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# Darpan

## Insights from Aditi

*Aditi's Monthly Newsletter*

### USHERING AN ORGANIC WAY OF LIFE

#### THIS ISSUE'S FEATURES

- *Future perspectives of organic farming*
- *Increased organic carbon improves soil's fertility and soil quality*
- *Singhare Ki Kachri -An Authentic traditional recipe*
- *The wonders of water melon*

#### CEO MESSAGE

*Narayan Upadhyaya*  
*MD- Aditi Organic Certifications Pvt. Ltd.*

Greetings! We at Aditi pay attention to every development happening in organic industry so that it yields fruit to our esteemed operators.

Our teams are growing, we are adding new accreditations this year, but one thing remains constant is our commitment towards customer success. We thank everyone for long-term association. You have been an essential part of our organization's 15 years of journey and success. The journey will continue together with you all, with firm commitments and the required responsibilities.

In this edition we explore the future of organic farming in India, Interview with Dr. Ashok Alur- Director, Centre of Excellence for Farmer Producer Organizations among others.

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

# FUTURE PERSPECTIVES OF ORGANIC FARMING

*Aditi's Insight*

Despite the fact that commercial organic farming with a strict quality certification system, a new market-driven consumer-oriented farming system worldwide has grown at a rate of almost 25% to 30% per year in the past ten years. Contrary to economic forecasts, the expansion of organic farming remains intact. The movement began in the developed world and is now spreading to developing countries. However, demand remains concentrated in industrialized and rich countries. Local cuisine is even more popular. As the domestic market grows, India is preparing for stronger growth. The growth of Indian domestic markets is crucial to the success of the organic movement.

Although India has long been known for its organic farming, the rise of today's input-intensive scientific agriculture is driving it forward. Organic farming is gaining in popularity in India and is in ninth place among the top ten countries with the most organic land. Organic farming has established itself as a practical alternative to conventional farming, which not only solves quality and environmental problems, but also ensures debt-free operation.

Support for crop insurance has also been changed to reduce losses for farmers and to provide a comprehensive risk coverage window for various crops. In the last 5 years, 30 percent of the total land planted area has been covered, compared to a target of 50 percent. Farmers' access to new knowledge and skills has also improved. For example, 652 agricultural technology management agencies have been set up across the country to provide farmers with the latest technology. Over the last 5 years, these agencies have reached 1.2 million farmers, half of whom are women.



Machine-driven farms, drone-controlled monitoring of farms, artificial intelligence-driven farming systems - this is the future predicted by agro experts. Using data analysis to improve soil quality, weather forecasting and agricultural practices has become commonplace. A biologically based, agri-food system will be created, which will enable a balanced connection between agriculture and nature.

Today, we are living in a highly uncertain times, and the struggle for the future of food and agriculture is essential for a health and wellbeing of humanity. There is an urgent need to move towards the idea of food sovereignty based on agro-ecological principles and local ownership and management of common resources. Organic farming systems can provide agronomic and environmental benefits through structural change and tactical management of agricultural systems. This will not only benefit developed countries (environmental protection, improving biodiversity, reducing energy consumption and CO2 emissions) but also developing countries such as India (sustainable use of resources, biodiversity, etc.).

## SPOTLIGHT

EXPERT SPEAK WITH DR. ASHOK ALUR DIRECTOR, CENTRE OF EXCELLENCE FOR FARMER PRODUCER ORGANIZATIONS



<https://www.youtube.com/watch?v=Hy1vr5ByP2U>



In conversation with Dr. Alur sharing insights on "How FPOs can benefit farmers"

# INCREASED ORGANIC CARBON IMPROVES SOIL'S FERTILITY AND SOIL QUALITY



## 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.



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:

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.

# SINGHARE KI KACHRI

*Vyanjan – An Authentic traditional recipe*



## How to make SINGHARE KI KACHRI Recipe:

- To make Singhare Ki Kachri, wash the water chestnut.
- Pressure cook water chestnut along with salt for one or two whistles over medium heat. Turn off the heat. Let the steam release naturally from the pressure cooker.
- Now it becomes easy to remove the outer peel of the water chestnut. Collect the pale white pulp in a separate bowl.
- Add salt, chili powder, cumin powder over the boiled water chestnut. Nicely mash it using the potato masher. The mashed water chestnut will be similar to stuffing for Aloo Paratha.
- Heat butter in a heavy bottom pan over medium heat.
- Now add asafoetida, grated ginger and green chili. Saute for few seconds or till the aroma of ginger is released.
- Add mashed water chestnut and roast over low heat till the mixture turns pale brown in color and starts leaving sides of the pan. Keep stirring the mixture while it is roasting. Slow cooking is the trick behind making the perfect Kachri.
- Once the Kachri is nicely roasted a pleasant aroma is released. The taste and texture of the mixture is also refined. Taste and adjust the seasoning accordingly.
- Before serving drizzle lemon juice, sprinkle chopped coriander and pour a teaspoon of melted butter on top.
- Serve Singhare Ki Kachri warm with coriander chutney.

## Ingredients

- 500 gram Singhare water chestnut
- Salt to taste
- 4 tablespoon butter
- 1 teaspoon asafoetida (hing)
- 2 teaspoon cumin powder
- ½ teaspoon red chili powder
- 1 green chili finely chopped
- An inch piece of ginger peeled and grated
- Juice of 1 lemon



## IMMUNITY BOOSTER

# THE WONDERS OF WATER MELON



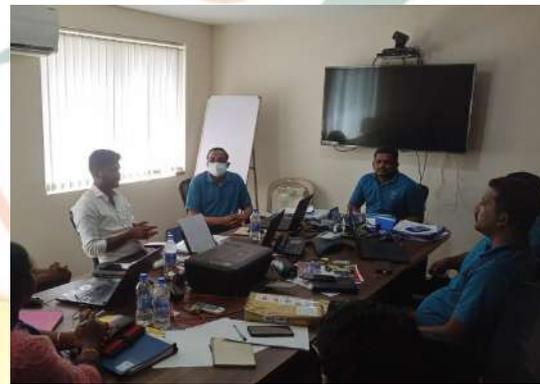
Watermelon comprises 92% water, making it a great choice for daily water intake. It contains a variety of nutrients, including potassium, magnesium, and vitamins A and C. It's also relatively low in calories. It boasts antioxidants, including vitamin C, carotenoids, lycopene, and cucurbitacin E.

Watermelon also contains citrulline, an amino acid that may increase nitric oxide levels in your body. Nitric oxide helps your blood vessels expand, which lowers blood pressure.

Vitamins A and C, which are found in watermelon, are important for skin health



# GLIMPSE OF INSPECTION ACTIVITY



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