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Knowledge of respondents about management practices in organic farming

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Abstract
Organic farming is a way of chemical free food production. Good crop production requires good management which includes soil, insect-pest, weed and diseases management. By keeping in mind the benefits of management in organic farming, the present study was conducted to assess the knowledge of people regarding bio-fertilizers. A total 240 respondents (120 males and 120 females) from Sirsa and Hisar districts of Haryana state were selected randomly. The data was collected by pre-tested questionnaire. Results shows that average knowledge of respondents about soil management practices was 31.3 percent, on insect-pest management was 30.1 percent, weed management practices was 30.8 percent and crop diseases management was 29.8 percent.

Keywords: organic farming, soil management, insect-pest management, weed management and diseases management

Introduction
In simple terms, organic farming means the production of crops without using any chemical inputs. Organically grown products contain very less amount of chemical residue which is beneficial for human as well as animal health. for more production, it is necessary to adopt the good practices for soil, insect-pest, weed and crop diseases management.Soil management is the application of operations, practices, and treatments to protect soil and enhance its performance for growth of plants. Insect-pest control is done to protect the crop from damage. Weed management is necessary so that crop can get proper nutrients without sharing. And crop diseases have severe losses so its management is necessary.

Review of literature
Barberi (2002) stated that the successful way of weed control was manual or direct weeding. To reduce the weed emergence, preventive and cultural management were applied which included choice of crop sequence, tillage, smother/ cover crops and improve crop competitive ability.
Watson *et al.* (2002) reported that crop rotation maintain and improved the soil fertility in organic system and resisted pests and diseases and allowed cultural methods of weed control. To fulfill nutrients need of crops legumes to add nitrogen and some acceptable supplementary nutrients were used. Manures and crop residues recycle the nutrients. Soil organic matter management improved the soil structure, biological activity, health and production of crops.
Gupta and Dikshit (2010) explained that bio-pesticides were cost effective than chemical pesticides, low persistence and residual effect, easily handled due to liquid formation, preventive nature and less harmful on beneficial pests but less shelf life.
Assis *et al.* (2011) in their study found that majority of the respondents stated that they had been practicing manual weeding (90.3%), using animal manure (71.0%), using organic fertilizer (58.1%), and doing crop rotation more than once. Mondal *et al.* (2014) stated that majority of the respondents knew that good soil (sandy loam) is required for organic vegetable production (90.0%); organically balanced fertilizer increased vegetables yields (81.0%); green manure added organic matter to soil (70.0%), and crop rotation helps in proper nutrient management (80.0%).

Methodology
The study was conducted in two districts of Haryana state viz. Sirsa and Hisar districts. Two blocks, NathusariChopta from Sirsa and Adampur from Hisar were selected randomly. From each block, two villages were selected randomly. Thus, the study was conducted in four villages i.e. Rupana Khurd, Nathusari Kalan, Chuli Khurd and Chuli Kalan by selecting sixty respondents (30 males and 30 females) from each village through random selection. Total 240 respondents were taken for the study. The data were collected through pretested questionnaire and analyzed by applying frequency and percentage tools.

Results
Practices adopted in organic farming
Practices such as soil management, insect-pest management, weed management and crop diseases management were covered under this topic.

Soil management
Table 1 and fig. 1.1 pinpointed that 47.0 percent respondents had knowledge about application of organic material for soil management followed by tillage and cultivation practices with no impact on soil structure

(37.9%) and manage crop fertility nutrients using crop rotation and cover crops (31.6%). Knowledge for maintaining and improving soil organic matter to avoid pathogenic organisms (37.0%), prohibited metals (28.7%),soil and water contamination (25.8%), , heavy metals (23.3%) and crop contamination (19.6%) respectively were recorded.

Table 1: Knowledge of respondents about soil management practices adopted in organic farming

Sr. No.	Soil Management Practices	Sirsa F (%) (n = 120)	Hisar F (%) (n = 120)	Total F (%) (N= 240)
I	Tillage and cultivation practices with no impact on soil structure	47 (39.2)	44 (36.)	91 (37.9)
Ii	Manage crop fertility nutrients using crop rotation and cover crops	36 (30.0)	40 (33.3)	76 (31.6)
Iii	Application of organic material	59 (49.2)	54 (45.0)	113 (47.0)
Iv	Maintain and improves soil organic matter to avoid			
	Crop contamination	26 (21.7)	21 (17.5)	47 (19.6)
	Soil and water contamination	26 (21.7)	36 (30.0)	62 (25.8)
	Pathogenic organisms	46 (38.3)	43 (35.8)	89 (37.0)
	Heavy metals	27 (22.5)	29 (24.2)	56 (23.3)
	Prohibited metals	31 (25.8)	38 (31.7)	69 (28.7)

