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## **A Green Thumb and Government Support: A Himalayan Polyhouse Success Story**

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### **ABSTRACT**

The system of farming under polyhouses, provide with a controlled agriculture environment, that has shown potential in overcoming the challenges that are associated with conventional agriculture. This modern technology has wide range of advantages like higher yield, better quality, better pest-disease management and less water use. Ajay Singh Thakur, a farmer with extraordinary foresight commenced cultivation of carnation in year 2016 with a small 150 square meter polyhouse. He went on having four more 500 square meter polyhouses owing to his entrepreneurial zeal. Now all five facilities serve as nurturing environment for red and yellow capsicums, of variety Indra. His socio-economic status raised by his excellent level of entrepreneurship and his journey emphasizes on perseverance, creativity and source of motivation.

### **INTRODUCTION**

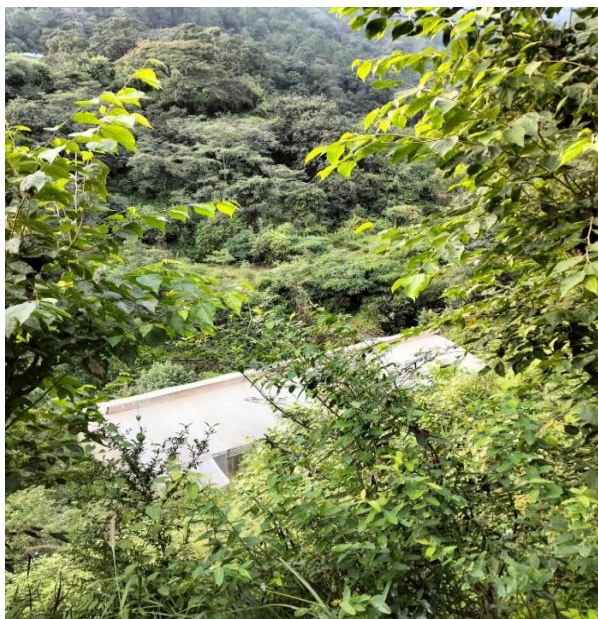
Polyhouse farming, provides farmers a promising solution to challenges faced by the atrocity of nature. It provides controlled indoor environment and is appealing towards the consumers as off-season demand is being fulfilled. Polyhouses uses wooden, steel or aluminium frames with polythene, polycarbonate or glass as covering material. Ajay Singh is a resident is a resident of Mangloonj, division of Tutu ward, in Shimla district. He is 43 years old and had studied till high school due to poor financial status of his family in past. Earlier he used to have small transport business in which he had fleet of two vehicles, but sometimes circumstances oppose you. His business had downfall and being unable to pay loan, he had to sell-off one vehicle. Then he ended in farming and eventually by the help of Himachal Pradesh government schemes he was interested keenly in polyhouse farming. He made one polyhouse under scheme of horticulture department of 150 square meter and four even span polyhouses under scheme of agriculture department. He also owns small land holding in which he grows vegetables and also has two Holstein Friesian cows which are looked after his wife.



Ajay Singh Thakur

## CHALLENGES

The business was started by him in year 2016 with growing carnation, but in year 2020 during lockdown he was unable to sell his produce due to which he faced total loss. Thus, he started cultivation of capsicum after 2020 lockdown. Biggest challenge faced by him is that his polyhouses are away from his house, since the village is located in lap of hills. The way to polyhouses is not paved and some amount of money is spent to labour for carrying up the boxes of harvest. Animals like monkey are common in that area, that damage the polyhouses. Landslides are common in area due rugged, hilly terrain, which block the accessibility to polyhouses. Since Shimla lacks a large market, so Ajay Thakur has to sell his produce in Chandigarh or Amritsar, incurring one time transportation cost of approximately 5k-6k. In Shimla due to mountainous terrain, makes water boring impractical, so Ajay Singh has to depend on rainwater, which flows down the hill and through the pipeline that comes from his home.



