



RESEARCH ARTICLE

“POLY MULCH IN EXOTIC VEGETABLE DIMINISHING COST OF CULTIVATION IN NORTH – EASTERN GHATS AGRO CLIMATIC ZONE OF ODISHA, INDIA”

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ABSTRACT

Agriculture is the most important source of income of our country, where as due increase in evaporation of water & nutrient from soil in open condition, fluctuations in soil temperature, abundant population of unwanted plants in crop field, heavy damage of crop roots & high human days input cost reduces interest in agricultural farming among young generation and for livelihood, agricultural farm families migration increasing Day by Day. Apart from this migration will encourages in infections of diseases like COVID – 19, Ebola, flue, depressions & bad health standard due to deficiency of nutrients in our body by changing food habits. As per data during the Year 2020 up to the month of July near about 1.45 lakhs population infected by COVID -19, out of which maximum migrated infected populations are identified. This type of problem has been identified globally. Krishi Vigyan Kendra, Kandhamal, Odisha, India has experimented a horticulture technology “Poly mulch in exotic vegetable diminishing cost of cultivation” which is able to reduce hardiness due to farming & able to solve problem hampers the productivities and which will definitely reduce migration and give livelihood to tribal farmers. The experimental has been conducted in site which is situated in 19°34' & 20°50' North latitude & 83°30' & 84°48' East longitude and comes under North – Eastern Ghats agro climatic zone of the State Odisha, India. The Mean Sea Level is varies from 300 meters to 1100 meters due to the presence of hills & mountain. The favourable climatic condition such as temperature, soil & air moisture of this area is suitable for agricultural farming. After a survey among farming communities weed density decreasing the production, increasing in the disease, insect – pest infestation & increase agricultural inter cultural operation in vegetable field and which further results low yield, poor quality of produce & less market demand & rate. When there is a will there is a way, KVK, Kandhamal Scientist take initiatives to formulate a less agriculture labour inputs and easy operated mechanise farming system that is in line paired row drip with LLDPE (25 micron) poly mulch farming system, which is proof to solve all post planting problems in the North – Eastern Ghats agro climatic zone. However, this method is new to farming community and availability of hi – technology horticulture inputs are rare, KVK, Horticulture discipline take initiatives to encourage the input providers to make avail all necessities and joint venture to promote this technology to diminishing cost of cultivation due to weed, evaporation of soil moisture, nutrient, run – off of upper most organic matter, management of soil humus by capacity building – demonstration – Extension of such a productive technology. However, this method is new to farming community and availability of hi – technology horticulture inputs are rare, KVK, Horticulture discipline take initiatives to encourage the input providers to make avail all necessities and joint venture to promote this technology to diminishing cost of cultivation due to weed, evaporation of soil moisture, nutrient, run – off of upper most organic matter, management of soil humus by capacity building – demonstration – Extension of such a productive technology with obtaining of maximum B:C ratio from exotic vegetables under poly mulch condition (As in table of Hot pepper B:C ratio 4.20 followed with Capsicum 3.61 so on).

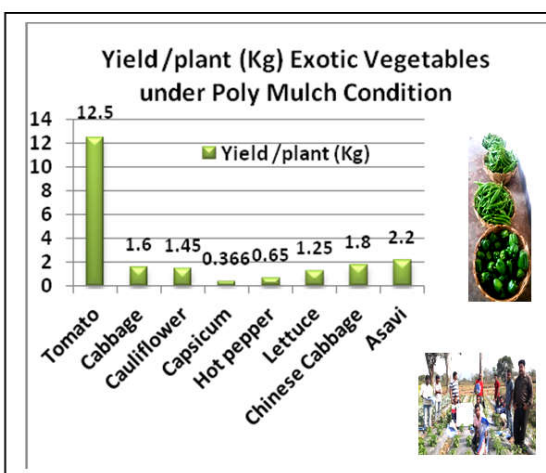
INTRODUCTION

Agriculture is the most important source of income of our country, where as due increase in evaporation of water & nutrient from soil in open condition, fluctuations in soil temperature, abundant population of unwanted plants in crop field, heavy damage of crop roots & high human days input

