Crop Demonstration – Vegetables – Towards the path of Organic farming

Background info:

Mr. Devendiran is a farmer living in Ponnakani hamlet in Bogampatti village with his family of five. He earns through agriculture and by selling milk to the local villagers. His wife and sons are taking care of the agriculture when he is busy with his milk business.

Water availability in the region was depleting due to the human intervention with the nature. Stone Quarrying, Extraction of ground water for agriculture and other purposes are the man-made reasons for the depletion of ground water level in his village. Failed monsoon is another major burden affecting the agriculture. He is having an open well and three borewells of depths 660 ft, 750 ft and 800 ft. Currently, Only one bore well of depth 660 ft is functioning and all other wells are not having any water.

Pre intervention:

- The farmer was cultivating vegetables in traditional method using flood irrigation.
- Depended mainly on store bought chemical pesticides and fertilisers.
- Usage of water was very high and the water use efficiency was low.
- The cost spent on tomato cultivation was around Rs. 10,000 to Rs. 12,000 per season in 25 cents of agricultural land. It includes the input cost, labour cost, transport cost, etc. for own land.

Intervention:

Following inputs were provided to the beneficiary for the application in demo plot.

- Bio fertiliser (40 Kgs), Micro nutrient (6 Kgs), Macro nutrient (1 Kg), Grub kill (1 Kg), Solar light trap (1 No.), Yellow and Blue sticky trap, Funnel trap, Panchakavya (3 litres), Fish Amino acid (3 litres) and Tomato saplings of variety Madan.
- Demonstration plot was regularly guided and measured by the agriculture officer.

Post intervention:

- The demo plot was applied with the above-mentioned inputs whereas the conventional plot was cultivated by the farmers himself in traditional methods.
- Nutrient application helped to rectify the deflowering issues during winter.
- Fish amino acids, Panchakavya and neem oil was applied instead of chemical inputs.

- Usage of chemical pesticides were very much reduced by replacing it with trap and lures. Solar light trap is an automatic device which is helpful in killing nocturnal pests.
- The solar light trap is being reused now for the cultivation of broad beans.
- Preparation of Panchakavya and fish amino acid was taught to the beneficiary so that he will be able to produce on his own.
- Following table shows the comparison between conventional plot and demo plot of tomato cultivation. Major observation identified by the beneficiary was the easiness in pest control method and uniform size of the vegetable.
- His advice to the fellow farmers was that the organic inputs should be used at right time to reap maximum benefit out of it. If the crop was not taken care properly, the farmers will be forced to use the chemical inputs in later stage. So, regular monitoring of changes in the crop growth should be done to avoid it.

Comparison between conventional and demo plot

Description	**Conventional plot**	**Demo Plot**
Date of transplanting	16th October 2023	16th October 2023
Type of vegetable	Tomato – Madan	Tomato - Madan
Age of saplings	17 days sapling	17 days sapling
Inputs used	Store bought chemical fertilisers and pesticides.	Bio fertiliser (40 Kgs), Micro nutrient (6 Kgs), Macro nutrient (1 Kg), Grub kill (1 Kg), Solar light trap (1 No.), Yellow and Blue sticky trap, Funnel trap, Panchakavya (3 litres), Fish Amino acid (3 litres) and Tomato saplings of variety madan
No. of weeding	3 weeding	3 weeding
First harvest	December 2023	December 2023
Avg. Quantity of harvest per day	8 boxes of 16 Kgs each (128 Kgs)	9 boxes of 16 Kgs each (144 Kgs)
Total Harvest	96 boxes of 16 Kgs each	108 boxes of 16 kgs each

Size of the vegetable	Small to Large	Medium sized vegetables (mostly uniform)
Pest control mechanism	Foliage spray of chemical pesticides	Solar light trap, blue and yellow sticky trap, funnel trap, etc.
No. of pest control sprays	8 times	NIL
Rate fetched	Rs. 200 to 250 per box	Rs. 220 to 250 per box

2 Distribution of inputs

1 Tomato cultivation - Demo plot