

# BIHAR AGRICULTURAL UNIVERSITY, SABOUR (BHAGALPUR)

## FORMAT FOR SUCCESS STORIES OF PROGRESSIVE FARMERS

### 1. Basic Information

**Name of Farmer:** Smt. Bina Devi

**Father's/Husband's Name:** W/o – Krishna Kant Singh

**Village:** Tilkari

**Block:** Tetia Bamber

**District:** Munger (Bihar)

**Mobile Number:** 9661274222 (Aadhar: 604304273229)

**Educational Qualification:** 6<sup>th</sup> pass

**Age / Gender:** 46 year Adult Female, Married - Women Farmer

**Farmers Categories (Marginal/Small/Big):** Small / Marginal Farmer (Area 1.2 ha)

**Major Farming System:** Integrated Farming System - Mushroom Production & Selling (300 bags) + Vegetable Farming (Karela, Parwal, Bora, Okra) + Pulse Crops (Gram 1 acre, Peas 10 katha, Lentil 10 katha, Pigeon pea 10 katha) + SRI Paddy + Livestock (03 Cows + 05 Goats) + Compost Unit + Residue Recycling

**KVK Benefitted:** KVK Munger and BAU Sabour

**Award Category:** Women Farmers Awards - Mushroom Production & Selling, Vegetable Farming, Crop Production



### 2. Background of the Farmer

Smt. Bina Devi is a progressive women farmer from Tilkari village, Tetia Bamber block of Munger district, Bihar. Belonging to a small farm family with 1.2 ha landholding, she owns 3 cows and 5 goats and depends on agriculture for livelihood. Before contact with KVK, her farming was limited to traditional paddy and few vegetables with low income and no scientific knowledge of mushroom cultivation, pulse production and residue management. She faced constraints like lack of technical knowledge, low productivity, limited income sources, seed/Spawn crisis in mushroom and poor market linkage. There was a need for technological intervention for diversification towards high-value enterprises like mushroom production, vegetable cultivation, pulse crops and composting through recycling of mushroom waste to increase family income, nutritional security and women empowerment.

### 3. Association with Krishi Vigyan Kendra

Smt. Bina Devi came in contact with Krishi Vigyan Kendra, Munger about 5 years back (since 2014-15) through women farmer trainings, FLDs, OFTs and Kisan Choupal organized in her village. KVK Munger provided her scientific training on mushroom cultivation, spawn production, vegetable farming (kitchen garden), SRI paddy cultivation, pulse production (gram, peas, lentil, pigeon pea), seed treatment, nursery bed preparation, poultry farming and mango orchard cultivation.

KVK scientists conducted Frontline Demonstrations (FLDs) and On-Farm Trials (OFTs) on mushroom, pulses, cereals and vegetables at her farm and in village. She was given critical input support, technical advisories, exposure visits and regular follow-up. With KVK's support she established compost unit for residue management and started recycling mushroom waste straw as compost for soil fertility. She was also linked with BAU Sabour for advanced trainings. Her farm became a demonstration model for women farmers in Tetia Bamber block. KVK has also provided training to about 25 women farmers in her village for scientific mushroom cultivation and value addition.

### 4. Innovative Technology/Practice Adopted or Developed

Smt. Bina Devi has adopted and modified several innovative practices with focus on low-cost, women-friendly enterprises:

1. **Mushroom Production and Spawn Production:** She is maintaining 300 mushroom bags for round the year production (Oyster and Button). She has innovated in scientific method of mushroom seed (spawn) production at home to solve seed crisis and make it easily available to nearby mushroom growers at low cost. She recycles mushroom waste straw as compost for soil fertility improvement, promoting circular economy.
2. **Integrated Vegetable & Pulse Farming:** She cultivates diverse vegetables in kitchen garden and field - Karela (5 katha - Income Rs 20,000), Parwal (2 katha - Rs 10,000), Bora (2 katha - Rs 5,000), Okra (1 katha - Rs 10,000) with scientific nursery management and organic inputs. She has grown pulse crops - Gram (1 acre), Peas (10 katha), Lentil (10 katha) and Pigeon pea (10 katha) with seed treatment technology taught by KVK, ensuring nutritional security and soil health through nitrogen fixation.
3. **SRI Paddy Technique:** She adopted System of Rice Intensification (SRI) method with nursery bed preparation and seed treatment, reducing seed requirement and increasing tillering and yield.
4. **Residue Management & Compost Unit:** She established compost unit using farm residues and mushroom waste straw, recycling nutrients and improving soil fertility. This is a climate-smart, organic practice reducing chemical fertilizer use.
5. **Livestock Integration:** Integration of 3 cows and 5 goats with mushroom and vegetable farming for additional income and manure.

