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An Economic Analysis of Organic Farming in Shivamogga Taluk

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Abstract: ***Traditional farming (of many kinds) was the original type of agriculture, and has been practiced for thousands of years. Forest gardening, a traditional food production system that dates from prehistoric times, is thought to be the world's oldest and most resilient agro ecosystem. Organic farming is a form of agriculture that relies on techniques such as crop rotation, green manure, compost, and biological pest control. Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony. This study is very essential based on the study area, so I have frame some objective like to ascertain the reasons for shifting from inorganic to organic cultivation, to study the type, pattern and levels of use of manures, fertilizers and plant protection measures and the cost involved under both the type of farming, to compare the yield, market prices and returns of organic products with that of inorganic products, to enumerate the problems of organic product growers. Based on this objective I framed some hypotheses like the costs involved in organic farming are less compared to that of inorganic farming, net returns from organic products are higher than that of inorganic products.***

I. INTRODUCTION

Green revolution has brought spectacular increase in production as well as productivity of crops in our country. But after the initial success, it had shown the undesirable effects on natural resources; such as soil, water, biodiversity and human health. The soil fertility was degraded due to soil erosion and water resources have been over exploited and polluted due to excessive requirement of irrigation water for high yielding varieties and intensive use of agro-chemicals. Many flora and fauna are wiped out are in endangered status. Residues of harmful pesticides in food and drinking water pose a serious threat to consumer's health.

In present day farming, the cost of cultivation has disproportionally has disproportionally increased as compared to the revenue generation. The increase in usage of external inputs in agriculture to meet the emerging requirement could be the reason for the above phenomenon. At present the issue is whether to continue with the chemical based intensive technologies or to go back to the traditional environment friendly-economic development of the farming community. So the problems have made us to think of some other alternative methods of increasing food production. In this context, organic farming has drawn the attention of agricultural scientists, farmers and policy makers' worldwide. Thus in developing countries the twin challenges are the production of sufficient food for the growing population from available land and prevention of environmental degradation. Meeting of one challenge certainly gives birth to other challenge. Hence to face these two challenges certainly gives birth to other practice is adopted that is "organic farming". Organic farming is a production system which avoids or largely excludes the use of chemical fertilizers, growth, regulators and livestock feed additives to the maximum extent possible and which also promotes and enhances the agro ecosystem health which includes biodiversity, biological cycles and biological activities. Organic farming relies mainly on crop residues, animal manures, legumes, green manures, wastes and biological pest control which aims at producing high quality nutritional food with sustainable high yield. Organic farming is practiced in India since thousands of year. The great Indian civilization thrived on organic farming and one of the most prosperous countries in the world, till the British rules it. In traditional India, the entire agriculture was practiced using organic techniques, where the fertilizers, pesticides etc. were obtained from plant and animal products. Organic farming was the backbone of the Indian economy and cow was worshipped as a God.

The first use of the term organic farming is usually credited to Lord Northbourne, in his book, 'Look to the Land' (1940), wherein he described a holistic, ecologically balanced approach to farming. The British botanist, Sir Albert Howard often called as "The Father of Modern Organic Agriculture" studied traditional farming practices in Bengal, India. He regarded such practices as superior as superior to modern agricultural sciences and recorded them in his book, 'An Agricultural Testament' (1940).

In 1972, the International Federation of organic agriculture Movements (IFOAM) was founded in Versailis, France. IFOAM was dedicated to the diffusion of information on the principles and practices of organic farming across national and linguistic boundaries. According to the International fund for agriculture development (IFAD), organic production in India has been growing

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steadily. About 2.5 million hectares of land is under organic farming in India. The Research Institution of organic agriculture reports a total 15,000 organic farm were operating in the country in 2004. The agricultural and processed food products exports development authority (APEDA) estimated 200000 hectares of certified organic land, mainly cultivated by small holder producers. Recently, an increasing number of companies, NGO's, farmers' organizations and Government agencies have been promoting organic agriculture in India.

A. Principles Of Organic Farming

Organic farming is based on the following principles:

1) To produce food of high quality in sufficient quantity.
2) To encourage and enhance biological cycles within the farming system involving micro organisms, soil flora, plants and animals.
3) To maintain and increase the long term fertility of soils.
4) To create a harmonious balance between crop production and animal husbandry.
5) To produce fully bio-degradation organic products.
6) To minimize all forms of pollution.
7) To promote the healthy use proper care of water, water resource and all lives therein.

