

Comparative economics of organic and inorganic farming

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ABSTRACT

Investigation was undertaken to estimate cost and returns in organic and inorganic farming considering cotton, pigeonpea, mung in *Kharif* season and wheat in *Rabi* season. For these, total 100 samples were studied out of which 50 were organic cultivators and 50 were inorganic cultivators. The gross income was observed higher in organic farming. Input-output ratios were higher in organic farming as compared to inorganic farming. They were 1.49 against 1.27 for cotton, 1.64 against 1.53, for pigeonpea, 1.54 against 1.38 for mung and 1.49 against 1.28 for wheat at cost 'C'. The major constraints observed were lack of awareness, high input cost, low yield, certification from government and poor market linkage.

INTRODUCTION

Organic farming is one of the several approaches found to meet the objectives of sustainable agriculture. Many techniques used in organic farming like inter-cropping, mulching and mix cropping with livestock are not alien to various agriculture systems including the traditional agriculture practiced in old countries like India. However, organic farming is based on various laws and certification programmes, which prohibit the use of almost all synthetic inputs, and health of the soil is recognized as the central theme of the method.

Consumers in many countries willingly pay for organically grown fruits, vegetables and other food products. Organic farming technology is becoming popular among farming community as its input cost is lower and returns are higher. The time has come to popularize the slogan "No Pesticide, No Suicide" for giving better to farmer for their produce.

METHODOLOGY

The study on comparative economics of organic and inorganic farming in Amravati district was carried out. For the present study, Chandur Railway and Tiwasa Tehsil of Amravati district were selected. From these Tahsils, ten villages were randomly selected on the basis of availability of the organic and inorganic cultivators of cotton, pigeonpea, mung and wheat. From each village five farmers,

those applying organic farming practices and five farmers, those applying inorganic farming practices 50 farmers of each group and in all total 100 farmers were selected randomly.

The primary data pertaining to the year 2009-10 from the selected farmers were collected by personal interview in pre-tested questionnaire. The data pertaining to family information, land use pattern, cropping pattern, livestock, implements and machinery etc. were also collected from home, field and their working places. Collected data were analyzed by using appropriate statistical tools like averages, percentages, ratios, etc. in order to accomplish the objectives of the present study. The comparison was made between organic (OFS) and inorganic (IFS) farming.

RESULTS AND DISCUSSION

The ill effects of the conventional farming systems are felt in India in terms of the unsustainability of agricultural production, environmental degradation, health and sanitation problems etc. Organic agriculture is gaining momentum as an alternative to the modern system.

Comparative economics of organic and inorganic farming:

The calculation of per acre cost of cultivation as well as working out the gross returns, the cost incurred was considered and also returns got by the farmers from cotton,

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pigeonpea, mung in *Kharif* season and wheat in *Rabi* season was considered.

Cost returns and comparative economics:

Comparative economics of organic as well as inorganic cotton, pigeonpea and mung farming in *Kharif* season and wheat farming in *Rabi* season was worked out and presented in Table 1.

Cost A— Approximate of actual expenditure on various inputs

Cost B—Cost A + Interest on fixed capital + Rental value of land

Cost C—Cost B + Imputed value of family labour

Net return —Gross returns - Cost of production at respective cost (Cost A, Cost B and Cost C)

IFS – Inorganic Farming System

OFS – Organic Farming System

The average cost 'C' in organic farming was estimated to Rs.15646.54, Rs.15491.5, Rs.13071.16 and Rs.17229.44 for cotton, pigeonpea, mung and wheat, respectively whereas it was estimated to be Rs.16428.17, Rs.15038.43, Rs.14547.49 and Rs.20548.44 for inorganic farming, respectively.

The cost 'A' Rs.9210.87, Rs.9221.82, Rs.7933.15 and Rs.11290.81 in OFS for cotton, pigeonpea, mung and wheat respectively which was less than cost 'A' in IFS i.e. Rs.10685.09, Rs.8938.91, Rs.8909.63 and Rs.14868.78 for cotton, pigeonpea, mung and wheat, respectively.

The cost 'B' was Rs.14121.34, Rs.14782.7, Rs.12455.66 and Rs.16517.04 in OFS while Rs.15398.97, Rs.14497.43, Rs.14097.69 and Rs.19956.24 in IFS,

respectively for cotton, pigeonpea, mung and wheat.

