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# THIS ISSUE'S FEATURES

- Individual farmer certification under PGS India standard
- Increased organic carbon improves soil's fertility and soil quality
- Gaya Farmers using waste decomposer in organic farming
- Bihari style Kadhi Bari Recipe

# **CEO MESSAGE**

Narayan Upadhyaya MD- Aditi Organic Certifications Pvt. Ltd.

Greetings! We hope you and your family are safe and keeping good health. The situation with pandemic is getting better in our country and we are seeing limitless possibilities in the new normal. More and more people than ever are starting a business at village level and keeping environmental issues in mind.

We are publishing our third exclusive newsletter edition to bring in more focus for Organic farming & certification services as per Participatory Guaranteed System (PGS -India) standards. In this edition we are presenting the details about revised PGS India Certifications services extended to Individual farmers, importance of organic carbon in soil, success story of organic farmer and traditional Indian recipe made with produce certified as per PGS India system.

We hope you enjoy reading this issue as much as we have enjoyed putting it together for you!

# INDIVIDUAL FARMER CERTIFICATION UNDER PGS INDIA STANDARD

## Aditi`s Focus

PGS-India is basically a farmer group centric organic guarantee system but to integrate all sections of producers, it also provides for an access to individual producers to get certified under PGS India Standard.

PGS-India also addresses the concerns of individual farmers that are unable to form groups or fall short of minimum numbers and the producers located in traditional/ default organic areas. The idea of 'trust' assumes that the individual producer has a commitment to protecting nature and consumers' health and well-being through organic production systems defined under "PGS-India standards"

To ensure reach of PGS-India organic guarantee system to individual farmers who are located in areas away from the groups and other members of the village community are not yet ready to embrace organic, PGS-India provides specific provisions to certify these farms through verification and guarantee from nearby PGS-India groups as per the guiding principles of PGS-India for groups. In exceptional cases where there is no PGS-India group nearby for such guarantee then national institutional structure through Regional Councils can assist such farmers for verification of their compliance to PGS-India guarantee process. But such farmers should make all out efforts to create groups and become part of PGS-India groups as and when possible. Individual farmers in villages where PGS-India groups are existing or are in close-by villages of such PGS-India groups, they shall be treated as part of those groups.

Individual producer registration is an interim arrangement and the producer must initiate efforts to bring in other members from the village community to form the group in due course (maximum 2 years) and transform individual status to group status. "Regional Councils will assist such farmers in verification of their compliance to PGS-India guarantee process"

In case if an individual farmer is unable to form a group even after 2 years, then Regional Council will attach the farmers with the nearest group

### Certification

Individual farmer shall apply online under PGS India website by selecting authorized regional council (RC). Documents like Application form, Organic Pledge, Declaration, Agreement for fees with RC along with Faring history sheet need to be submitted to RC.

Verification of do<mark>c</mark>uments and physical inspection shall be conducted by RC. Farmer can constitute peer appraisal from the members of LGS near by Individual farmer RC members directly or participate. Peer appraisal sheet is submitted to RC to generate the certificate with estimated yield. And farmer need to update the actual yield with would be verified and approved by RC. Based on the actual yield the transaction certificate can be generated and produce can be sold.



#### **INCREASED ORGANIC CARBON IMPROVES SOIL S FERTILITY AND** SOIL QUALITY Carbon is the main element present in soil organic matter, on average making up 58% by weight. The



Carbon is the main element present in soil organic matter, on average making up 58% by weight. The carbon present in soil organic matter is referred to as organic carbon. Total organic carbon influences many soil characteristics including colour, nutrient holding capacity (cation and anion exchange capacity), nutrient turnover and stability, which in turn influence water relations, aeration and workability. The importance of soil carbon are as follow:

## Aditi`s Insight

Soil organic matter (SOM) is the organic component of soil, consisting of three primary parts including small (fresh) plant residues and small living soil organisms, decomposing (active) organic matter, and stable organic matter (humus). Of all the components of soil, organic matter is probably the most important and most misunderstood. Organic matter serves as a reservoir of nutrients and water in the soil, aids in reducing compaction and surface crusting, and increases water infiltration into the soil. Yet it's often ignored and neglected.