B. Specific Objectives Of The Study

With the about principles and need for the study, the following objectives are framed to investigate:

1) To ascertain the reasons for shifting from inorganic to organic cultivation.
2) To study the type, pattern and levels of use of manures, fertilizers and plant protection measures and the cost involved under both the type of farming.
3) To compare the yield, market prices and returns of organic products with that of inorganic products.
4) To enumerate the problems of organic product growers.

C. The Hypotheses Outline For The Study

1) The costs involved in organic farming are less compared to that of inorganic farming.
2) Net returns from organic products are higher than that of inorganic products.

II. METHODOLOGY

Primary Data and Secondary Data are collected for the purpose of study about the advantages and disadvantages of organic and inorganic farming. Primary data is collected through field survey, where direct interaction was held with both organic farming and inorganic farmers. Secondary data was collected from articles, reports, journals, bulletins and so on through internet.

A. Limitation Of The Study

Due to the limitation of the time and other resource, the present investigation is been restricted to a village in Shivamogga district. The sample size is limited to 20 only taking few variables for the purpose of studying the above objectives. Hence, the findings have to be viewed in the specific context of the conditions prevailing in the study area and cannot be generalized for wider geographical area. However, careful and rigorous procedures have been adopted in carrying out the research as objectively as possible. In spite of the individual bias made by the respondent farmers in eliciting the necessary responses, it is believed that the findings and conclusions drawn in the present study would form the basis for future research study.

B. Present Status Of Organic Farming

1) *Present Status of Organic Farming in World:* The present area under organic cultivation in world is estimated about 35.24 million hectares spread in almost 154 countries. Australia stands first with highest area of more than 12 million hectares, where India's area is very less (1.020 million hectares) compared to other top countries. Oceania (Australian) region dominates with 37percent of the total organic area in the world, in which Asian region stands fourth with only 9 percent area. Africa region dominates with highest number of organic producers contributing 43 percent of the total organic producers worldwide followed by Asian region with 18 percent.

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Area of Major countries under organic management

Sl. No.	Name of the countries	Area under organic Management				2008 percentage
		2005	2006	2007	2008	
1	Australia	11.766	12.345	12.023	12.02	44.70
2	Argentina	2.682	2.358	2.778	4.00	14.88
3	China	2.300	2.300	1.553	1.85	6.88
4	USA	1.640	1.640	1.640	1.82	6.77
5	Italy	1.067	1.148	1.150	1.00	3.72
6	Brazil	0.842	0.882	1.765	1.77	6.58
7	Germany	0.807	0.825	0.865	0.91	3.38
8	Spain	0.807	0.926	0.988	1.13	4.20
9	UK	0.619	0.605	0.660	0.74	2.75
10	Canada	0.578	0.604	0.556	0.63	2.34
11	India	0.186	0.432	1.030	1.02	3.79
12	World Total	23.294	24.065	25.008	26.89	100.00
Source: FiBL, IFOAM and SOEL						

C. Present Status of organic farming in India

According to National Program of Organic Products the total Organic area under certification in India was estimated to be 2.8 million hectares in which only 1.20 million hectares area under certified organic cultivation with the total production of 18,11,111 million tones. In this total production, 44476.23 million tones of different organic products have been exported from India during 2008-09 which earned Rs.580 crore. The share of organic exports to total production works out to be only 4 percent but it recorded 30 percent growth when compared to previous year.

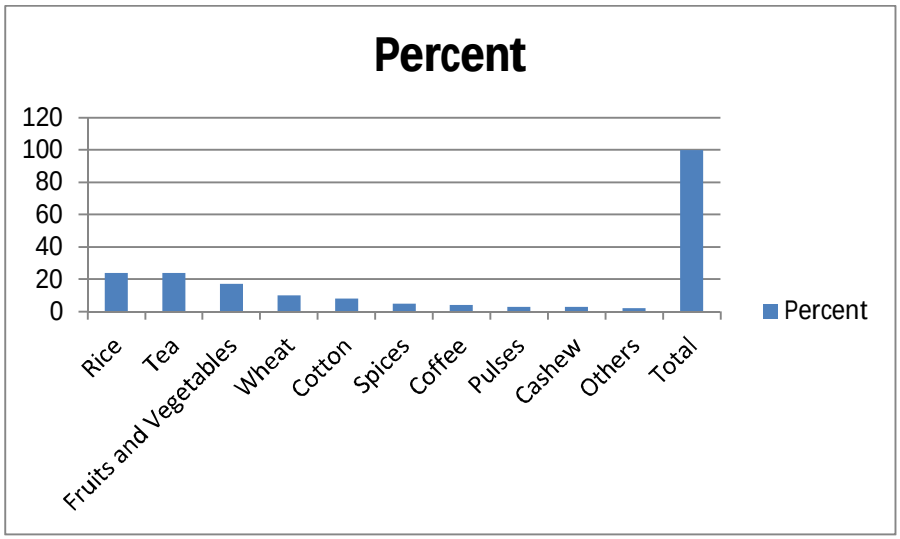
D. Major Organic Product Produced in India

