

Soil testing parameters typically include a wide range of physical, chemical, and biological assessments to determine the health and fertility of soil. Offering a soil testing service could cover the following essential parameters:

1. Physical Parameters

- **Soil texture:** Determines the proportion of sand, silt, and clay.
- **Soil moisture:** Indicates the water-holding capacity.
- **Bulk density:** Measures soil compaction.

2. Chemical Parameters

- **pH:** Measures soil acidity or alkalinity.
- **Electrical conductivity (EC):** Indicates salt content.
- **Organic carbon (OC):** Represents organic matter in the soil.
- **Macro-nutrients:**
 - **Nitrogen (N)**
 - **Phosphorus (P)**
 - **Potassium (K)**
- **Secondary nutrients:**
 - **Calcium (Ca)**
 - **Magnesium (Mg)**
 - **Sulfur (S)**
- **Micro-nutrients:**
 - **Zinc (Zn)**
 - **Copper (Cu)**
 - **Iron (Fe)**
 - **Manganese (Mn)**
 - **Boron (B)**
 - **Molybdenum (Mo)**

3. Biological Parameters

- **Microbial activity:** Indicates the presence of beneficial organisms.
- **Soil respiration:** Shows the biological activity and organic matter decomposition rate.
- **Cation Exchange Capacity (CEC):** Determines the soil's ability to hold nutrients.

4. Special Parameters (Optional)

- **Salinity**
 - **Sodium Absorption Ratio (SAR)**
 - **Heavy metal contamination (lead, cadmium, mercury, etc.)**
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Biocare Soil Testing Report

1. Client Information

- **Client Name:**
- **Farm/Location:**
- **Date of Sampling:**
- **Sample ID:**
- **Crop Type (if applicable):**
- **Purpose of Testing:** (Agriculture, Landscaping, Research, etc.)

2. Sample Information

- **Sampling Location:**
- **Sample Depth:** (Topsoil or Subsoil)
- **Sample Collected By:**
- **Date and Time of Collection:**
- **Weather Conditions at the Time of Sampling:**
- **Land Use History:**

3. Test Parameters and Results

Parameter	Unit	Test Method	Result	Permissible Range/Optimal Values (if applicable)	Remarks
Chemical Parameters					
pH	-	(Method used)	(Result)	(Optimal pH range for crops)	(OK/Not OK)
Electrical Conductivity (EC)	dS/m	(Method used)	(Result)	(Acceptable range for salinity)	(OK/Not OK)
Organic Carbon (OC)	%	(Method used)	(Result)	(Ideal range for fertility)	(OK/Not OK)
Macro-Nutrients					
Nitrogen (N)	kg/ha	(Method used)	(Result)	(Sufficient levels for crops)	(OK/Not OK)
Phosphorus (P)	kg/ha	(Method used)	(Result)	(Sufficient levels for crops)	(OK/Not OK)
Potassium (K)	kg/ha	(Method used)	(Result)	(Sufficient levels for crops)	(OK/Not OK)
Secondary Nutrients					
Calcium (Ca)	meq/100g	(Method used)	(Result)	(Optimal range for crops)	(OK/Not OK)
Magnesium (Mg)	meq/100g	(Method used)	(Result)	(Optimal range for crops)	(OK/Not OK)
Sulfur (S)	mg/kg	(Method used)	(Result)	(Optimal range for crops)	(OK/Not OK)

Parameter	Unit	Test Method	Result	Permissible Range/Optimal Values (if applicable)	Remarks
Earthworm Population (if any)	Number/m ²	(Method used)	(Result)	(Good indicator of soil health)	(OK/Not OK)

4. Analysis and Interpretation

- **Overall Soil Fertility Status:** (Good, Medium, Poor)
- **Nutrient Deficiencies:** (Highlight any deficient nutrients)
- **pH and Salinity Issues:** (If any, describe how they might impact crops)
- **Physical Properties:** (Note any compaction or moisture issues)
- **Microbial Health:** (Comment on biological activity and organic matter)

5. Recommendations

- **Fertilizer Recommendations:** (Based on the nutrient deficiencies)
- **Soil Amendments:** (Lime, gypsum, or organic matter for improving pH, structure, or fertility)
- **Water Management Suggestions:** (If high salinity or poor drainage is detected)
- **Cover Crops/Organic Practices:** (For enhancing biological health)
- **Re-sampling:** (If certain parameters are concerning and need to be monitored regularly)

6. Conclusion

- **Summary of Findings:** (Overall condition of the soil)
- **Next Steps for Improvement:** (Practical measures to enhance soil quality and crop yield)

Tested by:

- **Laboratory Name:**
- **Tested By:**
- **Date of Report:**
- **Contact Information:**