


## Success Story

### Farmer's details:

1.	<b>Name of the farmer</b>	Shri Mrityunjoy Pradhan	
2.	<b>Age</b>	50 years	
3.	<b>Gender</b>	Male	
4.	<b>Land Holding</b>	2 acre	
5.	<b>Occupation</b>	<b>Primary: Farmer</b> <b>Secondary: Farmer</b>	
6.	<b>Enterprises associated</b>	Commercial Horticulture	
7.	<b>Contacts</b>	9735204439	
8.	<b>Postal address:</b>	Village+P.O.:Dakshin Narikelda, P.S: Nandakumar, District- Purba Medinipur, Pin- 721648	

### **9. Title of the Story: Integrated Organic Farming: Betel Vine Cultivation in a Modified Low-Cost Shade-Net Boroj with Mushroom and Dragon Fruit Production – A Remunerative Venture"**

**10. Introduction:** *"Success is not just about what you accomplish in your life; it is about what you inspire others to do."* Shri Mrityunjoy Pradhan from Dakshin Narkelda, Nandakumar, Purba Medinipur, is a shining example of this philosophy. A dedicated and innovative farmer with over 30 years of experience, he has transformed his traditional farming system by adopting modern, sustainable, and diversified practices. Five years ago, he converted his conventional straw-made boroj into a modified low-cost shade-net structure, significantly improving betel vine production. In 2022, he further expanded his farm by introducing mushroom cultivation using low-cost technology and integrating dragon fruit farming with 26 pillars around his boroj. His holistic approach to farming not only increased productivity and income but also set a model for fellow farmers, demonstrating the potential of integrated organic farming for long-term sustainability and profitability.

### **Journey towards a New Dimension:**

Shri Mrityunjay Pradhan's journey in agriculture has been marked by continuous innovation and adaptation. His transformation began in 2019 when he came in contact with Purba Medinipur KVK, which provided him with training, technical guidance, and demonstrations to enhance his farming techniques. Recognizing the limitations of traditional betel vine cultivation under straw-made boroj, he took a bold step five years ago to convert his structures into modified low-cost shade-net boroj, ensuring better durability, microclimate control, and enhanced leaf quality.

With the training and support from KVK, Shri Pradhan further expanded his farming system by introducing mushroom production in 2022, utilizing low-cost techniques and quality spawn provided by KVK. To diversify his farm even further, he started dragon fruit cultivation with 26 pillars, after receiving good-quality saplings and scientific cultivation guidance from KVK. He also adopted overhead sprinkler irrigation to improve water efficiency in his boroj.

His integrated approach to organic farming, supported by Purba Medinipur KVK and the Department of Agriculture & Horticulture, has not only boosted farm profitability but also inspired fellow farmers to explore sustainable and diversified agricultural practices. Through continuous learning and adaptation, Shri Pradhan has successfully transformed his farm into a model of innovation, sustainability, and profitability.

### **11. Description of the technology: Progress made**

Shri Pradhan started converting his betel vine cultivation from conventional straw-made Boroj to a modified shade-net Boroj three years ago. Over time, he replaced all his Boroj with this improved

structure. The use of organic inputs and the favorable microclimate inside the shade-net Boroj have enhanced leaf quality, making them more glossy and attractive, meeting consumer preferences. From a single Boroj of approximately 3 cents (1306 sq. ft.), he earns a net profit of ₹1.2 lakh per annum. With four such Borojs, his total earnings from betel vine cultivation reach ₹5 lakh per annum. In 2022, he expanded his farm operations by adopting low-cost oyster mushroom production technology, earning a net profit of ₹3.04 lakh per annum. Additionally, by introducing dragon fruit cultivation on his farm, he has further increased his income, generating an extra ₹ 1.3 lakh per annum. Through his innovative and integrated organic farming system, Shri Pradhan has set an example for sustainable and highly profitable agricultural practices.

## **12. Intervention of Krishi Vigyan Kendra:**

The Purba Medinipur Krishi Vigyan Kendra (KVK) played a crucial role in supporting Shri Pradhan's transition to an integrated organic farming system by providing technical guidance, training, and input support:

### **i. Betel Vine Cultivation Improvement:**

- Provided a model organic package of practices for betel vine cultivation.
- Demonstrated better irrigation facilities through the introduction of overhead sprinklers in the shade-net Boroj.
- Established linkages with the Department of Horticulture for availing skill-based training on constructing shade-net houses.

### **ii. Mushroom Production Support:**

- Conducted a 7-day skill development training programme on oyster mushroom cultivation.
- Supplied high-quality spawn and facilitated linkages with reliable input suppliers.

### **iii. Dragon Fruit Cultivation Assistance:**

- Provided good-quality dragon fruit saplings from Purba Medinipur KVK.
- Offered technical guidance on cultivation practices and benefits to optimize yield and profitability.

With the timely interventions of KVK, Shri Pradhan successfully adopted an integrated organic farming approach, enhancing both his income and sustainability. His farm serves as a model for progressive farmers, demonstrating the potential of diversified organic agriculture.

## **13. Departmental association:**

<b>Sl. No.</b>	<b>Name of the Department</b>	<b>Nature of association</b>
1	Krishi Vigyan Kendra, Purba Medinipur	Training, Demonstration, Input support, Advisory services
2	WBCADC, Tamluk project, Purba Medinipur	Training, Input support, Advisory services, marketing
3	NABARD, Purba Medinipur	Training and Awareness
4	Department of Agriculture	Training, Awareness
5	Department of Horticulture	Training, Awareness

### **Benefit to youth:**

Shri Mritunjoy Pradhan imparted training, guidance, and technical support to local youth on organic betel vine cultivation, mushroom production, and dragon fruit farming. He also educated them on low-cost shade-net boroj construction, value addition in mushrooms (drying, pickling, powder making), and the concept of introducing high-value crops like dragon fruit. Many young individuals have engaged in these small-scale agri-entrepreneurial activities, earning a stable income and supporting their families while promoting sustainable farming practices.

