



MISSION  
SAVE SOIL



SOIL FERTILITY INSTITUTE

*"Breakthrough Technology  
for improving soil fertility in 100 days through  
biological treatment."*

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## ***Introduction***

Agriculture today is affected with lot of environmental concerns like 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 by increasing the use fertilizers and pesticides 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 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 Policy as a guiding principle for farming in India, be it profession or passion.



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## *From, Director's Desk*



“

***I am Santosh Somnath Latnekar, the Director of Soil Fertility Institute in Pune, with an engineering background. I focus on soil health, environment, and sanitation sectors. Our mission is to raise awareness, provide technical assistance, and offer technology to enhance soil health within 100 days. In ancient India, agricultural practices utilized cow-based techniques for soil conditioning and crop nutrition, which I thoroughly studied. These methods were effective but lacked scalability and had limited shelf life. After dedicated research for 17 years, I successfully developed a liquid solution that significantly improves soil health, is cost-effective, and increases organic carbon content within just 100 days.***

***By making some modifications, this liquid solution is now also employed in environmental and sanitation processes. It effectively facilitates and corrects biological processes in municipal sewage treatment plants, eliminates offensive odors from organic waste and septic tanks.***

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## Training program by Mr. Santosh Latnekar in Institution on Soil Fertility



*Workshop was on conducted on subject Soil Health through biological treatment at S. Nijligappa Sugar Institute (Government of Karnataka) Belgavi on 12/07/2023.*

*92 representatives of 22 sugar factories attended the programme.*



*Medicinal plants grow with only organic farming program and How to fertile soil program with Rahuri Krishi Vidyapeeth at Sangamner , Ahmadnagar.*



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## ***About Soil Fertility Institute***

**We, Soil Fertility Institute (SFI) are a Pune based organization. We have successfully developed SFI soil conditioner which improves soil organic carbon in 100 days. SFI soil conditioner is based on soil biodiversity, sun energy and ancient agricultural / soil conditioning techniques. It improves physical, biological and chemical properties of soil in very short time.**

**The aim of developing this has been to target the improvement of soil and not just focus on enhanced yield of crop.**

**We at SFI have clearly understood the root cause and therefore focused our energy and efforts on improving the soil condition, that too using traditional methods.**







## ***Issues of soil & Major Concerns***

- Excess use of Chemical Fertilizers & Pesticides
- Soil has become hard and Viscous
- Over Irrigation & water hardness
- Imbalanced Nutrition of SOIL
- Increase of pH in soil
- High Salinity in the Soil
- Water drainage problem
- Depletion of Ground water Levels
- Decreased Porosity of soil
- Low Productivity of CROPS
- Decrease in Organic carbon of the soil

## ***How to improve the fertility of the soil?***

### ***Organic Carbon & Its Importance***

***Soil organic carbon is a measurable component of soil organic matter. Soil organic carbon (SOC) is a major contributor to overall soil health, agriculture, climate change, and food solutions.***

- ***It is a natural energy storage, derived from soil organic matter and considered a highly valued earth's biopolymer.***
- ***SOC improves soil biological, chemical, and physical properties, water- holding capacity, and structural stability. It plays an integral part to the formation of soil's organic acids key to soil minerals dissolutions and availability to plants and nutrient leaching.***



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### *Some of the existing ancient methodologies /traditional technique used to increase organic carbon*

- Jeevamrut
- Sasyamrutha
- Panchgavya
- Amrut Paani
- Go Krupa Amrut
- Vermiculture



All the above methodologies are based on Soil biodiversity and they are beneficial to maintain soil health of a good soil. The bacterial count of the above culture is around 106 and 108 per ml/gm.

The limitation of the above technology is that their bacterial count is insufficient to recover current soil health conditions which has been depleted to extreme levels. The production of the above cultures are done by individual farmers who may not have access to standardized and consistent raw material which is required for a good quality product. This is the primary reason why it is believed that it takes 3 to 7 years to increase the organic carbon of the soil.

### **Soil Biodiversity**

- It is the factory of life that improves soil fertility (structuring the soil, improves entry and storage of water, plant nutrition, breakdown of organic matter)
- Reduces: Soil degradation (erosion, contamination, salinization)

### **Soil Biodiversity is Important for:**

- Climate regulation
- Carbon Sequestration
- Human Nutrition
- Pollution remediation
- Controlling pest outbreaks
- Providing life-saving medicines







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## ***Importance of Jaggery in Soil Conditioning:***

Jaggery contains around 10 -12 types of micronutrients which are also beneficial to improve the health of the soil. Such as

- Calcium, Magnesium, Sulphur, Iron, Manganese, Zinc, Copper, Boron, Nitrogen, Phosphorus, Potassium Molybdate.

