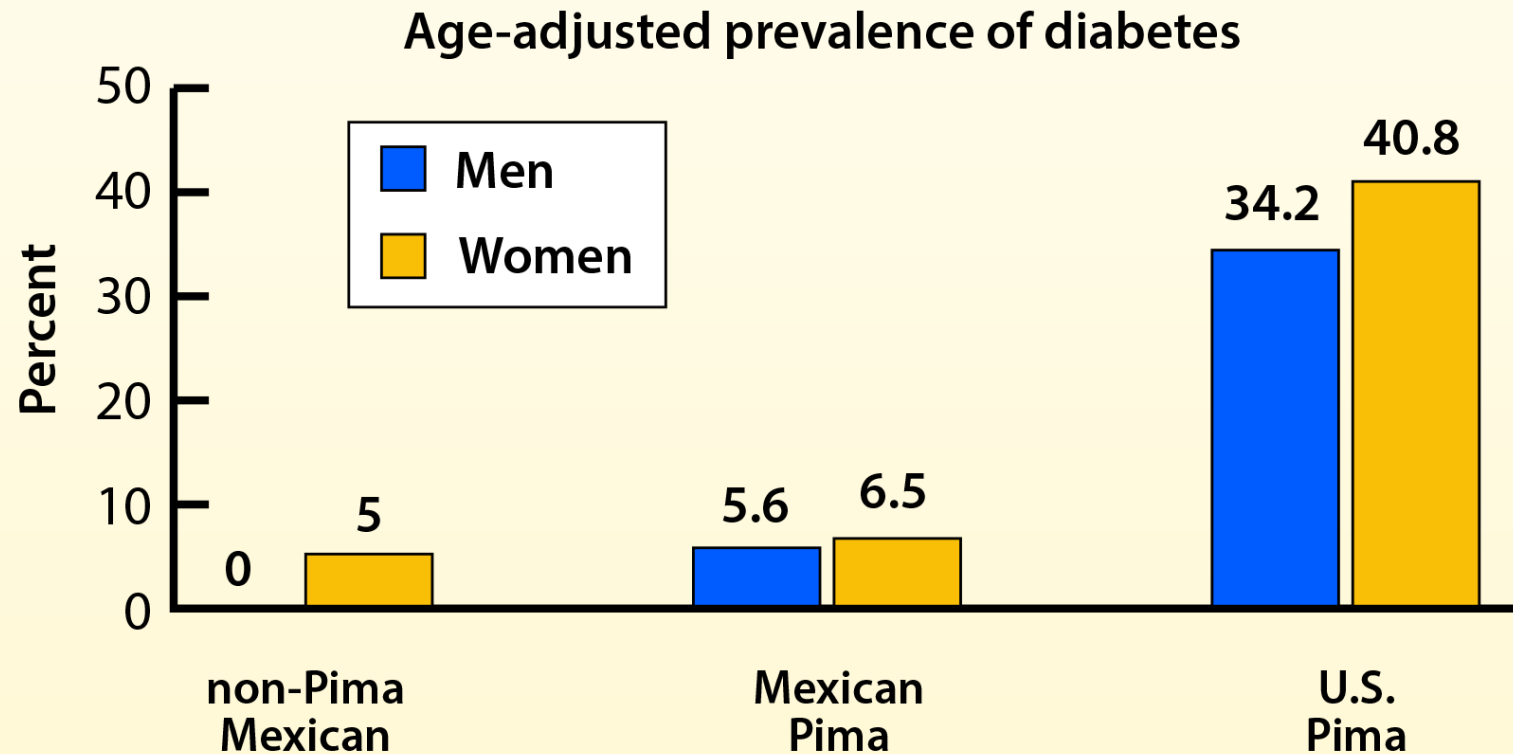
» **PEJIVALLS (PEACH PALMS)** Clusters of this small orange oval fruit dangle from palm trees. A staple food for Costa Rica's Indigenous people yet rarely sold in the United States, it is especially high in vitamins A and C. Traditionally the fruit is boiled for 10 minutes and served cold. It tastes like a cross between sweet potatoes and palm hearts.





# DIET MORE IMPORTANT THAN GENES

**Fig. 1: Pima in Mexico and U.S. have the same genes, very different rates of diabetes.<sup>1</sup>**



“Effect of Traditional and Western Environments on Prevalence of Type 2 Diabetes in Pima Indians in Mexico and the U.S.” (Schulz, L.O., et al.) *Diabetes Care*, Vol. 29, No. 8, August 2006.

# DIET CAN REVERSE OR PREVENT CHRONIC DISEASE

- More than 70% of chronic illnesses can be prevented or reversed with a whole food, plant-based dietary lifestyle.
- According to the CDC, 60% of Americans have at least one chronic illness such as heart disease, type 2 diabetes, obesity, auto-immune diseases and more.
- Despite these startling numbers, physicians receive less than 20 hours of nutrition education training during the entire course of their medical training.