Type	Products
Cereals	Rice, Wheat
Beverages	Tea, Coffee
Spices	Cardamom, black pepper, Ginger, turmeric, vanilla, mustard, tamarind, mace, chilly.
Pulses	Red gram, Black gram.
Fruits	Mango, Banana, pineapple, passion, orange, cashew nut, walnut.
Vegetables	Okra, Brinjal, garlic, onion, tomato, potato.
Oilseeds	Sesame, castor, sunflower.
Others	Cotton, herbal, extract.
Source: Organic Farming News letter	

E. Percent Share Of Different Organic Products In India

Product	Percent
Rice	24
Tea	24
Fruits and Vegetables	17
Wheat	10
Cotton	08
Spices	05
Coffee	04
Pulses	03
Cashew	03
Others	02
Total	100
Source: Organic Farming news letter	

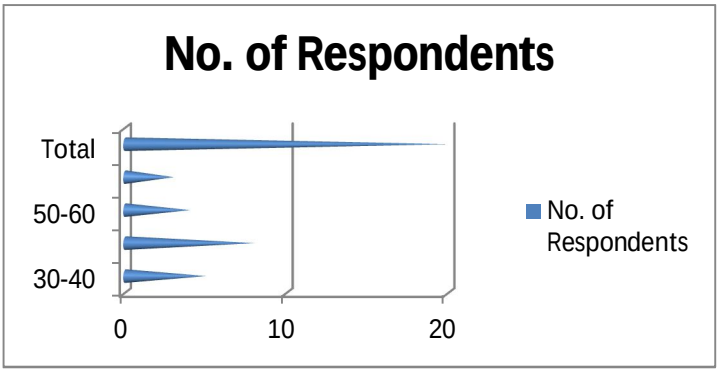
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III. RESULT AND DISCUSSION

A. *Age Wise Distribution Of Organic Farming*

Age	No. of Respondents	Percent
30-40	05	25
40-50	08	40
50-60	04	20
60-70	03	15
Total	20	100
Source: Field Survey		

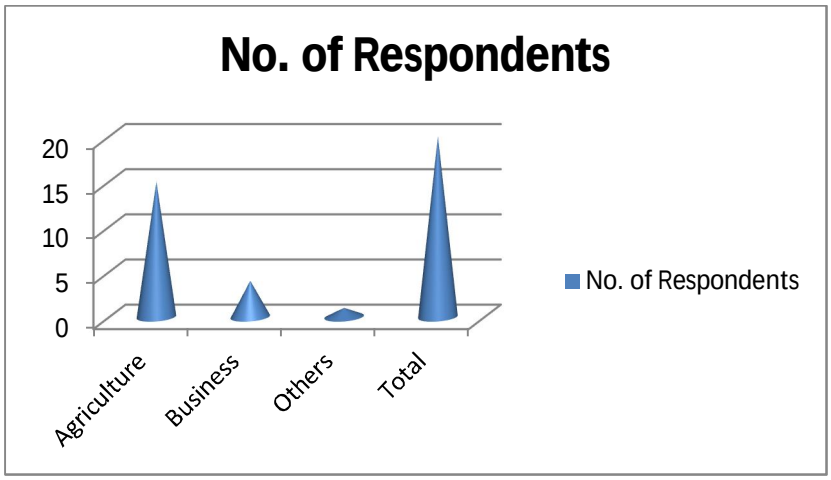


Organic Farming which is becoming more population now-a-days requires more awareness among the young age group. This is shown in the above table. In the study area 40 percent of organic farmers are in the group of 40-50 years. The old aged group is about 15 percent. 25 percent of the organic farming is between 30-40 years. Therefore it can be concluded that about 65 percent of organic farming are below 50 years. From this it can be concluded that working aged farmers are more engaged in organic farming.

