

Biota Food Sources (Crop Residues, Root Exudates, Manure, Decomposing OM, Humus & Living Organisms)

Section 15 of 22 (15a - Soil Quality Test Kit Guide):

Biological

2. Soil Respiration
(lbs CO₂-C/ac/d)

3. Infiltration Test
(in/hr)

10. Number/ft²

Soil Temp.

Additional Assessments:

- Soil, Irrigation Water & Plant Tissue analysis
- Active Carbon Test

(Photos: Soil Biology Primer)

Large Soil Pores
(Good Aeration & Infiltration)

4. Bulk Density Test (g/cm³)

8. Aggregate Stability Test
(% Water Stable Aggregates)

9. Slake Test (Stability Class: 0- 6)

Physical
(Soil Texture & Structure)

5. Electrical Conductivity Test (ECe in dS/m).
i.e., Salts in the Soil.

6. Soil pH Test

7. Soil Nitrate Test
(ppm or mg/kg)

Chemical
(Soil Solution)

1. Discusses sampling and site characterization (Refer to Guide, pages 1 – 3)

2. Indicates the soil's biological activity

3. Measures the soil's ability to take in water through the soil surface

4. Measures the soil's compaction or pore space

5. Measures the salt concentration in the soil

6. Measures the soil's acidity or alkalinity

7. Measures the soil's nitrate levels

8. Measures the amount of water-stable aggregates

9. Estimates the stability of soil fragments in water

10. Measures the number or earthworms in the soil

11. Shows how to observe soil structure and root patterns and how to estimate topsoil depth, penetration resistance, and soil texture in the soil profile (Refer to Guide, pages 23 – 27 & 75 – 78)

12. Estimates salinity and nitrate/nitrite levels in irrigation water (Refer to Guide, pages 79-82)

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NOTE: Emphasis on managing the Soil Ecosystem