<https://plantricianproject.org/>

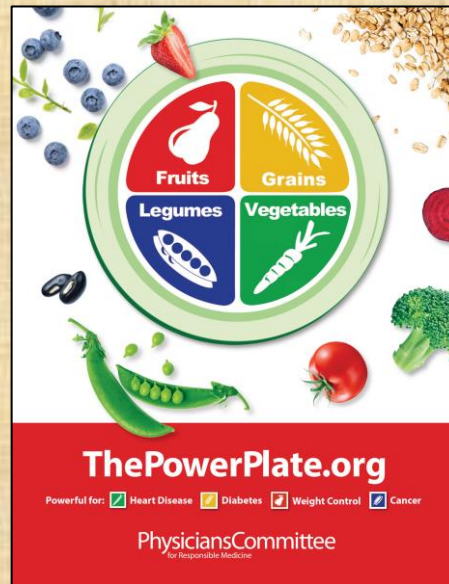




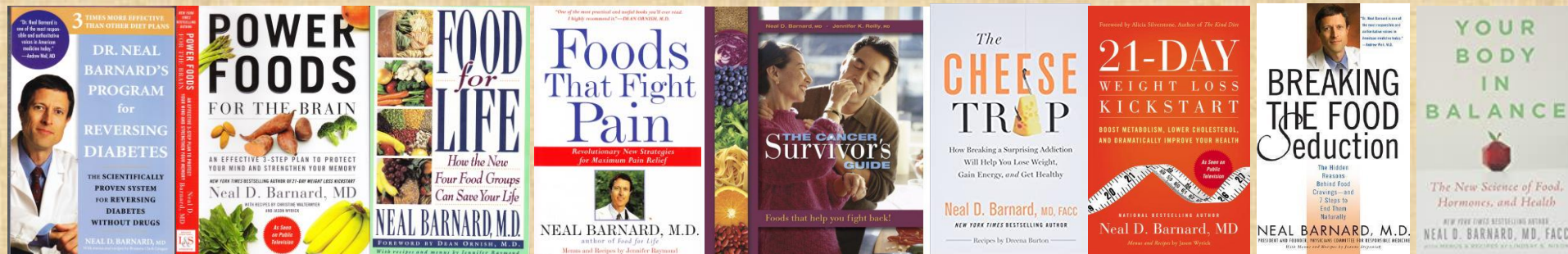
# Physicians Committee

for Responsible Medicine

<https://www.pcrm.org/>



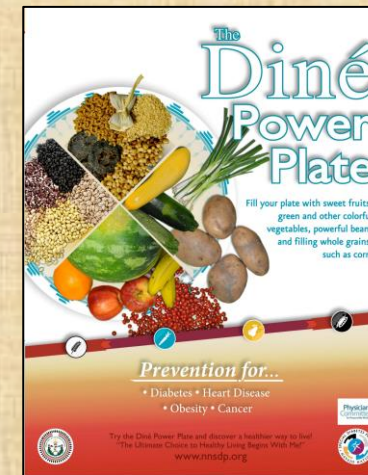
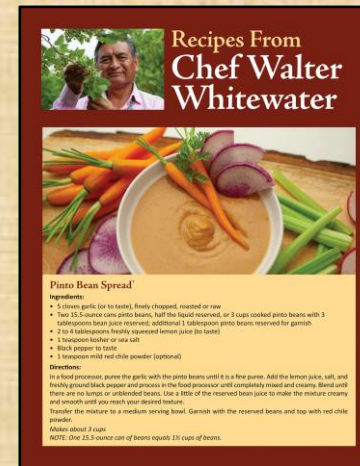
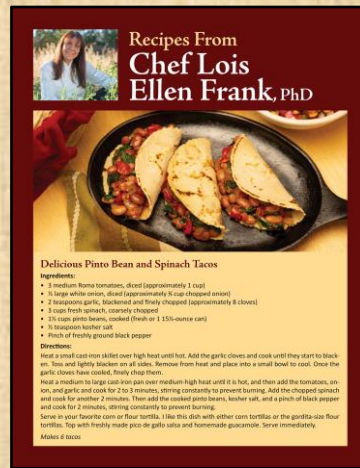
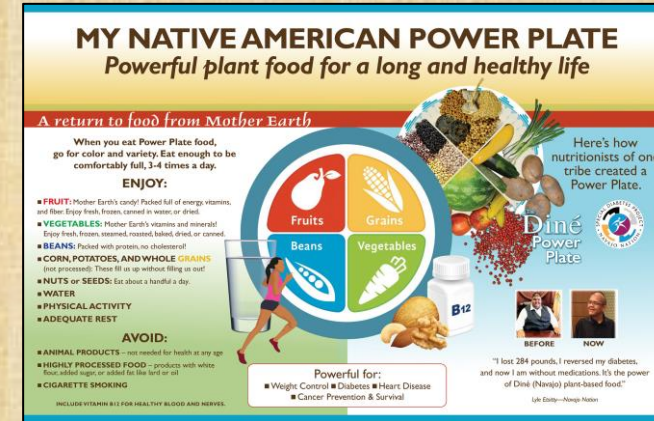
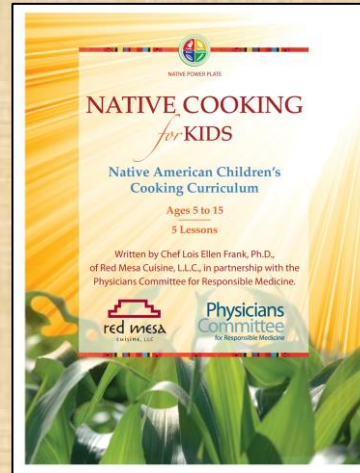
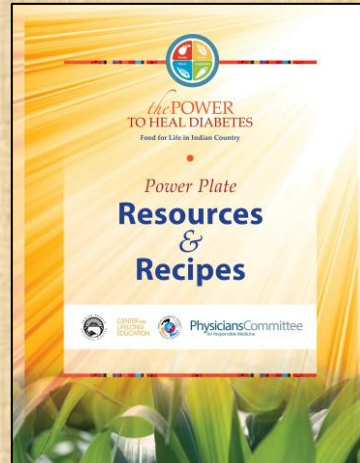
<https://www.youtube.com/watch?v=dxzSfiFz3fo>



<https://www.pcrm.org/good-nutrition/healthy-communities/native-american-resources>