Application of fermented solution of jaggery with water reduces the pH of the Soil. Jaggery is also used for multiplication of microbial count in the soil.

## ***Importance of Microbes for Nutrients:***

The microbial biomass consists of mostly bacteria and fungi which decompose crop residue and organic matter in soil. This process releases nutrient in to the soil that are available for plant uptake.

When microorganisms die these nutrients are release in the forms that can be taken up by plants.

The microbial cell is made up of several elements such as Carbon, Hydrogen, Oxygen, Nitrogen, Sulfur, Phosphorus, Potassium, Calcium, Magnesium and iron.





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Requirement of organic material to improve 0.1% organic carbon in 1 acre land:

1acre land = 2000 Tons

(1foot depth)

0.1% of 2000 Ton is 2Tons

2 Tons organic carbon = 4 Tons hummus =8 Tons organic matter = 16 Tons organic material

For 1 acre of soil, 16 Tons organic material is required.

Since some Organic Matter is already available in soil 10 tons of additional material can be sufficient.





## SFI-TECHNOLOGY/PRODUCT:

### SFI Soil conditioner for Soil Bio-Remediation:

SFI soil conditioner is based on soil biodiversity, sun energy and ancient agricultural soil conditioning techniques like use of jaggery, high bacterial count & diverse microbes. It improves physical, biological and chemical properties of soil in very short time.

SFI soil conditioner is a next generation liquid solution which improves physical, biological and chemical properties of soil in very short time. Diversified microbes which are soil friendly and useful to crop are inoculated together and sufficient quantity of nutrients is added for development and multiplication of microbes.

The ingredient in SFI Soil Conditioner are Indian breed cows - Dung, Urine, Curd, Milk, Ghee, Jaggery Syrup, Honey. It is organic and nontoxic.

Count of microbes is  $4 \times 10^{12}$  cfu as against government norm  $1 \times 10^8$  cfu per ml. shelf life of SFI soil conditioner is 2 years and it is highly and easily scalable.

Count of microbes in ancient Indian techniques like Jeevamrut, Panchgavya, Amrut Paani etc. is  $1 \times 10^8$  cfu per ml maximum and its shelf life varies from 1 week to 4 weeks. It's not scalable.

SR.NO	SOIL CONDITIONING	TENURE	DOSES
1	Traditional techniques	4-6 Years	Regular
2	1 Liter SFI Soil Conditioner + 10 MT Organic material	2 Months	Once in a year
3	1 Liter SFI Soil Conditioner + 20 Kg Jaggery/Syrup	100 Days	3 doses with interval of 1 month in a year





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## ***BENEFITS OF SFI SOIL CONDITIONER***

- Increases the soil fertility
- Increases porosity of the soil
- Increases water retention capacity of the soil
- Increases uptake of water & nutrients to the crop
- Increases ORGANIC CARBON of the soil in 100 days
- Increases productivity as well as the quality of the crops
- Reduces toxic elements and the salinity of the soil
- Creates habitable conditions for earthworms.
- Balances soil pH and maintains soil EC

## **Application of SFI soil conditioner for bioremediation of soil in CHEMICAL FARMING:**

1. 1 liter of SFI soil conditioner is to be poured in 200 liters clean drum/barrel/tank.
2. 10/20 kg jaggery/syrup is to be added to it.
3. Fill the drum with water.
4. Cover and keep it for 5 days.
5. The solution is ready and it should be used for 1 acre land only during flood/drip irrigation.
6. During application of SFI soil conditioner more water is required than regular.
7. 10 ml per litre of water should be used for spraying.
8. SFI soil conditioner should be used with 10 Tons of any type of organic material.
9. In absence of organic material, 5 doses of SFI soil conditioner should be used.





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## *Application of SFI soil conditioner in ORGANIC FARMING*

1. 1 liter of SFI soil conditioner is to be poured in 200 liters clean drum / barrel /tank.
2. 10/20kg jaggery/syrup is to be added to it. Fill the drum with water.
3. Cover and keep it for 5 days.
4. The solution is ready and it should be used for 1 acre land only during flood/drip irrigation.
5. During application of SFI soil conditioner, more water is required than regular.
6. 10 ml solution per liter of water should be used for spraying.