B. *Occupation-Wise Distribution Of Organic Farmers*

Occupation	No. of Respondents	Percent
Agriculture	15	75
Business	04	20
Others	01	05
Total	20	100
Source: Field Survey		

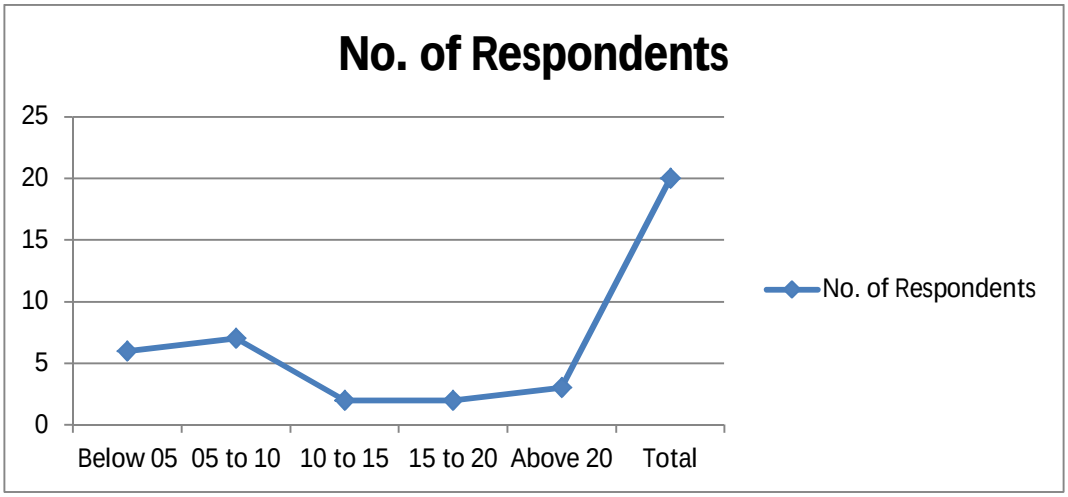
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In the study area out of 20 respondents 75 percent of them are engaged in agriculture sector. In other words, 75 percent of the respondents have taken agriculture as their primary occupation. Like that 20 percent of them are business people who have taken organic farming as their secondary occupations. Hence it can be concluded that those who have adopted organic farming have choose agriculture as their primary occupation.

C. Land Holding Of Organic Farming

Area in Acres	No. of Respondents	Percent
Below 05	06	30
05-10	07	35
10-15	02	10
15-20	02	15
Above 20	03	15
Total	20	100
Source: Filed Survey		

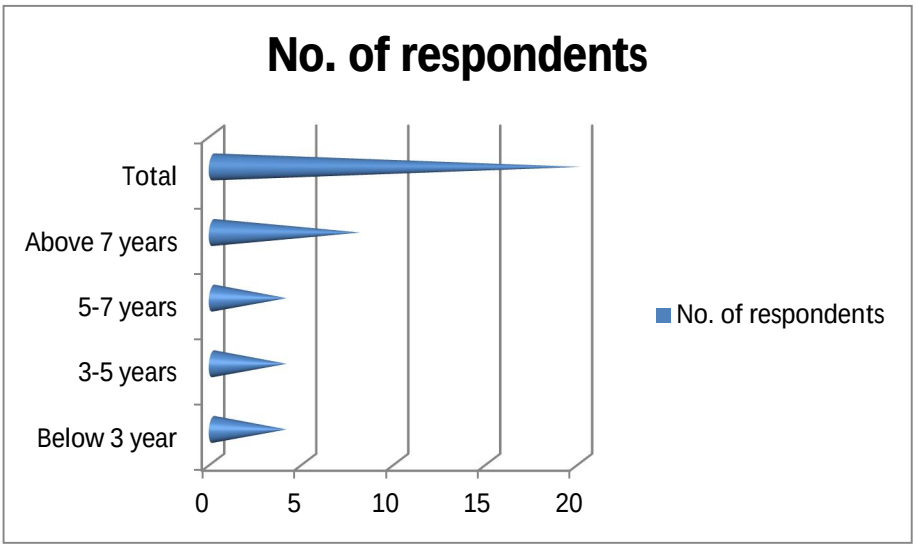


Farmers are broadly classified as small, medium and large farmers depending upon the size of land they hold. Accordingly, in the study area farmers owning land within 5 acres are about 30 percent, those owning land in between 5 to 10 acres are 35 percent, farmers having land between 10 to 15 and 15 to 20 acres are 10 percent each and 15 percent of them have land above 20 acres. By this it is clearly understood that in the study area all types of farmers are fund. But still farmers above 10 acres are 35 percent that is large farmers. Like that medium farmers are 35percet and small farmers are above 30 percent.

