Short communication

ORGANIC FARMING IS THE NEW SUCCESS MANTRA FOR SUSTAINABLE AGRICULTURE

Comment [u1]: Seems not matching with written documents in the body, for me it should be more sound if you say "role of **ORGANIC FARMING FOR SUSTAINABLE AGRICULTURE**

Abstract

Organic farming avoid investment on costly chemicals and pesticides. Mrs. Neerukondasatyanarayana adopted organic farming from the year 2015-16. He attended various trainings organized by department of agriculture and krishivigyan Kendra, Venkataramannagudem. After that he prepared 14 types of organic inputs, bio fertilizers, bio pesticides on his farm. Banana, Papaya, Vegetables (Brinjal, Tomato, chilli and Spine gourd) and Black gram crops were cultivated in 10 acres area by using the organic inputs. He got net income of Rs.3 lakhs /ac from Vegetable cultivation from banana.1.5 lakhs /ac net income in case of Black gram Rs. 35000/ac as net income and in papaya 1.5 lakhs

Comment [u2]: Better if you use scientific name

Comment [u3]: Should be comma

Comment [u4]: Should be comma

Keywords: organic farming, organic inputs, management strategies, and economics

Comment [u5]: Better if you say organic farming and input

Introduction

Chemical fertilizers and pesticides destroy soil health, farmers who rely on them need more and more every year to grow the same amount of crops and increase the cost of cultivation [1-3]. These rising costs can trap farmers in inescapable debt. Organic farming practices reduce pollution, conserve water, reduce soil erosion, increase soil fertility, and use less energy. Farming without pesticides is also better for nearby birds and animals as well as people who live close to farms also it gives quality of the fruits & vegetables. organic farming is a production system ,which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides,growth regulators and livestock feed additives [4-6].to the maximum extent feasible, organic farming system rely on crop rotation,crop residues,animal manures,legumes,green manures,off-farm organic waste,and aspects of biological pest control to maintain soil productivity and tilth to supply plant nutrients and to control insects, weeds and other pests. According to the World of Organic Agriculture 2018 report India is home to 30 per cent of the total organic producers in the world, but accounts for just 2.59 per cent (1.5 million hectares) of the total organic cultivation area of 57.8 million hectares.

Comment [u6]: As long as your work is about Organic farming practices please at least try to start your introduction from Organic farming practices and come to the inorganic one

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Comment [u9]: To

Mrs. NeerukondaSatyanarayana was a successful organic farmer residing in Dommeru village of kovvur Mandal, West Godavari District . He belongs to farming community and completed his Master of science in chemistry in 1986. After that he worked in private company for the period of ten years. He has not getting satisfaction from that job so he left the job & started farming from 1996.he gradually learned the advantages of organic farming and also known the disadvantages of in chemical farming. He believed organic farming reduce cost of cultivation, improve soil health and achieve sustainability in cultivation of various crops. Then he attended training programme on organic input preparation at rythunestam foundation, kornapadu, Vijayawada andKrishiVigyan Kendra, Venkataramannagudem also participated in exhibitions, Kisan melas and kisankalyankaryasala organized by the Department of Agriculture [7-10]. He learned and gained knowledge on organic inputs preparation and organic cultivation with this experience he started organic farming in his 10 acres of land he grows Banana, Papaya, Vegetables (Brinjal, Tomato ,chilli and Spine gourd) and Black gram crops since 2015-16 in organic methods. He having four cows, six buffalos and 130 poultry birds.During the year 2020 he attended Indian Science Congress held at UAS, Bengaluru with the support KVK, venkataramannagudem.

Comment [u10]: This part looks like CV? I am not sure the importance of this here in this paper

Table 1.cultivation of crop

S.No	Crop	Area (acres)
1	Banana (Grand nain, Karpura and Tellachakkarakeli	8
2	Papaya (Red lady)	1
3	Vegetables (Brinjal,Tomato,chilli and Spine gourd)	1
4	Blackgram (PU -31) as an intercrop in papaya	-
	Total	10 acres

Success Point/Results:

