



## MINI SOIL LAB



# SOIL TESTING KIT AND FERTILIZER RECOMMENDATION METER PUSA STFR METER

### Sub: Soil Testing & Fertilizer Recommendation (STFR) Meter Kit (A Mini Soil Testing Lab).

Hon'ble Sir,

We, at PSI, take pleasure in introducing the **PUSA STFR Meter Kit (Mini Soil Testing Lab)/ BHUMI PRAYOGSHALA** to your goodness we being the authorized license technology holders for it from ICAR-IARI, New Delhi. This mini lab is proving itself as an effective substitution to the traditional soil testing laboratories. By placing this cost-effective minilab at Taluka level, Gram Panchayat level and Village level 'Soil Health Card' can be made conveniently and would also ensure judicious use of chemical fertilizers, paving the way for increase in productivity and income of farmers.

The Indian Council of Agriculture Research (ICAR) and Indian Agriculture Research Institute (IARI), New Delhi, has developed a Mini Soil Testing Lab named as "**PUSA Soil Testing & Fertilizer (STFR) Meter Kit**" which can assess soil health and can be used in preparation of soil health cards. This is a digital mobile quantitative soil test mini lab which can provide soil testing service at farmer's doorstep. It can estimate important soil micro and macro parameters in soils namely Soil Reaction (pH), Electrical Conductivity (EC), Organic Carbon (OC), Phosphorous (P), Potassium (K), Manganese (Mn), Iron (Fe), Sulphur (S), Zinc (Zn), Boron (B), Copper (Cu), Available Nitrogen (N), Lime Requirement and Gypsum Requirement.

### With the setting up PUSA STFR Meter Kit (Mini Soil Testing Lab),

1. Faster and on-farm testing of soil nutrients for quick and balanced use of fertilizers and faster and easy Preparation of Soil Health Cards can take place.
2. Soil testing can be done in large numbers at one place.
3. Soils can be tested in front of the farmers who bring the soil samples thereby creating transparency and trust on the lab reports.
4. Get fast and accurate soil health results.
5. Generate employment to rural/unemployed youth and children of distressed farmers.
6. Help the distressed farmers understand the importance of soil testing for getting the desired yields.
7. Contribute effectively to the ambitious '*Lab-to-Land*' and '*Skills Development*' project of our Hon'ble Prime Minister Shri Narendraji Modi which aims for development of rural entrepreneurship, awareness of soil testing amongst farmers, hands-on training to the rural youths on soil testing and finally enable them ascertain earning in their villages.
8. Prevent farmers for committing suicides
9. Generate Self-Employment in their families.
10. Restrict her farmers and their family members and most importantly the rural youth from migrating to urban area for employment
11. Make them self-reliant and enhance their sustainability.

## **The salient features that back up the PUSA STFR Meter Kit (Mini Soil Testing Lab) are:**

Backed up with distinctive technology developed by Indian Council of Agriculture Research (ICAR) & Indian Agriculture Research Institute (IARI), Ministry of Agriculture & Farmers Welfare, Government of India.

1. It is a cost-effective digital mobile quantitative soil test mini lab which provides soil testing service at farmer's doorstep.
2. It can estimate important soil parameters namely Soil Reaction (pH), Electrical Conductivity (EC), Organic Carbon (OC), Phosphorous (P), Potassium (K), Manganese (Mn), Iron (Fe), Sulphur (S), Zinc (Zn), Boron (B), Copper (Cu), Nitrogen (N), Lime Requirement and Gypsum Requirement.
3. The kit comes with the Meter, pH electrode, conductivity cell, shaker, weighing balance, hot plate and various lab apparatus and reagents which help in determining the soil parameters and displaying of fertilizer nutrient recommendations.
4. It prescribes doses of fertilizer N, P and K based on the targeted yield equations developed by the All India Coordinated Research Project of ICAR and Soil Test Crop Response.
5. The results as obtained by the PUSA STFR Meter Kits are stable, reproducible and correspond (upto 90%) to the standard laboratory procedures employed in India.
6. The quantity of chemical 'solutions' provided along with PUSA STFR Meter Kit is sufficient for analyzing 100 samples and the 'solutions' can be subsequently refilled.
7. The kit can be operated by young educated farmers/rural youth (12<sup>th</sup> Pass) with a short training.
8. The PUSA STFR Meter Kit provides crop specific fertilizers recommendations.
9. Battery back-up up to 3 hours
10. Printer interface type RS232
11. Indicator for overcharging & discharging
12. Micro controller-based technology
13. Memory for data storage of up to 999 parameters
14. Computer connectivity
15. Wide LCD display
16. Surge protection
17. SMS facility (optional)
18. Solar charging (optional)
19. Fertilizer recommendation up to 100 crops
20. In built Soil Health Card, Format as per Government of India Guidelines.

Enclosed please D.O. No. 1-2/2014-Fert.Use dated 31.03.15 issued by the Hon'ble Joint Secretary (INM), Department of Agriculture & Cooperation, and Government of India, which places emphasis on the Soil Health Card scheme. A copy is enclosed for your kind perusal.

The Hon'ble Secretary, Ministry of Agriculture, Department of Agriculture Cooperation & Farmers Welfare, Government of India, has also issued D.O. No. 9-11/2016-Fert.Use in the month of June 2016 stating the facts and figures on the progress of Soil Health Card scheme. A copy is enclosed for your kind perusal.

PSI has priced this **PUSA STFR Meter Kit (Mini Soil Testing Lab)** most competitively and has repute for Quality, Timely deliveries and satisfactory training and after-sales-services. However, one of the few companies is propagating that there is only one technology for STFR mini lab, which is false. In fact, there is also similar technology from IARI-New Delhi who has licensed the technology to us for this product.

May we now take this opportunity to request your goodness to establish the **PUSA STFR Meter Kit (Mini Soil Testing Lab)** in all the villages and talukas of your district so that the farmers understand the importance of soil testing, can educate themselves on soil testing, they themselves can prepare their Soil Health Cards, can understand the nutritional health of their soils and can ensure correct crop-specific fertilizer doses for better and healthy yields in their fields and thus enhance their livelihoods and sustainability.

The **PUSA STFR Meter Kit (Mini Soil Testing Lab)** can also be procured through the National Federation of Farmers Procurement Processing & Retailing Cooperatives of India Ltd (**NACOF**) under the Government Soil Health Program.

We are an **ISO: 9001-2008, ISO: 13485** and **CE** certified organization and also recipient of '**BEST INDUSTRY AWARD 2010**' from Government of Maharashtra because of which PSI stands apart in the crowd.

There was long-felt need of a quantitative soil test kit to support the soil testing service. The **PUSA STFR Meter Kit (Mini Soil Testing Lab) / Bhumi Prayogshala** would increase farmers access to soil testing, and thus help them to achieve higher yields owing the soil test based fertilizers application.

We enclose herewith our product brochure and shall be glad to address your query, if any, for establishing this mini-lab in your entire district.

**Enclosures:**

1. DO No. 1-2/2014-Fert.Use dated 31.03.15 of the Hon'ble Jt. Secretary, Ministry of Agriculture.
2. DO No. 9-11/2016-Fert.Use dated June 2016 of the Hon'ble Secretary, Ministry of Agriculture.
3. Revised cost of soil health card component.
4. Technology Transfer Certificate
5. Certificate of Commercialization
6. Performance Certificates.