

The Intertribal Agriculture Council

About Us: Founded in 1987, the IAC is a national 501c3 that supports all 574 federally recognized Native American Tribes and Alaska Native Villages.

Our Mission: To to pursue and promote the conservation, development and use of our agricultural resources for the betterment of our people.

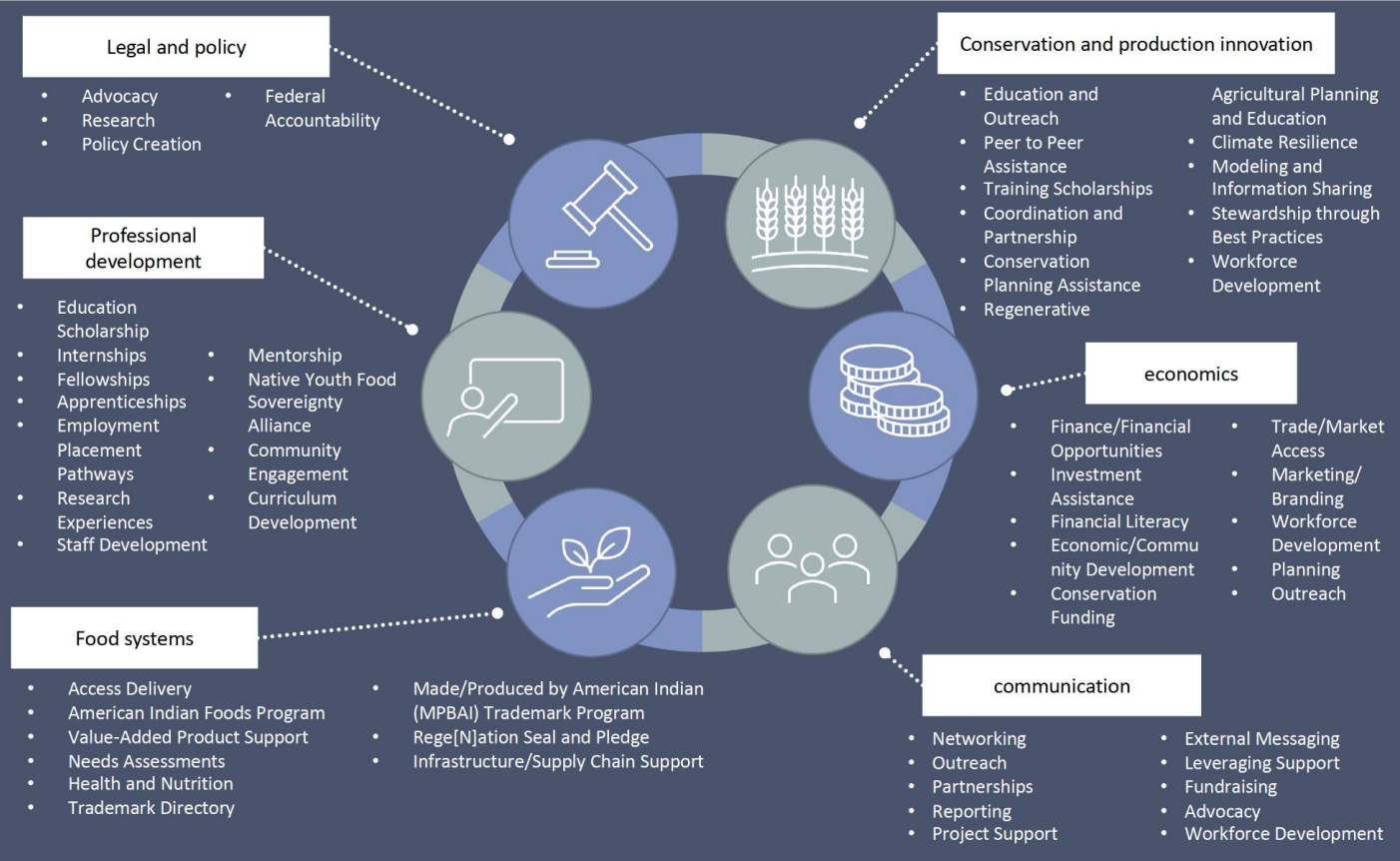


IAC Origins



IAC Charter Convention: 1987

The Intertribal Agriculture Council Mission: To pursue and promote the conservation, development and use of our agricultural resources for the betterment of our people.