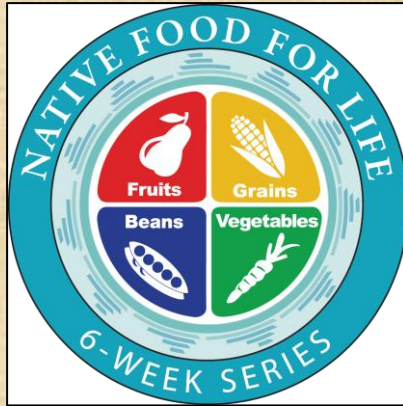


# PLANT-BASED RECIPES BY NATIVE CHEFS



<https://pcrm.widencollective.com/portals/cmngx13d/NativePowerPlate>

# NATIVE FOOD FOR LIFE ONLINE

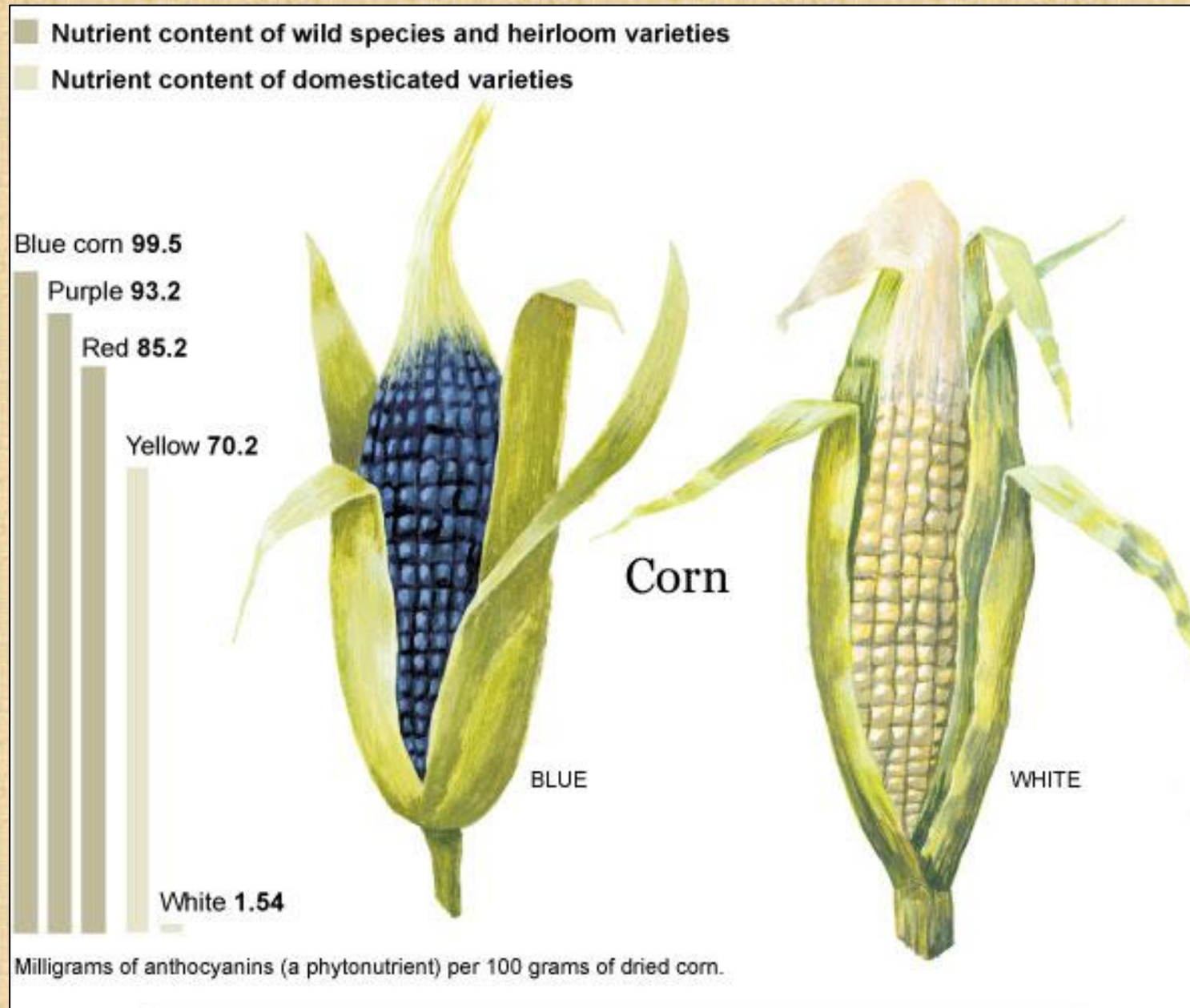


A free online six-class series teaching healthy, culturally relevant, plant-based eating habits for individuals, families, communities, and workplaces where people have or are at risk for type 2 diabetes, prediabetes, or gestational diabetes, and how plant-based nutrition can help prevent and reverse them. Participants gain knowledge, skills, and support to make and sustain significant dietary changes.

For information and scheduling contact: [nutrition@pcrm.org](mailto:nutrition@pcrm.org)



# LOST NUTRITION



After 400 generations of agriculture, we have bred the nutrition out of our food, in favor of starches and sugars.

*Eating on the Wild Side* (Robinson, J., 2013)





# Grow Your Own Native Food for Life!





# TEPARY BEANS - FOOD OF THE FUTURE?



- INDIGENOUS TO THE SOUTHWEST U.S.
- MOST DROUGHT-TOLERANT BEAN ON EARTH
- NUTRITIONAL POWERHOUSE
- EASY TO GROW & TASTE GREAT
- AVAILABLE AT:

RAMONA FARMS

<http://ramonafarms.com/>

NATIVE SEEDS SEARCH

<https://www.native-seeds.org/>



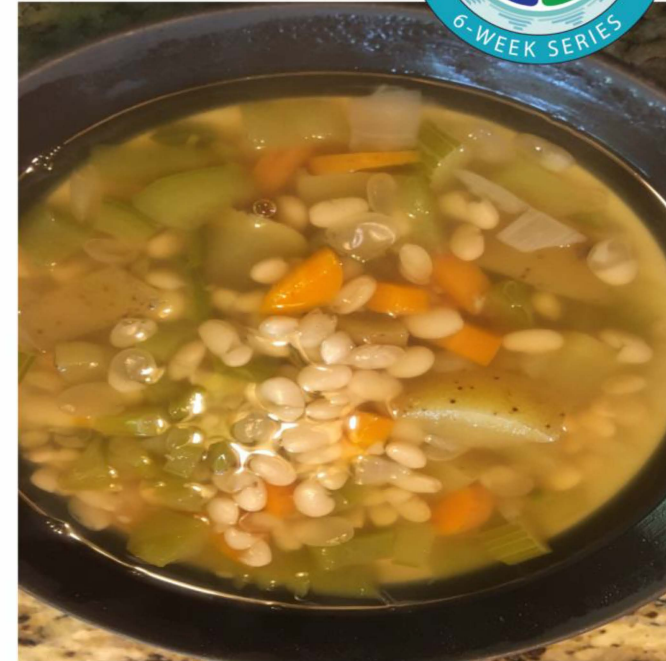
# White Tepary Bean Soup

Marc Anderson

*Serves 8*

### Ingredients

- |                                     |                               |
|-------------------------------------|-------------------------------|
| 1 pound (2 cups) white tepary beans | 1 Jalapeno pepper, chepped    |
| 1 medium onion, chopped             | 1 tablespoon ground cumin     |
| 2 cloves garlic, pressed or chopped | Water (see below)             |
| 3 carrots, chopped                  | 2 cups cholla buds (optional) |
| 4 celery stalks, chopped            |                               |
| 2 bell peppers, chopped             |                               |
| 1 potato, chopped                   |                               |



### Directions

1. Soak beans for at least 8 hours.
2. Place rinsed beans in a large soup pot and cover them with 4 inches of water. Bring to a boil, skimming off foam from the surface. Cover, reduce heat to low, and simmer for 2-3 hours.
3. Add remaining ingredients and stir gently. Add more water if necessary. Bring to a simmer, cover and cook on low heat for 40 minutes.

### Notes

1. Allow 10 minutes after pressing/chopping garlic before heating. (Maximizes its health benefits).
2. Cannellini beans work well as a substitute in this soup.
3. Use 4 cups of rinsed and drained canned beans in place of 2 cups dried beans.
4. Can use cooked asparagus tips and lemon juice as a garnish.



# CHEMOPREVENTIVE VEGETABLES

- In a Canadian study, 34 vegetable extracts were applied to 8 cancer cell lines (stomach, pancreas, breast, prostate, lung, kidney, medulloblastoma, glioblastoma);
- Extracts from cruciferous vegetables (Brussel sprout, cabbage, cauliflower, kale, broccoli) and alliums (onion, garlic, scallion, leek) inhibited proliferation of all tested cancer cell lines;
- Garlic was by far the strongest inhibitor of tumor cell proliferation; and
- Anti-proliferative effect of vegetables was specific to cells of cancerous origin and found to be largely independent of their antioxidant properties.

(Bolvin, D., et al., "Antiproliferative and Antioxidant Activities of Common Vegetables: A Comparative Study." *Food Chemistry*, Vol. 112, Issue 2, January 15, 2009, pg. 374-380.)