This model is unique as it is women-led, low investment, high return, uses waste as resource, requires less land, and promotes natural farming, organic practices and resource conservation. It differs from conventional paddy-wheat system and is easily replicable by women farmers.

## 5. Economic Impact

After adoption of KVK technologies, there is remarkable improvement in income and profitability.

Mushroom Production is her main enterprise: Income growth - 2016: Rs 50,000, 2017: Rs 1,00,000, 2018: Rs 1,50,000, and now approx Rs 2,00,000 per year from 300 bags. B:C ratio is more than 3.0 as low investment and high market demand.

Vegetable Farming: Karela 5 katha Rs 20,000, Parwal 2 katha Rs 10,000, Bora 2 katha Rs 5,000, Okra 1 katha Rs 10,000 - Total Rs 45,000 from just 10 katha. Income growth in vegetables: 2016 Rs 20,000, 2017 Rs 25,000, 2018 Rs 50,000, now more than Rs 60,000.

Pulse crops (Gram 1 acre, Peas, Lentil, Arhar) provide additional income and save expenditure on protein requirement.

Overall, before intervention family income was very low (Rs 30,000-40,000). Now total annual net income from mushroom (Rs 2 lakh) + vegetables (Rs 60k) + pulses + livestock (Rs 30k) exceeds Rs 3.0-3.2 lakhs per year from 1.2 ha. She also earns from selling mushroom spawn to other farmers. Cost of cultivation reduced through own compost and recycling of mushroom waste. Productivity increased by 50-100% in mushroom and vegetables after scientific cultivation.

### Economic data (with reference to crop/ enterprise):

| Particular (Crop name)                                                          | Before the Intervention        | After the Intervention                                                               |
|---------------------------------------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------------|
| Particular (Crop/Enterprise)                                                    | Before Intervention            | After Intervention                                                                   |
| Mushroom (300 bags)                                                             | No scientific cultivation      | Net Income Rs 2,00,000/year<br>(Growth: 50k in 2016 to 150k in 2018 to 200k now)     |
| Vegetable Farming (10 katha)<br>Karela 5 katha, Parwal 2,<br>Bora 2, Okra 1     | Rs 20,000 (2016)               | Rs 45,000-60,000/year<br>(Karela 20k, Parwal 10k,<br>Bora 5k, Okra 10k)              |
| Pulse Crops (Gram 1 acre,<br>Peas 10 katha, Lentil 10<br>katha, Arhar 10 katha) | Traditional, no seed treatment | Scientific cultivation with<br>seed treatment, additional<br>income + soil fertility |
| Compost Unit                                                                    | No recycling                   | Mushroom waste recycled as<br>compost, saving fertilizer cost                        |
| Yield Increase                                                                  | Low                            | 50-100% increase in<br>mushroom & vegetables                                         |

| Sl.No. | Activities             | Area     | Income/Year<br>(Rs) | Remarks                               |
|--------|------------------------|----------|---------------------|---------------------------------------|
| 1      | Mushroom<br>Production | 300 bags | 2,00,000            | Main enterprise, 300 women<br>trained |
| 2      | Vegetable Farming      | 10 katha | 45,000-60,000       | Karela, Parwal, Bora, Okra            |

|   |                            |                   |               |                           |
|---|----------------------------|-------------------|---------------|---------------------------|
| 3 | Pulse Crops                | 1 acre + 30 katha | 30,000-40,000 | Gram, Peas, Lentil, Arhar |
| 4 | Livestock                  | 3 Cows + 5 Goats  | 30,000        | Manure + milk + goatry    |
| 5 | Spawn Production & Compost | 1 unit            | 15,000-20,000 | Selling spawn + compost   |

## 6. Social Impact and Farmer-to-Farmer Extension

Smt. Bina Devi has emerged as a leader among women farmers in Munger district. She has given training to 200 farmers for SRI paddy cultivation with scientific nursery bed preparation and seed treatment, and 300 women farmers for scientific mushroom cultivation and kitchen garden vegetables (Bitter Gourd, Pointed Gourd, Okra & Cow pea)

KVK has provided training to about 25 women farmers in her village for scientific cultivation of mushroom and its value addition with her as resource person. She regularly conducts demonstrations, Kisan Choupal and field visits at her farm. Her adoption of mushroom cultivation has led to 50-100% increase in productivity and income of village farmers and improved standard of living.