IAC Stats:

IAC programming addresses all major components of the food system and includes the Natural Resources and Conservation program, American Indian Foods program, American Indian Trademark, and an evolving Youth Professional Development program.



Over **80,000 producers** and the community members they serve directly benefit from IAC Programming.

- IAC's countless examples of programmatic efficacy include (annually):
 - Provision of direct outreach and assistance to between **12,000-15,000 producers and Tribal contacts annually**;
 - facilitation of major regional **events and a national conference**;
 - The generation of over **30 million of dollars** in domestic and international sales for Tribal producers;
 - Building badly needed infrastructure in Indian Country for processing and distributing food;
 - Accomplishing conservation goals over **millions of acres of land**;
 - Fundamentally shaping federal policy through the Farm Bill and other major legislation to include underrepresented producers.

Policy & Government Relations

- Advocacy for 2023 Farm Bill priorities through Native Farm Bill Coalition (NFBC)
 - Over 250+ members including more than 200 Tribal Nations
 - Resulted in 63 Tribal-specific provisions
- Research through our partners at the Indigenous Food & Agriculture Initiative
 - Legal & programmatic
- Policy Creation through our connections on the Hill and with other organizations
 - Ensuring that Tribal priorities are included
- Federal Accountability by responding to Requests for Information & sending letters of support for legislation

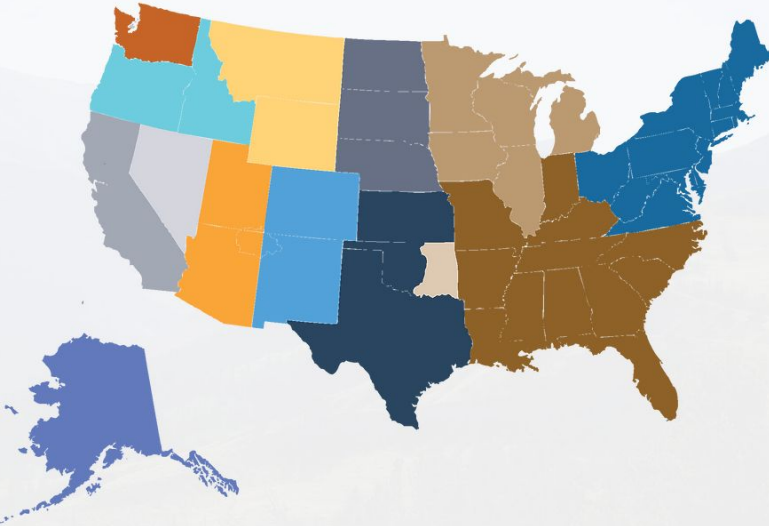


IAC TA Network Regions



REGIONS

- ALASKA
- EASTERN - OK
- GREAT PLAINS
- GREAT LAKES
- NORTHEAST
- NORTHWEST - OR/ID
- NORTHWEST - WA
- PACIFIC - CA
- PACIFIC - NV
- ROCKY MOUNTAIN
- SOUTHEAST
- SOUTHERN PLAINS
- SOUTHWEST
- WESTERN



- USDA Technical Assistance, Tribal outreach, and resource identification for individual Tribal producers
- Tribal food sovereignty initiative support
- Tribal representation on state and national level agriculture related initiatives
- On-the-ground coordination with all IAC programs to support producer engagement
- Native youth in food and agriculture mentoring and leadership development

IAC TA Initiative: Meat and Poultry Processing Technical Assistance

In March 2022, AMS identified IAC as one of six organizations to provide MPPTA.



What does the MPPTA Offer?

