



Mushroom Cultivation conferred recognition

Rachna Singla and Rajni Goel
Krishi Vigyan Kendra, Patiala

ABSTRACT

Sardar Sukhdev Singh has shown their phenomenal presence from traditional to hi-tech farming and ability to adapt with tremendous challenges posed by changing climate and market demands which can increase his income and status in the society. He acquired vocational training on mushroom cultivation from KVK Patiala and later on technical guidance from ICAR-Directorate of Mushroom Research, Solan and PAU, Ludhiana helped him in establishing S.S Mushroom Farm. He has developed several innovations in mushroom production techniques including low cost mushroom houses with locally available material. He has produced very high quality pasteurized compost, and white button mushroom 1800, and 1450 quintal during 2023-24, respectively. His total net income during 2023-24 from pasteurized compost and white button mushroom was 1.87 lakh and `11.05 lakh, respectively. He has also popularized mushroom production in several villages of the District Patiala by providing quality compost to mushroom growers. The state of the art facilities developed by him at his farm including compost pasteurization and mushroom production in low cost mushroom houses has proved very effective demonstration centre serving for KVK trainees, mushroom growers, agriculture officers, students of the different universities, etc. He has also formed mushroom club and providing technical know-how to the members of the club. As a part of mushroom unit, he has also established a vermi-compost unit in 2019 with the assistance from KVK, Patiala. He earns a net income of 1.5-2.0 lakh every year from selling the vermi-compost to the nurserymen and urban people. He is fully contented and is determined to expand this enterprise in future.

Situation Analysis

Poor crop productivity, small land holdings and lack of other income generating activities have made the cultivation of mushroom an economic compulsion in the region. Sardar Sukhdev Singh, Village Meeranpur, District Patiala, Punjab who was engaged in traditional farming, cultivating paddy and wheat crops on his five acres land. Although he had reasonable income from farming, but he knew that it will not be enough to meet his family's increasing needs and demands. He was not satisfied with the ongoing farming and wanted to do something challenging to establish himself a successful farm entrepreneur. He has decided to go for some agriculture based enterprise which could complement with the existing farming system and increase his net income.

Plan, Implementation and Support

In search of agri-based enterprise, he came to know about KVK, Patiala and visited there. He held detailed discussion with KVK scientists and got the idea to start mushroom cultivation in order to realise his dream. Keeping this in view, he attended a vocational training on Mushroom cultivation at KVK, Patiala in 2014. Initially he faced many problems but his hard work and technical guidance and close supervision of KVK Patiala make him a successful mushroom grower. Later on he also established contact with ICAR Directorate of Mushroom Research, Solan and PAU, Ludhiana for increasing the efficiency of his mushroom farm.

Output

Mr. Singh converted to prove that if one has patience and perseverance, there are still many

opportunities to flourish. With this zeal, he approached the doorstep of KVK-patiala (during 2014). After getting training from KVK Patiala, he started a mushroom production unit known as “S.S Mushroom Farm” with the available resources, where he soon realised some associated problems. In the first year, he prepared compost from 100 quintal of wheat straw and attained first hand experience in growing mushrooms. He harvested 35 q of mushrooms from 100 quintal wheat straw. In 2nd year, he prepared compost from 200 q wheat straw and constructed 6 sheds. Unfortunately, 4 out of 6 sheds got burnt in a fire accident at his farm. He suffered a huge loss. But, he didn't loose heart and continued mushroom farming. First sowing of mushrooms is done by mid September and 2nd during December at his farm. He constructed 32 sheds each of 100 q compost capacity in 2023-24. He has developed an eco-friendly casing media with a combination of FYM + burnt rice husk + cocopeat+ lime which are locally available with nominal cost. Looking ahead with the scenario of shortage of labour, he introduced mechanical pole digger which is used for pole fixing in the structure and other necessary machinery for making compost etc. The low cost sheds were constructed by using Bamboo, polythene and paddy straw. He is producing mushrooms by using 150 quintal paddy straw during this season with full enthusiasm. He visited Mushroom Research Center, Solan (H.P) besides private successful mushroom farmers at Narela, (Delhi) Kurkushetra and Karnal (Haryana) to gain more expertise in mushroom cultivation. He then shifted to the short method of composting and started preparing pasteurized compost with guidance with technical guidance from ICAR-Directorate of Mushroom Research, Solan and PAU, Ludhiana.

Outcome

His ambition for better economic status and guidance from KVK scientists lead him to establish a scientific mushroom farm .In 2016, He has constructed compost chamber at his mushroom farm after getting subsidy from Department of Horticulture. Size of compost chamber is 12'x40' with a capacity of 30 tonne. The production and net income he earned from

pasteurised compost in different years are presented in Fig. 1. It shows that he has produced 500 qtls pasteurised compost during 2016-17 and gradually increased it to 1800 qtls in 2023-24. His net income also increased from Rs.35000/- to Rs. 187200/- during the same period. Approximately, 100 farmers started cultivation of mushroom after taking ready compost from him.