Multiple response table

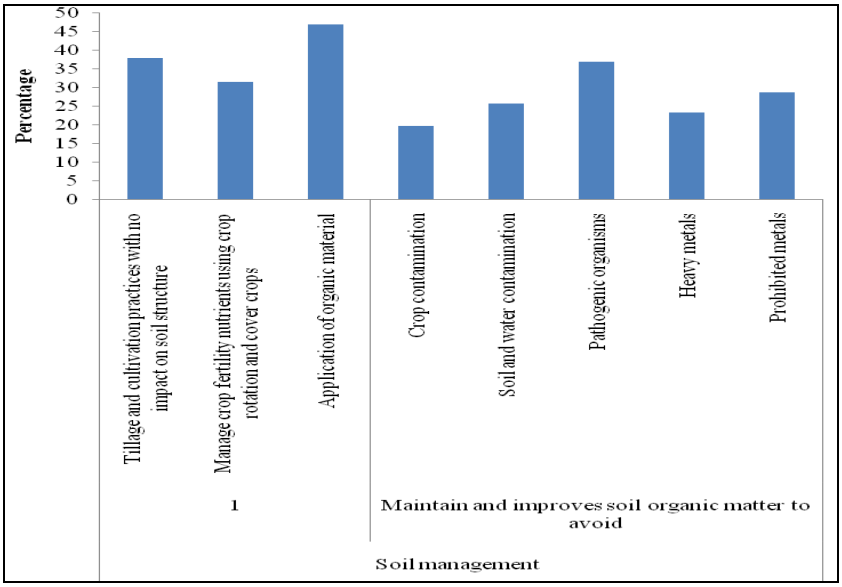

Fig 1: Knowledge of respondents about soil management practices adopted in organic farming

Insect-pest management

The data presented in table 2 and fig. 1.2 indicated that majority of the respondents (44.6%) had knowledge about use of light trap and feiraman trap followed by habitat management (41.2%), beneficial organism releases (34.2%), sanitation (29.6%),use of organic and non-toxic synthetic pesticides such as soap (27.9%), crop rotation (25.4%), use of trap crops (22.0%), crop diversification (16.2%) respectively.

Table 2: Knowledge of respondents about insect-pest management practices adopted in organic farming

Sr. No.	Insect-pest management Practices	Sirsa F (%) (n = 120)	Hisar F (%) (n = 120)	Total F (%) (N= 240)
I	Crop rotation	32 (26.6)	29 (24.1)	61 (25.4)
Ii	Crop diversification	16 (13.3)	23 (19.1)	39 (16.2)
Iii	Habitat management	41 (34.1)	58 (48.3)	99 (41.2)
Iv	Beneficial organism releases	49 (40.8)	33 (27.5)	82 (34.2)
V	Use of light trap and feiraman trap	56 (46.6)	51 (42.5)	107 (44.6)
Vi	Use of trap crops	30 (25.0)	23 (19.1)	53 (22.0)
Vii	Sanitation	37 (30.8)	34 (28.3)	71 (29.6)
Viii	Use of organic and non-toxic synthetic pesticides such as soap	29 (24.1)	38 (31.6)	67 (27.9)

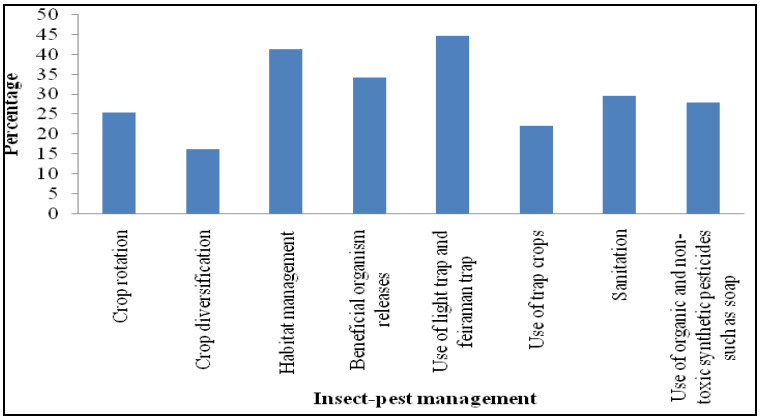

Fig 2: Knowledge of respondents about insect-pest managementpractices adopted in organic farming

Weed management

It was apparent from the table 3and fig. 1.3 that 43.3 percent respondents had knowledge about cultivation practices for weed management in organic farming followed by tillage (40.8%), manual weeding (38.3%), mulching (33.7%), crop rotation (30.8%), water management (19.6%) and intercropping (9.6%) respectively.