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D. Organic Farmers Experience in Organic Farming

Experience	No. of respondents	Percent
Below 3 year	04	20
3-5 years	04	20
5-7 years	04	20
Above 7 years	08	40
Total	20	100
Source: Field survey		



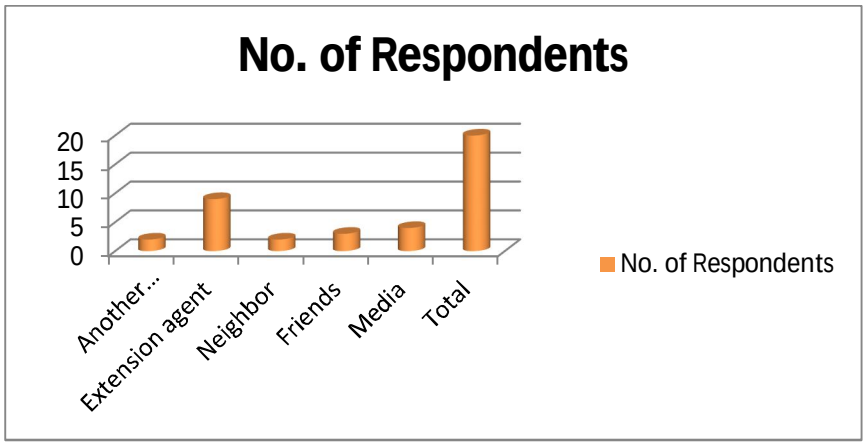
With regard the experience of the farmers in practicing organic farming, in the study area 20 percent of the farmers had experience of below 03 years. That means they have started adopting organic type of farming recently or very shortly. Like that 20 percent of the farmers in the farmers in the study area are following organic farming from 3 to 5 years. Against 20 percent of the farmers have experience of organic farming for more than five years but less than seven years. However, as the proof that organic farming is getting popular day by day, there are more numbers who are practicing organic farming for more than seven years. This data in the above table shows that year after year organic farming is getting more popular.

E. Awareness About Organic Farming By The Respondents

Awareness	No. of Respondents	Percent
Another organic farmer	02	10
Extension agent	09	45
Neighbor	02	10
Friends	03	15
Media	04	20
Total	20	100
Source: Field Survey		

With regard to the awareness of the farmers who had adopted organic farming, 45percent of the farmers came to know about organic farming from extension agents who are government officials. Another 10 percent each came to know from other organic farmers and neighbor. 15 percent of them from friends and the remaining 20 percent of them came to know about organic farming from media. From this is can be concluded that extension agents from government and media plays a major role in popularizing organic farming.

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F. Reason For Taking Up Organic Farming

Reasons	No. of Respondents	Percent
Healthy product, less cost and high returns	04	20
Health product, long life of land and eco friendly	04	20
Eco friendly prevention of soil fertility and quality yield.	05	25
All the above	07	35
Total	20	100
Source: Field Survey		

Any individual should have some reason to take up anything or do anything. Like that the farmers to adopt organic farming should have some reasons. Some of the reason why farmers were inspire to take up organic farming are like healthy product that organic produces, less cost, high returns, eco friendly, prevention of soil fertility and so on. In the study area 20 percent of the farmers were inspired by healthy product, less cost and high returns to take up organic farming. Another 20 percent were inspired by elements of healthy product, long life of land and eco friendly to take up organic farming. Again 25 percent of farmers were inspire by eco friendly, prevention of soil fertility yield and 35 percent of organic farmers were inspire by all the above mentioned factors to adopt organic farming.

G. Organic Practices Adopted By Organic Farmers

Practices	No. of Respondents	Percent
Mulching and bio-fertilizer usage	03	15
Bio-Fertilizer usage and green manure	04	20
Wastage recycle (Green manure) and micro nutrients usage.	03	15
All	10	50
Total	20	100
Source: Field Survey		

In adoption organic farming, farmers have to follow some measures in practicing organic farming like mulching, using bio-fertilizer, wastage recycle, usage of micro nutrients and so on. In the study area, 15 percent of organic farmers followed mulching and using bio-fertilizers in organic farming, 20 percent of farmers practiced usage of bio-fertilizers and usage of green manure. 15 percent used wastage recycle manure or green manure and micro nutrients will help in maintaining the fertility of soil and 50 percent practiced all the method available in practicing organic farming.