Hilly terrain major challenge for labour

**BUILDING COST AND GOVERNMENT SCHEMES:**

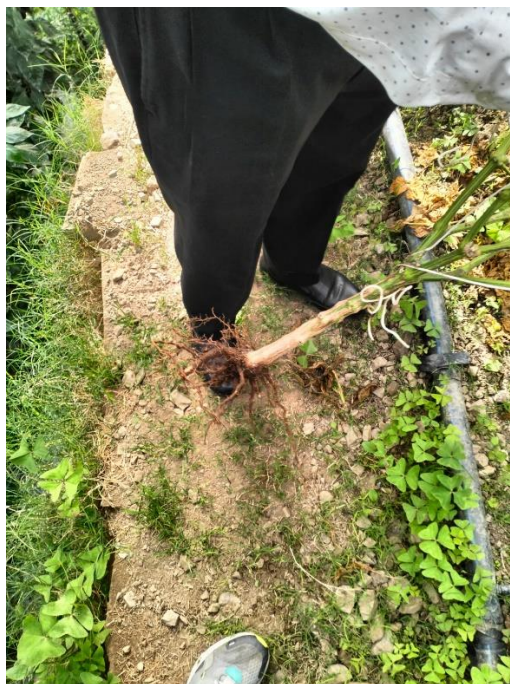
The cost to build one polyhouse of 500 square meter for Ajay Thakur was around 5-6 lakhs. So, approximately cost to build 3 polyhouses under agriculture schemes was around 16 lakhs. One 150 square meter polyhouse and 500 square meter was built under assistance of state horticulture department. According to him his 70% cost was covered under government schemes.

1. Dr.Y.S. Parmar Kisan Swarozgar Yojna
2. Mukhyamantri Krishi Utpadan Sanraksham Yojna
3. Rural Infrastructure Development Fund-XIV (RIDF-XIV)

**PEST AND DISEASE OF CAPSICUM IN HIMALYAN REGIONS AND THEIR MANAGEMENT:**

DISEASES AND THEIR MANAGEMENT:

	LOCAL NAME	COMMON NAME	SYMPTOMS	CONTROL
1	Tela	Powdery mildew	White, powdery patches on leaves, stem and fruit	Air circulation, sulphur fungicide
2	Tang Alan	Blossom End Rot	Black, leathery spot on blossom end of fruit	Avoid overhead sprinkling and ensure adequate moisture supply
3	Jadsan	Damping off	Seedling rot and die	Treat seeds with fungicides, use well drained soil
4	Mildew Sund	Downy mildew	Yellowish spots on leaves, often with a purplish underside	Copper based fungicides



Jadsan (Damping off)

**PEST AND THEIR MANAGEMENT:**

In polyhouses of Ajay Singh Thakur there are various pests, including aphids, thrips, whiteflies, borers and mites. He uses various traps like yellow sticky trap and light trap. He does regular inspection of plants, early detection of pests and handpicking.



Chili fruit borer

**CURRENT STATUS:**

To maximize pollination, red and yellow capsicum plants are grown in alternating rows. This is because red capsicum plants are male and yellow female. From one plant he got 3-4 kg yield throughout the year. In 500 square meter polyhouse around 1600 plants are there and in 150 square meter polyhouse around 400 plants are there. The price he got in year 2023 was around 70-90

rupees per kilogram in Chandigarh. Overall sale of his was 14 lakhs in year. Gross profit he made annually was 7-8 lakhs excluding labour, packaging cost, seedling cost, fertilizer cost and other marketing expenses.

### **SOCIAL INFLUENCE**

Ajay Singh Thakur has transitioned from traditional farming to polyhouse agriculture in a hilly region and has exert a social influence to fellow farmers. His initiative has attracted other farmers in village to do polyhouse agriculture. His deed to not stop after failure has inspired many people around.

### **SUMMARY**

Ajay Singh Thakur, an innovative farmer in Shimla has gained success in polyhouse farming despite having many failures. By establishment of five polyhouses he has increased his yield and quality. This technology helps a lot in hilly region where weather is unpredictable. Ajay journey has made people aware about government schemes also. His journey is full of adaptability in adopting innovative agricultural practices.

### **FARMER'S MESSAGE**

Failure can turn into success solely because of the option to try again. He told me that we should not forget that the cultivation of earth is most important labour of man and when tillage begins, other art will follow. Therefore, farmers are founders of civilization.