Mrs. NeerukondaSatyanarayana has prepared 14 types of organic inputs (Beejamrutham, Ghanajivamrutham, Dravajivamrutham, panchagavya, Agniastram ,Neemastram, vavilaku, Panchapatra, Dasaparni, Sontipala ,Saptankurakasayam, Fish amino acids, Egg and lemon amino acids , Starch liquid) in the farm. He has prepared and use the biofertilizers like PSB, zinc and sulphur solubilising bacteria,Azospirillum and bio pesticides *Beauveriabassiana, Verticilliumlacanii, Metarhiziumanisopliae, Trichodermaviride and pseudomonas fluorescence.* Farm

waste converted into manure and applied in the field & Vermicompost produced by own. Crop residues (paddy straw, dry leaves of banana and black gram husk) are being used for mulching in Banana and Papaya followed drip Irrigation System in papaya, vegetables and banana applied organic inputs through fertigation. Followed Intercropping of Brinjal and chilli in banana.

Table 2.**Organic inputs prepared and used in farm**

S.No	Name of the organic input used	Ingredients	Used for	Observations
1	Beejamrutham	Cow urine -2 L Cow dung 5 kgs White lime 50 grams Water 20 L	Seed treatment for black gram, vegetables and banana	Good germinat and vigour Controlled seed born diseases.
2	Ghanajivamrutham	100 kg desi dung manure 10 Lof cow urine Jaggery 2kg any pulse flour 2kgs Handful fertile soil from the farm.	Soil application (1 tonne/acre)	Soil fertility and water absorption capacity is increased. Earth worms (jeevanagali) number increased.
3	Dravajivamrutham	Water 200 L Desi cow dung 10kgs Desi cow urine 10 L Jaggery 2 kg Any pulse flour 2kgs Handful fertile soil from the farm,200 L plastic drum	Spraying(25%,50%,75%,100%) and soil application (4000 L/ac) at every 15 days interval.	Plant growth enhanced
4	Panchagavyam	Cow dung - 5 kg, Cow ghee – 1/2 kg, Cow Urine - 5 L Cow milk - 2 L, Cow curd - 2 L Tender coconut water - 3 L, Jaggery - 1 kg Well ripened poovan banana – 12 nos. Kallu -3 L ,white gourd 1kg	Spraying (30 ml/L) at 20 days intervel 2-3 times of the crop.	Corrected the micro nutrient disorders
5	Neemastram	10kg neem leaves,2kg cow dung, 5 kg cow urine in 100	Spraying (100 L /acre)	Prevented insect pest egg hatching

Comment [u11]: Regarding this column, I am not feeling good, so long as it is science better if you use internationally known language like English as you used in the others part

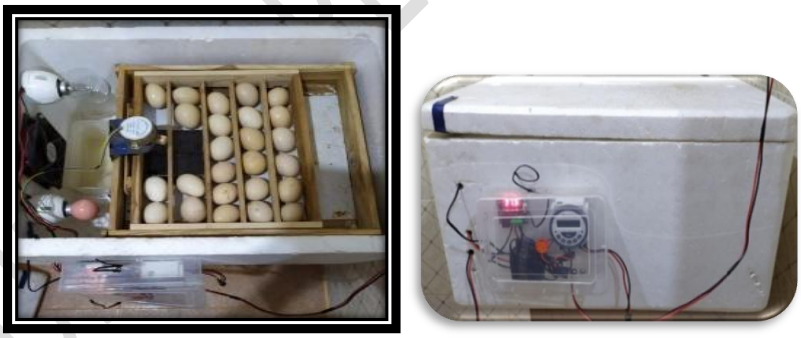
		L of water		
6	Panchapatrakashayam	Neem leaves 2kg Custard apple leaves 2 kg ummetha leaves - 2kgs Vavilakulu -2kg Jilledu 2kgs 5 L cow urine in 100 L of water	Spaying (100liters/acre)	Controlled Sucking pests and corrected the calcium, iron and boron
7	Dasaparni kashayam	2 kg Leaves of each of the following plants Neem, tutikada,maredu, castor , pongamia ,Papaya , teak, attakodaluaku, Custard apple-, *ummeta* 5 liters cow urine Water 100 liters	Spaying (100liters/acre)	Controlled insect pests Improved quality
8	Controlled insect pests Improved quality	5kg neem leaves 1/2kg Garlic 1kg tobacco powder 1kg chilli 15 L cow urine	Spraying (250ml/16 L of water)	Controlled Spodoptera pests.
9	Sontipalakasayam	Sonti 200 gram Cow milk 2 L 100 L water	Spraying (100 L /acre)	Controlled viral diseases in chilli papaya and brinjal
10	Fish amino acids	Waste fish material 1kg Jaggery 1kg 10 L of water Prepared in ceramic container (5 L)	Spraying (10 L /100 L of water)	Growth promoter and controlled the viral diseases in vegetables and papaya
11	Egg and lemon amino acids	Eggs -10 Lemon -150 no. Plastic container -5 liters 250 gram jaggery	Spraying (50ml/16liters)	corrected the calcium & iron deficiencies Improves the pollination of crops. Growth promoter and immunity power is also

