Rapid Soil Testing Solutions

1. Background

The Department of Soil Survey and Soil Conservation has been actively exploring advanced technologies to strengthen soil health assessment and promote sustainable agricultural practices across the State. A key focus in recent years has been the adoption of rapid soil testing devices that enable quick, on-site analysis of critical soil parameters such as pH, nutrient levels, organic carbon, and other fertility indicators.

These portable and efficient solutions facilitate timely and precise fertilizer recommendations, significantly reduce turnaround time compared to conventional laboratory testing, minimize excessive fertilizer usage, enhance crop productivity, and contribute to long-term soil health and environmental sustainability.

2. Objective

The Department invites Expressions of Interest (EOI) from eligible startups for the development, deployment, and scaling of innovative rapid soil testing solutions. The objective is to identify and empanel capable technology providers who can support the Department in modernizing soil testing processes and improving service delivery to farmers.

3. Scope of Work

The selected startups will be expected to:

- Develop or provide portable rapid soil testing devices capable of on-site analysis.
- Measure key soil parameters including pH, NPK (Nitrogen, Phosphorus, Potassium), organic carbon, micronutrients, and other relevant indicators.
- Provide real-time or near real-time test results with high accuracy.
- Integrate digital platforms (mobile/web) for data capture, storage, and analytics.
- Generate actionable soil health reports and fertilizer recommendations.
- Ensure ease of use for field-level staff and scalability across diverse geographic conditions.
- Provide training, maintenance, and technical support.