



A case study on innovative family farming: The success of Shri Pooran Singh Kushwaha in Uttar Pradesh

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Abstract

Innovative farmers play a crucial role in advancing sustainable agriculture through the integration of traditional and modern practices. This study examines the pioneering efforts of Shri Pooran Singh Kushwaha, a progressive farmer from Phutera village, Barua Sagar, Uttar Pradesh, who has revolutionized farming by cultivating medicinal plants like White Musli (Safed Musli) alongside traditional horticultural crops. His commitment to innovation and sustainability has earned him and his family state-level best farmer awards, recognizing their significant contributions to agriculture. Beyond enhancing productivity, Pooran Singh actively shares his knowledge, influencing the local farming community to adopt advanced techniques. His family-driven farming model highlights the role of collective effort in agricultural success. This study explores his farming innovations, family involvement, and their broader impact on sustainable agriculture and rural livelihoods.

Keywords: Family farming, innovation, Case study, White Musli, horticulture, medicinal plants, sustainable agriculture, knowledge dissemination, community development.

Introduction

Innovative farmers play a crucial role in knowledge transfer, bridging the gap between traditional practices and modern agricultural advancements. They not only adopt novel techniques but also serve as conduits of information to their peers. Mittal and Mehar (2015) ^[4] noted that farmers with larger landholdings are more likely to access diverse information sources, with 90% of farmers obtaining crucial insights from fellow practitioners. One such exemplary innovator is Shri Pooran Singh Kushwaha from Phutera village, Barua Sagar, Uttar Pradesh. While many local farmers focus on horticulture—particularly guava cultivation for export to cities like Lucknow and Delhi—Pooran Singh has distinguished himself by integrating the cultivation of medicinal plants with traditional horticultural crops. His innovative methods have not only transformed his own farming practices but have also inspired his entire family, with four members receiving state-level best farmer awards from the U.P. government. This study examines his pioneering farming techniques and the broader impact of his knowledge transfer on the local agricultural community, illustrating how individual innovation can drive sustainable agricultural development.

White Musli Cultivation and Diversified Farming System

White Musli (Safed Musli), a medicinal plant from the asparagus family, is highly valued for its applications in treating diabetes, cancer, and other ailments. The crop offers a lucrative return, with a cost of cultivation per hectare estimated at ₹2,50,000 and a potential benefit of ₹10,00,000, making its cost-benefit ratio 1:4.

Shri Pooran Singh Kushwaha, despite owning just 3.5 acres of land, has developed a diversified farming system. He cultivates various crops, including black gram, wheat, vegetables like brinjal, potato, ginger, turmeric, chili, and

cauliflower, along with floriculture crops such as rose and marigold. His farm also includes fruit crops like guava, a vegetable and flower nursery, a vermicompost unit, and a dairy farm, showcasing a well-integrated approach to agriculture.

His inspiration for cultivating White Musli came from a friend, and he successfully introduced this crop on his farm. Observing his success, around 15 farmers from his village and neighboring areas also adopted White Musli cultivation and collectively entered contractual agreements with pharmaceutical companies. This shift has positively impacted local agricultural income and employment.

In addition to being a progressive farmer, Pooran Singh has actively sought knowledge by attending training programs at various agricultural departments, universities, and research institutions. He has visited innovative farms across different states, including Odisha, Maharashtra, and Gujarat, to gain insights into best practices. Recognized for his exceptional yield in black gram, he was honored with the Best Farmer Award by the Uttar Pradesh government.

Beyond his own success, he plays a crucial role in knowledge dissemination. Acting as a mediator between farmers, agricultural departments, universities, and NGOs, he promotes awareness of improved agricultural practices and beneficial government schemes. His farm has become an educational hub, attracting nearly 400 farmers and officials annually who seek to learn from his innovative methods. Through his relentless efforts, Pooran Singh has inspired his fellow villagers to adopt sustainable farming and White Musli cultivation, strengthening the region's agricultural economy.

Methodology

In this case study, qualitative research methods were employed to gain a comprehensive understanding of Shri Pooran Singh Kushwaha's innovative farming practices and

their impact on the local community. The research involved field visits and in-depth interviews with Pooran Singh, his family members, local farmers, agricultural officers, and experts. Additionally, data were collected from agricultural departments, universities, and NGOs associated with the region's farming practices. Award records and farm demonstration statistics were reviewed to evaluate the success and impact of Pooran Singh's initiatives.

To assess the economic viability of his farming practices, the benefit-cost ratio (BCR) was calculated. The BCR is an indicator used in cost-benefit analysis to summarize the overall value for money of a project or proposal. It is calculated by dividing the discounted value of incremental benefits by the discounted value of incremental costs.

