



## Economic Analysis of Organic vs. Non-organic Farming in Himachal Pradesh

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### ABSTRACT

There is a debate in the context of output, cost of cultivation and benefits of organic versus non-organic farming among the various researchers. The present study highlights this debate and presents an overview of economics of organic and non-organic farming. Multistage random sampling technique has been used in the present study. The cost and returns from various cereal crops, vegetables and fruit have been calculated on the basis information collected from sampled farmers. It has been observed that organic farming is beneficial and sustainable as compared to non-organic farming, but there is an urgent need for more government support to it in the form agricultural extension services, infrastructure development and research activities. The economics on cost and returns of various crops helps the farmers in allocating the resources most optimally.

### 1. Introduction

Organic farming system is an age-old concept in India. It is an eco-friendly farming system, which maintained the soil fertility for a long period. This system uses the natural fertilizers and local inputs in place of chemical fertilizers and pesticides. It also helps in the safeguarding of natural resources for the coming generation and reduces the crop failure risk on the farm level (Rameshwar *et al.*, 2014). The main objective of organic farming is to maximize the output and minimize the cost of production as well as to protect the environment and whole of the society. According to various researchers there is a difference between organic and non-organic farming because in organic farming system prohibits the use of chemical fertilizers and other plant protection materials (Ohlan, 2016). Some of them claims that the organic farming is more economical and different form the non-organic farming and other claims they did not find any specific difference between two. Organic farming relies on environmentally friendly methods of crop production. It produces healthy food based on natural principles such as biodiversity and composting. Organic products are more expensive than non-organic products. While non-organic products are less expensive than organic food because of higher output per hectare. It includes the use of pesticides and other chemicals in order to increase crop output. The government India has launched many programmes to address the issue of

food grain production. The Green Revolution of the mid-1960s was the most successful all of them. No doubt, it has solved the problems food production to some extent but as a result of this most farmers have become dependent on chemical fertilizers and pesticides. It has also adversely affected the soil fertility and the environment as a whole. In order to address the issue of food security and sustainable food grain production in the long-run, the organic farming is one the important method. It is a viable option for achieving long-term agricultural growth. Organic farming is superior to nonorganic farming because of the factors such as lower cost of cultivation, higher profits and less environmental degradation. It promotes use local farm based resources and helpful in maintaining soil fertility. Organic farming is more economic as compared to inorganic farming (Dhandhalya *et al.* (2010). But, still many researchers are debating whether organic farming is better than non-organic farming (Sudheer, 2013).

The growing awareness of the importance of safe and healthy food, organic farming has emerged as an important farming system worldwide. It is a modern concept that combines tradition, innovation, and science. It is also gaining popularity among Indian farmers. Organic farming is usually considered a type of agriculture that uses organic inputs in its production systems. The present study conducted in Himachal Pradesh and it has been observed that initially,

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organic farming provided low yield, low income and profit as compared to non-organic crops but in the long term it may be more beneficial. Although some of the researchers argued that organic farming may be costly as compared to non-organic products due to labour intensive techniques and low volumes of production.

Farmers are converting to organic farming because some of them believe that chemical agriculture creates a health risk to them. The government of Himachal Pradesh is promoting organic farming through training programs, demonstrations and by providing the advisory services to the farmers. Various schemes have been launched to promote the organic farming in the state including Zero Budget Natural Farming and Prakritik Kheta Khushal Kisan Yojana. Presently thousands farmers have already switched over to organic farming. The state government is encouraging natural farming in order to make farming system more healthy and pesticide-free. Farmers are encouraged to increase vegetables and other crops by using natural farming methods, either individually or in self-help groups. Himachal Pradesh has a goal of being a natural farming state by 2022. This study of the economics of organic versus non-organic farming will help to the policymakers in deciding what steps to be taken to promote organic farming.

#### Research methodology and source of data

The present study is based on the primary as well as secondary sources of data. The primary data were collected through field survey by designing questionnaire and using personal interview method. The data have been collected from sampled farmers of Himachal Pradesh including their cost of cultivation, gross return, land use pattern, cropping and production pattern, size of holdings etc. The primary sampling unit for study was district and in the second stage two blocks from each district was purposively selected for the study. Thereafter, two villages from each block have been selected randomly. At the end 20 farmers have been selected from each village. Thus, the total sample of 480 (240 organic and 240 non-organic farmers of the State has been selected

for present study. The standard cost concepts (Government of India, 2018) has been used to work out the cost of cultivation of important crops. It has been categorized as cost A, cost B, and cost C. Secondary data has also been collected from various government websites, statistical outline of Himachal Pradesh, economic survey, various journals, books etc.