**NO SOIL? - NO PROBLEM**



# URBAN FOOD ORGANIZATIONS

Food Tank:

<https://foodtank.com/news/2021/12/organizations-transforming-food-systems/>

<https://foodtank.com/news/2020/02/24-organizations-finding-food-justice/>

Dreaming Out Loud (<https://dreamingoutloud.org/>)

FIG (<https://www.fig-nyc.org/>)

Harlem Grown (<https://www.harlemgrown.org/>)

Hunter College NYC Food Policy Center (<https://nycfoodpolicy.org/>)

Urban Farming (<https://www.urbanfarming.org/>)

The Urban Garden Initiative (<https://www.theurbangardeninitiative.org/>)

Food Sovereignty Alliance:

(<http://usfoodsovereigntyalliance.org/member-organizations/>)



# HOMEMADE AEROPONIC GARDEN



- 18 cells in a 4' section of 4" fence post, mounted on swivel pedestal into an 8-gallon bucket.
- Roots suspended in air (no soil) with nutrient solution flowing onto them (aquarium pump & timer).
- Use outdoors (patio, porch, balcony, fire escape, roof) or indoors with proper lighting.
- Plants grow fast without soil, can harvest some in 4-6 weeks, with low water use.
- Begin with seeds in rock wool, or wash soil off nursery starts and insert into cells.



