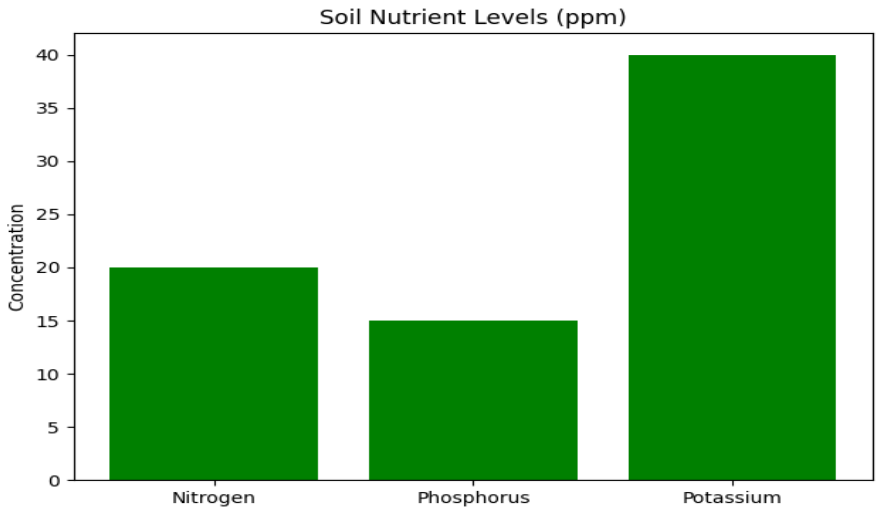
FarmMatrix Advanced Soil Health Report

Date: May 28, 2025



Soil Health Report

Sample Date: [Insert Date Here]
Sample Location: [Insert Location Here]

Parameter Analysis & Interpretation:

Parameter	Value	Interpretation
pH	6.8	Slightly acidic. This pH is generally suitable for most crops, but some prefer slightly high
Nitrogen (ppm)	20	Low. Nitrogen is crucial for vegetative growth. This level indicates a deficiency and
Phosphorus (ppm)	15	Low. Phosphorus is essential for root development and flowering/fruiting. Simila
Potassium (ppm)	40	Moderate. While not deficient, levels could be improved to enhance stress toleranc
Organic Carbon (%)	0.9	Low. Indicates poor soil structure, low water holding capacity, and limited nutrie
EC (dS/m)	1.0	Low. Suggests low salinity, which is positive. However, this doesn't necessarily refle
Moisture (%)	18	Moderate. Within a range suitable for many crops, but irrigation might be needed de
Temperature (°C)	27	Warm, favorable for most plant growth.

Ideal Crop Recommendations:

Given the current soil conditions, crops that tolerate slightly acidic conditions and are relatively less demanding

* **Legumes:** These plants fix atmospheric nitrogen, improving soil nitrogen content over time (e.g., beans, p
* **Cover Crops:** Fast-growing plants like rye, oats, or vetch will improve soil structure, suppress weeds, and
* **Vegetables with moderate nutrient demands:** Leafy greens like spinach and kale have a moderate nutrient

Fertilizer & Treatment Guidance:

Organic Approach:

* **Compost:** Applying a generous amount of well-rotted compost (at least 5-10 cm depth) will significantly inc
* **Manure:** Well-composted animal manure provides a balanced supply of nutrients and improves soil organ
* **Cover cropping:** Integrating legumes in cover cropping rotations helps to naturally replenish soil nitrogen.
* **Biofertilizers:** Inoculants containing nitrogen-fixing bacteria can be used to enhance nitrogen fixation by le

Chemical Approach:

* **NPK Fertilizer:** A balanced NPK fertilizer (e.g., 10-10-10 or a formulation tailored to the specific crop) shou
* **Potassium Sulfate:** Potassium sulfate can be used to increase potassium levels.

Important Note: The specific amounts of fertilizer required will depend on the chosen crop and further soil te

Soil Improvement Tips:

* **No-till farming:** Minimize soil disturbance to maintain soil structure and protect organic matter.
* **Crop rotation:** Rotating crops helps to maintain soil fertility and prevent pest and disease build-up.
* **Mulching:** Applying organic mulch (straw, wood chips) helps to retain moisture, suppress weeds, and impr
* **Water management:** Efficient irrigation practices prevent nutrient leaching and maintain optimal soil moist

Final Soil Health Rating:

Considering the low organic matter, low nitrogen, and low phosphorus levels, the overall soil health rating is **P