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From Traditional Farming to Integrated Success: The Journey of Harjit Singh

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Farmer Profile

- Name: Mr. Harjit Singh (39 years)
- Father's Name: Gurdial Singh
- Religion: Sikh
- Family Members: 5 (Joint family)
- Farming Experience: 16 years
- Landholding: 9 acres (owned)
- Village: Khadur Sahib, District Tarn Taran, Punjab
- Major Crops (Earlier): Wheat and Paddy
- Current Farming Activities: Field crops, horticulture, dairy, poultry, vegetable cultivation, vermicomposting, agroforestry
- Agricultural Apps Used: Kisan Suvidha, Pusa Krishi, IFFCO Kisan

Background and Initial Challenges

Khadur Sahib, located in the fertile belt of Tarn Taran district, is known for its rich agricultural traditions. Like many farmers in this region, Harjit Singh inherited farming knowledge from his family and initially practiced the conventional rice and wheat cropping system. For several years, this system provided stable production, but gradually the limitations became evident. The rising cost of fertilizers, pesticides, and irrigation began to reduce profitability. Continuous monocropping led to declining soil fertility, while excessive groundwater extraction created concerns about water sustainability. Harjit Singh also faced issues such as unpredictable market prices and increasing dependence on external inputs. Despite hard work, his income remained limited, making it difficult to meet the growing needs of his family. Recognizing these challenges, he realized the need to adopt a more diversified and sustainable approach to farming.

Adoption of Integrated Farming System (IFS)

In 2017, Harjit Singh attended awareness programs and training sessions organized by the local Krishi Vigyan Kendra (KVK). These programs introduced him to the concept of the Integrated Farming System (IFS), which focuses on combining multiple farm enterprises for better productivity and sustainability. Motivated by this approach, Harjit began transforming his farm step by step. Instead of relying solely on crops, he integrated horticulture, dairy, poultry, and organic practices into his farming system. The goal was to create a system where each component supports the other, reducing waste and increasing efficiency. Over time, his farm evolved into a diversified and self-reliant model, ensuring regular income throughout the year.

IFS Components on His Farm

1. Field Crops (4 Acres)

Harjit continues to grow essential crops but follows improved and sustainable practices.

- Kharif Season: Paddy (PR-126), Maize
- Rabi Season: Wheat (HD-3086), Mustard
- Zaid Season: Fodder crops such as Berseem and Chari

He practices crop rotation and intercropping, which helps maintain soil fertility and reduce pest attacks. Fodder crops also support his dairy unit, reducing feed costs.

2. Horticulture (2.5 Acres)

Considering the suitability of Tarn Taran's climate, Harjit introduced fruit cultivation.

- Fruits: Guava, Citrus (Kinnow), Papaya, Amla
- Vegetables: Tomato, Okra, Brinjal, Chilli, Seasonal greens

Horticulture provides a steady and higher return compared to traditional crops. By selling produce in local mandis and nearby markets, he earns approximately ₹1,50,000 annually.



3. Dairy Farming

Dairy farming is the backbone of his integrated system.

- 3 Murrah buffaloes and 3 crossbred cows
- Daily milk production: 40–45 liters

Milk is sold in nearby villages and local markets, ensuring daily income. The dung from livestock is used in vermicomposting and organic manure preparation.

- Annual Income: Around ₹3,20,000.

4. Vegetable Cultivation (Intensive Farming)

In addition to field crops, Harjit practices intensive vegetable cultivation on a small portion of land.

- Crops include spinach, coriander, radish, and cucurbits
- Provides quick returns and regular cash flow

5. Vermicomposting

Harjit established vermicomposting units to utilize farm waste effectively.

- Uses crop residues and animal dung
- Produces organic manure for fields

This practice significantly reduces the cost of chemical fertilizers and improves soil health.

6. Agroforestry

Trees are planted along field boundaries.

- Species: Neem, Shisham, Poplar
- Benefits: Timber, shade, windbreak, and environmental protection

Economic Impact of IFS

The adoption of the Integrated Farming System has brought a major financial transformation.

- Total Cost: ₹3,00,000
- Net Income: ₹2,00,000

After IFS

- Total Cost: ₹6,50,000
- Net Income: ₹9,20,000

Income increased more than 4 times, with better financial security and reduced risk.

Benefits Experienced

The Integrated Farming System (IFS) model has provided multiple advantages to Harjit Singh. It ensures year-round income through diversified sources, reducing dependency on a single enterprise. The presence of multiple farm activities also minimizes risk, as losses in one area can be balanced by gains in another. The adoption of organic practices has improved soil fertility, while efficient recycling of farm waste has enhanced overall resource use. Additionally, the system has helped in lowering input costs and increasing profit margins. It has also contributed to better family nutrition by providing fresh milk, fruits, and vegetables. Overall, the IFS model promotes environmental sustainability and supports biodiversity conservation.

Challenges Faced

While adopting the Integrated Farming System (IFS), Harjit Singh encountered several challenges. In the initial phase, he had to make significant investments to set up different farming units, which put financial pressure on him. Additionally, he lacked technical knowledge in the beginning, making it difficult to efficiently manage the diversified activities. Handling labour for multiple operations also proved to be a challenge, as each unit required proper attention and coordination. Moreover, he faced market fluctuations, especially for perishable produce, which affected his income stability. The lack of adequate storage and processing facilities further added to his difficulties. However, through strong determination and continuous learning, Harjit Singh gradually overcame these obstacles and successfully established his integrated farming system.

Future Plans

Harjit Singh has ambitious plans to further strengthen and expand his farming system. He aims to increase the production of vegetables and fruits to enhance his income and meet growing market demand. In addition, he plans to introduce mushroom cultivation on a larger scale as a profitable enterprise. To make his farm more sustainable and cost-effective, he is considering the installation of solar-powered irrigation systems. He also intends to join Farmer Producer Organizations (FPOs) to improve market access and gain better bargaining power. Furthermore, Harjit Singh is planning to start value addition activities such as producing juice, pickles, and dairy products, which will help in increasing the overall profitability of his farm.

Conclusion

Harjit Singh's journey from traditional farming to a diversified Integrated Farming System is a remarkable example of innovation and resilience. His success proves that even small and medium farmers can achieve high profitability by adopting modern and sustainable agricultural practices. Today, his farm in Khadur Sahib stands as a model of integrated and eco-friendly farming, inspiring other farmers in the region. By efficiently utilizing resources and diversifying income sources, he has ensured both economic stability and environmental sustainability. This case highlights that the Integrated Farming System is the future of Indian agriculture, offering a practical pathway toward increasing farmers' income while conserving natural resources.