# AEROPONIC PRODUCE



*Hood Strawberry*



*Swiss Chard*



*Bok Choy*



*Spinach*



*Purslane*



*Amaranth*



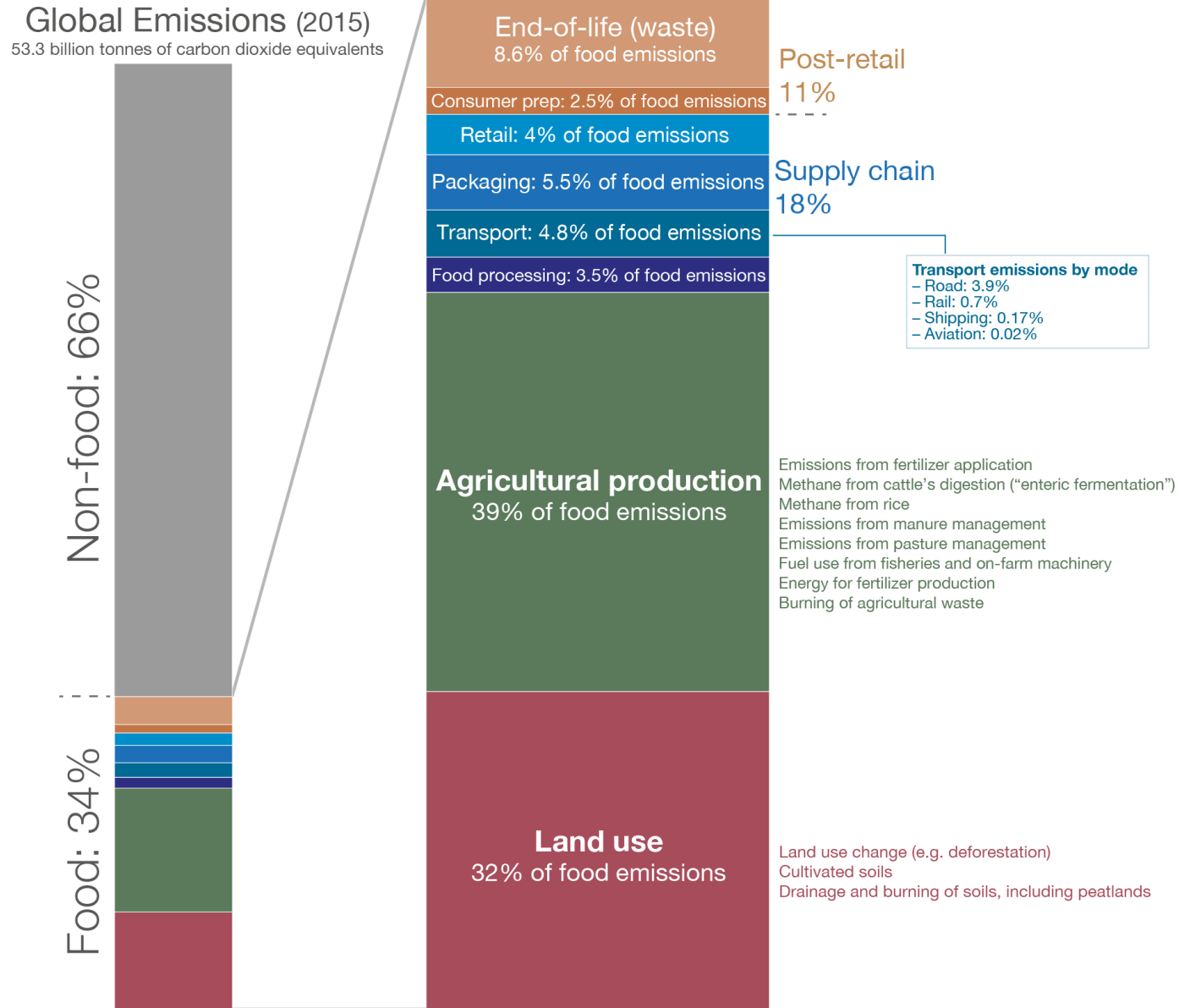
*Habanero Pepper*



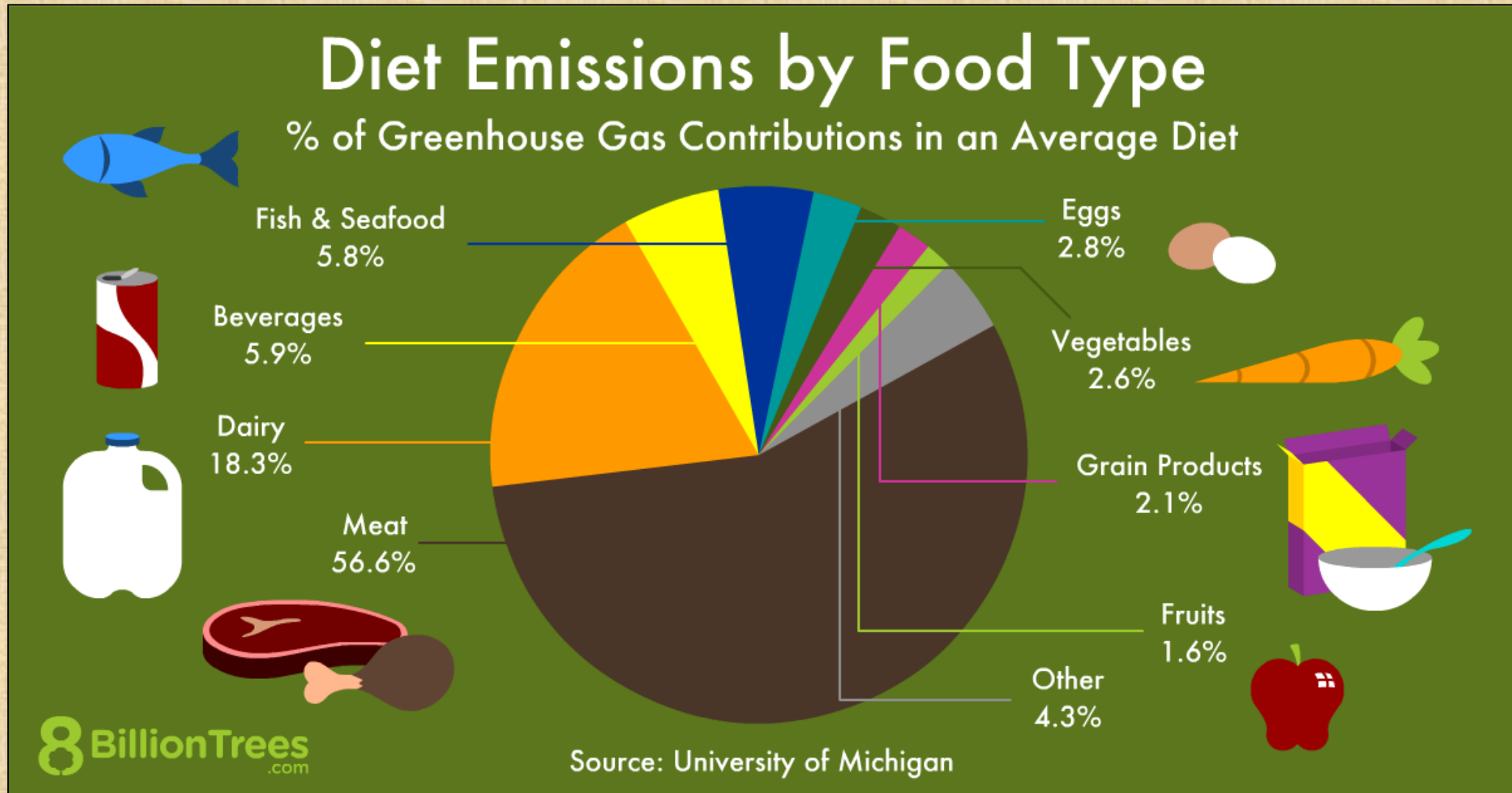
*Cucumber*



# One-third of global greenhouse gas emissions come from food systems



**ANIMAL PRODUCTS = 83.5% OF DIETARY GHG EMISSIONS**





# Transfarmation



**Transfarmation** = The repurposing of a concentrated animal feeding operation (CAFO) to help create a sustainable and compassionate plant-based food system.

Mission: To help farmers transition their industrial animal-agriculture operations to plant-focused farms raising crops for human consumption.

Farmers have used Transfarmation to convert from poultry, cattle and hog farming to growing organic vegetables, hemp, mushrooms, herbs, and flowers.

<https://thetransfarmationproject.org/>

# INDIGENOUS LAND TENURE BUILDS RESILIENCE

- Pacific Northwest forests managed by Indigenous peoples 150 years ago are still distinct from surrounding forests (more species, more diversity of plant foods, more animal/insect pollinators, larger seeds, more ecosystem functional diversity).
- Forest gardens featured an open canopy of small fruit and nut trees, understory of berry plants, and floor of herbaceous plants of ethnobotanical importance (10 indicator species).
- Results similar in Mexico, Belize, and Brazil, demonstrating that Indigenous land tenure legacy is long-persisting, high functional diversity and high species diversity.
- Studies demonstrate that Indigenous legal rights and autonomy need to be secured.

Armstrong, C. et al., 2021. "Historical Indigenous Land-Use Explains Plant Functional Trait Diversity." *Ecology and Society* 26(2):6.  
<https://doi.org/10.5751/ES-12322-260206>

Benzeev, R. et al., 2022. "Formalizing Tenure of Indigenous Lands Improved Forest Outcomes in the Atlantic Forest of Brazil." *PNAS Nexus* 2, 1-8. <https://academic.oup.com/pnasnexus/article/2/1/pgac287/7005261>



# Food Sovereignty – Healthier Foods, Cultural Practices and Food Security



Our work is centered on healing  
and consists of Doing *and* Being

*Jacque Salomon, Founder*





*I want to recognize with great honor and gratitude the privilege of living, working, and playing on the ancestral home of the Akimel O'odham and Piipaash people.*

## A co-created presentation



*Running Deer (Marina Thomas)  
Indigenous Life Advisor*



*Jacque Salomon, Founder*



## **Vision**

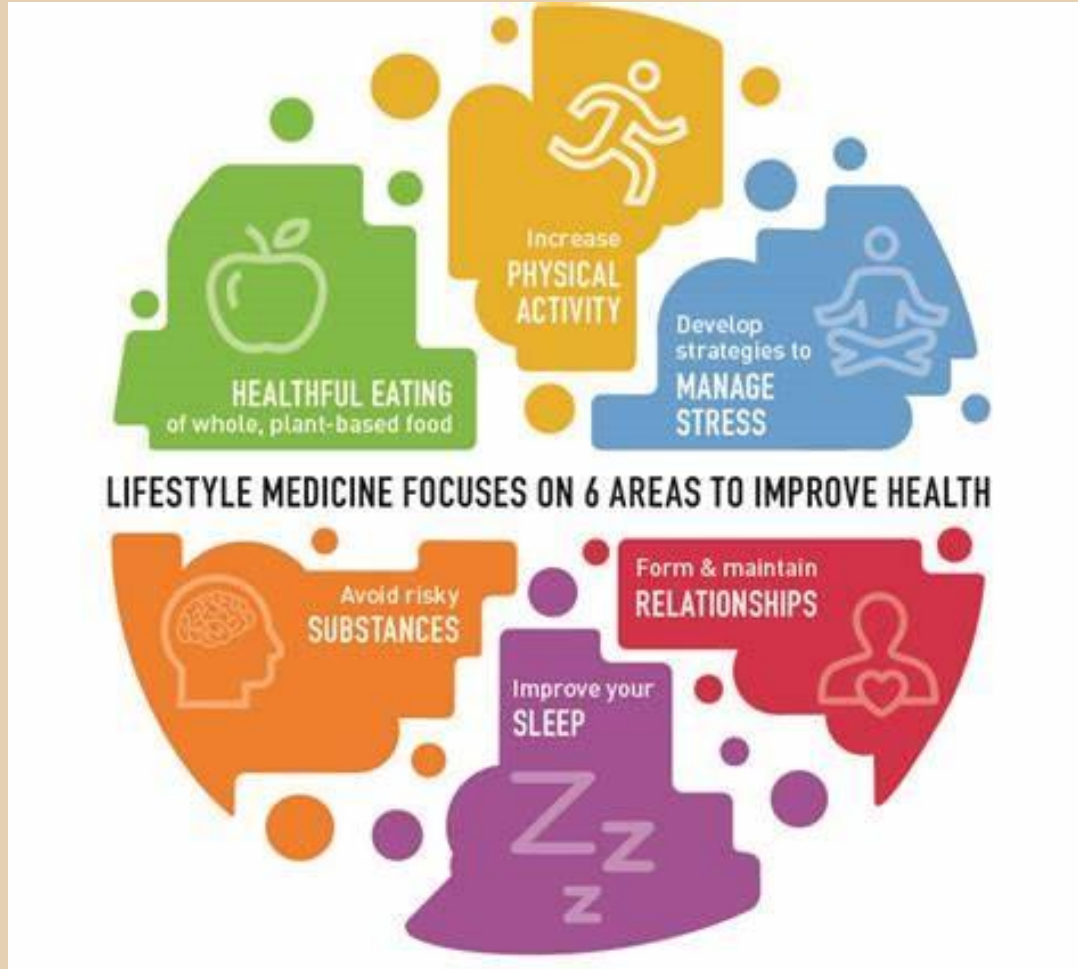
*Collaborative anchor institutions cultivating healthy mutually beneficial networks of health and wellness from within communities.*