Soil organic carbon is a measurable component of soil organic matter. Organic matter makes up just 2–10% of most soil's mass and has an important role in the physical, chemical, and biological function of agricultural soils. Organic matter contributes to nutrient retention and turnover, soil structure, moisture retention and availability, degradation of pollutants, and carbon sequestration

Microorganisms digest up to 90% of the organic carbon that enters a soil in organic residues. In doing so, they respire the carbon back into the atmosphere as carbon dioxide. While up to 30% of organic inputs can eventually be converted to humus, depending on soil type and climate. There are Soils naturally higher in clay content generally retain more organic matter – and hence can retain more organic carbon – than sandy soils.



Soil health card is distributed under PKVY program to the registered farmers.

"Paramparagat Krishi Vikas Yojana" is an elaborated component of Soil Health Management (SHM) of major project National Mission of Sustainable Agriculture (NMSA).

- 1. It is a vital component of productive agriculture. In addition, sequestration of carbon in agricultural soils has been recognized as a tool to mitigate climate change.
- 2. Organic carbon influences many soil characteristics including nutrient and water holding capacity, nutrient cycling and stability, improved water infiltration and aeration. Soils can preserve organic carbon, as the main component of organic matter, by forming soil aggregates. Clay particles are more effective than sand and silt in preserving soil organic matter.
- 3. Soil carbon is a food source for soil micro-organisms and an important bacteria metabolite, where microbial activity plays an important role in improving soil structure. Soil microflora form microaggregates in the soil by binding soil particles together with their secretions. These microaggregates are like the building blocks for improving soil structure. Improved soil structure increases water infiltration and increases water holding capacity of the soil.
- 4. SOC help to maintain agricultural production through its positive role in maintaining soil health, raising fertility, reducing erosion, and encouraging soil biota.
- 5. Soil carbon levels increase when carbon-based inputs are greater than the losses. The main losses of carbon from the soil are through organic matter decomposition, soil erosion, biomass burning.
- 6. Appropriate crop residue management is important for maintaining or increasing soil carbon levels in cultivated soils, especially when organic carbon is not provided from external sources e.g., manure.

# GAYA FARMERS USING WASTE DECOMPOSER IN ORGANIC FARMING

### Farmer's success story

Around 340 farmers are registered under Paramparagat Krishi Vikas Yojana from 10 local groups of Guraru Block, Gaya District, Bihar. They are happy to transition organic farming since 2018.

They are involved in cultivation of vegetable crops like Potato, Tomato, Bhendi and Brinjal in their 1 to 2.5 acres of land that is offered for certification under PGS -India standards.

One of the farmer and Group leader, Sri Harishchandra Sharma of Rajan 3 PKVY Group registered under PKVY scheme, PGS India standards recalls that initially it was a challenging time and upon getting proper training from Aditi Organic Certifications Pvt. Ltd he started using the self prepared Jeevamruth composition. The result on field was slowly observed.

Further he also started using the Waste Decomposer (WD) regularly along with traditional inputs like jeevamruth and other green manure. He is able to see significant variation in the yield as well as the quality of vegetable have improved. The farmer explain that earlier he had to remove the post harvest crop residue manually but now he is using WD where the residue gets converted to manure. The farmer has obtained a good yield of potato and tomato.



National Centre of Organic Farming (NCOF) has developed a waste decomposer culture which is used for quick composting from organic waste, soil health improvement and as plant protection agent. It is a consortium of micro organism extracted from desi cow dung.

The waste decomposer is sold in a bottle of 30 gms costing Rs. 20/- per bottle directly through NCOF and Regional Organic Farming Centres (RCOF) to farmers



Shri Jayanth Kumar Saxena, farmer and group leader from Barorah 3 PKVY group, Barorah village is happy about the fact the he is able to prepare the organic input with products available at his farm yard. The farmer is able to prepare inputs like Jeevamruth, Panchgavya and vermicompost which he has learnt during the training session. He is spraying the Jeevamruth composition 3 times in 2 months. He is able to observe significant change in the quality of the produce.

Sri Jayant also uses WD mixture in his farm. He is happy about the fact that with organic farming the yield and its quality of produce is not impacted even with deficit of rainfall. He has observed that soil has become more healthy and live with more earthworm in his field.

The farmers are able to sell the produce at the local market and their vegetables gets more consumer attraction ay time people come from Gaya to purchase the produce.

# <u>BIHARI STYLE KADHI BARI RECIP</u>E

## Vyanjan – An Authentic traditional recipe



Bihari Style Kadhi Bari Recipe is popular dish from the state of Bihar. Kadhi is a yogurt-based stew made with mixing yogurt and gram flour and tempered with few aromatic spices. Pakoras made with

gram flour are dunked in the kadhi. Make it for your lunch or dinner and serve with jeera rice. Serve

the Kadhi Bari with Steamed Rice, Phulkas and Bharma Baingan for a simple yet delicious weekend lunch.