- Access to technical experts from across industry, academia and state and federal government.
- Focused content for diverse stakeholders, including family-owned, rural, minority-owned, Native American and Tribal-owned businesses, and other underserved entities seeking to build or expand meat and poultry processing and supply chain capacity.
- General assistance with navigating USDA grant application and award processes, and successful post-award grant management
- One-one-one advising, including project and proposal reviews tailored to the specific needs of diverse stakeholders, from small and very small processors and new enterprise startups to organizations developing regional concepts and established mid-sized processing companies.
- Educational resources, events, and webinars covering topics of interest for meat and poultry processing enterprises of all types.

Note: The MPPTA Program *does not* offer or provide contractor services or financial capital. It does not offer grant writing or project management services, nor does the voluntary use of MPPTA guarantee the success of a grant application or the grant-funded project.

American Indian Foods

The American Indian Foods program is designed to work with American Indian and Alaskan Native owned businesses to provide export education and technical assistance in order to facilitate access into domestic and international markets. www.indianagfoods.org



- Export Program
- Native Food Connection
- 'Made/Produced by American Indians' Trademark



Natural Resources & Regen Agriculture



- Coordination with USDA-Natural Resources Conservation Service to improve access to conservation planning, technical assistance, management resources, and useful land stewardship tools.
- Empower producers through trainings, resources, and direct and tailored assistance to improve the sustainability, health and profitability of their operation's resources.

Natural Resources & Regen Agriculture

- Working to assist with regenerative agricultural practices/ conservation planning
- Climate change adaptation and mitigation assistance
- Youth programing and internships
- Outreach and education
- Healthy soils outreach
- Producer advice
- Water quality assistance
- Traditional Ecological Knowledge (TEK) connections



Regenerative Economies

- One-on-one consultation with:
 - Tribal producers
 - Food and agriculture businesses
 - Industry stakeholders

Understanding details of operations, current barriers & issues, and furthering economically viable end goals.

Specialized services include financial analyses, identifying credit solutions, financial literacy training, balance sheet support, building operating cost tables, domestic and international marketing cost-benefit analyses for planning purposes, creating Agri-Business Financial Toolkits, individualized economic research and market analysis (domestic and international markets), USDA intermediacy and mediation support, and general business planning and wellness analysis.



Rege[N]ation Seal & Pledge`



The Rege[N]ation seal complements the IAC's established American Indian Foods (AIF) "Made/Produced by American Indians" certification trademark and identifies Native American and Alaskan Native agriculturalists -- from farmers, ranchers to harvesters and foragers, who pledge to:

- work in tandem with my animals, land, water, and crops to develop a mutually beneficial relationship with them in-tune with the environment and self.
- have a genuine connection with the ecosystem and the citizens of my Tribal, local, and global community that promotes its greater wellbeing.
- promote the renewal of ancient, Native-led wisdom in my agricultural endeavors that returns us to the type of practices that have been regenerative in nature for generations to come.



Rege[N]ation

Youth and Professional Development



- Direct support from high school through career placement
- Pipeline Programming:
YOUTH SUMMITS > PROJECTS > INTERNSHIPS >
FELLOWSHIPS > APPRENTICESHIPS > LEVERAGING
IAC NETWORK/PARTNERSHIPS FOR CAREER
PLACEMENT

Climate Smart Agriculture - Understanding Natural Resources



- <https://www.youtube.com/watch?v=M7JPKpO1g2s> (HE SAPAW video by Kelsey)
- H: Humans
- E: Energy
- S: Soil
- A: Animals (both domestic and wildlife)
- P: Plants
- A: Air (top soil loss is a huge contributor to PM 2.5 and PM 10 air pollution as well as losing nutrients and organic matter needed to sustain life, keeping soil cover is so important in protecting this top soil)
- W: Water
- And there is an E and an F that is left out of the official government literature- ecosystem, and fire the importance of full ecosystem function

Some Climate Change Impacts

- Impacts on traditional foods, ceremonies, and lifeways
- Rising average temperatures, rising ocean temperatures, and sea level rise
- Less predictable weather impacting life in general and food production in particular
- Ocean acidification (and this impacts all ocean life and is most notably being seen with shellfish and then through the food chain as a result)
- Reduction in pollinators/ pollinator host plants
- Loss of both indicator and keystone species
- Trophic food chain collapse with keystone species loss