## **Mission**

*As part of a global social justice education movement, we work to dismantle health inequity and foster cultural healing in historically marginalized communities through the Pillars of Lifestyle Medicine and a Trauma-Informed lens.*



# Trauma-Informed Lifestyle Medicine



*An Integrative Intervention to Dismantle Health Inequity through the Six Pillars of Lifestyle Medicine*

1. Whole-food, plant-predominant eating pattern
2. Physical activity
3. Restorative sleep
4. Stress management
5. Avoidance of risky substances
6. Positive social connections

# Growing Our Own Food *IS* Multidimensional Healing

LOAR Culture  
Event,  
September 2021,  
Gila River  
Reservation



# Growing Food for Physical Health

Food *IS* Medicine for the Whole







**Forty percent of the American Indian population is obese, and 18% have diabetes.**

**Among American Indian tribes, Pima Indians have the highest incidence rates of diabetes in the world.**

*Yracheta, J. M., Lanaspá, M. A., Le, M. T., Abdelmalak, M. F., Alfonso, J., Sánchez-Lozada, L. G., & Johnson, R. J. (2015). Diabetes and Kidney Disease in American Indians: Potential Role of Sugar-Sweetened Beverages. Mayo Clinic Proceedings, 90(6), 813–823. <https://doi.org/10.1016/j.mayocp.2015.03.018>*

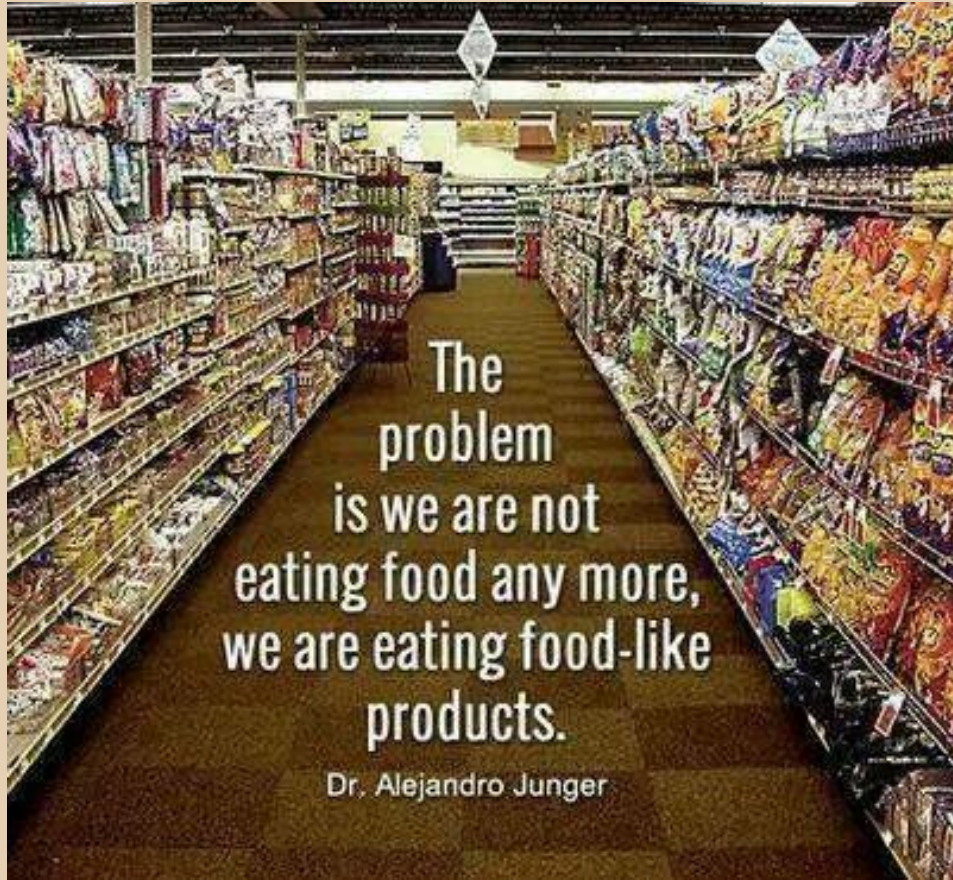
**Native Americans experienced disproportionately high rates of deaths from COVID-19 due to poverty, crowded housing, high rates of chronic disease, employment in frontline jobs, and limited access to quality health care.**

*Goldman, N., & Andrasfay, T. (2022). Life expectancy loss among Native Americans during the COVID-19 pandemic. Demographic Research, 47, 233–246.  
<https://doi.org/10.4054/demres.2022.47.9>*





SEEDS TO INSPIRE  
FOUNDATION



*“SNAP participants are **WORSE OFF** in terms of diet related diseases. If your’re on SNAP you’re more likely to be **OBESE** and **SUFFER** and **DIE** from almost **EVERY SINGLE DIET RELATED DISEASE**. The majority of SNAP money is going to buy **ANIMAL PRODUCTS** or **JUNK FOOD**.”*

[Leung CW, Willett WC, Ding EL. Low-income Supplemental Nutrition Assistance Program participation is related to adiposity and metabolic risk factors. Am J Clin Nutr. 2012 Jan;95(1):17-24. doi: 10.3945/ajcn.111.012294. Epub 2011 Dec 14. PMID: 22170370; PMCID: PMC3238460.]

[Zach Conrad, Colin D. Rehm, Parke Wilde, Dariush Mozaffarian, “Cardiometabolic Mortality by Supplemental Nutrition Assistance Program Participation and Eligibility in the United States”, American Journal of Public Health 107, no. 3 (March 1, 2017): pp. 466-474.]

[Zhang FF, Liu J, Rehm CD, Wilde P, Mande JR, Mozaffarian D. Trends and Disparities in Diet Quality Among US Adults by Supplemental Nutrition Assistance Program Participation Status. JAMA Netw Open. 2018;1(2):e180237. doi:10.1001/jamanetworkopen.2018.0237]



# “Food” in our Home





# My own personal healing journey



After adopting Whole Plant Nutrition and psycho-spiritual remediation, I was able to...

## **Arrest & Reverse Food Borne, Chronic, Lifestyle Diseases**

- Type 2 Diabetes
- Hypertension w/ Arrhythmia
- Obesity - 164 lb weight loss

And more...

