

**Indian Farmer**

Volume 11, Issue 09, 2024, Pp. 380-385

Available online at: www.indianfarmer.net

ISSN: 2394-1227 (Online)

Original Article**A Profitable Partnership: How Crops and Livestock Worked Together**

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Mr. Om Parkash Yadav, a 64-year-old farmer from Lohana Village in Haryana, embodies resilience and creativity in contemporary agriculture. Despite having limited education, he has effectively adopted an integrated farming approach that merges crop production with livestock management, transforming his 18 acre farm into a successful and sustainable enterprise. Overcoming initial hurdles like unpredictable weather, labour shortages, and low milk yields, Mr. Yadav has diversified his farming activities to include various crops such as bajra, wheat, mustard, and vegetables, alongside raising 11 Murrah buffaloes and two cows. He has also implemented robust pest and disease management strategies to protect his crops and livestock.

Through strategic planning, crop rotation, and the use of organic fertilizers, Mr. Yadav has continuously enhanced his yields, resulting in significant profits. His income is further strengthened by his dairy operations and machinery rental services. Looking ahead, he aims to start beekeeping to improve pollination and create an additional income stream from honey sales. Mr. Yadav's journey illustrates the impact of dedication, innovation, and adaptability in overcoming challenges and achieving agricultural success.

INTRODUCTION

In a world where farming is frequently viewed as a constant battle against natural forces and market challenges, this farmer's journey serves as a shining example of innovation and determination. By adopting integrated farming - combining both crop production and livestock management - this farmer not only revitalized his land but also built a flourishing, sustainable enterprise. What started as a small, simple farm has grown into a thriving business, where crops and livestock complement each other, increasing efficiency, cutting costs, and improving overall profitability.



Mr. Om Parkash Yadav, a 64-year-old farmer from Lohana Village in the Rewari District of Haryana, India, has studied up to the 4th grade. He has a family which includes two sons and a daughter, and he owns 18 acres of land, along with 11 buffaloes and 2 cows. Farming has been a part of Mr. Yadav's life since childhood, and he remains committed to the integrated farming system, where losses in one crop can be offset by the income from other farming activities. His strong connections with fellow farmers and input dealers ensure a steady flow of information, and his regular engagement with mass media through radio and television keeps him well-informed.



Mr. Yadav learned the art of farming and livestock management from his father and continues to practice farming, even as many farmers face challenges such as pest infestations, stagnant crop yields, labour shortages, and rising cultivation costs. Despite these difficulties, he remains dedicated. During the Kharif season, he cultivates pearl millet (bajra), sorghum (jowar), cotton (kapas), and leafy vegetables, while in the Rabi season, he grows wheat (gehoon), mustard (sarso), chickpeas

(chana), and barley (jau). In addition to his crops, he raises 11 Murrah buffaloes, including calves, heifers, and adults, and two cattle of the Pure Haryana or Desi breed.

CHALLENGES

Mr. Yadav grew up in a small village where agriculture was the main source of livelihood. From a young age, he worked alongside his father and uncles in the fields. However, the early years of his farming journey were marked by failure due to limited knowledge and resources. Managing both the farm and his household was challenging, especially as raising cattle requires significant time and care. Weather conditions played a critical role in his agricultural efforts, with any fluctuations directly impacting his crops.



Mr. Yadav started his journey with three farms, two buffaloes, and one cow. However, due to poor livestock management, he faced low milk production, which caused multiple issues like poor reproduction, energy imbalance, metabolic disorders, and vulnerability to diseases in the animals. Harsh weather conditions, such as heatwaves, insufficient rainfall, and heavy downpours, further affected his crops, with waterlogging often leading to up to 50% crop loss. Although he primarily relied on rainfall for irrigation, he owned a tubewell to supplement water during critical stages of crop growth.

One of the major challenges Mr. Yadav faces is the shortage of labour in rural areas, which has pushed him to consider investing in machinery to improve productivity. Despite these obstacles, Mr. Yadav remains optimistic, believing that success in farming comes from making timely decisions and putting in hard work. For him, farming not only provides a stable income to support his family but also gives him a sense of self-confidence and the ability to maintain a comfortable standard of living.