The Soil Food Web

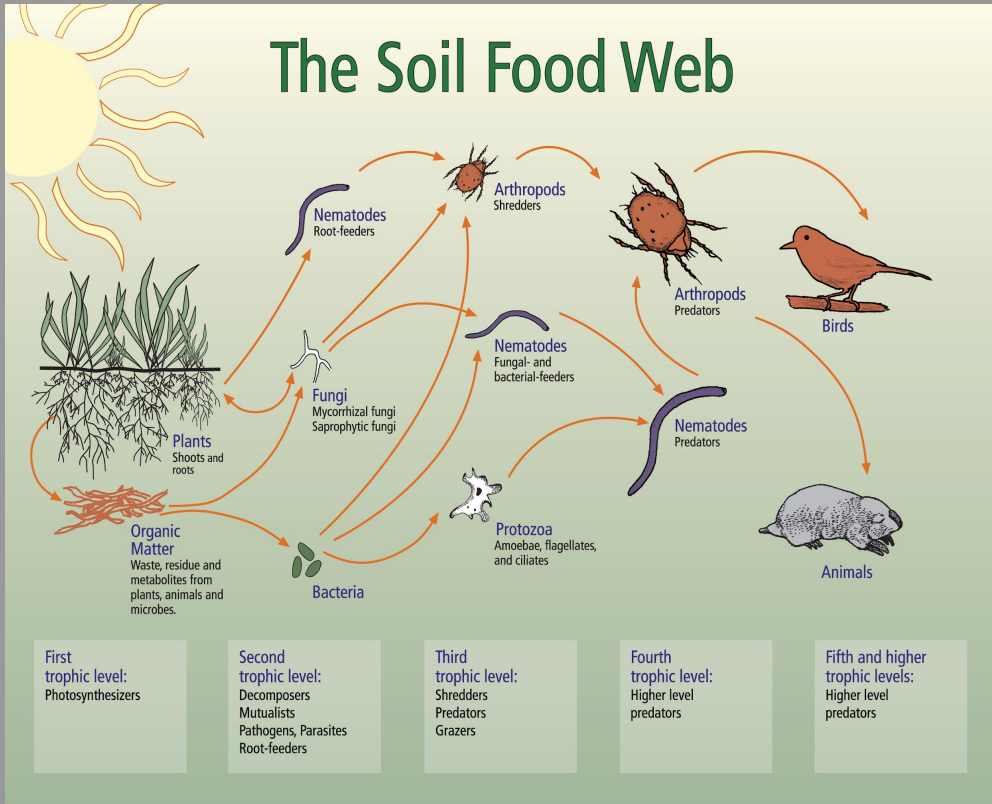