#### Land use pattern and crop wise area under the major crops

Land is primarily used for agriculture. The usage of land is not only determined by physical and human factors but it is also determined by various factors such as; socio-economic factors, density of population, climate etc. The entire population of the study area was depended more or less upon the agriculture sector. The major food crops of the study area are; wheat, paddy, barley, ginger, vegetables, seed potato, mushrooms and hops. The cropping pattern of the State has been shifted towards the horticulture crops and major cereals maize and wheat. Although paddy, barley and pulses like *rajmash*, *mash*, *Kulth* etc. are also produced in the study area but the proportion of area under these crops is very small.

Nowadays farmers are also producing more and more of cash crops and fruits. The state of Himachal Pradesh is also known as the apple state of India. Table -1 presents the crops –wise area under the major crops during *Kharif* and *Rabi* seasons from 2012-13 to 2020-21. This table shows decreasing trends in area under the all-major crops such as maize, paddy, *ragi*, wheat barley, pulses etc. in both the seasons (*Rabi* and *Kharif*). The following Table -2 presents the production of the major crops during *Kharif* and *Rabi* seasons from 2012-13 to 2020-21. It can be seen from the table that the total production of the major crop was 1541.33 thousand ton (MT) during 2012-13 has been increased 1594.24 thousand MT during 2020-21. There was slightly increment was found in case of *Kharif* crops during this period i.e., 803.76 to 893.09 thousand MT. But, There was slightly decline was found in case of *Rabi* crops during this period i.e., 737.57 to 701.15 thousand MT.

**Table 1.** Crop Wise Area Under the Major Crops from 2012-13 to 2019-20

(Area in ha)

Name of the Crops	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b><i>Kharif</i>Crops</b>								
Maize	294.32	292.78	292.58	299.22	281.34	280.81	286.78	287.44
Paddy	76.90	74.36	72.47	73.69	73.83	71.61	71.81	72.62
Ragi	2.77	2.01	1.94	1.88	2.52	1.82	1.72	1.76
Millet and Bazara	5.20	5.41	5.10	4.27	4.20	4.18	5.10	5.32
Kharif pulses	20.70	16.01	18.50	17.74	18.58	15.23	17.91	15.87
<b>Total</b>	<b>399.89</b>	<b>390.57</b>	<b>390.59</b>	<b>396.8</b>	<b>380.47</b>	<b>373.65</b>	<b>383.32</b>	<b>383.01</b>

<b>Rabi Crops</b>								
Wheat	354.27	350.32	330.39	341.05	338.28	342.68	319.00	319.10
Barley	20.35	20.23	21.73	19.23	19.49	19.16	20.36	20.40
Gram	0.48	0.43	0.41	0.36	0.33	0.36	0.38	0.39
Rabi pulses	11.44	13.10	12.10	12.43	14.33	12.87	9.56	12.14
<b>Total</b>	<b>386.54</b>	<b>384.08</b>	<b>364.63</b>	<b>373.07</b>	<b>372.43</b>	<b>375.07</b>	<b>349.3</b>	<b>352.03</b>
<b>Grand Total (Rabi+ Kharif)</b>	<b>786.43</b>	<b>774.65</b>	<b>755.22</b>	<b>769.87</b>	<b>752.9</b>	<b>748.72</b>	<b>732.62</b>	<b>735.04</b>