SFI soil conditioner is highly recommended in organic farming as large amount of organic material is already available in soil. Visible development in crop and soil are seen within 2 weeks after application of SFI soil conditioner in organic farming. There are enhancements in yield, weight, size, color, glaze, smell, shelf life etc. and overall quality/quantity of organic agriculture produce.

### Please Note:

- Every soil particle should be dipped in water during application.
- Soil testing is to be done before and after applications, if required.
- SFI soil conditioner is used for composting dung, poultry litter, press mud, agriculture waste etc. for preparing organic manure with excellent results.
- SFI soil conditioner can be prepared in large quantities at any location without electricity. Hence it is easily and highly Scalable.





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## Before Treatment Soil Analysis- Shahaji Kothare

### MAHARASHTRA RAJYA DRAKSHA BAGAITDAR SANGH, PUNE

Research & Training Center  
Manjri Farm Laboratory  
Pune - 412 307

E-mail: mrdbslab@yahoo.in

Issued to: Shahaji Zhumbar Khothare

A/P: Belwandi Kothar

Tal: Shrigonda

Dist.: Ahamadnagar

Identification : Gat No. 252 Pomengranete

Date : 13 /07/2020 o/w no. mrdbs/lab/69

Lab No - 44 Mob. no. 7448130404

Sample received in Lab. - 11.07.2020

Receipt No. -3555

Date -11.07.2020 Amount -2100/-

### SOIL ANALYSIS REPORT

Parameter (Methods)	Unit	Optimum level	Analysis Value	Remark
pH (1:2.5 water) (सामु)	--	6.51 - 7.50	7.42	Optimum
E.C. (1:2.5 water) (विद्युत वाहकता)	dSm <sup>-1</sup>	< 1.00	0.26	Low
CaCO <sub>3</sub> (Titration) (चुना)	%	1.00 - 3.00	14	High
Organic carbon (Walkley & Black) (ऑक्सीजन कार्बन)	%	0.41 - 0.60	0.59	Optimum
<b>Primary Nutrient</b>				
Av. N (Alkaline KMnO <sub>4</sub> method) (उपलब्ध नाइट्रोजन)	Kg / ha	281 - 420	139	Low
NO <sub>3</sub> - N (नाइट्रेट - नाइट्रोजन)	ppm	10 - 20	18.33	Optimum
Av. P (Olsen Method) (उपलब्ध स्फुरक)	Kg / ha	14.01 - 21.00	15.79	Optimum
Av. K (NH <sub>4</sub> - Ac) (उपलब्ध पालाश)	Kg / ha	151 - 200	448	High
<b>Secondary Nutrient</b>				
Av. Calcium (कैल्शियम)	ppm	500 - 1000	5850	High
Av. Magnesium (मैग्नेशियम)	ppm	251 - 500	905	High
Av. S (Barium Chloride Turbidimetry) (सल्फर)	ppm	11 - 50	11.99	Optimum
<b>Micro Nutrient</b>				
Av. Fe (DTPA Extr. - AAS) (लोह)	ppm	2.01 - 4.50	5.00	High
Av. Mn (DTPA Extr. - AAS) (मँगल)	ppm	1.01 - 2.00	2.08	Optimum
Av. Zn (DTPA Extr. - AAS) (जस्त)	ppm	0.51 - 1.00	0.79	Optimum
Av. Cu (DTPA Extr. - AAS) (तांबे)	ppm	0.21 - 1.00	1.64	High
<b>Other Parameter</b>				
Extr. Na (NH <sub>4</sub> - Ac) (सोडियम)	ppm	< 1000	520	Safe
Boron	ppm	0.3 - 0.5	0.29	Low
Extr. HCO <sub>3</sub> (बायकार्बोनेट)	ppm	180 - 250	107	Safe
Extr. Cl <sup>-</sup> (Mohr's method) (क्लोराईड)	ppm	< 100	70	Safe

Low (कमी) Optimum (सोम्य) High (जास्त)

(J.N. Kalbhor)

Laboratory Incharge

**ORGANIC CARBON**  
**Before Treatment 0.59**





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## After Treatment Soil Analysis - Shahaji Kothare