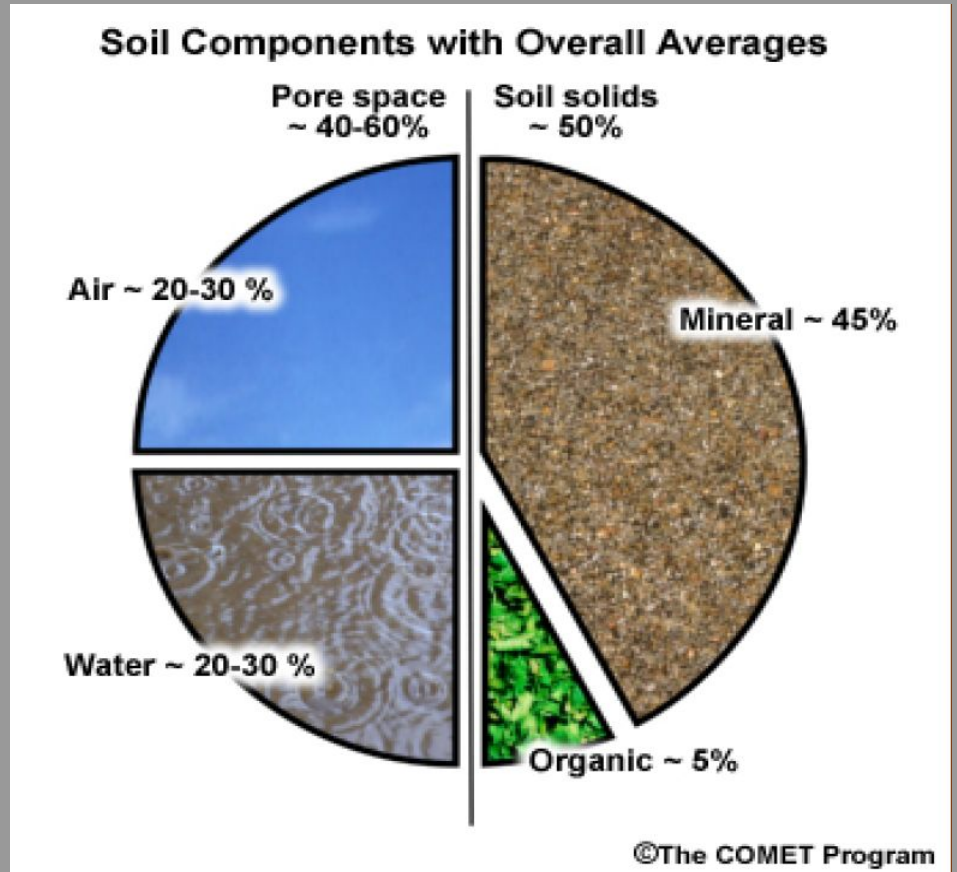


