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Practices by Vegetable Growers in Jaipur
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Research Journal of Agricultural Sciences
An International Journal

P- ISSN: 0976-1675

E- ISSN: 2249-4538

Volume: 13

Issue: 04

Res. Jr. of Agril. Sci. (2022) 13: 1308–1310



CARAS



Extent of Utilization of Organic Farming Practices by Vegetable Growers in Jaipur District of Rajasthan

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Received: 13 Jun 2022 | Revised accepted: 09 Aug 2022 | Published online: 19 Aug 2022
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Key words: Organic farming, Vegetables, Panchayat samitis, Utilization, Interview

Organic farming is a method of farming, which primarily aims at cultivating the land and raising crops in such a way, so as to keep the soil alive and in good health. It is done mostly in in-situ situation, along with the beneficial microbes to release nutrients to the crops, by the use of organic wastes and other biological materials. The components of organic farming include soil reclamation by green manuring, beneficial insects, crop rotation, covering the crops through mulching, crop diversity, weed management, biological pest control, use of Vermicompost, neem cake, organic manure, compost and livestock rearing [1].

Vegetables play a very important role in meeting the nutritional requirement of human being. For all the vegetarian and non-vegetarians, vegetable acts as protective food. In India, majority of the population is vegetarian, however the per capita availability as well as the consumption is low as expected [2]. Therefore, increasing the vegetable production is very important in order to ensure food as well as the nutritional security. India has produced 185.58 million metric tonnes of vegetables during the year 2018-19 with the total area under cultivation of vegetables was 10.1 million hectares. However, in Rajasthan, the area under vegetable cultivation was 166175 thousand ha & the production was 16.63 Mt. during the year 2018-19. The government is continuously encouraging the farmers for organic cultivation of crops, especially the vegetables by providing them subsidies, technical guidance and certification facilities so that they earn higher returns [3]. In viewing the above concept current study taken over with particular objective “Extent of utilization behavior of organic farming practices of vegetable growers”.

The study was under taken in Jaipur district of Rajasthan, which comprises of 15 Panchayat Samitis. A total sample of

120 respondents were selected for the proposed study. Pre-structured interview schedule was used to collect the data covering the objectives of the study. Collected data were analyzed by using frequency and percentage.

Extent of utilization of organic farming practices of vegetable growers

The data in (Table 1) shows the component wise extent of utilization of organic farming practices by the farmers. There were 31 components of organic farming practices and the farmers were categorized into three categories (low, medium, high) as per utilization of particular component.

It is evident from the (Table 1) that the highest mean score percent of utilization (86.94 MPS) was found in case of application of FYM to improve soil fertility (rank Ist) followed by Weed control by hand weeding (85.00 MPS, IInd), crop rotation (84.72 MPS, IIIrd), Use of insect, pest and disease Free resistance varieties (79.44 MPS, IVth), Application of vermicompost to improve soil fertility (78.05 MPS, Vth), Use of green manuring crop (Daincha, Sunhemp, Karonj, Cowpea, Clusterbean) (70.55 MPS, VIth), In situ incorporation of crop residues (66.94 MPS, VIIth), Use of trap crops (61.11 MPS, VIIIth), Use of non-edible oil cake (60.83 MPS, IXth), Application of Neemastra (60.55 MPS, Xth), Use of neem based insecticide (60.00 MPS, XIth), Application of biofertilizer (59.72 MPS, XIIth), Use of poultry and sheep manure (58.88 MPS, XIIIth), Application of Panchagavya (58.88 MPS, XIIIth), Use of multiple cropping (57.77 MPS, XIVth), Summer ploughing (57.22 MPS, XVth), Application of Bijamrita (57.22 MPS, XVth), Use of *rhizobium culture* (58.38 MPS, XVIth), Application of Jivamrit (54.44 MPS, XVIIth), cover crop (54.16 MPS, XVIIIth), Use of *Verticillium spp.* (47.22 MPS, XIXth), Use of bio herbicide (46.38 MPS, XXth), Use of *Trichoderma viride* (45.00 MPS, XXIst), Seed treatment with wood ash (40.27 MPS, XXIInd), Soil mulching (40.00 MPS, XXIIIrd), Seed treatment with cow urine (39.44 MPS, XXIVth), Use of plant biomass (38.33 MPS, XXVth), Application of green leaf manure (38.05 MPS, XXVIth), Use of HaNPV microbial insecticide (31.38 MPS, XXVIIth), Use of pheromone trap or light trap (28.88 MPS, XXVIIIth) and Seed soaking in water (16.11 MPS, XXIXth) respectively [4-5].