cost reduces interest in agricultural farming among young generation and for livelihood, agricultural farm families migration increasing Day by Day. Apart from this migration will encourages in infections of diseases like COVID – 19, Ebola, flue, depressions & bad health standard due to deficiency of nutrients in our body by changing food habits. As per data during the Year 2020 up to the month of July near about 1.45 lakhs population infected by COVID -19, out of which maximum migrated infected populations are identified. This type of problem has been identified globally.

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Sl. No.	Exotic vegetables under mulching condition	Variety	Yield /plant (Kg)	Involvement of tribal farming population	Number of farmer encourage for further steps	B:C Ratio
1	Tomato	Pratikhya, Mohini, Arka Rakhyak	12.50	62	150	1.48
2	Cabbage	Harekrishna	1.60	28	250	2.65
3	Cauliflower	NS 60, Early Kuanri	1.45	28	300	2.80
4	Capsicum	Arka Mohini, Green wonder	0.366	25	120	3.61
5	Hot pepper	Green Hot	0.650	23	80	4.20
6	Lettuce	Red & Green	1.25	14	50	3.56
7	Chinese Cabbage	Hybrid CC	1.80	13	40	3.10
8	Asavi	Asavi Tsai	2.2	15	25	3.45



Intervention: Krishi Vigyan Kendra, Kandhamal, Odisha, India has experimented a horticulture technology “Poly mulch in exotic vegetable diminishing cost of cultivation” which is able to reduce hardness due to farming & able to solve problem hampers the productivities and which will definitely reduce migration and give livelihood to tribal farmers. The experimental has been conducted in site which is situated in 19°34’ & 20°50’ North latitude & 83°30’ & 84°48’ East longitude and comes under North – Eastern Ghats agro climatic zone of the State Odisha, India. The Mean Sea Level is varies from 300 meters to 1100 meters due to the presence of hills & mountain. The favourable climatic condition such as temperature, soil & air moisture of this area is suitable for agricultural farming. After a survey among farming communities weed density decreasing the production, increasing in the disease, insect – pest infestation & increase agricultural inter cultural operation in vegetable field and which further results low yield, poor quality of produce & less market demand & rate. When there is a will there is a way, KVK, Kandhamal Scientist take initiatives to formulate a less agriculture labour inputs and easy operated mechanise farming system that is in line paired row drip with LLDPE (25 micron) poly mulch farming system, which is proof to solve all post planting problems in the North – Eastern Ghats agro climatic zone.

RESULTS

During the Year 2019 Rabi season, initiatives on farming of exotic vegetables such as Lettuce (green & red), Asavi Tsai, Broccoli, Chinese cabbage, Hot pepper, Capsicum,

Cauliflower, Cabbage under paired row in line drip poly mulch organic farming condition testing has been carried out in 1 hectare area in instructional farm as well as 0.4 hectare in outside the instructional farm to check-out the feasibility and productivity of vegetable farming under hi-tech horticulture technologies. The package of organic farming practices and in line drip with Poly mulch has proof successful intervention by providing quality, tasty & productive fruits harvest(as in table) encourages hopeful tribal farmers towards adoption of this technology and increase interest of youths towards horticulture garden.

Conclusion

However, this method is new to farming community and availability of hi –technology horticulture inputs are rare, KVK, Horticulture discipline take initiatives to encourage the input providers to make avail all necessities and joint venture to promote this technology to diminishing cost of cultivation due to weed, evaporation of soil moisture, nutrient, run – off of upper most organic matter, management of soil humus by capacity building – demonstration – Extension of such a productive technology with obtaining of maximum B:C ratio from exotic vegetables under poly mulch condition (As in table of Hot pepper B:C ratio 4.20 followed with Capsicum 3.61 so on).

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