Image from USDA NRCS

Soil Makeup

Soil Components



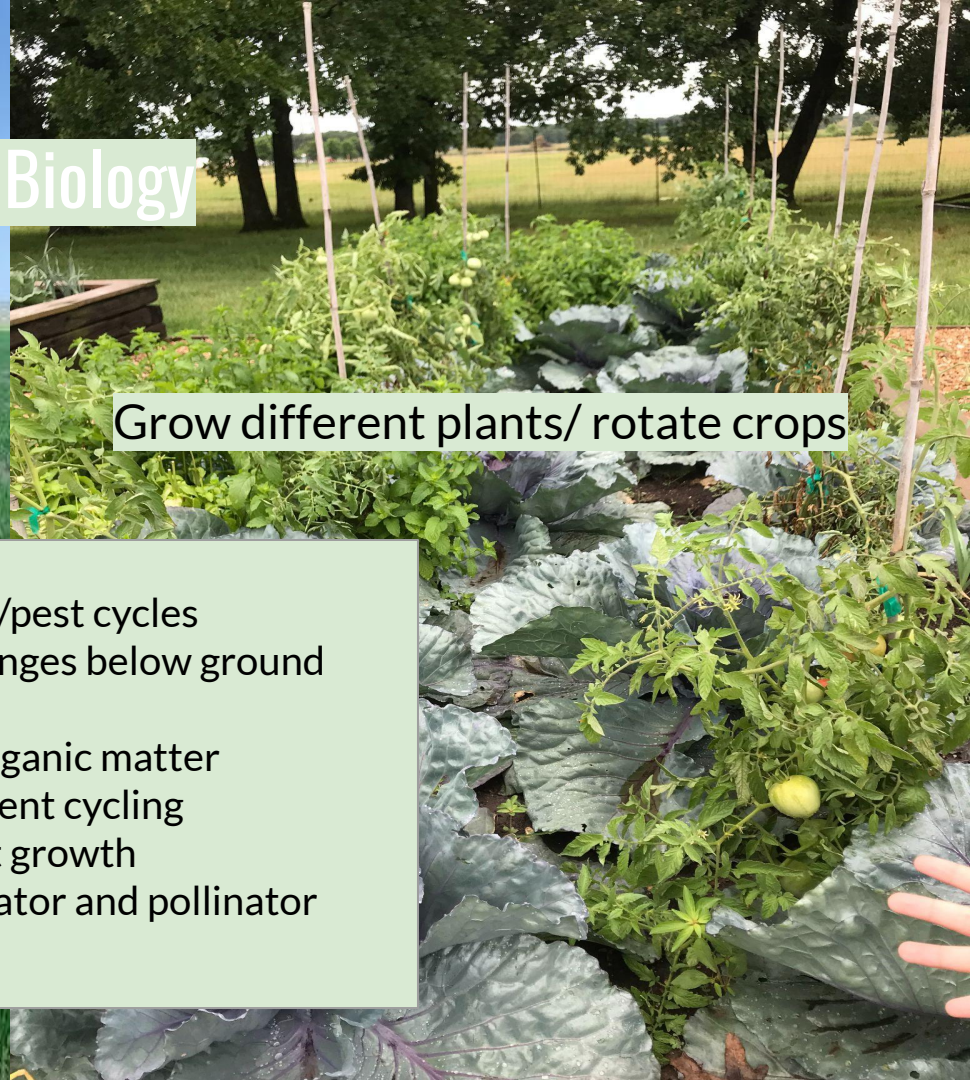


Feeding the Soil Biology

Keep living roots in the ground year round

Grow different plants/ rotate crops

- Breaks disease/pest cycles
- Stimulates/changes below ground biodiversity
- Increase soil organic matter
- Increases nutrient cycling
- Enhances plant growth
- Increases predator and pollinator populations





**Support
productive
plants and
livestock**

**Drought
resilient**

**Are stable
and resist
upon
erosion**

**Are
efficient at
cycling
nutrients
internally**

**Regulate
soil temp.
and assist
in climate
resilience**

Healthy Soils

**Support
healthy
and
diverse
biomes**

**Store
Carbon**

**Store
water for
future
plant use**

**Drain well
to avoid
drowning
plant roots**

**Resist pests,
pathogens,
and disease**

**Help plants
grow during
'stressful'
events**



Collapsed Soils

Compaction = hydrophobic soil and drought/ flood cycle

Encourage pests, pathogens, and disease

Restrict water infiltration

When soil is compacted microbes can't breathe and water can't get in

Increased soil temperatures

Doesn't allow for infiltration and causes run off

Store less water for future plant use

Struggle to support plants and livestock

Increased climate change impacts

Drain poorly often drowning plant roots

Erode more easily from wind and water

Help plants die during 'stressful' events



Tend to Reduce Soil Health

Aggressive Tillage

Annual/seasonal fallow

Mono-cropping

Annual Crops

Excessive inorganic fertilizer use

Excessive crop residue removal

Broad spectrum fumigants/pesticides

Broad spectrum herbicides

Reduced organic matter and soil armor

Photo Credit USDA NRCS



Tend to Promote Soil Health

No-till or conservation tillage

Cover crops; Relay crops

Diverse crop rotations

Perennial crops

Organic fertilizer use (manures)