She explains to fellow women farmers how to cultivate kitchen garden vegetables scientifically and produce mushroom spawn at home to solve seed crisis. Her enterprise has benefited about 500 farmers (200 paddy + 300 mushroom). She has motivated women Self Help Groups (SHGs) to take up mushroom and vegetable cultivation as income generating activity. She acts as a bridge between KVK and women farmers, contributing to women empowerment and agricultural development beyond her own farm.

## 7. Entrepreneurship and Employment Generation

Smt. Bina Devi is a successful women agri-entrepreneur. Her main enterprises are:

- Mushroom Production & Selling: 300 bags round the year with annual turnover Rs 2 lakhs. She also produces mushroom spawn (seed) scientifically and sells to nearby growers, solving local seed crisis and generating extra income.
- Vegetable Farming: Commercial cultivation of Karela, Parwal, Bora, Okra with organic practices and compost from mushroom waste.
- Pulse Seed Production: Gram, Peas, Lentil, Pigeon pea with seed treatment.
- Compost Unit: Recycling mushroom waste straw as compost for soil fertility and selling surplus.
- Value Addition: Processing and marketing of mushroom and vegetables locally.

Annual turnover from all enterprises is approx Rs 3.5-4.0 lakhs with net profit Rs 3.0-3.2 lakhs. Low investment model suitable for women.

Employment Generation: Her enterprises provide employment of about 250-300 mandays annually to family labour and 2-3 women labourers. Additionally, she has generated self-employment for 300 women through mushroom training and 200 farmers through SRI paddy training. Future expansion plan includes increasing mushroom bags from 300 to 1000, establishing small processing unit for mushroom pickle and powder, expanding spawn production

lab, developing organic kitchen garden model for SHGs, and establishing FPO for women farmers for collective marketing.

### **8. Awards, Recognition and Media Coverage**

Smt. Bina Devi has received several awards and recognitions:

- Award on Fourth Foundation Day of Bihar Agricultural University, Sabour (Bhagalpur) for best women farmer in mushroom production and vegetable farming.
- Selected as Best Women Farmer in Women Kisan Award during 2018-19 by Doordarshan, New Delhi - national recognition.
- Recognition by KVK Munger and BAU Sabour for her contribution to women empowerment through mushroom and vegetable cultivation.
- Invited as progressive women farmer in Kisan Mela, exhibitions, fairs and Kisan Choupal organized by KVK Munger.

Media Coverage: Her success story has been documented by KVK Munger, BAU Sabour, Doordarshan New Delhi, newspapers and magazines. Her model of mushroom production with waste recycling and spawn production has been published as success story in KVK annual report and BAU publications. She is frequently invited as resource person for women farmer trainings.

### **9. Future Vision**

Smt. Bina Devi's future vision is to expand mushroom production from 300 bags to 1000 bags with establishment of low-cost mushroom spawn production lab to ensure quality spawn availability for all women farmers in Tetia Bamber and surrounding blocks. She plans to expand compost unit using mushroom waste and farm residues for organic farming, develop processing unit for mushroom value addition (pickle, powder, dried mushroom), expand kitchen garden model with year-round vegetable cultivation, promote SRI paddy and pulse cultivation among more women farmers, and form Women Farmer Producer Organization (FPO) for collective marketing of mushroom and vegetables. She also aims to train 1000 more women farmers in next 3 years and make Tilkari village a model village for women-led mushroom entrepreneurship.

### **10. Message to Fellow Farmers**

"My message to fellow women farmers is that do not sit idle at home. Even with small land and less investment you can start mushroom cultivation and vegetable farming in kitchen garden. Take training from KVK Munger, learn scientific methods of nursery, seed treatment and compost making. Use mushroom waste as compost and make your own spawn. You can earn Rs 2 lakh per year from 300 bags from your home itself. Women can also become successful farmers and support family income. Come forward and adopt scientific farming." - Smt. Bina Devi, Tilkari, Tetia Bamber, Munger

## Photographs

