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Future Prospects of Organic Farming: A Review

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ABSTRACT

The use of organic manures was reduced year by year which may be due to its less availability and no knowledge about its long-term benefits. Majority of organic farmers had less experience and medium level of knowledge about organic farming. Majority of the organic farmers have moderately favorable attitude towards organic farming practices. Nearly half of the respondents were medium adopters organic farming practices. The organic farmers fell in high category perception dimension like profitability, input availability and medium category perception dimension like simplicity, efficiency, flexibility, cost effectiveness.

Key words: Farming, Organic, Tatus.

Organic farming is a holistic production management system that promotes and enhances health of agro-ecosystem including biodiversity, biological cycles and soil biological activity (FAO 2002). A system of farm design and management to create an ecosystem, which can achieve sustainable productivity without the use of artificial external inputs such as chemical fertilizers and pesticide.

Why organic farming is necessary

It is sustainable and eco-friendly technology. It improves quality, shelf and nutritive value of the farm produce. It encourages sustainable livelihood of the producers as well as safeguard of the consumer's health. It improves the physical, chemical and biological health of the soil. Promotes healthy use of the natural resources and minimize all forms of the pollution. It enhances and sustains biological diversity within the system.

Associated benefits of organic farming

Soil conservation and soil fertility maintenance. Water conservation. Protection of wild life. Higher diversity, more diverse landscape better treatment of farm animals. Less utilization of non renewable inputs. Minimize pesticide residues in food Better product quality.

Principles of organic farming

Enhancement of soil fertility by conservation and management of organic matter improvement in soil health by nourishing the living matter in soil. On-farm development, conservation and efficient utilization of natural resources. Crop rotation / intercropping/ multiple cropping to change the field ecology and disrupting the insect pests, pathogens and weeds. Prevention of pests and diseases through plant nutrient management, use of bio-pesticides, bio-fungicides, traps, barriers *etc*. Use of bio-fertilizers, green manures *etc* in plant nutrient management and maintenance of ecological balance.

Potential of organic farming

India organic – An overview

- Area under certified organic farming = 2.5 million ha.
- Total certified product = 1,15,238 metric ton.
- Projects certified = 332.
- No. of processing units = 158 Total organic quantity exported = 11,925 MT (2006).

Area under organic farming in India was maximum in Orissa about 26387.86 ha and minimum in Tripura about 20.87 ha, while in Gujarat it was about 1627.06 ha.

Garibay and Jyoti (2003) reported that major organic products produced in India are tea, rice, wheat, cotton, okra, brinjal, mango, banana and cardamom, red gram, potato, chili, turmeric, sesame.

The total export sale of organic products of India is around 11,925 tons and major organic products are tea, rice, cotton, wheat, okra, brinjal, mango, banana and cardamom. Among the total export of organic product tea have highest export quantity which is 3000 tone followed by rice and fruit and vegetables (www.orgprints.org).

Myth and opponents in organic farming

Organic farming proponents

1. Organic farming is a holistic approach which takes care of all the components of the system.
2. It is nature-based, environment friendly and sustainable, and also ensures the conservation of resources for future.
3. Organic foods are better in look, taste, flavour and in nutritional contents.
4. Organic foods are free from al chemical residues; hence do not pose any threat to health of human and animals.

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Table 1: State-wise area under organic farming in India during 2007-08.

State	Area (ha)	State	Area (ha)	State	Area (ha)
Andhra Pradesh	1661.42	Madhya Pradesh	16581.37	Arunachal Pradesh	557.76
Rajasthan	22104.91	West Bengal	6732.43	Sikkim	177.64
Assam	1817.50	Manipur	347.65	Tripura	20.87
Chattisgarh	293.16	Maharashtra	18786.69	Tamilnadu	5423.63
Delhi	1658.71	Karnataka	4117.17	Kerala	15474.47
Goa	5555.07	Mizoram	300.40	Uttaranchal	5915.85
Gujarat	1627.06	Meghalaya	378.89	UP	3033.97
Haryana	3437.52	Nagaland	718.76		
J & K	22315.92	Orissa	26387.86		
Jharkhand	500	Punjab	3779.31	Total	114037.00

Table 2: Major products produced in India under organic farming.

Type of product	Products
Commodity	Tea, Coffee, Rice, Wheat
Spices	Cardamom, Black pepper, White pepper, Ginger, Turmeric, Vanilla, Tamarind, Clove, Chili
Pulses	Red gram, Black gram
Fruits	Mango, Banana, Pineapple, Passion fruit, Sugarcane, Orange, Cashew nut, Walnut
Vegetables	Okra, Brinjal, Garlic, Onion, Tomato, Potato
Oil seeds	Mustard, Sesame, Castor, Sunflower
Other	Cotton, Herbal extracts

Garibay and Jyoti (2003).