Crop residue retention

Integrated pest management

Weed control by mulching, cultivation

Promotion of soil biome

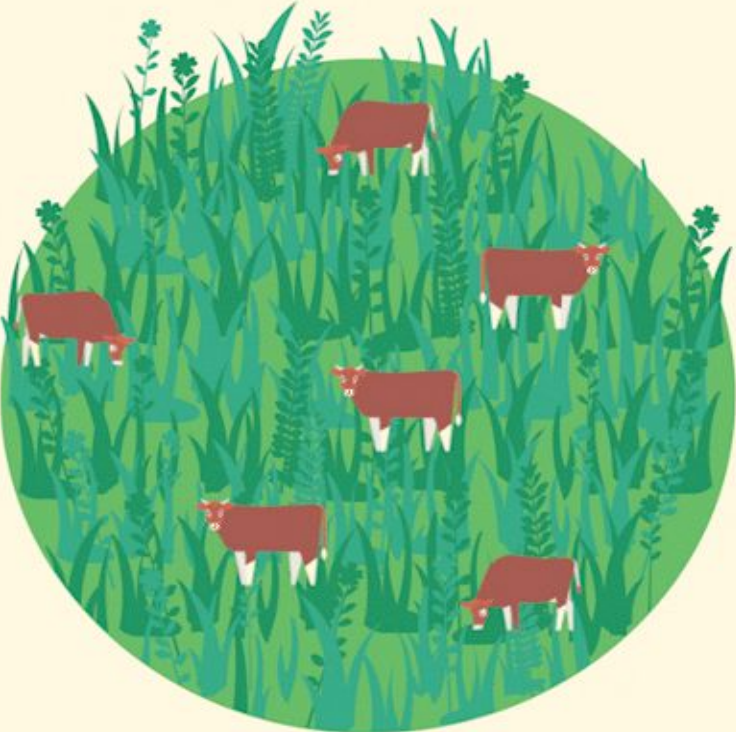


Regenerative Grazing and Mimicking of Nature

- When animals grazed in nature they were in herds with the safety in numbers
- We hunted these animals and followed them contributing to their movements and grouping
- When herding large groups each area is grazed intensively for a short period of time and the animals move on to another area giving a long rest period to each spot.
- When we added cows to the environment they are more diffuse grazers that pick out certain plants and overgraze them while under grazing others. Selective overgrazing goes for areas too they will hang out by water and more desirable areas until they degrade them.
- Regenerative grazing is managing domesticated animals so that they graze in a manner similar to natural herd movement with rotational higher density grazing



Conventional grazing



Regenerative grazing



Continuous vs Rotational

How to protect your water quantity while practicing agriculture



- Slow the water cycle
- Use regenerative practices to increase the water holding capacity and filtration properties of your soil
- Improve your riparian habitat
- Increase irrigation and use efficiency
- Improve water storage to collect more during times of more precipitation
- Do not discourage beavers in natural waterways where they are native
- Reduce run off
- Reduce erosion (both wind and water erosion)





Dealing with Arid Climates and Drought

- Increase organic matter in the soil
- Slow the water cycle and keep as much water on the land as possible
- Look for areas where there is wind erosion/ evaporation protection
- Take advantage of higher altitudes where possible that have more precipitation
- Look for areas where water will pool and flow naturally
- Using organic matter and rock mulch instead of covering all of the soil with vegetation
- Plant deeper
- Use heirloom varieties bred for the climate



Some Things You Can Do Easily to Check on Your Soil Health

- Soil aggregate test (Slake Test)
- Infiltration test- want 1 inch to infiltrate in no more than 12.5 minutes
- Brix testing with refractometer measures the sugars in your plants. You want a Brix degree of more than 12 for grasses, more than 14 for legumes, and more than 16 for alfalfa
- Test for Compaction
- Look for Organic Matter/ Carbon
- Look for soil armor
- Look for living roots and rhizosheath
- Look at plants for signs of nutrient deficiency
- Soil temperature
- Dig a hole



Checking your soil health from above ground

- Look for dung beetles when you have animals, they bury $\frac{2}{3}$ of the fecal matter in the soil, they are a good sign
- Look for oxidized fecal matter. If it is oxidized then your soil biome is not functioning.
- Look for oxidized grass and plant matter, if there is too much oxidized matter on the ground there is not enough life to break it down.
- You should have some level of green year round in your vegetation
- Health issues in plants and livestock are indicative of a soil health issue and imbalance in nutrients so observe closely



