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Success story of an innovative organic farmer

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Abstract

This paper discussed about the success of an innovative organic farmer. Narasimhulu (52), hailing from Nellikondi village in China Chinta Kunta mandal of Mahabunagar district has set himself as a role model for farmers and braved to make a fortune in such situation through adoption of integrated organic farming. The main factors that have contributed to his success are his interest and passion towards advanced technologies. He is a hard worker who was self-motivated to take up a new initiative for profitable agriculture and allowed other farmers to visit his field from surrounding villages Fareedpur, Ammapur, Undyala, Muchintala villages of CC Kunta mandal. He is an example of a successful farmer and has proved that wonders can be done in agriculture if investments are made in the right direction and farmers are equipped with the latest knowledge. Mr. Narasimhulu net income for each acre is approximately Rs. 70,000 per annum.

Keywords: Integrated organic farming, innovative, adoption and success

Introduction

Nellikondi Village is located 38 kilometers far from district head quarters Mahabubnagar towards southern side and 5 kilometers from mandal head quarters Chinna chintakunta. The total area of the village is 2225 acres out of which the cultivated area is 1717 acres constituting 270 acres under irrigation and 1440 under rainfed situation. The main soil types in the village are sandy loams, clay loam soils with patches of saline soils. The main sources of irrigation are bore well and two canals i.e Peddavagu in the village where water comes from Koilsagar and Chinnavagu water comes from Jurala, which are occasionally useful for irrigation. The main crops in the village are Rice, Cotton and Redgram. Rice area is under with bore well irrigation. Water availability in these bore wells depends on monsoonal rainfall.

Mr. C. Narasimhulu (52), from Nellikondi village, Chinna chintakunta mandal in Mahabubnagar district of Telangana State, India, studied up to the 5th standard. He is from an agrarian family. He has a family that includes one son and two daughters. He owns 20 acres of land including 10 acres under rainfed and 10 acres under irrigated condition. He grows Rice, Redgram, Cotton and vegetables in the *Kharif* season. Immediately after harvest of the *Kharif* crops, he takes up Chilli and vegetables for the *Rabi*. Mr. Narasimhulu has been farming since 15 years. The farmer, tired of chemical farming, started organic farming in year 2017. The success model adopted by Mr. Narasimhulu was integrated organic farming. He has four cows and two buffalos whose dung and urine is converted into Jeevamrutham, which is used as a fertilizer for the plants. He never uses chemical fertilisers or pesticides; he follows only natural methods of agriculture from last three years, he noticed his crops getting better and developed an interest in continuation of integrated organic farming (Agriculture+Horticulture+Dairy) in a contemporary situation, where loss in one crop can be substituted with the other enterprise. He has good contact with fellow farmers and input dealers, facilitating a healthy exchange of information. He has considerable mass media exposure as he listens to the radio, watches the television and reads newspapers regularly. Mr. Narasimhulu believes that the beauty of the integrated organic farming is that he gets most of the ration from his own farm. According to him, the supplementary and complementary relationship between the enterprises generates more income for farmers.

He has been recognised as a progressive farmer and he is well known for his rich knowledge of organic farming. He does not hesitate in sharing his experience with farmers and other senior officers in agriculture and allied departments. He regularly attended meetings conducted by Department of Agriculture under Paramapragat Krishi Vikas Yojana (PKVY) programme. He uses the knowledge gained in the meetings to raise crops in his field. He also received timely technical support from the DAATTC, Mahabubnagar, helped him shore up and integrate his organic farming through the use of water saving technologies, improved varieties/hybrids of agriculture and horticulture crops.

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Technologies adopted by under integrated organic farming:

The farmer uses farm yard manure, cow urine, neem oil, green manures, panchagavya waste decomposer, ghanajeevamrutham, CVR method, ponnu swamy oils and improved irrigation techniques.

Farm yard manure: prepared by decomposing dung and urine of farm animals and other organic residues such as kitchen wastes, crop residues, animal wastes and uniformly spread 5 tones of FYM over the soil surface and mixed thoroughly. He applied 15-20 days before sowing or transplanting so that manure goes under the ammonification and nitrification process.



FYM heap

Cow urine

The farmer collects cow urine in a tank of 50 litres capacity. He uses the urine to spray on to the crops in order to protect

them from the attack of pests and diseases. He also used fermented Ipomea cornea + cow urine for control of brown plant hopper in rice field.



Neem oil: This works as an insecticide and fungicide. Unlike chemical pesticide Neem oil doesn't work immediately but slowly reduces the growth and reproduction of pests. He used Neemastram for control of leaf folder in rice

sesamum 0.25 kg, 0.25 kg Mustard). Cassia, Neem and Calotropis leaves are spread and incorporated in puddled nursery field.

Green manures: Nine types of grains are grown and incorporated in soil. (one kg dhaincha, 0.25 green gram, 0.25 kg black gram, 0.25 kg phaseolus, 0.25 kg cowpea, 0.25 kg

He also used 13 leaves concoction (Ipomea Cornea, Bougainvillea, Peepal, Cassia, Custrard Apple, Teak, Calotropis etc.) for control of pest and diseases in Rice, Redgram, Cotton and Chilli.



Preparation of leaves concoction

Panchagavya: It plays the role of promoting growth and providing immunity in plant system. Panchagavya consists of nine products viz. cow dung, cow urine, milk, curd, jiggery, ghee, banana, Tender coconut and water. He used three liters of panchagavya to every 100 liters of water for Rice, Cotton, Chilli and Redgram. In rice crop it was applied at 10, 15, 30 and 30 and 50th days after transplanting.