Findings and analysis

- **Farming Practices and Crop Diversity**
- Shri Pooran Singh Kushwaha cultivates a variety of crops on his 3.5-acre farm. These include:
 - **Horticultural Crops:** Guava, which is a staple crop in the region and widely exported.
 - **Medicinal Plants:** White Musli, known for its medicinal properties, particularly in the treatment of diabetes, cancer, and other diseases.
 - **Field Crops:** Black gram, wheat, and vegetables like brinjal, potato, ginger, turmeric, chili, and cauliflower.
 - **Flower Crops:** Roses and marigolds.
 - **Nursery Cultivation:** Vegetables and flowers are also grown in nurseries for sale.

This diverse crop portfolio allows for increased profitability and sustainability. The cultivation of White Musli, in particular, stands out due to its high cost-benefit ratio of 1:4, with a cost of ₹2.5 lakh per hectare and a return of ₹10 lakh. The benefit of ₹7.5 lakh per hectare from White Musli cultivation has significantly boosted the farm's income.

- **Family Involvement and Role of Women**

A key feature of the Kushwaha family's farming success is the active participation of all family members, including women. This inclusive approach to farming underscores the importance of family involvement, which is often a key factor in the success of small-scale farms. The family works collectively in various areas, from crop cultivation to the management of the vermi-compost unit and dairy farming, creating a shared responsibility that enhances farm productivity.

Furthermore, Pooran Singh's farm exemplifies the positive role of women in agriculture, as they contribute to both the farming activities and the decision-making processes. This collaborative approach strengthens the family's agricultural enterprise and ensures its continued success.

- **Knowledge Dissemination and Community Impact**

Shri Pooran Singh Kushwaha has played a pivotal role in spreading agricultural knowledge to fellow farmers. He acts as a mediator between farmers, agricultural departments, universities, and NGOs, facilitating the exchange of information about best practices and government schemes. His farm has become a hub for agricultural learning, with nearly 400 farmers and officials visiting his farm annually to observe his practices.

Inspired by Pooran Singh's success with White Musli, 15 farmers from his village and nearby areas have adopted

similar cultivation techniques, entering into contracts with pharmaceutical companies to supply White Musli. This has helped to boost local incomes and has set a precedent for crop diversification in the region.

- **Training, Awards, and Recognition**

Pooran Singh's commitment to continuous learning has played a significant role in his farming innovations. He has attended training programs organized by agricultural universities and government departments, which have provided him with the knowledge to experiment with new farming techniques. His visits to other innovative farm demonstrations in states such as Orissa, Maharashtra, and Gujarat have also contributed to his growth as a farmer.

In recognition of his achievements, Pooran Singh has received multiple accolades, including the prestigious Best Farmer Award from the Uttar Pradesh government for his high yield of black gram. These awards not only validate his farming methods but also raise awareness about the benefits of innovative farming in the region.

Reflection

- **Pursuit of Knowledge:** Driven by a deep passion for agriculture, Shri Pooran Singh Kushwaha actively sought information from diverse sources. His extensive travels across various Indian states allowed him to acquire advanced farming techniques, demonstrating his commitment to continuous learning and practical application.
- **Information Dissemination:** Serving as a vital link between farmers and institutions such as agricultural departments, universities, and NGOs, he effectively disseminated valuable information throughout the farming community. This facilitation ensured that fellow farmers were well-informed about best practices and available resources, thereby enhancing agricultural productivity and sustainability.
- **Family Involvement:** The active participation of his entire family, including women, in farming activities underscored the significance of family farming. This collective involvement not only diversified the skill set within the farming operations but also strengthened the social fabric of the rural community, highlighting the integral role of family unity in agricultural success.

Conclusion

Shri Pooran Singh Kushwaha's innovative farming practices have not only transformed his farm but have also inspired a broader shift in agricultural practices within the Barua Sagar region. The success of Pooran Singh Kushwaha's farm is a testament to the power of innovation, education, and family involvement in agriculture. His integration of medicinal plant cultivation, along with traditional crops, has significantly increased the farm's profitability while promoting sustainable agricultural practices. His story also highlights the importance of family farming, where all members, regardless of gender, are actively involved in both farming activities and decision-making. This holistic approach is crucial for the long-term success of small-scale farms.

In conclusion, Shri Pooran Singh Kushwaha's innovative approach to agriculture—marked by crop diversification, the integration of medicinal plants, and a strong emphasis on knowledge-sharing—has culminated in a sustainable and

profitable farming system that stands as a model for others. His family's active participation and his unwavering commitment to continuous learning have positioned them as leaders in advancing community-driven agriculture in India. Moreover, his role as a knowledge disseminator has significantly contributed to the agricultural development of his community, creating a ripple effect that extends well beyond his own farm. By fostering collaboration among farmers, agricultural departments, universities, and NGOs, he has facilitated the exchange of valuable information and resources, further strengthening the agricultural framework of his region. Shri Pooran Singh's efforts exemplify the profound impact that dedicated individuals can have on promoting sustainable and innovative farming practices, inspiring a new generation of farmers to embrace holistic and community-oriented approaches to agriculture.

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