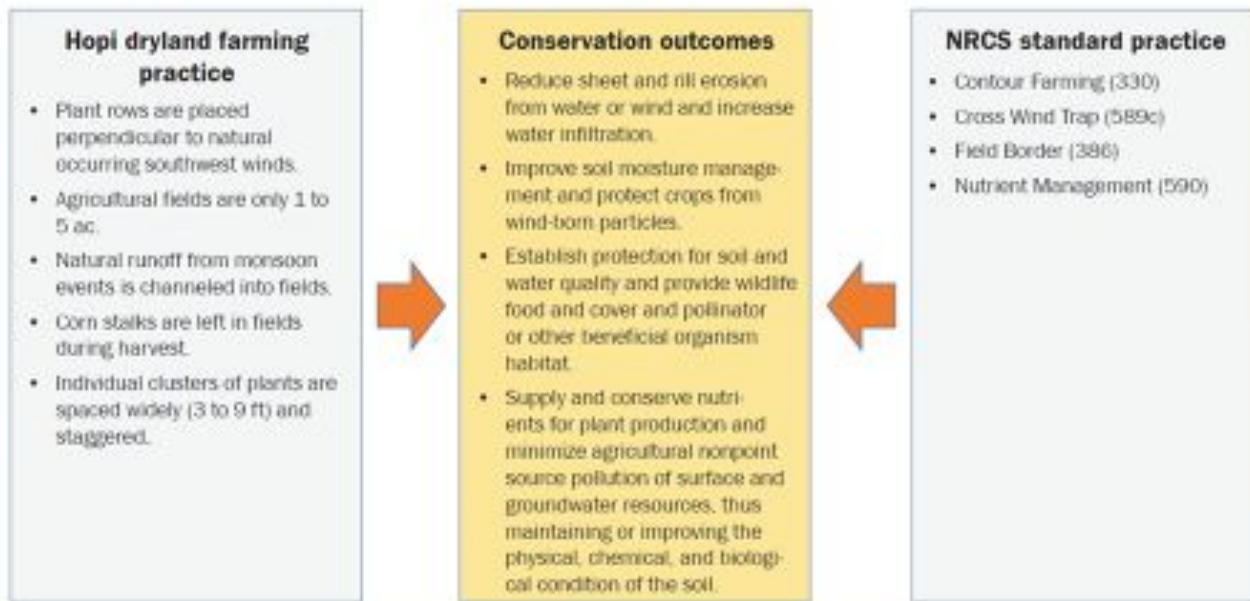
Indigenous Agricultural Knowledge is Suited to the Environment and Needs to be More Incorporated



This is one brief example of how traditional methods compare to NRCS standard practices. This article goes far more in depth on this than there is time for in this presentation and is an excellent reference to read.

Figure 3

A comparative analysis of outcomes from Hopi dryland farming practices and USDA Natural Resources Conservation Service standard practices.



Online Resources for Tribal Producers and Tribes

- Mighty Networks: Online curriculum curated by IAC Staff with workshops on: **Intro. to Regenerative Agriculture, Developing a Tribal Cooperative, Grant Writing 101, and Farming 101 etc. (Click for Link)**
 - Sign Up: https://intertribal-agriculture-council.mn.co/share/P6EclsnpGwZBUh13?utm_source=manual
- Youtube: Hours of content from previous conferences, webinars, and presentations
- IAC Newsletter: Sign up for weekly updates and policy briefs!
- Social Media: Follow us on Facebook and Instagram

SAVE THE DATE

April
25-26,
2023

INTERTRIBAL AGRICULTURE COUNCIL
TECHNICAL ASSISTANCE NETWORK

2023 SOUTHWEST Spring Conference

Registration &
Exhibitor Setup: 8 AM
Event: 9 AM - 3 PM

Santa Claran Resort & Casino
460 N Riverside Dr, Espanola, NM 87532

SCAN TO REGISTER



Attendance for this event is free. Registration will be capped at the first 60 attendees. Lodging is available at \$99.00 per night at the Santa Claran Hotel under the SW IAC Room Block.

Please register at bit.ly/3lz70q8 or by scanning the QR code.
For further assistance contact Desbah Padilla at
(505) 377-0342 or desbah@indianag.org.



indianag.org

Thank you!



www.indianag.org

Some Resources

- For more information on soil science and agriculture some of the people I suggest looking up on YouTube and reading their books are:
- Nicole Masters
- Dr. Elaine Ingham
- Alejandro Carrillo
- Gabe Brown
- Ray Archuleta
- Dr. Christine Jones
- Allan Savory
- Didi Pershouse
- Fred Provenza

This is not an exhaustive list and is in no particular order, but is a good starting point for easy to digest further information. There are also a lot of resources on USDA NRCS websites, extension service websites, and a number of non profit organization. I am happy to direct you to more resources.