



BhuMangal: Microbial Replenishment Technique for Improving Soil Health (Organic Carbon) Using Local Resources

Santosh Somnath Latnekar*

Soil Fertility Institute, Maharashtra India

***Corresponding Author:** Santosh Somnath Latnekar, Soil Fertility Institute, Maharashtra India.

DOI: 10.31080/ASAG.2025.09.1494

Received: June 05, 2025

Published: June 09, 2025

© All rights are reserved by

Santosh Somnath Latnekar.

Abstract

Agriculture (Soil Health improvements in 100 days). Agriculture today is affected with lot of environmental concerns like soil pollution, contamination, soil erosion, pesticide residues, lack of organic carbon or plainly due to too intensive agriculture. Farmers are continuously trying to meet the ever-increasing demand and need more and more input cost by way of purchasing fertilizers and pesticides for enhanced produce to meet the increasing demands. This makes farming not only financially demanding but is resulting in ecologically draining in many ways. Since past 50 years or so the focus was more on crop management rather than maintaining soil health. And today, soil condition is the biggest concerns of agriculture and it needs a National Policy to break this vicious cycle and have a robust Soil Health Policy as a guiding principle for farming in India, be it profession or passion. We are importing latest/modern technologies in agriculture but there is no technology available throughout world which can improve soil health in minimum time till date.

We have successfully developed groundbreaking technology which improves soil organic carbon in 100 days. Our technology is based on soil microbial diversity and ancient agricultural / soil conditioning techniques. It improves physical, biological and chemical properties of soil in very short time. It is non-toxic, organic and can be prepared in any location with local resources. This technology has potential to bring paradigm changes in agricultural economics. Present scenario of soil health and agriculture throughout our nation can be improved by using our technology.

The aim of developing this technology has been to improve soil health and thereby increasing agriculture productivity. By improving soil health, pollution of water bodies will be reduced, nutritional and medicinal value of farm produce will increase, expenses for fertilizers and pesticides will be reduced and in general farming economy will improve.

Keywords: Soil Health; Soil Fertility; Microbial Replenishment; Microbial Diversity; Microbial Count; Organic Carbon; Agriculture

Introduction

We at SFI have clearly understood the root cause of depleted agricultural productivity and therefore focused our energy and efforts on improving the soil condition, that too using traditional techniques based on Vermi-wash (Vermi compost liquid extract) and Indian breed cow.

Materials and Methods

For 1 acre land.

Bhu-Mangal Technique (Nature's blessing for Soil Health)

- **How to make:** In this process, 200 litres a clean drum/barrel is used and filled with water. 5 kg jaggery and 5 litres vermi-wash is added. The drum/barrel is covered and kept for 7 days. The ready solution is named Bhu-Mangal.

- **How to use:** The solution is applied to soil during heavy irrigation.
- **When to use:** After applying good quantity of organic matter in the plot/land.
- 200 litres BhuMangal solution with 4-5 MT of organic matter is the ideal dose for 1 acre.
- Depending upon existing soil conditions, number of doses can be decided.
- Minimum 3 doses are recommended with intervals of one month.
- Organic matter should be cow dung, press mud, mushroom waste, poultry litter, farm yard waste, city compost, market yard left over etc.
- Shelf life of BhuMangal solution is 15 days.

Results and Discussion

After the above treatment of soil following changes in the soil and productivity has been observed

- Soil became soft and porous
- Water drainage in the soil was improved
- Earthworms were observed
- Soil pH was balanced and organic carbon was increased
- Crop health and immunity was improved with increase in production of crop
- The quality of farm produce is improved such as size, weight, color, taste, glaze, shelf life etc.

Conclusion

Due to increase in natural, diversified microbial population and organic matter there is increase in humus content reflecting in overall improvement of the soil health (organic carbon). This further translates in high farm productivity while lowering the requirements of chemical fertilizers. BhuMangal solution can be used by farmers having less farm land holdings.