Table 3: Major organic products exported from India during 2007- 08.

Products	Exported (tonnes)
Tea	3000
Rice	2500
Fruits and vegetables	1800
Cotton	1200
Wheat	1150
Spices	700
Coffee	550
Cashew nut	375
Pulses	300
Herbal products	250
Oilseeds	100
Total	11,925

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5. Organic farming is locally available and renewable resources based system, hence easily affordable to even small and marginal farmers.
6. Organic farming system, if properly implemented, ensure consistent and optimum productivity and can successfully feed the world.
7. Organic products are not costly, keeping in view of the subsidy and support to the conventional agriculture.

Impal Yadav (2005).

Organic farming opponents

- Organic farming is an ideology and not a science.
- Organic farming is claimed as environment friendly, but in reality it is neither friendly nor sustainable.
- Organic food poses higher risk of disease and infections.
- Organic foods are in no way superior over conventionally grown foods.
- In conventional farming some problems have come up but they can be tackled with scientific knowledge.
- Organic farming cannot feed the world and can pose threat to national food security.
- Organic foods are costlier and cannot feed poor.
- Organic farming management suits big farmers and is not practicable for small and marginal farmers.
- There is not much organic matter available to meet the demand of nutrients.

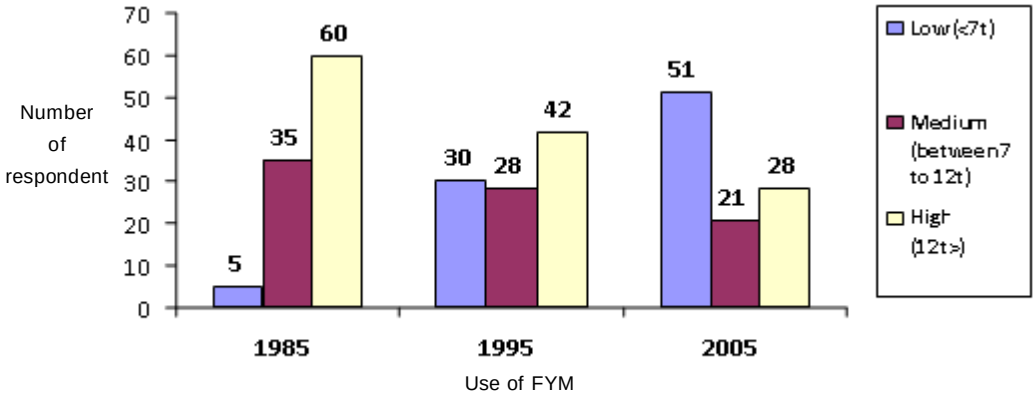
Impal Yadav (2005)

Reality of organic farming

Patel (2005) revealed that in the year 1985, 60 per cent sampled farmers had used more than 12 tones of FYM per ha. and 5 per cent of the farmers had used less than 7 tones of FYM, while in 2005 only 28 per cent farmers used FYM above 12 tonnes per ha. The use of FYM decreases over the period of time (1985-2005).

Patel (2005) revealed that 64.44 per cent organic farmers had moderately favorable attitude and remaining (35.56%) had highly favorable attitude towards organic farming.

Patel (2005) indicated that 71.00 per cent of the farmers had medium favourable attitude towards organic farming practices where as 19.00 per cent and 10.00 per cent had less and highly favourable attitude towards organic farming practices, respectively. It can be concluded that majority of the farmers had medium favourable attitude towards organic farming.



Junagadh Patel (2005)

Fig 1: Distribution of the respondents according to the use of FYM/ha.

Table 4: Distribution of the respondents according to their attitude towards organic farming, n=90.

Category	Number	Per cent
Less favorable (below 48.19)	00	0.00
Moderately favorable (48.19 to 86.93)	58	64.44
Highly favorable (above 86.93)	32	35.56
Total	90	100.00

Sardarkrushinagar Patel (2005)

Table 5: Distribution of respondents based on their attitude about organic farming practices, n= 100.

Category	Number	Per cent
Low (<50.83)	19	19.00
Medium (between 50.83 to 79.77)	71	71.00
High (>79.77)	10	10.00
Total	100	100

Junagadh Patel (2005)

Table 6: Distribution of respondents according to their actual use of recommended practices of vermicomposting, n=150.

Adoption level	Number	percentage
Low	32	21.33
Medium	88	58.67
High	30	20.00
Total	150	100.00

Akola Patil (2006)

Table 7: Distribution of the respondents according to their experience of organic farming, n=60.