Net returns obtained at cost 'A', cost 'B' and cost 'C' were Rs. 14189.13, Rs. 9278.66 and Rs. 7753.46 and Rs. 16148.18, Rs.10587.3 and Rs. 9878.5 and Rs.12166.85, Rs.7644.34 and Rs.7028.84 and Rs.13909.19, Rs.8682.96 and Rs.7970.56 in OFS for cotton, pigeonpea, mung and wheat, respectively while Rs. 10114.91, Rs. 5401.03 and Rs. 4371.83 and Rs. 14101.09, Rs.8542.57 and Rs. 8001.57 and Rs. 11215.37, Rs. 6027.31 and Rs. 5577.51 and Rs. 11381.22, Rs. 6293.76 and Rs. 5701.56 in IFS for cotton, pigeonpea, mung and wheat, respectively. The study conducted by Sujatha *et al.* (2006) in a comparative analysis of organic and inorganic farming of rice and cotton in Andhra Pradesh revealed the similar results with respect to net income.

As there was better price fetched for organic produce the net returns were subsequently higher than inorganic produce. These differences were obtained in input-output ratios. Input-output ratios were higher in organic farming as compared to inorganic farming. They were 1.49 against 1.27 for cotton, 1.64 against 1.53, for pigeonpea, 1.54 against 1.38 for mung and 1.49 against 1.28 for wheat at cost 'C', respectively. The study conducted by Patil (2006) in comparative economics of organic and inorganic farming in Akola district of Maharashtra by selecting four crops *viz.*, cotton (including pigeonpea and mung) and wheat revealed the similar result with respect to input-output ratios. Besides these organic farming is safe for the environment, it also reduces soil degradation and organic produce are safe for human consumption. Increasing awareness about health and

Table 1 : Comparative economics of organic and inorganic farming in Amravati District (Rs/Acre)

Particulars	Cotton		Pigeonpea		Mung		Wheat	
	OFS	IFS	OFS	IFS	OFS	IFS	OFS	IFS
Gross returns	23400	20800	25370	23040	20100	20125	25200	26250
Costs								
A	9210.87 (58.87)	10685.09 (65.04)	9221.82 (59.53)	8938.91 (59.44)	7933.15 (60.69)	8909.63 (61.24)	11290.81 (65.53)	14868.78 (72.36)
B	14121.34 (90.25)	15398.97 (93.74)	14782.7 (95.42)	14497.43 (96.40)	12455.66 (95.30)	14097.69 (96.91)	16517.04 (95.86)	19956.24 (97.12)
C	15646.54 (100.00)	16428.17 (100.00)	15491.5 (100.00)	15038.43 (100.00)	13071.16 (100.00)	14547.49 (100.00)	17229.44 (100.00)	20548.44 (100.00)
Net returns at cost								
A	14189.13	10114.91	16148.18	14101.09	12166.85	11215.37	13909.19	11381.22
B	9278.66	5401.03	10587.3	8542.57	7644.34	6027.31	8682.96	6293.76
C	7753.46	4371.83	9878.5	8001.57	7028.84	5577.51	7970.56	5701.56
Input-Output Ratio	1:1.49	1:1.27	1:1.64	1:1.53	1:1.54	1:1.38	1:1.49	1:1.28

(Figures in parenthesis are percentage to cost C)

environmental issues are seems to be major factors to adopt organic farming.

The most important constraint felt in the progress of organic farming is the inability of the government policy making level to take a firm decision to promote organic agriculture. Lacking in the process of certification and marketing are also important constraints noted by by Ladole and Sangai (2005). Besides these, lack of awareness, high input costs certification, low yields, inadequate supporting infrastructure and marketing problems are the other major constraints in the adoption of organic farming. Rajendra Prasad (2006) observed the similar obstacle in the adoption of organic farming.

Conclusion:

From the present study it is concluded that organic cotton, pigeonpea, mung and wheat farming is comparatively more profitable than inorganic farming. In spite of the monetary gains, there are other hidden benefits of organic farming namely, it reduces environmental degradation and increases soil texture which ultimately results in increasing productivity.

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