- Acid Reflux (GERD)
- Restless Leg Syndrome
- Chronic Insomnia
- Somatic Disorder/PNES
- Depression
- Generalized Anxiety Disorder



# Growing Food for Mental Health

Food *IS* Medicine for the Whole



Kids gathered in the orchard at Rez Family farms in Salt River



*“A friend of mine once suggested that one of the things that Indian People have never really had is a kind of way to overcome the sorrow of conquest... the sorrow of being conquered...I think a lot of the alcoholism has to do with looking around in a world in which your people are still oppressed.”*

– Jack Forbes, PhD



*“Not why the addiction  
but why the pain.”*

– Gabor Maté, MD





**Trauma has profound implications for mental and physical health. Historical trauma can create health inequities centuries later.**

The impact of historical trauma on American Indian Health Equity (no date) Medical News Today. MediLexicon International. Available at: <https://www.medicalnewstoday.com/articles/the-impact-of-historical-trauma-on-american-indian-health-equity> (Accessed: January 19, 2023).





*“Funding goes to hospitals and treatment centers. Nothing preventative. Nothing culturally healing. Nothing addressing the TRAUMA of colonization on a population. This is the greatest wound.”*

— Running Deer, Onk Akimel O’odham

*The tissue of the body has  
become a living expression  
of trauma*



*- Heidi Hanson*

# Trauma

is singular, continual and/or  
continuous events that  
overwhelm the central nervous  
system rendering the Being  
incapable of coping in the  
moment.



# Trauma lives in the body

When you heal trauma, you heal the nervous system. When you heal the nervous system, you heal the emotional body. When you heal the emotional body, you heal the psychic (empathic) body. When you heal psychic body, you heal vibration. Once the vibration is healed, realities change.

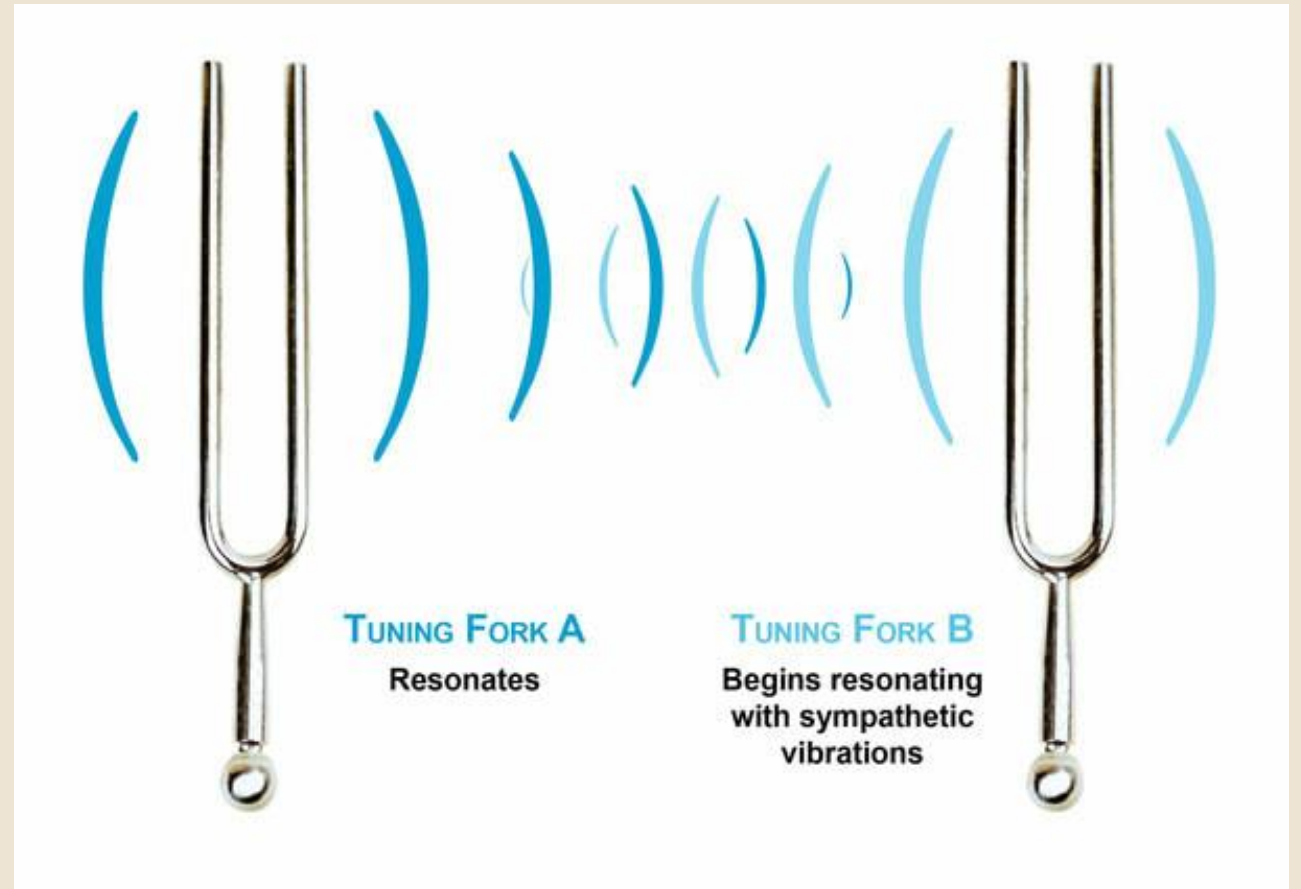






*ReMembering our  
Humanity and  
ReConnecting with our  
Spiritual nature by being  
in the garden.*

Nature  
Is a  
Symphony  
and the Universe  
is Vibration.  
We are Energy,  
Frequency,  
Vibration.



# The Evidence

- Forest Medicine/  
Forest Bathing
- Nature Therapy/  
Ecotherapy/  
EcoPsychology
- Neuroacoustics/  
Psychoacoustics/  
Vibroacoustics
- Cymatics



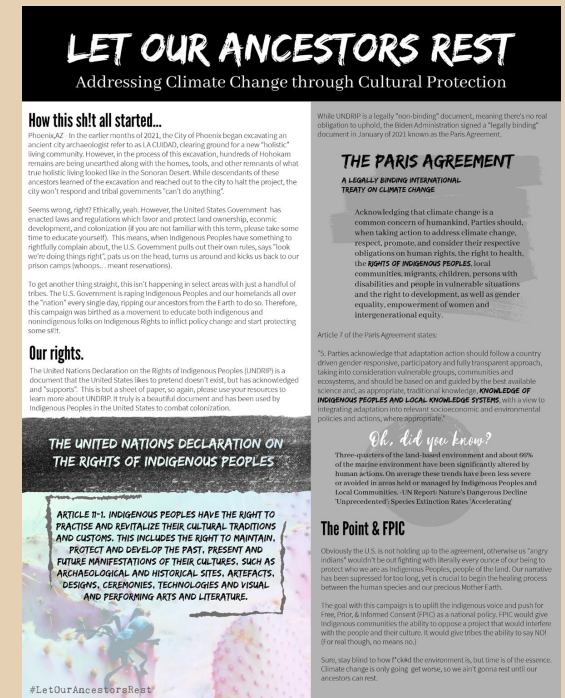


# Growing Food for Planetary Health

Food *IS* Medicine for the Whole



# Community Partners





# LET OUR ANCESTORS REST

Addressing Climate Change through Cultural Protection

## How this sh!t all started...

Phoenix AZ - In the earlier months of 2021, the City of Phoenix began excavating an ancient city archaeologist refer to as LA CUIDAD, clearing ground for a new "holistic" living community. However, in the process of this excavation, hundreds of Hohokam remains are being unearthed along with the homes, tools, and other remnants of what true holistic living looked like in the Sonoran Desert. While descendants of these ancestors learned of the excavation and reached out to the city to halt the project, the city won't respond and tribal governments "can't do anything".