Source: Government of Himachal Pradesh, Directorate of Land Records, Shimla

**Table 2.** Production of Major Crops from 2012-13 to 2019-20 (Production in M.T.)

Name of the Crops	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Kharif Crops</b>								
Maize	657.16	678.25	735.96	737.65	736.46	750.91	771.11	729.73
Paddy	125.28	128.49	127.38	129.88	135.48	141.37	146.68	143.66
Ragi	2.50	1.97	1.91	1.93	1.60	1.92	1.82	2.06
Millets and Bazara	3.55	3.60	3.39	3.09	4.80	3.36	4.12	4.77
Kharif pulses	15.27	9.19	10.21	15.53	15.76	11.65	17.05	12.87
<b>Total</b>	<b>803.76</b>	<b>821.5</b>	<b>878.85</b>	<b>888.08</b>	<b>894.1</b>	<b>909.21</b>	<b>940.78</b>	<b>893.09</b>
<b>Rabi Crops</b>								
Wheat	671.94	685.45	648.29	667.62	605.18	598.32	682.63	627.96
Barley	34.83	35.18	36.70	34.33	28.66	28.19	32.08	30.83
Gram	0.49	0.40	0.38	0.38	0.41	0.37	0.40	0.42
Rabi pulses	30.31	42.61	43.67	43.64	34.38	45.34	36.56	41.94
<b>Total</b>	<b>737.57</b>	<b>763.64</b>	<b>729.04</b>	<b>745.97</b>	<b>668.63</b>	<b>672.22</b>	<b>751.67</b>	<b>701.15</b>
<b>Grand Total (Rabi+ kharif)</b>	<b>1541.33</b>	<b>1585.14</b>	<b>1607.89</b>	<b>1634.05</b>	<b>1562.73</b>	<b>1581.43</b>	<b>1692.45</b>	<b>1594.24</b>

Source: Government of Himachal Pradesh, Directorate of Land Records, Shimla

### Economics of Organic and Non-Organic Cultivation of Maize on Sampled Farm

Maize is the most important cereal *Kharif* crop in the study area. The total production of maize in the State has increased 644.44 thousand tonnes in 2017-18 as compare to 67.3 thousand tonnes in 1951-52 (Department of Agriculture, Himachal Pradesh, 2018) The important varieties of maize are girija and bajaura makka and seeds used about 20-25kg/ha. (Bhardwaj et. al, 2014). The economics of organic and nonorganic maize cultivation has been examined and presented in the Table-3. This table depicts that the gross returns from maize per hectare is almost equal in case of organic as well as inorganic farming. The major difference between two is the expenditure on manure and fertilizer. Non-organic farmers were using manure as well as fertilizers and other plant protection materials on their farm but organic farmers were using only manure on their farms. Wages on organic farming of hired human labour was 1261 and for bullock labour it was 2035, slightly higher than inorganic farming 1246 and 2035 respectively at per hectare/ per farm. Table also revealed that net returns in case of inorganic

farming over Cost A, Cost B and Cost C per farm per hectare are positive *i.e.* 11503, 2633, 33. But it is negative over Cost C *i.e.*, -214 in case of organic farming although it is positive over Cost A and Cost B, *i.e.*, Rs. 10116, and 2485 respectively on sampled farms in the sate.

### Economics of Organic and Non-Organic Wheat Cultivation in Himachal Pradesh

Wheat is an important cereal crop in *Rabi* season of the state. It requires 95-100 kg seeds per hectare. The total production of wheat in the state was 61.2 thousand MT in 1951-52, which has gone 670 thousand MT in the year of 2017-18 (Department of Agriculture, Himachal Pradesh, 2018). Table 4 shows the economics of organic and non-organic cultivation of wheat on sampled farm. It can be seen from this table that total paid out cost (Cost A<sub>1</sub> and Cost A<sub>2</sub>) was higher on non-organic farming 6455.7 as compared to organic farming 5734.6. The total net return per hectare/per farm of wheat was also marginally higher than organic farming *i.e.*, 26604.2 as compared to non-organic farming *i.e.*, 24185.6 per hectare/per farm. The gross returns over Cost A, Cost B and

**Table 3.** Economics of Organic and Non-organic Cultivation of Maize on Sampled Farm (ha/farm)

Particulars	Organic Farming	Non-organic Farming
(i) Wages of hired human labour	1262	1246
(ii) Value of bullock labour (hired + owned)	2035	2035
(iii) Value of seeds (farm produced and purchased).	1292	1421
(iv) Expenditure on manuring	855	684
(v) Expenditure on Fertilizer	-	850
<b>Cost A<sub>1</sub></b>	<b>5444</b>	<b>6236</b>
Lease in & Lease out	-	0.0
<b>Cost A<sub>2</sub></b> (Cost A <sub>1</sub> + Lease in & Lease out)	<b>5444</b>	<b>6236</b>
<b>Cost B</b> (Cost A <sub>2</sub> +rental value of owned land)	7631	8869
<b>Cost B</b>	<b>13075</b>	<b>15105</b>
Imputed value of family labour.	2700	2600
<b>Cost C</b> (Cost B + imputed value of family labour)	15775	17705
<b>Gross Return</b> (Output in Rs.)	<b>15560</b>	<b>17739</b>
Cost A <sub>1</sub>	10117	11503
Cost A <sub>2</sub>	10117	11503
Cost B	2486	2634
Cost C	-214	34

Source: Author's calculations based on field survey, 2017-18

- Note: a. The calculations are made on the market prices for the period of 2017-18.  
b. Human labour own and hired) includes time spend on preparatory tillage, watch and ward, harvesting/picking, threshing etc.