				increased .
12	Starch liquid	Rice flour 1 kg, 250 grams inguva (asafoetida) 500 gram soap nut Water 5 L	Spaying (10liters/100 liters of water)	Controlled the mealy bug in papaya
13	Saptankurakasaya m	2kgs Powders of following material Groundnut ,sesamum, mustard, red gram, cow pea, green gram, maize	Spaying (2 kg/32 L of water)	Increased the yields
14	Waste decomposer solution	Jagggery -2kg, Waste decomposer -1 bottle Water 200 L	Soil application (4000 L/acre)	Soil fertility and earth worms increased.

Special Innovation(s) :

- He developed low cost semiautomatic poultry egg Hatcher unit Used for the incubation of eggs into chicks in 21 days and Incubator capacity is 50 eggs .it cost around 4000 rupees

Comment [u12]: What is the aim of discussing this here? is it part of organic farming or what? Try to elaborate more to make clear for your readers



- Fig 1. semiautomatic poultry egg Hatcher

- Maintenance & Cultivation of 14 Desi varieties of vegetables under department of agriculture (cauliflower, tomato, red amaranthus, purple carrot, cabbage, onion, green long chilli, kasi tomato, red bhendi, byadagi chilli, pumpkin and sorrel)

Fig 2. Seeds of Desi varieties

Economics

Table 3.**Economic details prior to organic farming**

Economic details prior to organic farming				
Crop	**Yield/ac**	**Cost of cultivation (Rs/ac)**	**Gross income (Rs/ac)**	**Net income (Rs/ac)**
Banana	25 tonnes	80,000	2,00,000	120000
Spine gourd	4 tonnes	50,000	1,50,000	1,00,000
Buffalos	250 L/month	30000	40,000	10,000
Poultry	130 birds	10000/year	1,20,000+4,000 (1,24,000)	1,14,000

Economics with organic farming				
Crop	**Yield/ac**	**Cost of cultivation (Rs/ac)**	**Gross income (Rs/ac)**	**Net income (Rs/ac)**
Banana	25 tonnes	60,000	2,00,000	1,40,000
Vegetables (spine gourd,chill&brinjal)	4 tonnes	40,000	3,50,000	3,10,000
Black gram	5 quintal	5000	40,000	35,000

Papaya	16 tonnes	50,000	200000	1,50000

Horizontal spread of technology

- Department of Agriculture, horticulture and ATMA conducted exposure visits to the farm
- Selected as a resource person for the training to the farmers conducted by the department of agriculture and horticulture
- Attended as a resource person for UNEP (united nation environmental programme) which was organized by the department of agriculture.
- Success story of Spine gourd and banana farming documented by zero budget natural farming government of A.P.
- Success story broad casted in 10 Tv news in the year 2019.The videos available in *http://youtu.be/ES5lv67fEWo* and http://youtu.be/Av9UX-1rqQQ

- Motivated Nearly 100 farmers to adopt organic farming from various mandals of west Godavari i.ekovvur, chagallu and tadepalligudem.

Conclusion:

- Organic method of cultivation has reduced dependence on external inputs and created high marked demand and additionalnutritional value and taste for the produce.
- He got net income of Rs.3 lakhs /ac from Vegetable cultivation from banana . 1.5 lakhs /ac net income in case of Black gram Rs. 35000/ac as net income papaya 1.5 lakhs
- Mr NeerukondaSatyanarayana engaged in production of inputs at their farm. Therefore cost of cultivation is reduced as compared to spraying of pesticides/fungicides to control pest and diseases.
- Because of better taste ,flavour and quality, produce are sold at premium price in the markets.

Quality Photograph

Pic1.Director of extension,Dr YSRHU visited the organic field of Mrs. NeerukondaSatyanarayana

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