

18. Green Growth in Jehanabad: A Case Study of Organic and Diversified Farming in Nonhi, Keshopur

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Abstract:

Ganesh Prasad, a smallholder farmer from Nonhi, Keshopur village in Kako block of Jehanabad district, Bihar, transformed his livelihood through training and support provided under the Krishi Vigyan Kendra, Gandhar, Jehanabad. Initially practicing traditional farming with limited income, he adopted advanced vegetable cultivation techniques after receiving capacity-building training on advanced technologies of rice, wheat, pulses, cultivation, water conservation methods for crop production, vegetable nursery development, crop management, vermicomposting practices and technologies of climate resilient agriculture. By cultivating cereals, pulses and vegetables like Brinjal, Okra, Cauliflower, Cabbage, Tomato, Cowpea, Ladyfinger, Chilli and other vegetables across one and a quarter hectare of land, he significantly increased his earnings, reaching an income of ₹4.0–4.5 lakhs annually. His model of integrated farming and marketing has inspired nearby farmers,

positioning him as a progressive farmer in the region. His success highlights the impact of skill development and technical guidance in enhancing rural livelihoods.

Early Life and Education

He completed his schooling up to High School. In 1988, he worked as a seasonal labourer in the Ara subdivision, Bihar, under the Sone command as a clerk. He later served as a private invigilator in informal education but eventually left his job and returned to his village. His keen interest in farming led him to return to the village. After returning, motivated by a renewed interest in farming and began crop production with the traditional subsistence farming method. Due to less cultivable land holding, low yields, poor economic returns, limited resources and expense, he found himself in pitiful condition for 2-3 years and struggled to meet his family's needs. His family faced significant challenges in managing household expenses, children's education and medical needs. This drove him to seek assistance from the Krishi

Vigyan Kendra (KVK), Gandhar, Jehanabad, where he was inspired to adopt scientific methods of cultivation and other technologies. He received training in various farming techniques and agri-based enterprises and started farming with scientific innovations.

The goal:

Promotion of organic farming, profitable and eco-friendly agriculture and consistent income generation throughout the year.

Adoption of advanced farming practices and Innovations

At KVK, he received training on crop production and agriculture-based enterprises. With scientific knowledge, he started improving his farming. Mr. Prasad started using the latest technology, like direct sowing of paddy by drum seeder to conserve water and reduce the number of labourers, as well as saving in cost of cultivation, mainly on nursery raising and transplanting of seedlings. In wheat cultivation, he adopted zero tillage and raised bed technology, which significantly reduced cost and time on land preparation, with savings of water, reduced cost on weed management and increased productivity as well as advancement in sowing time. Along with this, he made farming prosperous and environment-friendly by adopting technologies like

- Soil Health Card-Based nutrient Management in crop production,
- Use of Bio-fertilisers (Rhizobium, PSB, Azolla, etc.),
- organic manure (Vermicompost production and utilization)
- Efficient Water Management Techniques in cereals and vegetable crop production

Keeping in view the scarcity of water, he used plastic mulching and straw mulching techniques in vegetable cultivation like Brinjal, Ladyfinger and Tomato, resulting in moisture conservation, less weed infestation and increased yields. Having special experience in vegetable farming, he also started an innovative work of vegetable nursery business and raising seedlings of various vegetables like tomato, brinjal, onion, chilli, cauliflower, cabbage, benefiting his family income and also supplying these nursery seedlings for the ease of neighbour farmers alike. The innovative works resulted an increase in income from agriculture up to 27 per cent. To ensure the availability of vegetables with high nutrition for household use throughout the year, a nutrition garden has also been established near the house in which radish, carrot, spinach, red spinach, turnip, tomato, fenugreek, coriander, green chilli, brinjal, bottle guard, etc. are grown. This provides nutritious vegetables to all

the family members, which is very essential for the good health of the farmer's family. He believes that crop diversification reduces the risk in farming and maintains continuity in income. He is also doing excellent work in mushroom production. Starting with oyster mushrooms in two

rooms of his house, today he has moved towards button mushroom production. The average production of button mushroom is 2.5-3.0 kg per bag, due to which he is successfully producing and marketing 250 kg of button mushroom in a season, which is being sold in the market at the rate of Rs. 150 per kg.



Direct Rice Seeding by Drum Seeder



Cabbage cultivation



Laying of plastic mulch in the field



Okra cultivation with plastic mulch

Vermi Compost Production, Animal Husbandry and Other Activities

Sri Ganesh Prasad has started animal husbandry with 4 cows and vermicompost production also for promotion of bio-diversity in his fields from which he is getting extra income. Keeping in view, the high price of chemical fertilizers, its

excessive use that is leading to the degradation of land and possibility of ground water pollution as well as quality of soil health, he is producing vermicompost as organic manure and using its especially in vegetable farming so that environment friendly farming can be promoted.