**Award/ Recognition:**

- i) “Best Innovative Farmer” by Dept. of Horticulture, Govt. of West Bengal, 2022
- ii) “Krishi Ratna Award” by Dept. of Horticulture, Govt. of West Bengal, 2022
- iii) “Best Progressive Farmer Award” by Purba Medinipur KVK, 2024

**Change in economic status:**

Sl. No.	Period	Activities	Net Average Income per annum per farm family (Rs.)	Intervention by KVK (Forward & Backward Linkage)
1.	2016 to 2019 (Before intervention)	Casual farm labour and traditional betel vine cultivar	150000/- to 180,000/-	--
2.	2019-2021	Scientific betel vine cultivation, vegetable cultivation	4,50000/- to 5,0,0000/-	Training and advisory services
3	2021-24	Shed net boroj, Mushroom cultivation, Dragon Fruits cultivation and High vale Vegetable cultivation	775000/- to 900000/-	Skill Development Training, Demonstration, Input support, Linkage with other departments in relation to input support, training, marketing and financial support

**Economics:**

Sl. No.	Enterprise (Crop)	Yield (Leaf No./ 3 cent)	Cost (Rs.) for 3 cent	Gross Return (Rs.) for 3 cent	Net Return (Rs.) for 3 cent	Benefit-cost ratio
1.	Betel Vine	1500000	30000.00	150000.00	120000.00	5:1
Sl. No.	Enterprise (Crop)	Yield (kg/pillar)	Cost (Rs.) (1 <sup>st</sup> year)	Gross Return (Rs.)	Net Return (Rs.)	Benefit-cost ratio
2.	Dragon Fruits	25 kg	15000.00	130000.00	115000.00	8.6:1
Sl. No.	Enterprise	Yield (kg/day)	Cost (Rs.)	Gross Return (Rs.)	Net Return (Rs.)	Benefit-cost ratio
1.	Mushroom	20 kg	360000.00	900000.00	540000.00	2.5:1

**14. Future prospect:****A. Model for Future Boroj Construction:**

- i. Shri Pradhan’s shade-net Boroj is a sustainable alternative to conventional straw-made structures.
- ii. Since it is a permanent structure, it will motivate fellow betel vine farmers to adopt this cost-effective, durable system, reducing annual maintenance costs.

**B. Organic Betel Vine and Market Expansion:**

- i. By using organic inputs, Shri Pradhan is producing high-quality betel leaves that fetch a higher market price.
- ii. If more farmers shift to organic betel vine cultivation, it will open opportunities for organic certification, leading to export potential in international markets.

**C. Value-Added Products:**

- i. Organically grown betel vine has the potential to be processed into packaged drinks and pan masala, creating value-added products.

- ii. The petiole of betel leaves can be used as a bio-herbicide to control aquatic weeds, promoting sustainable environmental management.

#### **D. Mushroom and Dragon Fruit Expansion:**

- i. Given the success of mushroom production, more farmers may adopt low-cost mushroom farming as an additional source of income.
- ii. Fresh mushrooms have a short shelf life, but processing into value-added products can improve marketability and profits. Like Dried mushrooms, Mushroom protein powder, Pickled mushrooms etc.
- iii. Dragon fruit cultivation is emerging as a high-value crop, and expanding its production could bring higher financial returns for farmers in the region. There is also potential for value-added dragon fruit products such as juices, dried fruit, and processed foods, enhancing farm income.

Through his integrated organic farming model, Shri Pradhan is paving the way for a more sustainable, diversified, and profitable future in agriculture. His success story serves as an inspiration for farmers to embrace innovative and eco-friendly farming techniques.

#### **Constraints Faced During the Journey:**

- i. **Financial Challenges:** High initial investment for transitioning to a shade-net boroj and expanding mushroom and dragon fruit cultivation.
- ii. **Lack of Technical Knowledge:** Limited expertise in organic farming, mushroom production, and dragon fruit management initially.
- iii. **Market Challenges:** Difficulty in accessing premium markets, fluctuating prices, and lack of organized buyers.
- iv. **Climatic Factors:** Maintaining optimal microclimate for betel vine and managing weather fluctuations affecting dragon fruit growth.
- v. **Farmer Resistance:** Hesitation among fellow farmers to adopt modern organic practices and integrated farming approaches.
- vi. **Input Supply Issues:** Difficulty in procuring quality organic inputs, mushroom spawn, dragon fruit saplings, and proper storage facilities.

Despite these challenges, support from Purba Medinipur KVK, persistence, and innovation helped Shri Pradhan establish a successful, sustainable farming model.

#### **Conclusion:**

Shri Mritunjoy Pradhan is a progressive and innovative farmer who has successfully transformed his traditional farming system into a profitable integrated organic model. Speaking about his journey, Shri Pradhan says, *“I always believed in improving my farming techniques, and with the adoption of shade-net boroj, organic practices, and new crops like mushroom and dragon fruit, my income has increased significantly. The guidance and support from Purba Medinipur KVK have played a crucial role in my success. I am happy to share my knowledge and inspire other farmers to adopt sustainable agriculture.”* Despite challenges, he has emerged as a role model for fellow farmers and rural youth, encouraging them to explore diversified, climate-resilient, and high-value farming for a better livelihood.

15. Action photographs



Quality Betel vine production



Quality Betel vine production



Introduction of Mushroom



Dragon Fruits in his Farm