

## Original Research Article

# Adoption of Organic Farming Practices by Farmers in Indore District of Madhya Pradesh

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## ABSTRACT

### Keywords

Adoption level,  
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The present study was conducted in the Department of Extension Education College of Agriculture, Sehore in the year 2016-17. The main objective of the study to know the adoption level of organic farming practices by the farmers and the study revealed that the majority of farmers have medium adoption level of organic farming practices followed by low and, high

## Introduction

Organic farming follows the principle of circular causation and has emerged in response to questions on health, environment and sustainability issues. It assesses the status, opportunities and sequestration potentials of in India. It identifies constraints that impede adoption of especially for small farm holders who constitute over 70% of farming community in India.

With large land area and climate diversity, India has a considerable potential to contribute to C- sequestration. The soil organic carbon (SOC) in cultivated soils is less than 5 mg g<sup>-1</sup> compared to 15-20 mg g<sup>-1</sup> in uncultivated soils. This available potential of 10-15 mg g<sup>-1</sup> soil-C sink could balance net emission from fossil fuel combustion. Although India occupies second position in terms of number of certified organic farms (44,926), it is 13th in terms of area under of

representing only 0.3 % of total agricultural lands. This scenario appears poor compared to many other countries. Farmer's apprehension towards in India is rooted in non-availability of sufficient organic supplements, bio fertilizers and local market for organic produce and poor access to guidelines, certification and input costs.

Capital-driven regulation by contracting firms further discourages small farm holders. An integrated effort is needed from government and non government agencies to encourage farmers to adopt of as a solution to climate change, health and sustainability issue.

In Madhya Pradesh farming is the major source of self employment and livelihood of near about 80 per cent of the population living in rural areas. Madhya Pradesh is endowed with tremendous improvement relating agricultural development from the

innovation of green revolution time. Now a day there is great challenge for agricultural scientists to fulfill increasing demand of agricultural production which requires to produce extra several million tonnes every year for increasing population.

The main factors which effect the agricultural production are non adoption of improved production technologies due to majority of the farmers in India as well as in Madhya Pradesh found to resources poor, higher cost of improved inputs and awareness of improved agricultural technology. There is an urgent need to consider these constraints for enhancing the agricultural productivity.

Hence, the study has been designed to explore the adoption level of farmers regarding organic farming practices.

### **Materials and Methods**

Present study was conducted in the Indore District, district comprises four blocks. Out of four blocks, two blocks were selected randomly. A list of organic farming villages of each selected block was obtained from State Department of Agriculture and among these total villages, 15 villages were selected randomly for study i.e. Budi barlai, Badodiya khan, Kheti, Nagpur, Jenaapur, Billoda, Tumni, Sanwer, Rijlaye, Snavadiya, Pivday, TillorKhurd, Pedmi, Undeel and Tillorbujurg.

A list of farmers doing organic farming was obtained from these selected villages with the help of State Department of Agriculture.

From this list, 90 farmers (6 farmers from each village) were selected by simple random sampling method for final study. Statistical test i.e. frequency, percentage, mean, standard deviation and correlation coefficient or chi-square test was used for analyzing and interpreting the data.

### **Results and Discussion**

The table 1 revealed that the level of technically, the soil organic matter and major sources of organic plant nutrients of sub divided into 4 sub head i.e. (1) For-in situ management (2)Use of pre-digested /semi digested manure (3) Bio-fertilizers (4) Cultural Methods. The study reveals that the over all organic farming practices was adopted by 60.00 per cent only. This can be say that only 60 per cent of the organic farming practices was adopted by user's i.e. in the low level of 29 respondents followed by 50 respondents at medium level and only 11 respondents was adopted at high level.

Among these sub heads, the higher percentage of respondents i.e. (on the basis of cumulative adoption percentage) 61.48 per cent was adopted in the form of pre-digested and semi digested manure followed by bio fertilizer 61.11 per cent, in situ management 59.26 per cent and cultural method 58.15 per cent respectively. The data compiled in Table 1 shows the adoption behaviour of respondents according to adoption level of organic farming manures there were 9 practices identified for in situ management and this is categorized into low, medium and high adoption categories.

