



Holistic Rural Development Program- Parbhani
Implemented by- Yuva Rural Association
Supported by- HDFC Bank



Vision changed the livelihood

THE SITUATION

Ambegaon (Digar), Takula Selu, Dist- Parbhani a small village in the Marathwada region of Maharashtra state, there are about 973 households dependent primarily upon agriculture and its allied activities. Around 10% hectares of area in the village is under cultivation. Around 90% of the land is rainfed, where crops like cotton, soybean, moong, bajra and jowar are grown in single season and keep the land fallow rest of the year. The small patches of irrigated area are under vegetable cultivation. The average size of land holding in the village is 0.58 ha. The village is well connected with road networks, therefore, has ease in market accessibility and transportation.

Utilization of land effectively by growing mixed vegetables all through the year will increase the farm income and sustain the soil health. Unevenly distributed and erratic rainfall in the region hindering the farmers to take sequential crops, also has posed a huge limiting factor for farming households who depend on agriculture for food security and their economic well-being.

THE INNOVATION: MULTILAYER VEGETABLE CULTIVATION

Multilayer Farming technology will increase the farm income by growing vegetables round the year. By covering the multi-crops with different layer provides an opportunity to schedule the production program as per grower need.

Yuva Rural Association, Nagpur, has been implemented a Holistic Rural Development project with the funding support of HDFC Bank under its CSR program since 2016 for 3 years. The major focus of this project was agriculture based livelihoods, sustainable agriculture, etc.

During the Project interventions, series of exposure visits, trainings were conducted to interested farmers to sensitize them about the Multi-layer farming technology and created awareness about the easy avenue of income generation. One to one contact and group meetings were organized in the villages and home to make them friendly with the project. The technology was then given to chosen farmers.

Mr. Dinkar Sakhare a poor farmer from village Ambegaon (Digar, Taluka-Selu, Dist-Parbhani living with 7 members in the family. He has land holding of 15 Guntha rainfed agriculture. Agriculture is the main business of Mr. Dinkar. However, the current drought situation and due to low production and high input cost, it was difficult for him to keep up with his family expenses.

He realized the fact that huge amount of vegetables are coming to market from other nearby blocks in the district and decided to do multilayer farming for vegetable production.

PROCESS & IMPACT

Under the project, he went for six days field training on multilayer farming in Badlapur, Mumbai for getting first hand practical information and learned everything there about the techniques.

With the help of the organization and financial support of HDFC Bank, he has received proper guidance and financial support for setting up a 'Multi Layer Farming Demo Plot' in his field. He has established multi-layer farm by investing some self contribution and with the financial support from the project.

Three types of vegetables were grown on single piece of land through multi-layer farming. He has started cultivating short duration green vegetables on the three layers, at the 1st layer Turmeric, 2nd layer coriander, SHEPOO, Methi, Chili, Tomatoes & Cauliflower, at the 3rd layer Chawali (चवळी), Karle (कारले), Dodke (दोडके) and Cucumber (काकडी) were cultivated in this land as sole plantation.

Realizing that the top soil layer in the fields remain unused for a significant period of time due to late germination of the crop, he has explored ways of utilizing the resources in a better way for improved production. By using this new technique, popularly called as multilayer cultivation, he tried to maximize production from an unit of 15 Gnta of land area. Following this improved cultivation practice; he has cultivated a diverse range of seasonal vegetables through multilayer technique all over the year. The vegetables were sold directly in the nearby markets and increased an annual income by Rs. 25,000 to Rs. 30,000, now living well with my family, with good income even during drought, he says. However, in the present case of multilayer farming technique practiced in the village. Since, water is drawn from natural spring and stored in cement tanks, there is no scarcity of water for land irrigation even in the summer season. Moreover, farmers have developed a rotational system of land irrigation. In this system, a whole day is allotted to a farmer to irrigate the land using the water stored in the tanks. Through this system, each farmer gets his chance to irrigate the land at regular intervals.

To overcome the problem of nutrient competition in the multilayer crop fields, farmers apply a huge quantity of farmyard manure in each of such crop field. Most importantly, the availability of enough water and farmyard manure has made this multilayer farming system viable in the village.

As vegetable crops are now being cultivated at 3 layers simultaneously, the new technique has resulted in increased in income

THE CHALLENGES

Initially, the introduction of multilayer farming techniques was low. Farmers were skeptical about the technology and were reluctant to invest and risk the whole crop failing. It was only through demonstrations where farmers could compare the yields of the new technology with those commonly grown.

Limited awareness and knowledge among farmers remains a challenge for adoption of the success of multilayer farming. There was a limited availability of products that struggle to satisfy a fast growing market, due to the lack of professionalization and training or land limits.

STEPS FOR SUSTAINABILITY

The farmers of the village are learning how to voice their concerns in a collaborative manner. They established a monthly meeting, where they can discuss problems and find solutions or new ideas that helps them make progress in multilayer farming. Adequate trainings were conducted to build their confidence and demonstrated the technologies in farm and field of progressive farmers.

Farmers were advised to grow the sequential crops on their land to harvest some more crops and also suggested to select crops with high vegetative growth, so that fertility of land improved along with reduction in weed growth and proper soil and moisture conservation.

CONCLUSION

Multilayer vegetable cultivation in the village is an excellent example of judicious utilization of soil and water resources to take full advantage of limited land resources. Also, access to markets has been one of the major drivers of this innovation in farming practice. Now he is the ideal farmer from his villages among the other agriculturists in the region. Soil moisture and nutrient dynamics in this vegetable farming technique should be of interest to further investigation.



Name: Dinkar Sugar
Village: Ambegaon (Digar)
Taluka: Selu
Number of family members: 07
Plan: Multi-layer farming demo plot
Area: 15 Guntha

SN	Name of Crops Cultivated	Crop Layer	Seed and Ratio	Area in Guntha
1	Turmeric	1 st	4 Quintal	7
2	Coriander	2 nd	4 Kg	7
3	SHEPOO	2 nd	2 Kg	2
4	Methi,	2 nd	12 Kg	7
5	Chili,	2 nd	2000 Seedling	13
6	Tomatoes	2 nd	300 Seedling	2
7	Cauliflower	2 nd	500 Seedling	1
8	Chawali (चवळी),	3 rd	2 Kg	1
9	Karle (कारले),	3 rd	2 Kg	3
10	Dodke (दोडके)	3 rd	2 Kg	6
11	Cucumber (काकडी)	3 rd	2 Kg	5