Cost C have also been calculated and observed positive net returns for both organic and inorganic wheat on sampled farms in Himachal Pradesh.

#### Economics of Organic and Non-Organic Paddy Cultivation

Paddy is kharif crop grown in Himachal Pradesh in wet season from May to October. The nursery of this crop starts by the end of May and continue up to about 15<sup>th</sup> of June. Like other major crops, the total production of paddy has also gone up from 28.3 thousand tonnes in 1951-52 to 117.80 thousand MT in 2017-18 (Department of Agriculture, Himachal Pradesh, 2018). Although the area under rice is declining in the recent years because of the farmers in the state are turning to vegetables and cash crops. But organic rice specially, the basmati type has good market price as compare to the nonorganic. Seed of rice is required 30-35 kg/ha. Table -5 presents the economics of organic and inorganic cultivation of paddy on sampled farm. It may be noted from the table that the gross returns from paddy per hectare/ per farm has been observed marginally lower in case of organic farming *i.e.*, 57720 as compared to 62338 per hectare/ per farm from inorganic farming. The gross returns over Cost A, Cost B and Cost C have also been calculated and observed positive net returns for both organic and inorganic rice on sampled farms in Himachal Pradesh.

#### Economics of Organic and Non-organic Cultivation of Barley on Sampled Farm

Barley is the fourth important cereal crop of the state. It is drought tolerant winter season crop, which requires very less irrigation facilities. It is generally called 'Jao' in many areas of the state. Table-6 shows the economics of organic and non-organic cultivation of barley on sampled farm. It may be seen from the table that the cost of cultivation (paid out cost) in inorganic farming has been observed marginally higher *i.e.*, 1878 than as compared to organic farming *i.e.*, 1556 on sampled farms in the state. The total gross returns were slightly lower on organic farming as compare to inorganic farming in the study area. There was a net loss of 94.6 in the cultivation of barley on organic farming whereas inorganic farming has observed profit of 175 at overall level.

#### Economics of Organic and Non-Organic Vegetables on Sampled Farms

The life of vegetables is perishable in nature. It requires immediate market or food preservation and processing facilities at local level. The important vegetables are tomatoes, cauliflower and cabbage. But farmers of the selected area were also producing brinjal, beans, ladyfinger, chillies, ginger etc. The area production under vegetables is

**Table 4.** Economics of Organic and Non-organic Cultivation of Wheat on Sampled Farm (ha/farm)

Particulars	Organic Farming	Non-organic Farming
(i) Wages of hired human labour	1717	1701
(ii) Value of bullock labour (hired + owned)	1749	1662
(iii) Value of seeds (farm produced and purchased).	1466	1613
(iv) Expenditure on manuring	804	643
(v) Expenditure on Fertilizer	0.0	838
<b>Cost A<sub>1</sub></b>	<b>5735</b>	<b>6456</b>
Lease in & Lease out	0.0	0.0
<b>Cost A<sub>2</sub></b> (Cost A <sub>1</sub> + Lease in & Lease out)	<b>5735</b>	<b>6456</b>
<b>Cost B</b> (Cost A <sub>2</sub> +rental value of owned land and interest on owned fixed capital excluding land.)	12092.8	13302.1
<b>Cost B</b>	<b>17827</b>	<b>19758</b>
Imputed value of family labour.	3463	3388
<b>Cost C</b> (Cost B + imputed value of family labour)	<b>21290</b>	<b>23146</b>
<b>Gross Return</b> (Output in Rs.)	<b>24186</b>	<b>26604</b>
Cost A <sub>1</sub>	18451	20149
Cost A <sub>2</sub>	18451	20149
Cost B	6358	6846
Cost C	2895	3458

Source: Own field survey, 2017-18

- Note: a. The calculations were made on the market prices for the period of 2017-18.  
b. Human labour own and hired includes time spend on preparatory tillage, watch and ward, harvesting/picking, threshing etc.