Table 3: Knowledge of respondents about weed management practices adopted in organic farming

Sr. No.	Insect-pest management Practices	Sirsa F (%) (n = 120)	Hisar F (%) (n = 120)	Total F (%) (N= 240)
I	Crop rotation	39 (32.5)	35 (29.1)	74 (30.8)
Ii	Intercropping	12 (10.0)	11 (9.1)	23 (9.6)
Iii	Mulching	39 (32.5)	42 (35.0)	81 (33.7)
Iv	Tillage	45 (37.5)	53 (44.1)	98 (40.8)
V	Cultivation practices	56 (46.6)	48 (40.0)	104 (43.3)
Vi	Water management	23 (19.1)	24 (20.0)	47 (19.6)
Vii	Manual weeding	44 (36.6)	48 (40.0)	92 (38.3)

Multiple response table

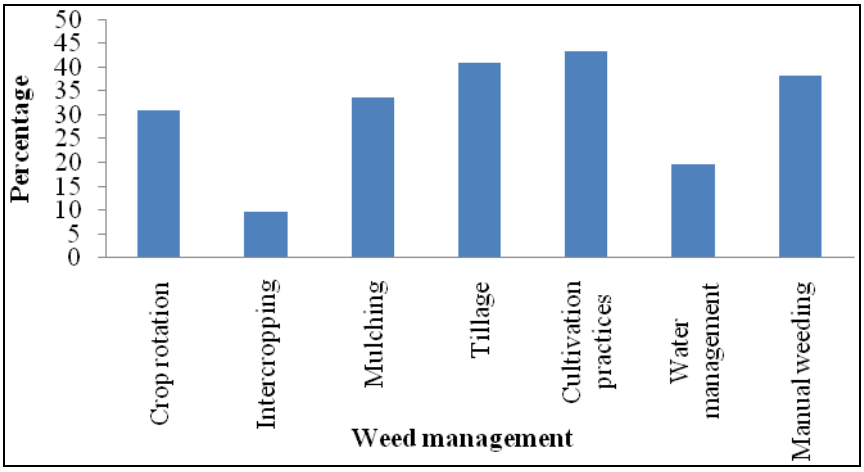

Fig 3: Knowledge of respondents about weed management practices adopted in organic farming

Crop diseases management

Data presented in table 4 and fig. 1.4 revealed that 41.2 percent respondents had knowledge about the use of synthetic fungicides such as copper sulphate (permitted by USDA National Organic Programme Standards) followed by pruning (34.5%), crop rotation (29.5%), sanitation (28.7%), selection of diseases resistant verities (23.3%) respectively. About 22.0 percent respondents had knowledge on crop diseases management by improving organic matter and biological activities.

Table 4: Knowledge of respondents about weed management practices adopted in organic farming

Sr. No.	Crop Diseases Management Practices	Sirsa F (%) (n = 120)	Hisar F (%) (n = 120)	Total F (%) (N= 240)
I	By improving organic matter and biological activities	28 (23.3)	25 (20.8)	53 (22.0)
Ii	Crop rotation	34 (28.3)	37 (30.8)	71 (29.5)
Iii	Sanitation	24 (20.0)	45 (37.5)	69 (28.7)
Iv	Pruning	41 (34.1)	42 (35.0)	83 (34.5)
v	Selection of diseases resistant verities	33 (27.5)	23 (19.1)	56 (23.3)
vi	Use of synthetic fungicides such as copper sulphate (permitted by USDA National organic Programme Standards)	54 (45.0)	48 (40.0)	99 (41.2)

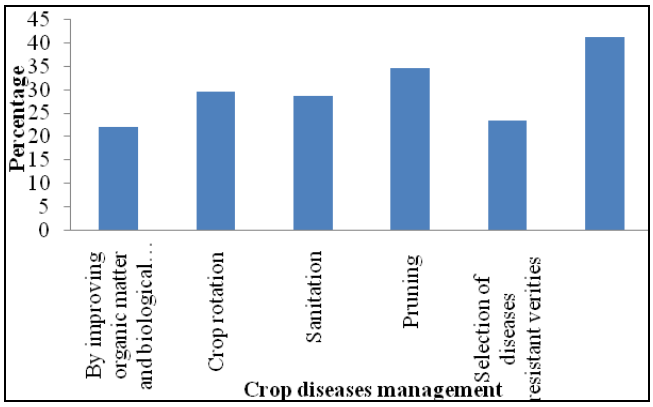

Fig 4: Knowledge of respondents about crop diseases management practices adopted in organic farming

Conclusion

Organic farming is a way of chemical free food production in which different management practices are included. Total 240 respondents were selected for the study from Haryana state. The results related with different management practices in organic farming shows that the average knowledge level of respondents was very low.

References-

1. Barberi P. Weed management in organic agriculture: are we addressing the right issues? Weed research. 2002; 42(3):177–193
2. Watson CA, Atkinson D, Gosling P, Jackson L, Rayns FW. Managing soil fertility in organic farming systems. Soil Use and Management. 2002; 18(1):239-247
3. Gupta S, Dikshit AK. Biopesticides: An ecofriendly approach for pest control. Journal of Biopesticides. 2010; 3(1):186 – 188.
4. Assis K, Ismail Mohd HA. Knowledge, attitude and practices of farmers towards organic farming. Int. J. Eco. Res. 2011; 2(3):1-6.
5. Mondal S, Haitook T, Simaraks S. Farmers knowledge, attitude and practice toward organic vegetables cultivation in Northeast Thailand. Kasetsart J. (Soc. Sci). 2014; 35:158-166