Waste Decomposer

It is purchased from outside. This helps in quick composting of organic waste, soil health improvement and as a plant protection agent. One bottle of waste decomposer is mixed with 2 kg jaggery in 200 liter of water in a plastic drum. After 5 days the solution of the drum turns creamy. This is applied on the standing crop for 4 times at 10 days interval.



Ghana Jeevamrutham

He collected 100kg of desi cow dung + 1kg Jaggery + 1 Kg dicot flour and mixed well and made into heaps. This heap is covered with rug sack to maintain good temperature for the growth of micro-organisms. Once it is completely dried it is stored in bags. This is enough for an acre.

An acre of land requires 10 kg of local cow dung per month. Since an average cow gives 11 kg of dung a day, dung from one cow can help fertilize 30 acres of land.



CVR method

The farmer C. Narasimhulu being a follower of Chintala Venkat Ram Reddy and adopted this soil and nutrient management technique in his farm in 2017. If the plant is affected by pest then he applied 3 parts of top soil and 1 part of sub soil that is 15kg and 5kg mixed in 200litres of water.

Ponnu swamy oils

He used ponnu swamy oils for control of sucking pests in Cotton and Chilli crops. He prepared oils by adding 100 ml mixing agent to one liter edible oil and then mixing of this one liter oil into 200 liters of water for spraying.

Pheromone traps

He was installed pheromone traps @ 8/acre in Rice, Cotton and Redgram for regular monitoring of pest incidence.



Installation of pheromonetraps in Rice, Cotton and Redgram

Irrigation techniqu

He practiced alternate wetting and drying method of irrigation in rice and drip irrigation in Cotton and Chilli.



Drip in Chilli



AWD method of irrigation in Rice

Traps crops for control of pests

Chilli trap cropped with marigold and tomatto will reduce the incidence of sucking pests and fruit borers.



Trap crop in Chilli

Bund plantation: His farm is well fenced and planted coconut trees and bamboos on bunds.



Bund plantation with bamboo and coconut trees

Cost of technology intervention

Table 1: Economic benefit due to Technology intervention

Crop	Improved water management technologies adopted in addition to Organic farming	Percent saving in water	Yield (Kg./acre)	Cost of Cultivation (Rs./acre)	Gross Returns (Rs./acre)	Net Returns (Rs./acre)
Rice	Alternate wetting and drying method of irrigation in Rice using AWD perforated pipe since 3 seasons.	24	2730	15440	48327	32887
Chilli	Drip irrigation	43	2500	30000	200000	1,70,000
Cotton	Drip irrigation	25	1500	25000	60000	35000
Redgram	Square planting	-	850	10000	48450	38450

Results achieved

There was yield reduction in all the crops initially during the first year due to the adoption of organic farming but yields were stabilized in the crops by the end of 3rd year. The reduction in cost of cultivation with the adoption of organic farming was to the tune of Rs 10,000, Rs.40,000, Rs 20,000, and Rs. 10,000 per acre in the crops Rice, Chilli, Cotton and Redgram respectively thereby increasing the net returns achieved compared to the conventional chemical farming being practiced by fellow farmers. In addition to the practice

of organic farming, the farmer has adopted other improved technologies suggested by DAATTC such as AWD method of irrigation in Rice, Drip irrigation in Chilli and Cotton resulting in improved water use efficiency in terms of water saving of 24 per cent, 43 per cent and 25 per cent respectively which can be utilized for further increase in the acreage of respective crops with the same amount of available water, thereby increased returns to the farmer and square planting in Redgram which increases the yield in addition to saving of seed requirement reducing the cost of cultivation even further.



Chilli crop at harvesting stage



Rice crop at grain filling stage

Impact on livelihoods/ Socio economic condition of the farmer

Mr. Narasimuhulu believes that if other farmers follow the organic farming method he has practiced all these years, it will greatly benefit them in maintaining sustainable agriculture and getting remunerative income from agriculture operations under uncertain and unpredictable rain fed conditions. He is the only farmer in the village to take up

integrated organic farming in 20 acres of land. The main factors that have contributed to his success are his interest in and passion towards advanced technologies. He is a hard worker who was self-motivated to take up a new initiative for profitable agriculture and allowed other farmers to visit his field from surrounding villages Fareedpur, Ammapur, Undyala, Muchintala villages of CC Kunta mandal.



Explaining his success to fellow farmers,



Scientists and Department of Agriculture

Feedback of the farmers

While his neighbours do not make profits from agriculture, Mr. Narasimulu gets profits because of proper crop planning based on limitations of soil and water resources, personal involvement in all field operations and following modern practices clubbed with traditional intelligence. He is an

example of a successful farmer and has proved that wonders can be done in agriculture if investments are made in the right direction and farmers are equipped with the latest knowledge. Mr. Narasimulu net income for each acre is approximately Rs. 70,000 per annum.



Felicited by DAATTC, Mahabubnagar as a best farmer



Farmers express their satisfaction about Sustainability

The farmer proudly says that the sales milk, organic rice, farm yard manure, panchakavya, dairy support their livelihood expenses including their children education. He explored sustainable agriculture using locally available natural resources with compost, local seed material. By adopting this method of organic farming, he has been able to achieve better crop productivity per acre of land under scanty rainfall conditions. Also, the culinary value and shelf life of the end produce is good and retains its original nutrient contents on storage.

Lessons learnt: He believes every farmer should follow the integrated way of organic farming as this result in complementary and supplementary methods that enhance the productivity of crops.

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