

Soil amendments are natural or man-made materials added to soil to improve its physical or chemcial properties. They help:

- Increase water retention in dry soils
- Improve soil structure and porosity
- Add essential nutrients for plant growth
- Restores depleted soils affected by drought or overuse.

## Types of Amendements:

- Organic: Compost, Manure, Cover Crops, Biochar
- Mineral: Gypsum, Lime, Rock Phosphate
- Biological: Mycorrhizal fungi, Microbial inoculants.

TIP: ALWAYS TEST YOUR SOIL FIRST TO DETERMINE WHICH AMENDMENTS YOU NEED.

TIP: BEST DONE BEFORE PLANTING IN SPRING OR AFTER HARVEST IN FALL.







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## SOIL AMENDMENTS FOR A STRONGER FUTURE

NAVAJO NATION CLIMATE RESILIENCE & FOOD SOVEREIGNTY





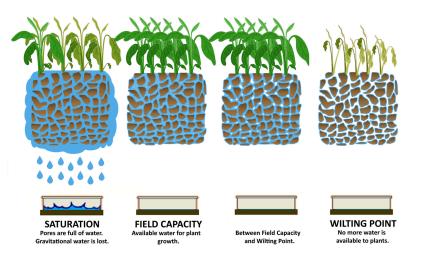
## BENEFITS FOR THE NAVAJO NATION:

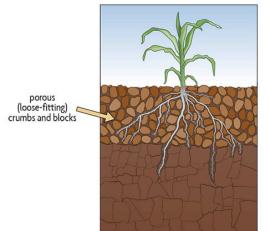
- <u>Food Sovereignty:</u>
   Wealthier soils lead to more productive gardens and local food systems, reducing reliance on imported food.
- <u>Mater Efficiency:</u> Improved soils hold water better-critical in arid and drought-prone regions like the Southwest.
- <u>Resilience:</u> Organic matter helps sequester carbon and buffer crops against temperature extremes.
- \*\*Cultural Connection: Revitalizing traditional farming practices and connecting with ancestral knowledge about land stewardship.

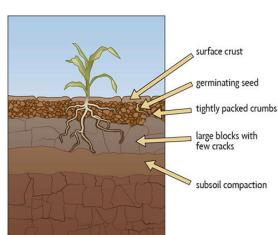


## **HOW TO APPLY SOIL AMENDEMENTS:**

- 1. Test your soil
  - a. use a soil test kit or send a sample to a lab to identify pH, Nutrients, and textures.
- 2. Choose the Right Amendments:
  - a. Sandy soils: Add compost or aged manure to boost organic matter,
  - b. Clay soils: Use gypsum or organic matter to improve drainage.
  - c. Alkaline soils (Common on Navajo Land): Add elemental sulfur or composted pine needles to lower pH.
- 3. Apply and Mix:
  - a. Spread a 1-3 inch layer of compost or amendment over soil.
  - b. Use shovel or rototiller to mix it into the top 6-8 inches (don't till to deep)
  - c. Water thoroughly to activate biological processes.
- 4. Repeat Annually or Seasonally







a) good soil structure

b) compacted soil