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H. Reason For Cost Minimization In Organic Farming By Organic Farmer

Cost Minimization	No. of Respondents	Percentage
Less Fertilizers and pesticide usage	03	15
Less machinery and labour usage	02	10
All the above	15	75
Total	20	100
Source: Field Survey		

Organic farming was population due to its cost maximization, high returns, healthy products, etc. At the same time farmers were also inspire with these features as the result of which they adopted organic farming. 15 percent of the organic farmers in the study area were inspired by less fertilizer and pesticide usage and adopted organic farming. 10percent were inspired by less machinery and labour usage in adopting organic farming. The remaining 75 percent that is major percent were motivated by all the mentioned factors for which they found organic farming as more preferable and profitable than inorganic farming and adopted organic farming.

I. Constraints In Practicing Organic Farming

Res No.	Lack of Compose Manure	Lack of domestic animal	Local Market not accessible	Price	Lack of awareness	Labour	Gradual increase in yield	Initial risk in conversion	Initial financial assistance	Lack of transportation
1	1	1	1	1	1					1
2	1	1			1	1				
3							1	1		1
4		1	1	1	1				1	
5	1			1				1	1	
6	1		1		1	1	1			
7			1	1				1		1
8	1	1					1			
9	1	1	1	1	1				1	
10	1		1			1		1		1
11	1	1		1	1		1		1	
12			1							
13	1	1	1		1		1	1	1	1
14						1				
15	1			1						1
16		1			1			1	1	
17			1				1			1
18	1							1		
19		1			1	1				
20	1		1	1				1	1	
Source: Field Survey										

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In practicing organic farming, in the study area respondents faced various constraints or problems. Some of the most important constraint are the lack of compose manure which is very essential for organic farming, lack of domestic animals which are the source to produce compose manure, accessibility of local market which will reduce the problem of transportation, low price fixation for organic products. Like that there is lack of awareness about the organic farming in farmers. Also there is the risk of initial conversion. This is because while converting farming practice from inorganic to organic the expenditure will be more when compared to the income and the total yield will also be less when compared to inorganic farming. For instance, for the first five years of conversion, in the first year yield will be very less may be not even half the yield of inorganic farming. But the yield will increase year by year. After full conversion of inorganic farming into organic farming the expenditure incurred will be very low when compared to inorganic farming and the income generated will increase year by year. Thus the farmers have to take the risk of conversion which will initially reduce their yield and income. At one stage there will be zero income that is no profit and no loss. But after this point the income starts increasing from year by year. Finally organic farmers will be able to earn more income from less expenditure.

IV. FINDINGS

With regarding to irrigation facility, in study area still 30 of the land rely upon rain for water required to carry out farming. This percent is to be reduced by initiating farmers to take up rain harvesting, or to have their own tanks, bore wells and so on. The finance required is to be provided by the government at low interest or at interest less if possible.

It is found farmers in the study area own very little machinery and other implements required for agricultural activities, from this point of view farmers should be provided with necessary implements at subsidized rates. In fact, government is doing it, but it should be done in larger scale so that more number of farmers gets its benefits. It seems from the survey that very little farmers subscribe to the magazines related to farmers. This percentage is to be increased by bring more educated populations into organic farming.

Through organic farmer are aware about the features of organic products and advantages of organic farming its percent is very low. By more programs on organic farming this percent is to be increased.

V. CONCLUSION

The organic farming method was found to be more superior than inorganic farming method on account the of lower cost of cultivation, higher profits, better input use efficiency and reduced risk lending to increased income, enhanced self-reliance and livelihood security of the farmers. Moreover, organic farming methods have the positive impact on soil conservation and water use efficiency demonstrating substantial potential for sustenance of soil and water resources. It also safeguards and improves the health of soil and water resources there by helps in achieving sustainable income.