**Table 5.** Economics of Organic and Non-organic Cultivation of Paddy on Sampled Farm (ha/farm)

Particulars	Organic Farming	Non-organic Farming
(i) Wages of hired human labour	3780	3578
(ii) Value of bullock labour (hired + owned)	5280	4971
(iii) Value of seeds farm produced and purchased).	5650	6215
(iv) Expenditure on manuring	2240	1568
(v) Expenditure on Fertilizer	0	2182
<b>Cost A<sub>1</sub></b>	<b>16950</b>	<b>18514</b>
Lease in & Lease out	0	0
<b>Cost A<sub>2</sub></b> (Cost A <sub>1</sub> + Lease in & Lease out)	<b>16950</b>	<b>18514</b>
<b>Cost B</b> (Cost A <sub>2</sub> +rental value of owned land and interest on owned fixed capital excluding land.)	28860	31169
<b>Cost B</b>	<b>45810</b>	<b>49683</b>
Imputed value of family labour.	6790	6472
<b>Cost C</b> (Cost B + imputed value of family labour)	<b>52600</b>	<b>56155</b>
<b>Gross Return</b> (Output in Rs.)	<b>57720</b>	<b>62338</b>
Cost A <sub>1</sub>	40770	43824
Cost A <sub>2</sub>	40770	43824
Cost B	11910	12655
Cost C	5120	6183

Source: Own field survey, 2017-18

- Note: a. The above calculations were made on the market prices of the period of 2017-18.  
b. Human labour own and hired) includes time spend on preparatory tillage, watch and ward, harvesting/picking, threshing etc.

**Table 6.** Economics of Organic and non-organic Cultivation of Barley on Sampled Farm (ha/farm)

Particulars	Organic Farming	Non-organic Farming
(i) Wages of hired human labour	217	210
(ii) Value of bullock labour (own +hired)	696	542
(ii) Value of seeds (farm produced and purchased).	218	240
(iv) Expenditure on manuring	546	437
(v)Expenditure on Fertilizer	0	450
<b>Cost A<sub>1</sub></b>	1557	1878
Lease in & Lease out	0	0
<b>Cost A<sub>2</sub></b> (Cost A <sub>1</sub> + Lease in & Lease out)	1557	1879
<b>Cost B</b> (Cost A <sub>2</sub> +rental value of owned land and interest on owned fixed capital excluding land.)	3408	3919
<b>Cost B</b>	4965	5798
Imputed value of family labour.	1946	1866
<b>Cost C</b> (Cost B + imputed value of family labour)	6911	7664
<b>Gross Return</b> (Output in Rs.)	6816	7838
Cost A <sub>1</sub>	5259	5960
Cost A <sub>2</sub>	5259	5960
Cost B	1851	2041
Cost C	-94.6	175.04

*Source: Own field survey, 2017-18*

- Note:**
- The calculations were made on the market prices of the period of 2017-18.
  - Human labour own and hired) includes time spend on preparatory tillage, watch and ward, harvesting/picking, threshing etc.

continuously increasing in the state due to high returns on per hectare as compared to other traditional crops. The total production of vegetables has gone up from 25 thousand MT in 1951-52 to 1691.56 thousand MT in 2017-18 (Department of Agriculture, Himachal Pradesh, 2018). Cauliflower is one of the most daily consumable vegetables in the study area. It can grow in all types of soil. The area and production of tomato in the state is also increasing continuously. It is a well-known vegetable of the state. Tomatoes are grown where irrigation facilities are available. Generally, it requires warm and cool climate. The Solan district of Himachal Pradesh produces a bulk of tomatoes. As per information collected from the field during the examination, tomato gives very high returns on per hectare as compared to other traditional crops.

Table- 7 presents an overview of prices of organic and non-organic vegetables on sampled farms in the state during 2017-18. It can be observed from the table that the prices of organic vegetables are slightly higher as compared to non-organic vegetables in the state. It was observed during the study that there is lack of organic vegetables markets in the state

**Table 7.** Prices of Organic vs. Non-Organic Vegetables on Sampled Farms (in Kg.)

Sr. No.	Name of the Vegetable	Prices of Inorganic Vegetable	Price of Organic Vegetable
1.	Cauliflower	20-25	30-34
2.	Tomato	10-15	20-22
3.	Cabbage	15-20	25-30
4.	Brinjal	15-20	30-35
5.	Beans	45-50	60-65

