



*“SRT humming..... Soil enriching, Crops booming and Farmers Empowering”*

## Understanding Soil Health through Bulk Density and Organic Carbon

Namaskar,

We're excited to bring you groundbreaking insights from our own fields at Saguna Baug, where we've been pioneering the Saguna Regenerative Technique (SRT). Our approach, which focuses on no-till regenerative farming, not only preserves the soil's integrity but enhances its capacity to support healthy crop growth.

### The Significance of Measuring Beyond N:P:K

Traditionally, farming assessments heavily leaned on measuring nitrogen, phosphorus, and potassium (N:P:K) levels. However, critical aspects of soil health, such as Soil Organic Carbon (SOC), Bulk Density, and microbial load, were often overlooked. At Saguna Baug, we believe in a holistic view of soil health, prompting us to measure these essential parameters. The recent data we collected showcases significant differences in soil quality between the Saguna Regenerative Technique and conventional farming methods.

### What We Found ?

Here’s a comparative glance at the outcomes of employing SRT versus traditional farming methods:

Sr No	Sample Name	Farming Type	Regenerative Farm Year	Village Name	% Soil Organic Carbon	Soil Microbial Load	Bulk Density
1	Sample A Saguna Baug	Regenerative	8	Neral	2.05	6X10*20	1.29
2	Sample B Saguna Baug	Regenerative	3	Neral	1.06	1X10*16	1.31
3	Sample C Saguna Baug	Conventional	NA	Neral	0.45	7X10*12	1.51

**Soil Organic Carbon:** Higher levels in SRT plots, indicating richer, more fertile soil.

**Bulk Density:** Lower in SRT plots, indicating less denser, more porous soil structure.

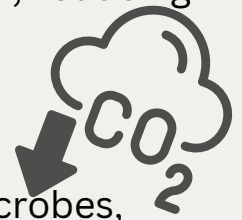
**Microbial Load:** Greater microbial activity in SRT plots, which is essential for nutrient cycling and soil fertility.



## Why Bulk Density Matters?

Bulk density is a critical indicator of soil compaction and health. Here's why it's important:

1. **Aeration and Water Infiltration:** Lower bulk density means the soil is less compacted, allowing more air to permeate and increasing water infiltration. This condition is vital for root growth and the microbial activity essential for a thriving soil ecosystem.
2. **Root Penetration:** Soils with lower bulk density are easier for roots to penetrate, enhancing plant stability and nutrient uptake.
3. **Erosion Control:** Lower bulk density soil absorbs water better, reducing runoff and erosion.



## The Role of Organic Carbon in Soil

Soil Organic Carbon is crucial for:

1. **Nutrient Supply:** SOC acts as a reservoir of nutrients for microbes, which in turn help releasing food for the crops.
2. **Soil Structure:** Organic carbon helps bind soil particles into aggregates, which improve soil structure and its ability to retain moisture, improves drainage and improves nutrient exchange.
3. **Carbon Sequestration:** Increasing SOC levels can help mitigate climate change by capturing atmospheric carbon dioxide.



## Importance of Microbial Load

Microbial load refers to the quantity and diversity of microorganisms in the soil, and it is vital for:

1. **Nutrient Cycling:** Soil microbes play a critical role in decomposing organic matter, which releases essential nutrients back into the soil, aiding plant growth.
2. **Disease Suppression:** A diverse microbial community can help suppress soil-borne diseases, reducing the need for chemical inputs.
3. **Soil Structure and Fertility:** Microbes produce substances like glomalin and polysaccharides that help stabilize soil structure, reduces soil erosion and improve its fertility over time.

NEWS

UPDATE

## » SRT Case Study Featured on Conscious Planet's Website

Conscious Planet (Save Soil) has published a case study about Saguna Regenerative Technique (SRT) on their official website. This feature highlights the impact and effectiveness of our innovative no-till farming practices in promoting soil health and sustainability.

To read more about the case study, please click on the link below:

[SRT Case Study 1 by Conscious Planet - Save Soil](#)

Thank you!



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