MAHARASHTRA RAJYA DRAKSHA BAGAITDAR SANGH, PUNE				
Research & Training Center, Soil, Water, petiole testing Laboratory				
Pune Solapur Road Manjri Farm				
Pune - 412 307 E-mail: mdrslab@yahoo.in				
Issued to:	Kothare Shahaji Zhumbar		Date :	26.07.2021
A/P:	Belwandi Khotar	Lab. No.	384	Mob. No. 7448130404
Tal:	Shrigonda	Sample received in Lab		23.07.2021
Dist.:	Ahmednagar	Receipt No		Manj/122
Identification :		Date	23.07.2021	Amount 1050/-

### SOIL ANALYSIS REPORT

Parameter (Methods)	Unit	Optimum level	Analysis Value	Remark
pH (1:2.5 water) (सास)	--	6.51 - 7.50	7.71	Alkaline
E.C. (1:2.5 water) (विद्युत वाहकता)	dSm <sup>-1</sup>	< 1.00	0.38	Safe
CaCO <sub>3</sub> (Titration) (चुना)	%	1.01 - 3.00	10	High
Organic carbon (Walkley & Black) (सेडीव कार्ब)	%	1.01 - 2.00	1.73	Optimum
<b>Primary Nutrient</b>				
Av. N (Alkaline KMnO <sub>4</sub> method) (उपलब्ध नात्र)	ppm	181 - 220	211	Optimum
NO <sub>3</sub> - N (जायवट - नात्र)	ppm	10 - 20	19.12	Optimum
Av. P (Olsen's Method) (उपलब्ध स्फुरक)	ppm	51 - 75	31.95	Low
Av. K (NH <sub>4</sub> - Ac) (उपलब्ध पालाश)	ppm	451 - 600	290	Low
<b>Secondary Nutrient</b>				
Av. Calcium (कैल्शियम)	ppm	1001 - 1500	5208	High
Av. Magnesium (मॅग्नेशियम)	ppm	501 - 750	1412	High
Av. S. (Barium Chloride Turbidimetry) (सल्फर)	ppm	21 - 50	256	High
<b>Micronutrients</b>				
Av. Fe (DTPA Extr. - AAS) (लोह)	ppm	2.51 - 5.00	2.01	Low
Av. Mn (DTPA Extr. - AAS) (मँगल)	ppm	2.01 - 5.00	2.61	Optimum
Av. Zn (DTPA Extr. - AAS) (जस्त)	ppm	2.01 - 4.00	1.35	Low
Av. Cu (DTPA Extr. - AAS) (तांबे)	ppm	0.41 - 1.00	2.83	High
<b>Other parameters</b>				
Extr. Na (NH <sub>4</sub> - Ac) (सोडियम)	ppm	< 1000	1000	Safe
Boron (Hot Water) (बोराज)	ppm	0.3 - 0.5	0.27	Low
Extr. HCO <sub>3</sub> (बायकार्बोनेट)	ppm	180 - 250	53.68	Low
Extr. Cl <sup>-</sup> (Mohr's method) (क्लोराईड)	ppm	< 100	24.99	Safe
Ca/Mg	--	5.5 - 6.5	3.69	Low
Ca/K	--	12.5 - 13.5	17.96	High
Mg/K	--	1.5 - 2.5	4.87	High

Low (कमी); Optimum (सोन्या); High (जास्त)

*J. N. Kalbhor*


J. N. Kalbhor  
Laboratory Incharge

**ORGANIC CARBON**  
**Before Treatment 1.73**



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## Before Treatment Soil Analysis- Sandeep Tapkir