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Table 1 Distribution of farmers according to their component wise extent of utilization of different organic farming practices (n=120)

S. No.	Organic farming practices	Mean percent score	Rank
1.	Summer ploughing	57.22	XV
	In situ incorporation of crop residues	66.94	VII
	Application of FYM to improve soil fertility	86.94	I
	Application of vermicompost to improve soil fertility	78.05	V
	Soil mulching	40.00	XXIII
	Use of plant biomass	38.33	XXV
	Use of green manuring crop (Daincha, Sunhemp, Karonj, Cowpea, Cluster bean)	70.55	VI
	Application of green leaf manure	38.05	XXVI
	Application of biofertilizers	59.72	XII
	Use of poultry and sheep manures	58.88	XIII
	Use of non-edible oil cakes	60.83	IX
	Seed soaking in water	16.11	XXIX
2.	Seed treatment with cow urine	39.44	XXIV
3.	Seed treatment with wood ash	40.27	XXII
4.	Cover crops	54.16	XVIII
5.	Crop rotation	84.72	III
6.	Use of multiple cropping	57.77	XIV
7.	Use of trap crops	61.11	VIII
8.	Use of <i>Trichoderma viride</i>	45.00	XXI
9.	Use of <i>Verticillium spp.</i>	47.22	XIX
10.	Use of neem-based insecticide	60.00	XI
11.	Use of insect, pest and disease-free resistance varieties	79.44	IV
12.	Use of HaNPV microbial insecticides	31.38	XXVII
13.	Use of pheromone trap or light trap	28.88	XXVIII
14.	Use of <i>Rhizobium culture</i>	56.38	XVI
15.	Application of Panchagavya	58.88	XIII
16.	Application of Bijamrita	57.22	XV
17.	Application of Neemastra	60.55	X
18.	Application of Jivamrit	54.44	XVII
19.	Weed control by hand weeding	85.00	II
20.	Use of bio herbicide	46.38	XX

Table 2 Distribution of respondents into different levels of utilization of various organic farming practices (n=120)

S. No.	Levels	Frequency	Per cent
1.	Low utilization (below 44 score)	17	14.20
2.	Medium utilization (45-57 score)	79	65.00
3.	High utilization (more than 58 score)	24	20.00
	Total	120	100.00

Mean=51.60 S. D.=6.36

After going through the practice wise and aspect wise utilization of various organic farming practices, it is natural that the levels of utilization of these practices by farmers should also be discussed as these provide an idea about the extent of utilization of organic farming practices at a glance by the farmers. For this purpose, the utilization scores of all the 31 traditional practices were computed. The maximum and minimum possible score an organic farming practices could obtain 44.00 and 58.00 respectively. From the utilization scores obtained by all the organic farming practices, the mean score and standard deviation was calculated to classify these practices in three different level of utilization namely “High utilization practices”, “Medium utilization practices” and “low utilization practices” as follows:

- The organic farming practices which obtained the utilization scores more than 58.00 were classified as “High utilization practices” by the farmers.

- The organic farming practices which obtained the utilization scores from 45.00 to 57.00 to were categorized as “Medium utilization practices” by the farmers.
- The organic farming practices which obtained the utilization scores below 44.00 were classified as “low utilization practice” by the farmers.

It is evident from the table that 65.00 percent organic farming practices were moderately utilized by the farmers, whereas 14.20 percent organic farming practices were less utilized practices by the farmers. Only 20.00 percent were highly utilized by the farmers [6].

SUMMARY

The current study was taken in Jaipur District of Rajasthan state. The purpose of the study was to perceive the extent of utilization of organic farming practices by vegetable growers in Jaipur. For this research, two Panchayat samitis

namely Bassi and Amber were selected for the research purpose as Bassi (644) has maximum number of organic farmers in the Jaipur district and Amber (131) has least number of organic farmers in the Jaipur district. A list of all vegetable growers' villages in the selected panchayat samitis was prepared, out of which, eight villages having maximum number of organic farmers was selected from the selected panchayat samitis for the proposed study. From the selected village a sample of 15 respondents were selected randomly from each village. Hence, the total sample of 120 respondents was selected for the

proposed study. Data were collected through interview schedule. It is evident from the study that as a whole 65.00 per cent farmers had medium utilization of organic farming practices followed by high (20.00%) and low utilization (14.20%). Highest level of utilization was found in respect of application of FYM to improve soil fertility (rank Ist) followed by Weed control by hand weeding (rank IInd), crop rotation (rank IIIrd), use of insect, pest and disease-free resistance varieties (rank IVth), application of vermicompost to Improve soil fertility (rank Vth) respectively.

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