

Vegetable Cultivation Under Drip and Mulching is Boon for Farmer

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Sri M. Rama chandraiah, s/o Eswaraiah, (36 years) was completed his secondary school education and very enthusiastic in farming. He having 3 acres of irrigated and 1 acre rain fed black loamy soils. He was regularly cultivating field crops like Maize and Redgram in rainy season and Mango from past 10 years. The cropping system has not given better returns and also cost of cultivation has been rising day by day. Then he had to switch over to high remunerative crops with in short period like vegetable crops, where vegetable sales were possible nearby town kollapur which is 20km away.



When he started vegetable cultivation, he has faced many changes like less ground water availability during summer season, high labour cost for manual weeding, fertilizer application and irrigation which were major share in cost of cultivation. He also experienced more fruit rotting (approx. 50%) in Tomato, Brinjal and cucurbits when they contaminated with soil during rainy season and high pest and disease incidence.

Process and method

The Krishi Vigyan Kendra, Palem was adopted chennapuraopally village during 2018-2022 and conducted several training programmes, FLD, OFT and CFLDs on pulses to this village. He undergone training programme on integrated crop management of Mango and vegetables which are organised by the KVK, Palem and he had visited demo unit at KVK, Palem on vegetable cultivation under drip and mulching system during 2018-19. He had interacted with SMS (Horticulture) regarding modern technologies in vegetable and Mango cultivation. Then he became beneficiary farmer while organised

OFT on New Ridge gourd variety Arka Prasan, Tomato variety Arka Abhed and FLD on Foliar spray of Arka mango special in his field during 2018-2022 and attended training programmes given by KVK, Palem, regularly.

Interventions/ initiatives

Sri M. Rama chandraiah had inspired to practice drip and mulching system in vegetables after visiting demo plot at KVK, Palem and also undergone training programmes on vegetable cultivation in drip and mulching system, trellises method in Ridge gourd, Bitter gourd by KVK, Palem. The KVK, Palem have been organised OFT on New Ridge gourd variety Arka Prasan, Tomato variety Arka Abhed and FLD on Foliar spray of Arka mango special in his field during 2018-2022.

He was adopted improved practices, which includes like deep summer ploughing, Farm yard manure application, 3 feet width raised beds, laid inline drip line per each bed, applied basal dose, covered 25-micron thickness 4 feet width mulching film on the bed. The vegetable seedlings like Tomato, Chilli, Brinjal and seeds of bitter gourd, Ridge gourd and Bhendi have planted in paired row system at 60 x 45 cm distance on the beds. The Tomato and cucurbit vines were tide vertically on trellies in row length wise, which are made 12 feet height wooden poles installed at 6 feet distance interval and two GI wire tide horizontal to the ground and made plants creep on this system.



He had used water soluble fertilizers like urea, 19-19-19 and 13-0-45 fertilizers as fertigation as per PJTSAU recommendation. He also followed all agronomical and plant protection measures with technical guidance of SMS (Hort.), KVK, Palem. He was also received subsidy on drip and mulching system from department of Horticulture and sericulture, Nagarkurnool initial years.

Input and outputs

He has been cultivated vegetable crops by adopting drip and mulching system, trellises method in Ridge gourd, Bitter gourd and Tomato for 3 years with technical guidance of KVK, Palem. He reaped better yields & income than earlier farming situation. Sri Rama chandraiah had spent Rs. 16500/- per acre to cover mulching sheet and it is used for two cropping seasons. The cost of cultivation has been reduced about Rs. 27,500/- per acre and yield increased up to 50% more. He had earned about Rs. 8,59,250 gross returns, Rs. 4,57,050 net returns with BC ratio 2.13:1 after production of 755.5 q from 2.5 acre in a year.

Outcomes and Impact

Sri M. Rama chandraiah have been practicing drip and mulching system for 3 years successfully with high net returns over conventional practices. He had doubled farm income after adopting this practice and stood role model among his village and surrounding village farmers. The farmer was very active in whatsapp groups and face book and shared field photographs and experiences to fellow farmers.

In Nagarkurnool district, drip and mulching system have been spread in to about 243 acres under different vegetable cultivation. The main constraint of this technology have been adopted by large group of farmers was initial cost is high and the Govt. have to be assist by giving subsidy regularly for long period to the vegetable growers in the district.



Sri M. Rama chandraiah reported that vegetable cultivation by adopting drip and mulching system with the help of technical guidance of KVK, Palem have changed his life and able to doubled his farm income. Sri M. Rama chandraiah's success story have been documented by KVK, Palem and accolade best farmer award in vegetable cultivation category by Eruvaka foundation on eve of National farmers day 23.12.2022 held at University Auditorium, PJTSAU.

The Drip and mulching system technology have reduced cost of cultivation by 20-40% and increases yield about 33-50% in deferent vegetable crops. This technology is boon for farmer to achieve doubling of farm income.

Table1: Vegetable crops grown in one year using drip and mulching system during 2022-23.

S. No.	Crop	Area	Yield (q)	Gross returns (Rs.)	Cost of cultivation (Rs.)	Net return (Rs.)	B:C Ratio
1	Bhendi (Kharif)	1 acre	116.5	1,74,750	72,500	1,02,250	2.41:1
2	Bitter gourd (Kharif)	1 acre	125.0	2,00,000	98,800	1,01,400	2.03:1
3	Ridge gourd (Kharif)	1 acre	146.0	1,90,000	91,700	98,300	2.07:1
4	Tomato (Rabi)	1 acre	215.0	1,72,000	88,200	83,800	1.95:1
5	Brinjal (Rabi)	1 acre	153.0	1,22,500	53,200	71,300	2.30:1
	Total	5 acre	755.5	8,59,250	4,04,400	4,57,050	2.13:1

Table 2: Contact details of farmer

Name of the farmer	Address	Phone no
M. Rama chandraiah	S/o Mekala Eswaraiah, H. No. 3-143. Chennapuraopally (V), Peddakottapally (M), Nagarkurnool (Dist), Telangana state, PIN Code: 509102.	9440673406