MAHARASHTRA RAJYA DRAKSHA BAGAITDAR SANGH, PUNE				
Research & Training Center Manjri Farm Laboratory, Pune – 412 307 E-mail: mrdbslab@yahoo.in				
Issued to: Tapkir Sandeep Ramdas		Date : 13/07/2020 Ow. No, mrdbs/Lab/65-3		
A/P: Hiraadgaon		Lab No.- 43 mo. No. 7387850405		
Tal: Shrigonda		Sample received in Lab. - 11/07/2020		
Dist.: Ahamadnagar		Receipt No.- 3556		
Identification : Plot No. Grapes		Date - 11/07/2020 Amount -2100/-		
SOIL ANALYSIS REPORT				
Parameter (Methods)	Unit	Optimum level	Analysis Value	Remark
pH (1:2.5 water) (साम)	--	6.51 – 7.50	8.43	Alkaline
E.C. (1:2.5 water) (विद्युत वाहकता)	dSm <sup>-1</sup>	< 1.00	0.19	Safe
CaCO <sub>3</sub> (Titration) (चुना)	%	1.01 – 3.00	20	High
Organic carbon (Walkley & Black) (सैद्धीय कर्ब)	%	1.01 – 2.00	0.08	Low
primary nutrient				
Av. N (Alkaline KMnO <sub>4</sub> method) (उपलब्ध नात्र)	ppm	181 – 220	31	Low
NO <sub>3</sub> – N (नायट्रेट – नात्र)	ppm	10 – 20	9.63	Low
Av. P (Olsens Method) (उपलब्ध स्फुरक)	ppm	51 – 75	7.05	Low
Av. K (NH <sub>4</sub> - Ac) (उपलब्ध पालाश)	ppm	451 – 600	102	Low
Secondary Nutrient				
Av. Calcium (कैल्शियम)	ppm	1001 – 1500	3727	High
Av. Magnesium (मैग्नेशियम)	ppm	501 – 750	624	Optimum
Av. S. (Barium Chloride Turbidimetry) (सल्फर)	ppm	21 – 50	8.33	Low
Micronutrients				
Av. Fe (DTPA Extr. – AAS) (लोह)	ppm	2.51 – 5.00	4.15	Optimum
Av. Mn (DTPA Extr. – AAS) (मँगल)	ppm	2.01 – 5.00	1.82	Low
Av. Zn (DTPA Extr. – AAS) (जस्त)	ppm	2.01 – 4.00	1.04	Low
Av. Cu (DTPA Extr. – AAS) (तांबे)	ppm	0.41 – 1.00	0.99	Optimum
Other parameters				
Extr. Na (NH <sub>4</sub> - Ac) (सोडियम)	ppm	< 1000	740	Safe
Boron (Hot Water) (बोरॉन)	ppm	0.3 – 0.5	0.16	Low
Extr. HCO <sub>3</sub> (बायकार्बोनेट)	ppm	180 – 250	215	Optimum
Extr. Cl <sup>-</sup> (Mohr's method) (क्लोराईड)	ppm	< 100	42	Safe
Ca/Mg	--	5.5 – 6.5	5.97	Optimum
Ca/K	--	12.5 – 13.5	36.54	High
Mg/K	--	1.5 – 2.5	6.12	High
 J. N. Kalbhor Laboratory Incharge		<b>ORGANIC CARBON</b> <b>Before Treatment 0.08</b>		





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## After Treatment Soil Analysis- Sandeep Tapkir

		<b>MAHARASHTRA RAJYA DRAKSHA BAGAITDAR SANGH, PUNE</b>			
		Research & Training Center Manjri Farm Laboratory Pune - 412 307 E-mail: mrdbslab@yahoo.in			
Issued to:	Tapkir Sandip Ramdas			Date :	19.03.2022
A/P:	Hiradgaon	Lab. No.	1609	Mob. No.	7387850405
Tal:	Shrigonda	Sample received in Lab			15.03.2022
Dist.:	Ahmednagar	Receipt No			Manj/17616
Identification :	Plot No. 1	Date	15.03.2022	Amount	700/-

### SOIL ANALYSIS REPORT

Parameter (Methods)	Unit	Optimum level	Analysis Value	Remark
pH (1:2.5 water) (साम)	--	6.51 - 7.50	7.21	Optimum
E.C. (1:2.5 water) (विद्युत वाहकता)	dSm <sup>-1</sup>	< 1.00	0.23	Safe
CaCO <sub>3</sub> (Titration) (चुना)	%	1.01 - 3.00	14.55	High
Organic carbon (Walkley & Black) (सैदीय कर्ब)	%	1.01 - 2.00	0.52	Low
<b>Primary Nutrient</b>				
Av. N (Alkaline KMnO <sub>4</sub> method) (उपलब्ध नत्र)	ppm	181 - 220	64.00	Low
NO <sub>3</sub> - N (नायट्रेट - नत्र)	ppm	10 - 20	13.74	Optimum
Av. P (Olsen's Method) (उपलब्ध स्फुरक)	ppm	51 - 75	13.95	Low
Av. K (NH <sub>4</sub> - Ac) (उपलब्ध पालाश)	ppm	451 - 600	80	Low
<b>Secondary Nutrient</b>				
Av. Calcium (कैल्शियम)	ppm	1001 - 1500	4896	High
Av. Magnesium (मैग्नेशियम)	ppm	501 - 750	638	Optimum
Av.S.(Barium Chloride Turbidimetry) (सल्फर)	ppm	21 - 50	11.52	Low
<b>Micronutrients</b>				
Av. Fe (DTPA Extr. - AAS) (लोह)	ppm	2.51 - 5.00	4.78	Optimum
Av. Mn (DTPA Extr. - AAS) (मंगल)	ppm	2.01 - 5.00	2.55	Optimum
Av. Zn (DTPA Extr. - AAS) (जस्त)	ppm	2.01 - 4.00	1.5	Low
Av. Cu (DTPA Extr. - AAS) (तांबे)	ppm	0.41 - 1.00	1.89	High
<b>Other parameters</b>				
Extr. Na (NH <sub>4</sub> - Ac) (सोडियम)	ppm	< 1000	320	Safe
Boron (Hot Water) (बोरॉन)	ppm	0.3 - 0.5	0.15	Low
Extr. HCO <sub>3</sub> (बायकार्बोनेट)	ppm	180 - 250	146.4	Low
Extr. Cl <sup>-</sup> (Mohr's method) (क्लोराईड)	ppm	< 100	76.68	Safe
Ca/Mg	--	5.5 - 6.5	7.67	High
Ca/K	--	12.5 - 13.5	61.20	High
Mg/K	--	1.5 - 2.5	7.98	High