Unlike others who only depend on crops, he diversified into:

- Dairy Farming
- Vermicompost Production
- Bee Keeping

He is currently producing 42 quintals of vermicompost per year and using it in vegetable cultivation, helping in integrated nutrient management along with increasing the water holding capacity of the soil. He is also doing beekeeping with 10 boxes. In this way, he is earning income from every area related to agriculture.

Source of Scientific Knowledge as a Tool

He makes good use of new techniques in farming. He continuously acquires modern knowledge in farming and allied activities from Krishi Vigyan Kendra, Gandhar, Jehanabad and uses the techniques in his

field according to the time. He also actively participates in agricultural fairs, workshops, exhibitions, and other extension activities in various parts of the district and the state. He visited various research institutes to gain information on modern agricultural technologies, such as Nalanda College of Horticulture, Noorsarai, Bihar Agricultural University, Sabour and ICAR-Research Complex for Eastern Region, Patna

Crop Production and Income Trends

Due to Sri Prasad's adoption of innovation in farming and related sectors, there has been a continuous increasing trend in production during the last five years, and encouraging income has been obtained from various crops, including vegetables.

Table 1. Year-wise productivity of different crops

Crop	Year-wise crop productivity (Qtl./ Acre)					
	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
Paddy	17.75	18.50	18.80	20.05	20.80	21.05
Wheat	15.80	16.00	16.25	16.75	17.45	17.51
Lentil	5.60	6.00	6.40	6.70	7.10	7.30
Chickpea	3.80	4.00	4.65	5.45	6.20	6.25
Okra	92.00	100.00	102.00	108.00	112.50	116.10
Onion	72.00	74.00	74.35	75.10	76.18	76.40
Chilli	42.00	46.50	48.90	52.00	54.30	54.80
Lobia	52.00	58.00	59.15	59.90	60.75	61.60

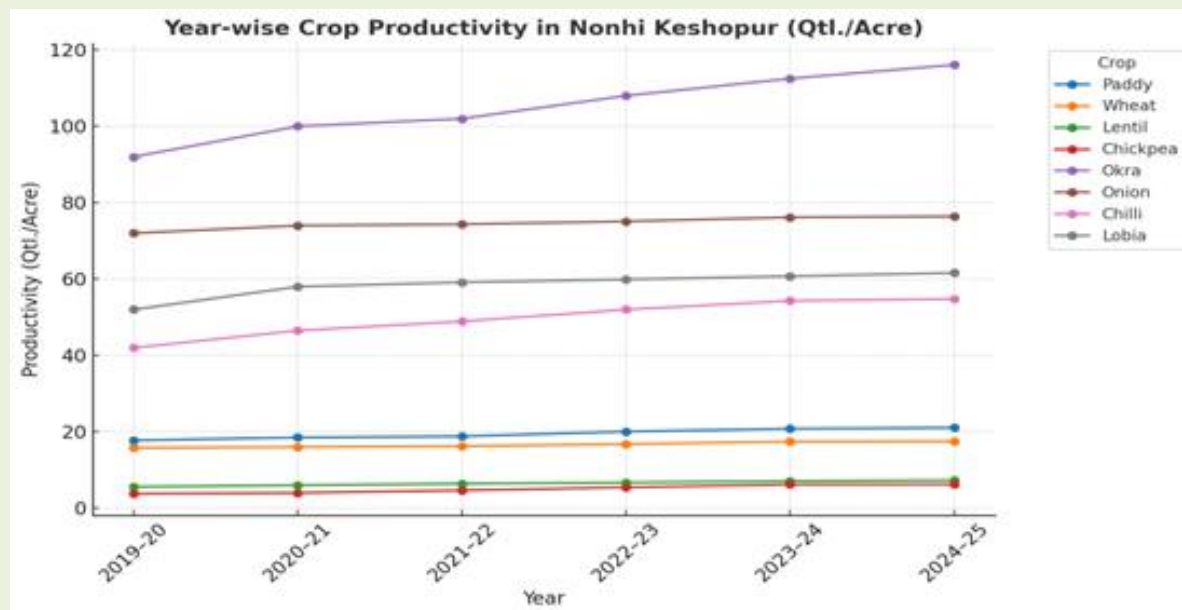
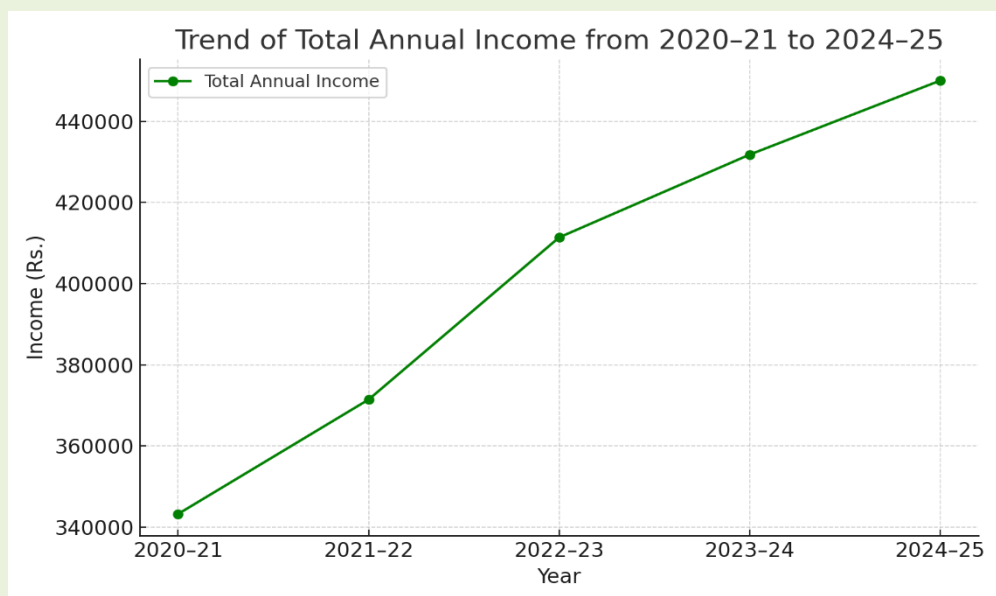