Preparation time - 10 minutes Cooking time - 30 minutes Serve for - 4 people

### How to make Bihari Styl<mark>e</mark> Kadhi Bari Recipe:

- To begin making Bihari Style Kadhi Bari Recipe we start with making the bari's. To make the bari, mix the besan, red chilli powder, coriander powder, cumin seeds, ajwain seeds, turmeric powder, eno and salt in a mixing bowl.
- Add enough water to make a thick batter. Whisk this mixture vigorously for few minutes to make the mixture light.
- Heat a paniyaram pan on medium heat, brush each cavity with oil, pour a spoon full of the prepared bari batter into each cavity.
- Pour a few drops of oil around and let it cook for 3 minutes. Flip over and cook the other side of the bari's, once cooked take it out in a bowl and finish making bari's with the leftover batter. The baris should be golden brown in colour on the outside.
- Next, we will make the kadhi. Take a big bowl mix the curd, besan and turmeric, make a thin lump free mixture by adding 3 cups of water.
- Heat oil a heavy bottomed pan. Add bay leaf, coriander seeds and let it splutter. Add the prepared curd and besan mixture, whisk well to avoid the lumps, add more water if the mixture becomes too thick.
- Let the kadhi simmer for 5 minutes, until the raw smell of the besan goes away. Ensure you keep whisking the khadi, so it becomes smooth and does not look curdled.
- Season the Kadhi with salt, add the prepared baris and simmer for another 10 minutes.
- Heat ghee in a pan over medium heat; add the mustard cumin seeds, garlic, chillies, and chilli powder. Saute for a few seconds and pour it over the Khadi Bari
- Once done, switch off the heat and let the baris soak up the kadhi and become soft before serving.

## **Nutrition Facts**

Serving Size: \$ 1 serving (about 2 cups) (462g)

Calcium

Iron

Amount Per Serving	
Calories 496	Calories from Fat 289
	% Daily Value
Total Fat 32g	49%
Saturated Fat 4.8g	24%
Trans Fat 0.6g	
Cholesterol 16mg	5%
Sodium 973mg	41%
Potassium 836mg	24%
Total Carbohydrates 40g	13%
Dietary Fiber 6.6g	26%
Sugars 16g	
Protein 14g	
Vitamin A	15%
Vitamin C	1/19/

\* Percent Daily Values are based on a 2000 calorie diet.

22%

20%



Ingredients to make the Bari's

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- 1 cup Gram flour (besan)
- 1 teaspoon Red Chilli powder
- 1 teaspoon Coriander Powder (Dhania)
- 1/2 teaspoon Turmeric powder (Haldi)
- 1/2 teaspoon Cumin seeds (Jeera)
- 1/2 teaspoon Ajwain (Carom seeds)
- 1/4 teaspoon Enos Fruit Salt
- Salt, to taste

### Ingredients to make the Kadhi

- 1 cup Curd (Dahi / Yogurt), sour
- 3 tablespoons Gram flour (besan)
- 1/2 teaspoon Turmeric powder (Haldi)
- 1 teaspoon Coriander (Dhania) Seeds
- 1 Bay leaf (tej patta)

### To temper

- 1 sprig Curry leaves
- 5 cloves Garlic, chopped
- 1 teaspoon Cumin seeds (Jeera)
- 2 Dry Red Chilli
- 2 teaspoons Ghee
- 1/4 teaspoon Kashmiri Red Chilli Powder

PAGE 4

• Salt, to taste

# GLIMPSE OF PGS ACTIVITIES AT DIFFERENT DISTRICTS, VARIOUS STATES

## Program & Place

Online training program on PGS India Organic Certification conducted to farmers of Chhatisgarh and Madyapradesh by RCOF Jabalpur. The training on practical Demonstration of PGS India website through RC was imparted by Ms. Kavya HP



Online training program on PGS India Organic Certification conducted to farmers of Karnataka by RCOF Bengaluru. The training on Organic farming and certification process under PGS India guidelines through RC was imparted by Ms. Reshma Rani



Group meeting conducted at Aland Block, Kalburgi, Karnataka

2021 SEPTEMBER

Refresher training conducted by Mr, Praveen at Barhari, Nalanda District, Bihar



Meeting conducted with farmers and buyers at Angada Block, Ranchi, Jharkhand.



Refresher training conducted by Mr, Rakesh Kumar at Gaya District, Bihar



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