On the basis of over all cumulative percentage the higher number of respondents adopted crop residues (67.41%) followed by poultry manure (64.44%), green manure (58.15%), and other are found to very nominal differences in their adoption level.

It is evident from the table that out of total adoption of pre digested and semi digested manure, higher of the respondents (67.41%) was adopted livestock wastage followed by composting (64.81%), farm yard manure (59.63%) and bio-mass (54.07%) respectively.

**Table.1** Level of adoption of organic farming practices by the farmers.

(N=90)

S.No.	Practices	Level of adoption			Cumulative percentage
		Low	Medium	High	
<b>1</b>	<b>For-in situ management</b>	<b>28</b>	<b>54</b>	<b>8</b>	<b>59.26</b>
a.	Green manures	31	51	8	58.15
b.	Crop residues	9	70	11	67.41
c.	Poultry manure	16	64	10	64.44
d.	Urban and rural wastes	34	53	3	55.19
e.	Recycling the weed biomass	33	48	9	57.78
f.	Recycling the agro based industrial wastes	30	53	7	58.15
g.	Fish wastes	34	48	8	57.04
h.	Use of oil industry products	32	49	9	58.15
i.	Sewage farming	33	50	7	57.04
<b>2.</b>	<b>Use of pre-digested /semi digested manure</b>	<b>23</b>	<b>58</b>	<b>9</b>	<b>61.48</b>
a.	Farm yard manure	29	51	10	59.63
b.	Composting	14	67	9	64.81
c.	Other livestock wastes	12	64	14	67.41
d.	Biomass conversion of unconventional methods	37	50	3	54.07
<b>3.</b>	<b>Bio-fertilizers</b>	<b>30</b>	<b>45</b>	<b>15</b>	<b>61.11</b>
a.	N-fixing agents	39	36	15	57.78
b.	N-containing vegetation	28	45	17	62.59
c.	P-Solubilizing microbes	32	49	9	58.15
d.	Vermin-culture	16	55	19	67.78
e.	N-fixing crops and trees	35	40	15	59.26
<b>4.</b>	<b>Cultural Methods</b>	<b>35</b>	<b>43</b>	<b>12</b>	<b>58.15</b>
a.	Crop rotation with pulses for N-Fixation	40	33	17	58.15
b.	Intercropping with pulses for N-Fixation	45	29	16	55.93
c.	Minimum tillage for nutrient conservation	25	55	10	61.11
d.	Agro-forestry methods i.e. alley cropping	30	50	10	59.26
e.	Strip cropping and vegetative/live bunds	37	44	9	56.30
f.	Mulching cover crops.	33	47	10	58.15
	<b>Over all organic farming practices</b>	<b>29</b>	<b>50</b>	<b>11</b>	<b>60.00</b>

The study also shows that among the bio fertilizer use the higher percentage of respondents (67.71%) was adopted vermin

culture followed by N-containing vegetation (62.59%) and others are found to some what very limited variation.

Cultural methods of organic farming practices are found least preference among the other practices. Among this method, minimum tillage for nutrient conservation practices was adopted by higher percentage of farmers i.e. on cumulative percentage basis it was (61.11%) followed by other practices having very limited variations in adoption levels. Thus, it is concluded that the cumulative adoption basis of organic farming practices were observed as (60.00%) among the total respondents. Thus, it can be concluded that the respondents in study area had medium level of adoption behaviour regarding organic farming practices. The above findings were also reported by Khan (2004). The data presented in above table indicates that most of the respondents 55.56 per cent had medium adoption level of organic farming practices followed by 32.22 per cent had low and, 12.22 per cent had high adoption level. Thus, it may be concluded that most of the respondents had medium adoption level of organic farming in study area followed by low and high adoption level.

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