Seems wrong, right? Ethically, yeah. However, the United States Government has enacted laws and regulations which favor and protect land ownership, economic development, and colonization (if you are not familiar with this term, please take some time to educate yourself). This means, when Indigenous Peoples have something to rightfully complain about, the U.S. Government pulls out their own rules, says "look we're doing things right", pats us on the head, turns us around and kicks us back to our prison camps (whoops... meant reservations).

To get another thing straight, this isn't happening in select areas with just a handful of tribes. The U.S. Government is raping Indigenous Peoples and our homelands all over the "nation" every single day, ripping our ancestors from the Earth to do so. Therefore, this campaign was birthed as a movement to educate both indigenous and nonindigenous folks on Indigenous Rights to inflict policy change and start protecting some sh!t.

## Our rights.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) is a document that the United States likes to pretend doesn't exist, but has acknowledged and "supports". This is but a sheet of paper, so again, please use your resources to learn more about UNDRIP. It truly is a beautiful document and has been used by Indigenous Peoples in the United States to combat colonization.

## THE UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES

ARTICLE 11-1. INDIGENOUS PEOPLES HAVE THE RIGHT TO PRACTISE AND REVITALIZE THEIR CULTURAL TRADITIONS AND CUSTOMS. THIS INCLUDES THE RIGHT TO MAINTAIN, PROTECT AND DEVELOP THE PAST, PRESENT AND FUTURE MANIFESTATIONS OF THEIR CULTURES, SUCH AS ARCHAEOLOGICAL AND HISTORICAL SITES, ARTEFACTS, DESIGNS, CEREMONIES, TECHNOLOGIES AND VISUAL AND PERFORMING ARTS AND LITERATURE.

#LetOurAncestorsRest

While UNDRIP is a legally "non-binding" document, meaning there's no real obligation to uphold, the Biden Administration signed a "legally binding" document in January of 2021 known as the Paris Agreement.

## THE PARIS AGREEMENT

A LEGALLY BINDING INTERNATIONAL TREATY ON CLIMATE CHANGE

Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote, and consider their respective obligations on human rights, the right to health, the **RIGHTS OF INDIGENOUS PEOPLES**, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.

Article 7 of the Paris Agreement states:

"5. Parties acknowledge that adaptation action should follow a country driven gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional knowledge, **KNOWLEDGE OF INDIGENOUS PEOPLES AND LOCAL KNOWLEDGE SYSTEMS**, with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions, where appropriate."

*Oh, did you know?*

Three-quarters of the land-based environment and about 66% of the marine environment have been significantly altered by human actions. On average these trends have been less severe or avoided in areas held or managed by Indigenous Peoples and Local Communities. -UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'

## The Point & FPIC

Obviously the U.S. is not holding up to the agreement, otherwise us "angry indians" wouldn't be out fighting with literally every ounce of our being to protect who we are as Indigenous Peoples, people of the land. Our narrative has been suppressed for too long, yet is crucial to begin the healing process between the human species and our precious Mother Earth.

The goal with this campaign is to uplift the indigenous voice and push for Free, Prior, & Informed Consent (FPIC) as a national policy. FPIC would give Indigenous communities the ability to oppose a project that would interfere with the people and their culture. It would give tribes the ability to say NO! (for real though, no means no.)

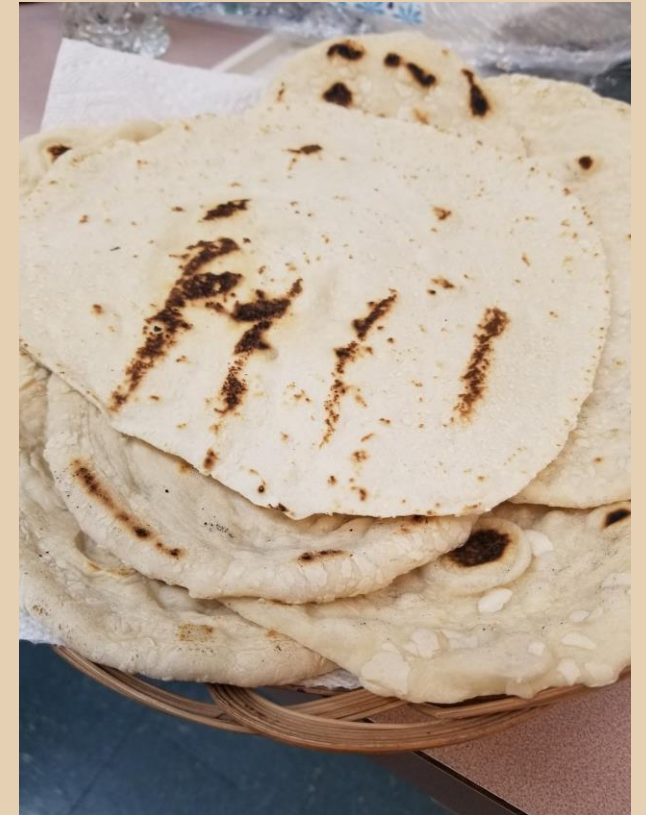
Sure, stay blind to how f\*ck!d the environment is, but time is of the essence. Climate change is only going to get worse, so we ain't gonna rest until our ancestors can rest.

# Community Partner Founder, Running Deer



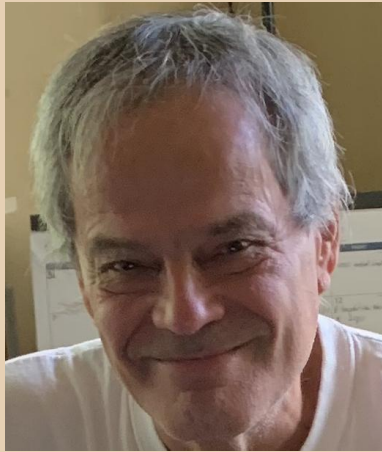


# Community Partner





# Community Partner



Facilitated by Marc  
Anderson, CE

Board-Certified  
Lifestyle Medicine  
Healthcare  
Professional &  
Advanced Alcohol  
and Drug Counselor





# Community Partner





# My Role is to Help Heal Minds

Genes load the gun...



and Lifestyle pulls the trigger



To find out more about our work you can visit us at:

<http://www.seedstoinspire.org>

<https://www.instagram.com/seedstoinspire/>

<https://www.linkedin.com/in/jacque-salomon-116096155/>

<https://www.facebook.com/Jacque.Salomon/>



# Questions and Answers Period

- **Evaluation:** <https://forms.gle/yiFrzz192WVRw2g8>



# Contacts

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