Experience	Number	Per cent
Less experience (3 to 5 years)	23	38.33
Medium experience (6 to 8 years)	29	48.34
High experience (above 8 years)	8	13.33
Total	60	100

Punjab Kaur and Klara (2006)

Patil (2006) reported that 58.67% of the respondents had medium adoption level while 21.33% and 20.00% of the respondents had low and high adoption level of actual use of recommended practices of vermicomposting, respectively.

Kaur and Klara (2006) observed that the 48.34 per cent of the organic farmers had medium experience (6 to 8 years) of organic farming followed by 38.33 per cent and 13.33 per cent with less (3 to 5 years) and high (above 8 years) experience of organic farming respectively.

1. Patel (2005) reported that the majority of the farmers (55.00 per cent) fell in the medium perception category followed by high (24.00 per cent) and low (21.00 per cent) perception category. Organic farming practices such as use of tanch, benefit of seed treatment, mixed cropping, crop rotation are perceived as simple practices and widely adopted.

2. Patel (2005) reported that majority (74.00 per cent) of the farmers were from high category on this dimension of perception. Only 12.00 per cent of the farmers found these practices to be less profitable whereas, 14.00 per cent of them found these to be medium profitable. These practices are economically viable and even the poor farmers can also afford to put into practice on their fields.

3. Patel (2005) reported that 71.00 per cent of the respondents were from the medium category of perception, while 22.00 per cent perceived these practices as less efficient and only 7.00 per cent viewed it to be highly efficient. So it can be concluded that organic farming practices can give desired results in long run.

Constraints in organic farming

(A) Biophysical constraints

Among biophysical constraints; appearance of periodic drought spells during cultivation and poor water retention capacity of the soils were perceived as first and second by the respondents, respectively. This might be due to the fact that periodic drought spell directly affect the yield of the

crops. Like-wise the poor water retention capacity of the soils directly affected the seed germination and development of the root systems.

(B) Micro level constraints

Among the micro level constraints, farmers do not willing to take risk, medium education and lack of information and experience regarding organic farming were ranked first, second and thirds respectively within the group. This might due to the lack of innovativeness and poor status of farmers which prevent them to take risk. In village level higher education facilities are not available, thus medium education seen in farmers.

(C) Technological constraints

Among the technological constraints lack of sound research and development of organic farming, lack of pest and disease resistant varieties, lack of drought resistance varieties and lack of short duration varieties were ranked first, second, thirds and fourth respectively within the group.

(D) Administrative constraints

Among the administrative constraints inadequate and untimely supply of agricultural inputs, lack of market facility and lack of special administrative set up were ranked first, second and thirds respectively within the group. This might be due to the fact that even through there is neither special regulated market nor special price policy available for their produced. Moreover, no special administrative set up for boosting up this concept.

(E) Extension constraints

Among the extension constraints lack of extension machinery to disseminate the proven organic farming technologies, poor contact of extension workers with farmers and apathetic attitude of extension functionary towards farmers and their problem were ranked first, second and thirds respectively within the group. This might be due to the fact that there is neither any special organized institute for documentation and testing of organic farming knowledge nor any communiqué for the transfer of organic farming technological known how.

(F) Organic market constraints

Among the organic market constraints distance between producer and market or delivery point, lack of consumer understanding about organic food and lack of organic marketing network were ranked first, second and thirds respectively within the group. This might be due to the fact that due to the poor transport services, which increase the distance between producers and market. Now a recently proper organic export market network is not prevailing yet. Organic farming is a new trade so illiterate person cannot understand about importance of organic food and its benefit.

(G) Other constraints

As far as other constraints are concerned, among the constraints, poor return as compare to modern technologies, controversy among family members regarding organic farming and natural hazards were ranked first, second and thirds respectively within the group. This might be due to the fact that in organic farming the crop yield are reduce, but in chemical farming or after adoption of the modern technology the crop yield are gradually increase, because insect pest or disease are easily control in this farming system. Besides, high wind speed, heavy rainfall, high intensity of rainfall, very cold temperatures *etc*. are natural hazards which are indirectly affected the quality of the organic farming product.

CONCLUSION

The use of organic manures was reduced year by year which may be due to its less availability and no knowledge about its long term benefits. Majority of organic farmers had less experience and medium level of knowledge about organic farming. Majority of the organic farmers have moderately favorable attitude towards organic farming practices. Nearly half of the respondents were medium adopters organic farming practices. The organic farmers fell in high category perception dimension like profitability, input availability and medium category perception dimension like simplicity, efficiency, flexibility, cost effectiveness. The organic farmers faced the constraints like concept of organic farming is not clear, Organic sources are generally slow in releasing plant nutrients, Non-availability of biofertilizers and biopesticides.

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