6.	Ladyfinger	40-45	45-50
7.	Chillies	40-45	50-55
8	Ginger	50-60	65-75

Source: Own field survey, 2017-18

Note: Prices of organic and inorganic vegetables are based on farmer's opinion

#### Economics of Organic and Non-organic cultivation of Apple

Fruits play a very important role in the agricultural economy of Himachal Pradesh. Among all the fruits grown by the sampled farmers, apple is the most planted and commercial crop in the study area. It constitutes about 49 percent of the total area under fruit crops. The production of apple is mainly done in the districts of Kullu, Shimla, Kinnour, Mandi, Chamba and some parts of Sirmour. The duration of apple starts from June to November depending upon the altitude. The output of any fruit depends upon many factors such as age of tree, variety, climatic conditions etc. Apple tree takes about 8 years to reach in its production stage. The productivity of apple goes on increasing up to 30 years and after that it may starts decreasing. The history of organic apple is not old. Recently farmers are gradually shifting to organic practices. The maximum area under apples was observed in Shimla district followed by Kullu and Mandi districts. It has been observed from the respondents that organic fruits have longer life as compared to inorganic fruits. It may be seen from the analysis that the overall areas under apple are larger as compared to the other fruit products. The area under apple has been positively related to the size of farms, meaning by large farmers have more area under apple crop as compared to small and marginal farmers.

Table- 8, presents the economics of organic and non-organic cultivation of apple on sampled farms during the 2017-18. The cost of cultivation and returns from apple has been calculated on the evidence calculated from the sampled farms. It was observed that initial costs of apple production are very high because it involved the digging and filling of pits, cost of apple plant, manure, labour etc. The initial costs generally increased with an increase of size of holding. Initial cost of organic and inorganic apple plantation was calculated 24402 and it was 28303 per ha. respectively. Cost of cultivation and different income measures have been found positive trends with size of farms. The marketing of apple includes picking, grading, packaging, transportation etc. all these activities needs very care, as the apple is delicate fruit. It can be seen from the following table-8 that cultivation of apple was found profitable on each cost on farms *i.e.*, 122802 per farm/per hectare over Cost A for organic farming and 126261 per farm/per hectare for inorganic farming. Similarly, over Cost C it was 36431 per far farm/per hectare for organic and 36678/farm/hectare for inorganic farming marginally higher in case of inorganic farming.

**Table 8. Economics of Organic and Inorganic Cultivation of Apple on Sampled Farm**

(ha/farm)

Particulars	Organic Farming	Non-organic Farming
(i) Wages of hired human labour	11783	11236
(ii) Value of hired bullock labour	1511	1488
(iii) Value of owned bullock labour	2689	2536
(iv) Value of seeds (farm produced and purchased).	2391	2511
(v) Expenditure on manuring	6028	5425
(vi) Expenditure on Fertilizer	0	5107
<b>Cost A<sub>1</sub></b>	<b>24402</b>	<b>28303</b>
Lease in and Lease out	0	0
<b>Cost A<sub>2</sub></b> (Cost A <sub>1</sub> + Lease in and Lease out)	<b>24402</b>	<b>28303</b>
<b>Cost B</b> (Cost A <sub>2</sub> +rental value of owned land and interest on owned fixed capital excluding land.)	73602	77282
<b>Cost B</b>	98004	105585
Imputed value of family labour.	12769	12301
<b>Cost C</b> (Cost B + imputed value of family labour)	110773	117886
<b>Gross Return</b> (Output in Rs.)	<b>147204</b>	<b>154564</b>

Cost A <sub>1</sub>	122802	126261
Cost A <sub>2</sub>	122802	126261
Cost B	49200	48979
Cost C	36431	36678

Source: Own field survey, 2017-18

- Note: a. The calculations were made on the market prices for the period of 2017-18.  
b. Human labour own and hired) includes time spend on preparatory tillage, watch and ward, harvesting/picking, threshing etc.

## 2. Conclusion

On the basis of above analysis it may be concluded that organic farming is more economical and in favour of sustainable agriculture as compared to non-organic farming. Although in the initial stages of production the output from organic farming may be lower than non-organic farming but in the long run it is more in favour of farmers as well as whole of the society and environment. It provides economic benefits and food security to the farm families. Organic farmers improve the fertility and productivity of soil through the use of manure, compost and green manure. These also protect the environment as well as the health of the society as a whole. The knowledge of the cost of cultivation of various crops and their returns is very important not only to the farmers but also equally important to the policy makers, researchers and government for selecting strategies and identifying a comparative advantages and disadvantages in crop production.

The people of the state are still not aware about the benefits of organic farming. Although many farmers have shown their interest in organic farming and they are ready to convert inorganic farming to organic farming if they will get basic facilities such as; organic seed, manure, and marketing facilities as well as the training to the farmers to produce organic products in the study area.

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