

PROPER CROP MANAGEMENT ENSURES HIGHER INCOME AND SUSTAINABLE LIVELIHOOD

Mr. Jai Chand Thakur, At. -Gohagari, Po.- Kuji, GP- Dilman Block- Pachhad, District- Sirmour, State- Himachal Pradesh.



CONTEXT:

Mr. Jai Chand is a progressive farmer from Pachhad block's Gohagari hamlet. The settlement of Gohagari is made up of seven families with a total population of 29 people. He has 52 bigha (8 acres) of land, of which only 15 bigha are used for agricultural purposes (2.3 Acres). Garlic, ginger, tomato, capsicum, cabbage, bean, broccoli, turmeric, kidney beans, wheat and maize are some of the vegetable and cereal crops he grows to support his family. After receiving training through the SLADRC project, Jai Chand now uses a drip irrigation system, which saves water when compared to a lift irrigation system. He did, however, have a problem with weed development in his fields, which ate up most of the soil nourishment and impeded optimum crop growth. He discovered higher pest infestations in the field as a result of weed development. He had to spend more money on weeding and deal with other challenges like labour shortages, increased water uses to maintain soil moisture, insufficient fertiliser and chemical use, and poor soil moisture management.

The geographical location of his block has also highlighted its vulnerability to climate change in terms of drought and water scarcity. As a result, farmers like Jai Chand struggled to maintain the soil moisture in their fields. He has taken up agriculture as a career and has established himself as a known progressive farmer in the area by successfully adapting various agricultural strategies. He is now aiming to cultivate apple as a main crop, which he was unable to do previously due to lack of irrigation water available to grow apple. Instead of paddy and maize, he began growing capsicum, pomegranate, and several vegetables. He has a water tank, a polyhouse, a drip system, and a vegetable transplanter, as well as all agricultural equipment.

TRAINING AND MOTIVATION:

When he took part in the SLADRC project's training programmes, his hardships came to an end. He learned the benefits of drip irrigation and mulching in crop management as part of this project, and he got inspired to apply the ideas to a variety of crops.

PACKAGE PRACTICES ADAPTED BY JAI CHAND:

Jai Chand introduced new technologies to his current agricultural practice after attending the SLADRC project's training. By adding mulching and a drip system to his field, he has modified his crop management package. He has concentrated on land preparation, bund preparation, and drip pipe emitter placement at the proper row to row and plant to plant distances required for vegetable growing. Following that, black plastic mulch is placed over the raised beds to protect them. The holes were drilled according to the spacing and location of the drip pipe emitters. Using a vegetable transplanter, grown seedlings were transferred. He grew indeterminate tomatoes, which necessitated the placement of supporting poles and the tying of the poles with iron wire for stacking purposes, as indeterminate tomato plant vines require support for crawling and, in general, this form of tomato yields more than determinate tomatoes. Weed growth was restricted as a result of mulching.

He and his family members now keep them engaged in weeding and undertakes different cultural practices. Fertilisers and insecticides are applied using a drip system, which allows him to save money and time. His family members are in charge of all intercultural operations. Jai Chand and his family normally pick fruits and vegetables, grade and package them before marketing.



Some stills of Package of Practices adapted by Jai Chand

BENEFITS AS HE PERCEIVE:

He has been reaping the benefits of drip irrigation and mulching techniques in crops such as tomato, capsicum, and beans for the past two years. He has been able to diversify his crops from maize and wheat to diverse cash crops such as tomato, capsicum, beans, cabbage, and broccoli. Previously, he was mainly growing maize and wheat in his fields. After learning about better crop management practices and consulting with line department officials, Jai Chand began using a drip irrigation system with plastic poly sheets for mulching. Micro irrigation and mulching have shown to be beneficial to him because they reduce labour costs significantly when compared to weeding, fertiliser application, and pesticide application. He is currently using this strategy and has increased the area under cash crop from 15 to 17 bigha.

More production, crop diversity, cost and time savings, soil erosion control, suppressed weed growth, integrated pest management, effective use of pesticides and fertilisers, and crop nutrition management are all benefits of better crop management practices in farming, according to Jai Chand. He demonstrated how mulch with drip irrigation can act as a weed barrier by limiting the amount of space and nutrients available for weeds to grow in the field.



Jai Chand's crop production of vegetables such as tomato, capsicum, beans, cabbage, and broccoli increased by 4-5 percent after applying mulching with micro irrigation technology, and his revenue increased by 4%. In addition to increased income and agricultural productivity, Jai Chand claimed that the number of days and time spent irrigating the crops has decreased after adopting the mulching with micro irrigation system.

Year	2019-20 (Before)			2020-21 (After)		
Crops	Area(Bigha)	Production (Kg)	Income (Lakh)	Area (Bigha)	Production (Kg)	Income (Lakh)
Tomato	4	1000	1.20	5	1500	1.90
Capsicum	5	1500	2.5	6	2000	3.20
Bean	1	2500	0.3	2	3750	0.5
Cabbage	1	2500	0.26	2	4000	0.6
Broccoli	1	2500	0.6	2	4250	1.10
Total	12	32500	4.85	17	47000	7.30

Crop Production Performance in Jai Chand's field before and after adoption

KEY ACHIEVEMENTS:

Increased production of
vegetables after
adaptation

01

Ample Scope for Crop
Diversifications from
Vegetables to Fruit Crops

02

Farm mechanization

03

His field is a showcase of
various innovative and new
technologies which include
mechanization for
irrigation, spraying, various
farming operations.

04

Poly house– Production of
capsicum, chilly, tomato &
beans production.

05

IMPORTANCE FOR FARMERS:

Many farmers and youth come to his farm on a regular basis to see how successful he is, and many have followed his footsteps.

Within the Kuji Village environs, he became a role model for other farmers.



"CROP MANAGEMENT THROUGH DRIP IRRIGATION ALLOWS TO FERTIGATE
5000 PLANTS IN 5 MINUTES".



**Department of Environment, Science Technology & Climate Change
Government of Himachal Pradesh**