Low (कमी); Optimum (योग्य); High (जास्त)



J. N. Kalbhor  
Laboratory Incharge

**ORGANIC CARBON**  
**Before Treatment 0.52**



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## VSI MICRIBIOLOGY LAB TEST REPORT

Highest  
Total Bacterial

Form no. VSI/AGMQCC/FM29

### VSI MICRIBIOLOGY LAB TEST REPORT

Test Report No. - 11 Date - 02/03/2020

Address of Factory/Client- Shree Lotus Solution, Kadamwakwasti, Tal-Haveli, Dist-Pune

VSI Micro- Lab Sample receipt nos.- 11

Sample descriptions - Soil conditioner trial product

Customer letter No.- By hand Letter dated 07/03/2020

Date of sample receipt- 11/02/2020 Date of Analysis- 12 to 17/02/2020

Date of sample receipt- 11/02/2020

Sr. No.	Test Parameter & Unit	TVC on Respective Selective Media	FCO Standards	Test method adopted
1	Total bacterial count on NA	4.0 X 10 <sup>12</sup> ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	FCO 1985
2	Total Fungal count on PDA	1.0 X 10 <sup>8</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
3	Total Actinomycetes count	3.0 X 10 <sup>8</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
4	Azotobacter	4.0 X 10 <sup>8</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
5	Phosphate solubilizing bacteria	3.0 X 10 <sup>12</sup> / ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
6	Potash mobilizing bacteria	4.0 X 10 <sup>8</sup> / ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
7	Thiobacillus	Absent	1.0 X 10 <sup>8</sup> /ml of sample	
8	Iron solubilizing bacteria	2.0 X 10 <sup>10</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
9	Zinc solubilizing bacteria	2.0 X 10 <sup>10</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
10	<i>Lactobacillus</i>	Absent	1.0 X 10 <sup>8</sup> /ml of sample	
11	<i>Rhizobium</i>	3.0 X 10 <sup>6</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
12	<i>Metarhizium</i>	1.0 X 10 <sup>6</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
13	<i>Beauveria</i>	1.0 X 10 <sup>6</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
14	<i>Verticillium</i>	2.0 X 10 <sup>6</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
15	<i>Pseudomonas spp.</i>	11.0 X 10 <sup>6</sup> /ml of sample	1.0 X 10 <sup>8</sup> /ml of sample	
16	pH	3.22		





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## Training program by Mr. Santosh Latnekar in Institution on Soil Fertility



*Workshop was on conducted on subject Soil Health through biological treatment at S. Nijligappa Sugar Institute (Government of Karnataka) Belgavi on 12/07/2023.  
92 representatives of 22 sugar factories attended the programme.*



*Medicinal plants grow with only organic farming program and How to fertile soil program  
with Rahuri Krishi Vidyapeeth at Sangamner , Ahmadnagar.*



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*Thank You*



SOIL FERTILITY INSTITUTE

**Santosh Somnath Latnekar**

111, South Block A, Fortune Estate  
Aakashwani, Hadapsar, Pune 411028.

9561325565 / 8788570055

E-mail : [soilfertility8@gmail.com](mailto:soilfertility8@gmail.com)

**Compiled by**

Sachin S Kalbhor  
Santosh S Latnekar  
Ashish B. Sheth  
Vijay Gaikwad



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