

A Case Study

Beetroot cultivation and marketing in the Sakra block of Muzaffarpur District (Bihar)

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Farmer Name : Sri Rakesh Ranjan

Vegetables grower

Age : 40 Years

Education : Intermediate

Mob. No. : 7761860685

Village : Gannipur Bejha

Block : Sakra

District : Muzaffarpur

State : Bihar

Background

Beetroot, popularly known as Chukunder in Hindi, is an important vegetable crop grown during. The Kharif season in July. The cultivation of Chukunder is gaining popularity due to its numerous Health benefits. This crop plays a crucial role in boosting immunity, acting as an Antioxidant, Antimicrobial, and Antiviral agent. It also provides essential nutrients like magnesium, sodium, potassium, and vitamin C. Additionally, beetroot helps prevent life-threatening diseases such as cancer and hypertension. Compared to sugarcane, beetroot has a higher sucrose content, ranging between 14-20%. It also matures in a shorter duration of 5-6 months, whereas sugarcane takes 12-14 months with a sucrose content of only 10-12%. The unique attributes of beetroot—its vibrant color, freshness, taste, and organic value—make it a highly desirable crop.

A Case Study

This case highlights a beetroot farmer from Gannipur Bejha village who has been cultivating vegetable crops for a long time. Since the agricultural year 2016-17, Sri Ranjan, a young, dynamic, and progressive farmer, has been engaged in beetroot cultivation. He is known for his innovative farming techniques and grows a variety of vegetables using relay cropping methods.

His inspiration to cultivate beetroot came from regular visits to the local market, where he noticed high demand but insufficient supply of the crop. This market gap caught his attention, prompting him to experiment with beetroot cultivation on his farm. His initial trials proved profitable, encouraging him to expand his beetroot cultivation area year after year. By the agricultural year 2024-25, he has dedicated over 6.0 acres to beetroot farming, showcasing a shift towards diversified cropping patterns.

Economic Viability

Cost of cultivation Rs. per acre

Ploughing costs	-	Rs 3500/-
Seeds	-	Rs 7000/-
Ridge making	-	Rs 14000/-
Cow dung manure	-	Rs 10000/-
DAP	-	Rs 1800/-
MOP	-	Rs 1200/-
Urea	-	Rs 250/-
Calcium	-	Rs 600/-
Insecticides, pesticides	-	Rs 8000/-
Irrigation	-	Rs 6000/-

Labour charges

Planting charges	-	Rs 6000/-
Inter-culturing	-	Rs 20000/-
Irrigation	-	Rs 2000/-
Digging of the crop	-	Rs 5000/-

Total cultivation costs - Rs 85350/-

Returns

Yield 210 quintals/acre

Market rate Rs 1200/ quintal - 2,52,000/-

Net return Rs - 1,66,650/-

The yield of beetroot varies between 20-25 tonnes per acre, while the market price ranges from ₹1000 to ₹2500 per quintal, depending on demand and target markets.

On an average, the income per acre from beetroot cultivation is around ₹1,66,650 per year, although this may vary based on yield, market location, and seasonal demand.

Future Aims

Implement intercropping with spices and fruits crops.

Supply produce to Shakti Sudha Industries, Patna for processing.

Develop and package beetroot-based products like pickles and jam.

Encourage more farmers to adopt beetroot cultivation in the area.

Conclusion

The successful cultivation of beetroot by this farmer demonstrates its profitability in both local and state markets. With growing interest among farmers, beetroot farming is expected to expand in the region, creating new opportunities in the food processing industry. This, in turn, will contribute to employment and income generation for the farming community in one hand and state prosperity in other hand.

Image with caption.



Sole beetroot Crop



(Inter crop with Fig (Anjeer



Fresh beetroot



Packed beetroot for sale