There is a growing global demand for organic farming products. At present organic farming and supply of organic products along with its demand is very negligible. Shimogga district has comparative advantage in producing of organic products as organic farming is practiced by default in most of the rain fed areas. If reduction in the cost of organic farming is achieved by creating awareness in the organic farming's about the practiced are to be adopted in organic farming, policy measure like giving incentive in the form of subsidies and tax concession for production and distribution of organic farming inputs, encouragement for manufacturing bio fertilizers and bio-pesticides, conducting awareness and training programs, imparting knowledge in standards of organic production, establishing more net work of training and information centers and so on will definitely make organic farming more poplar which will not only empower the farmers but also provide the population with healthy and hygienic products which are very much needed in the present situation. For this there is a need of trained agricultural graduates, so government should appoint agriculture technical officers is block level or in every Gram Panchayat.

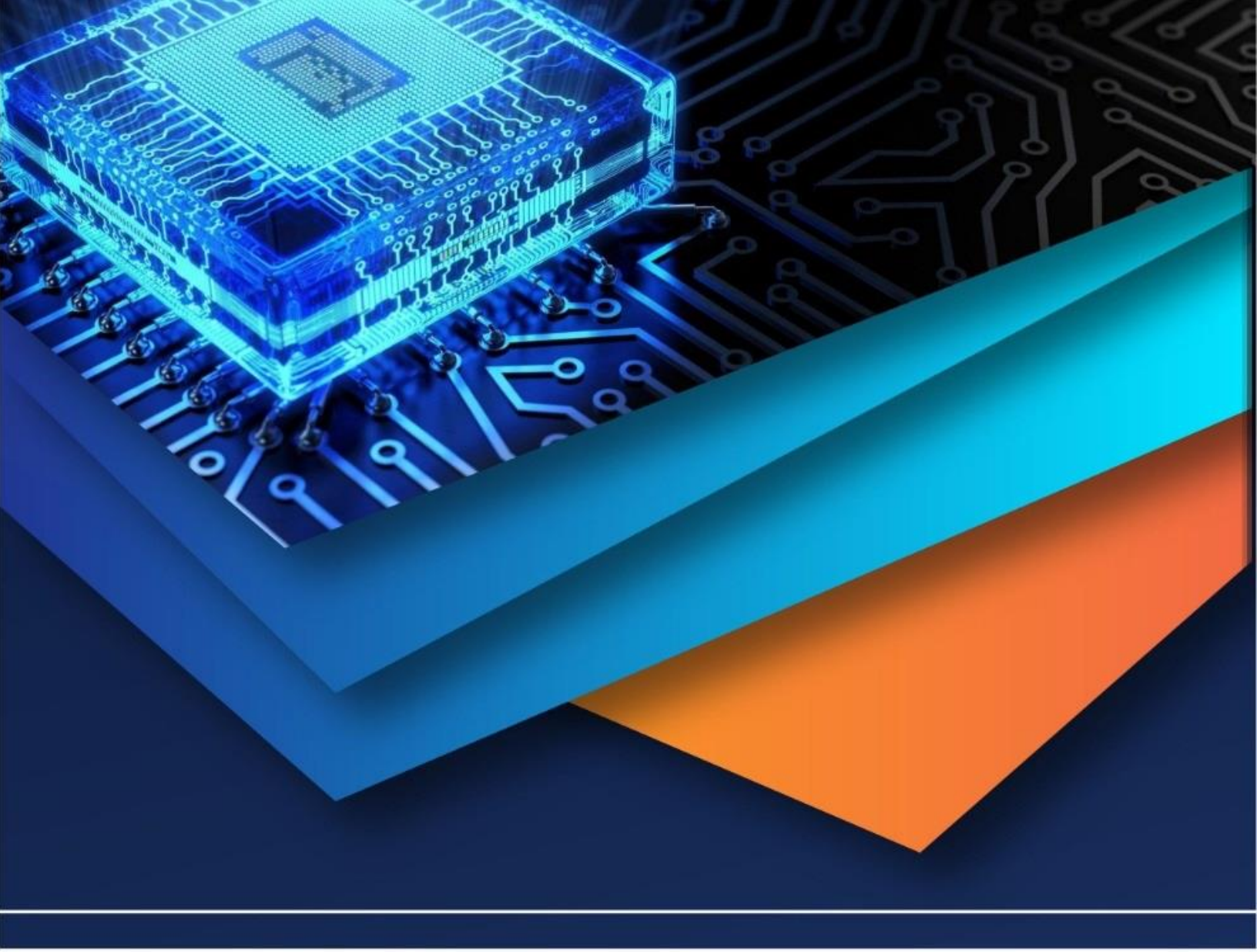
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