S.S Mushroom Farm has fabricated low cost mushroom houses with locally available material of 500 sqm each. Table 1 indicates that during 2014-15, he cultivated 82 qtl white button mushroom from 2 such sheds and his net income was `0.80 lakh. Similarly in 2023-24 he cultivated 1450 qtl white button mushroom from 32 such sheds and his net income was 11.05 lakh. The start-up grew up steadily day by day and presently they have provided employment to 20-25 people. For marketing of mushrooms, he himself sells his produce at Patiala, Ludhiana and Sangrur markets. In order to increase the scale, As he gained experience and insight in mushroom cultivation, he has developed number of innovations viz. use of paddy straw in place of wheat straw for compost preparation and fabrication of low cost mushroom houses with locally available material. Similarly; he designed and fabricated compost bag filling machine, low cost bunkers for compost preparation and low cost compost pasteurize chambers. Moreover; he standardized a very high yielding formula for compost preparation by short method of composting, a very good casing mixture and cultivation of milky mushroom in rainy season. As a part of mushroom unit, he has also established a vermi-compost unit in 2019 with the assistance from KVK,Patiala. He earns a net income of 1.5-2.0 lakh every year from selling the vermi-compost to the nurserymen and urban people. He is fully contended and is determined to expand this enterprise in future. He received “Sardarni Parkash Kaur Sra Memorial Award” from PAU Ludhiana during Kisan Mela on March 24, 2023.

Impact

All the successful people have one thing in common and that is ability to inspire others. This success story is about a man who has hunger for achievement. Inspiration, diligence and

Mushroom Cultivation Conferred Recognition

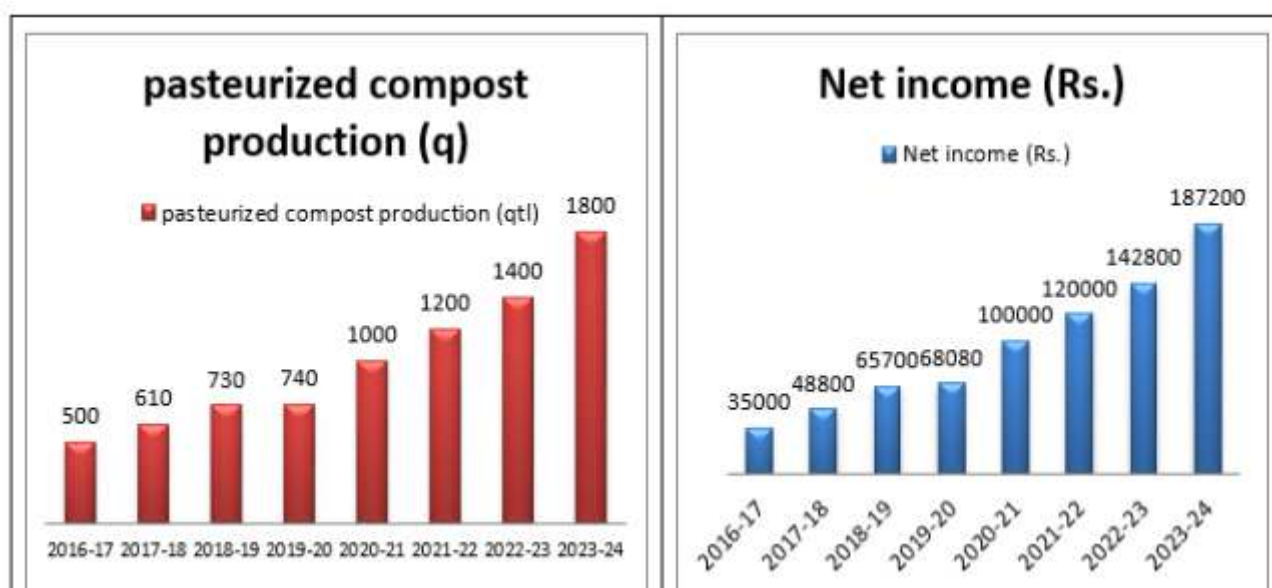


Figure 1: pasteurized compost production and net income

Table1. Performance of the mushroom farm.

Year	Sheds (each shed 500 sq. meter)	Yield (q)	Gross expenditure (Rs.)	Gross Returns (Rs)	Net Income (Rs.)
2014 -15	2	82	18000	98400	80400
2015 -16	6	105	35000	106000	71000
2016-17	10	310	65000	372000	307000
2017-18	14	385	85000	462000	377000
2018-19	18	468	105000	561600	456600
2019-20	20	525	112000	630000	518000
2020-21	22	630	155000	756000	601000
2021-22	26	805	225000	1050000	825000
2022-23	30	1210	290000	1250000	960000
2023-24	32	1450	345000	1450000	1105000

persistence became the hallmarks of his success. S. S Singh has set an example for other small and marginal farmers on efficient and effective use of limited resources through Mushroom Farming System approach to earn handsome sustainable returns. Further, adoption of mushroom farming by the farmers of the district has also helped in generation of employment as more labour was engaged to handle the increased produce. This also resulted in lowering down the rate of migration of the unemployed rural youths to urban areas. Adoption of mushroom production by

farmers of various villages may be credited to the S.S Mushroom Farm as it made the availability of high quality of compost to mushroom growers of Patiala. The state of the art faculties at integrated mushroom unit including compost pasteurization and mushroom production in low cost mushroom houses has proved very effective demonstration centre serving for KVK trainees, mushroom growers, agriculture officers, students of the different colleges, etc. Trainees of KVK who are landless **scheduled caste** farmers has been purchasing pasteurised spawn run compost for the



last five years from this farm only. His hard work and reservoir of experience in mushroom production has earned him a status of very successful farm entrepreneur in the District. Many developmental agencies such as department of Agriculture, Horticulture, working in the state, District administration, NABARD, etc. take his expertise as a resource person for further mobilizing the farmers to adopt Mushroom Farming System. Many farmers visit his farm for experiential learning and to seek his guidance. He also motivates farmers and advises them to adopt

latest technologies in agriculture, animal husbandry and allied vocations. The Mushroom club formed by him gives technical know-how to the members regarding compost preparation, spawn and spawning, casing, management practices, marketing etc. Due to his constant hard work and indomitable will, his work has been recognized at different platforms (district level and state level) for his outstanding contributions in developing and dissemination of mushroom production technologies in the country.