PEST AND DISEASE MANAGEMENT

Pest and disease management is vital to ensuring the success and sustainability of farming. As a major agricultural hub, farmers in the state have embraced various techniques to protect their crops

from potential threats. Integrated Pest Management (IPM) has become a key strategy, combining biological, cultural, mechanical, and chemical methods to control pests while minimizing environmental damage. Mr. Yadav relies on his experience and knowledge to spot diseases early through regular field inspections, applying pesticides when necessary. However, unseasonal rainfall and humid conditions often trigger pest and disease outbreaks, making management difficult and sometimes leading to yield losses. To address these challenges, Mr. Yadav uses resistant crop varieties and practices crop rotation to break disease cycles and lower pest populations.



Healthy and infected ears of bajra crop

Managing livestock diseases presents another set of challenges, requiring meticulous care and hygienic practices. Mr. Yadav ensures his cattle and buffaloes receive timely vaccinations and follows strict biosecurity measures, such as quarantining new animals and limiting visitor access, especially since he now focuses on the sales and purchases of buffaloes. Regular deworming is essential to prevent parasitic infections, and proper nutrition, early disease detection, and prompt treatment help maintain the animal's health and strengthen their immunity.



To enhance soil fertility, Mr. Yadav periodically leaves some of his fields fallow, allowing the land to recover. During this time, he uses natural fertilizers to boost soil health and support the activity of beneficial microorganisms. He also practices open grazing during the day, while at night, animals are tethered in rows across the farm using a long rope. Every few days, the rope is moved to a new position, ensuring that the animal's dung and urine are naturally absorbed by the soil. This method enriches soil fertility and helps control weeds, thanks to the in-situ application of farmyard manure.

YIELDS & PROFIT

Mr. Yadav primarily cultivates bajra during the kharif season, producing 20 quintals per acre, which he sells at ₹850 per quintal. From his 16-acre bajra farm, he earns ₹2,72,000. In addition, he grows vegetables on 2 acres, earning ₹1,86,000 from these crops.



During the rabi season, Mr. Yadav switches to wheat, earning ₹12,54,400 from 16 acres, with a yield of 28 quintals per acre sold at ₹2,700 per quintal. The vegetables he grows on 2 acres during this season bring in another ₹1,57,000. He also cultivates sarson (mustard) in the rabi season, earning ₹14,21,280 from 18 acres, producing 14 quintals per acre sold at ₹5,640 per quintal.

In addition to crop farming, Mr. Yadav runs a livestock business, supplying buffalo milk to a dairy at ₹62-65 per liter. While buffalo milk is sold commercially, cow milk is used solely for his household. He also sells milk within nearby villages and trades buffaloes, with prices ranging between ₹1.5 to ₹3.75 lakhs.

To further supplement his income, Mr. Yadav rents out his farming machinery during crop seasons and manages the farms of other villagers who have moved to cities or are unable to tend to their land. His wife is also knowledgeable about vegetable farming, contributing to the farm's productivity.

Looking ahead, Mr. Yadav plans to introduce beekeeping on his farm, as bees aid in pollination. He hopes to increase the family's income by selling honey and other bee-related products.

SUMMARY

Mr. Om Parkash Yadav's journey is a shining example of perseverance, adaptability, and innovation in farming. Despite challenges such as unpredictable weather and labour shortages, he has skilfully utilized integrated farming to not only sustain but also expand his business by diversifying his crops, raising livestock, renting out machinery, and planning future ventures like beekeeping, Mr. Yadav has built a resilient and profitable enterprise. His adaptability whether in managing pests and diseases or adopting new farming techniques demonstrates his deep dedication to both his land and his family. This approach reflects how a holistic farming model can transform challenges into opportunities for long-term success.

Through his hard work, strategic decisions, and forward-thinking mindset, Mr. Yadav has created a sustainable farming system that not only ensures financial stability but also serves as a model for other farmers in his community. His success story highlights the tremendous potential of integrated farming systems, proving that even small-scale farmers, with the right approach, can achieve lasting success and make a meaningful impact on the agricultural landscape.