Figure 1. Trends in crop productivity from 2019 to 2025

Annual Income (₹) from agriculture and other enterprises:

Year	Annual income (Rs.) from Crops and other enterprises					Total Annual Income
	Paddy	Wheat	Pulses	Vegetables	Other enterprises	
2020–21	68450	30800	54000	158000	32000	343250
2021–22	73000	32500	60800	170650	34500	371450
2022–23	82606	36000	73000	176000	43800	411406
2023–24	84515	39200	78200	181500	48400	431815
2024–25	86850	41500	81600	186200	53900	450050



Income Trend

- The Total Annual Income increased steadily from ₹3,43,250 in 2020–21 to ₹4,50,050 in 2024–25.
- Vegetables remain the largest income contributor, followed by Paddy and Pulses.
- Other enterprises show strong year-to-year growth, especially in 2022–23 (+26.96%).

Growth Rate Highlights (YoY %)

- Highest growth in Paddy: 13.16% (2022–23)
- Highest growth in Wheat: 10.77% (2022–23)
- Highest growth in Pulses: 20.07% (2022–23)
- Vegetables saw peak growth in 2021–22 (8.01%) but slowed to ~2–3% later.
- Other enterprises showed double-digit growth in most years.
- Total Annual Income grew fastest in 2022–23 (+10.76%).

Awards and Recognitions:

He has been honoured on many occasions due to his active participation in various exhibitions organised by agricultural institutions on many occasions.

- March 11–12, 2025: Honoured as an *Innovative Farmer* at the Farmer Fair organised by Bihar

Agricultural University (BAU), Sabour, Bhagalpur.

- February 19–21, 2015: Received the Consolation Prize for *Small-Scale Commercial Vegetable (Cauliflower) Farming* during the Eastern Regional Farmer Fair organised by the Central Potato Research Station, Patna.
- March 4–6, 2016: Awarded Second Prize in the *Commercial Crop Category (Brinjal)* at the Farmer Fair organised by BAU, Sabour.
- March 4–6, 2016: Also received the Third Prize in the *Vegetable Category (Radish)* at the same fair.
- March 3–5, 2017: Received the Best Award in the *Cauliflower Crop Exhibition* during the Farmer Fair held at BAU, Sabour.

The success of Sri Ganesh Prasad is not only for himself, but he is also motivating the nearby farmers towards organic farming of vegetables by training them. He is promoting farmers to produce and use organic fertilizers, and produce more crops at low cost by adopting scientific methods.

Special Achievements

In last five years, Mr. Prasad has achieved remarkable achievements by adopting various farming and farming related techniques which have given him

satisfactory economic returns from excellent performance in production and marketing of 18.0 quintals of oyster mushroom and 2.5 quintals of button mushroom, year round vegetable production, 42 quintals of vermicompost production, proper use of natural resources, use of plastic and straw mulching technique in vegetable cultivation (Brinjal, ladyfinger, tomato).

Conclusion

The success story of Ganesh Prasad in farming is an inspiration for those farmers who want to adopt farming as a sustainable and profitable, and commercial way even with limited resources. He has moved toward sustainability in farming through organic, scientific and diversified farming and is earning a continuous income. His example proves that modern scientific techniques, new technologies and entrepreneurial vision can turn farming into a rewarding venture both economically and socially.

Farmer's Message

Sri Ganesh Prasad wants to leave a message to fellow farmers that "Farming is not just a livelihood; it's a dignified profession. It must be done with innovation, awareness and a scientific approach with dedication".

Progressive Farmer Details:

Mr. Ganesh Prasad,
Village: Nonhi Keshopur, Block: Kako,
District: Jehanabad, Bihar

