Poll Res. 41 (1) : 158-163 (2022)

ISSN 0257–8050
DOI No.: http://doi.org/10.53550/PR.2022.v41i01.023

CONSTRAINTS FACED BY FARMERS PRACTICING ORGANIC FARMING IN HARYANA

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(Received 9 June, 2021; Accepted 26 June, 2021)

ABSTRACT

An investigation was undertaken to identify the constraints faced by farmers in practicing organic farming. The present study was carried out in Haryana state. Three districts namely, Hisar, Sirsa and Sonipat were selected purposively as the locale for the proposed study. Organic farming has been received considerable attention in Haryana in the recent years. This may be due to declining soil fertility, indiscriminate usage of agro-chemicals etc. and increasing demand of organic products in Metropolitan city Delhi and exportable opportunities of organic products. Awareness about organic farming is increasing in Haryana and even small number of farmers have converted and started organic farming. But majority of the farmers in the state are still engaged in commercial agriculture and adoption rate of organic farming practice is not significant. Many factors are responsible for the present dismal situation of organic farming in the state. Cultural and demographic attributes of the farmers play an important role in adoption/ rejection of new technologies/alternative methods. There is need for proper socio-cultural environment for promotion of organic farming in the state which have not been given due attention.

KEY WORDS : Constraints, Organic farming, Agro-chemicals and Cultural factors.

INTRODUCTION

Organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc.) maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection (USDA). Organic farming is cost-effective for farmers due to the lack of usage of chemicals (due to its high price), turning to inexpensive methods, such as biological resources rather than chemical fertilizers and pesticides. India has the largest number of organic producers in the world, with 1,093,288 certified organic producers, it is home to more than 35.11 per cent of total number of organic producers (3.10 million) in the world (APEDA, 2019) However, when it relates to area under certified organic cultivation, India contributes only 2.54 per cent (1.80 million ha) of the total (69.80 million ha) coverage at global level. India is one leading country for export of organic products to various destinations in world. Organic farming is a productive system in which environment is preserved, farmers and workers have fair access to the means of food production while receiving a fair return for their labour and consumers have their food at fair prices. In India, still farmers face several constraints in practicing organic farming like high cost and risk involvement in getting organic manure (vermi-compost, oil cakes etc), transportation of green manure, lack of ready packages for growing crops particularly rice organically and lack of knowledge on crop rotation, water management and a few complete organic farming practices were the major constraints faced by 60.00 per cent of the small farmers to practice organic farming (Ranganatha *et al*., 2001).

MATERIALS AND METHODS

The study pertains to Hisar, Sirsa and Sonipat

districts of Haryana. The survey was conducted during agricultural year 2018-19. From the above selected district, total 3 blocks were selected based on highest number of organic farmers. Though organic farming is much beyond the use of chemicals, the farmers who were not using chemical fertilizers and chemical pesticides/weedicides for the last three years constantly were considered as the organic growers in the present study. From the selected blocks 120 farmers cultivating organically were interviewed to extract relevant information pertaining to the constraints in adoption of organic farming etc. The information regarding identified constraints was extracted from selected farmers for the crops wheat, basmati paddy, bottlegourd and guava in the study area.

RESULTS AND DISCUSSION

Each and every constraint related to organic cultivation of identified crops was included in survey based on feedback of researchers working in area of organic farming, development officials, market functionaries, progressive farmers, Farmer-Producer organization (FPOs). Further, constraints included were validated by expert in related to the field in the university. The constraints are grouped under three major aspects i.e production constraints, Nutrients and Plant Protection material constraints and marketing constraints.

Production constraints expressed by organic growers in Haryana

Data regarding production constraints faced by the farmers cultivating wheat, basmati paddy, bottlegourd and guava organically are presented in the Table 1. In this study the yield gap found for wheat and basmati paddy was 40-50 percent that means the yield for organic wheat and basmati paddy was 50 per cent less than the conventional grown crops in the same area. The yield gap for bottlegourd was found 30 to 40 percent and for guava it was observed 60-65 per cent. Predominance of the inorganic farmers in the locality (36.66 %) is the other constraint. The organic farming systems cannot be introduced in one day, the period needed to develop an organic agriculture system is called the conversion period. There is period of time between the discarding of synthetic inputs and sufficient biological insect populations, nitrogen fixation from legumes during which pest suppression and fertility problems are typical. Conventional farmers use all of those chemicals and synthetic pesticides because they end up reducing the cost of production by getting the job done faster and more efficiently. Without them, organic farmers have to hire more workers for tasks like hand-weeding, clean up of polluted water, and the remediation of pesticide contamination. The constraint, scarcity of labour was expressed by 70 per cent of the respondents, inadequate capital

Table 1. Production constraints expressed by organic growers in Haryana

Sr. No.	Constraints	Wheat (N=30)	Basmati paddy (N=30)	Bottlegourd (N=30)	Guava (N=30)
1	Low production in initial years	28(93.33)	30(100)	25(83.33)	30(100)
2	Inadequate capital	19(63.33)	16(53.33)	14(46.67)	18(60)
3	Lack of knowledge of recommended package of practices	12(40.00)	14(46.67)	10(33.33)	11(36.67)
5	Seed and sowing:				
	a) Lack of improved seed	13(43.33)	17(56.67)	5(16.67)	13(43.33)
	b) Costly in nature	15(50)	17(56.67)	8(26.67)	19(63.33)
	c) Poor knowledge about seed variety, seed rate, seed treatment and right time of sowing	13(43.33)	15(50)	11(36.67)	20(66.67)
6	Need of more irrigations	16(53.33)	21(70)	10(33.33)	26(86.67)
7	Scarcity of labour	21(70)	24(80)	18(60)	28(93.33)
8	Small land holding	18(60.00)	19(63.33)	16(53.33)	13(43.33)
9	Predominance of the inorganic farmers in the locality	11(36.66)	12(40.00)	14(46.66)	12(40.00)

Note: Figures in parenthesis are the percentage to the total number of respondent of a particular crop
N= Sample size

expressed by 63.33 percent farmers and 53.33 per cent farmers expressed that there is, need of more irrigations in organic farming. According to the respondents as organic methods tend to have lower yields due to no use of chemical fertilizers, use of more water per crop may increase the yield in some cases. Fifty percent of the respondents expressed that organic seeds are costly than inorganic seeds. As the organic seeds are grown using sustainable methods from start to finish, no pesticides, no chemical fertilizers, all on land that has been cultivated for at least 3 years using the standards established for Certified Organic farming that is why they are 20- 30 per cent costly than the inorganic seeds. Lack of knowledge of recommended package of practices (40%), lack of improved seed (43.33%), poor knowledge about seed variety, seed rate, seed treatment and right time of sowing (43.33%), In case of organic basmati paddy, the initial yield loss was expressed as most severe constraint faced by cent percent of respondents followed by small land holding (63.33%), scarcity of labour (80%), need of more irrigations (70%), lack of improved seed (56.67%), costly seeds (56.67%), inadequate capital (53.33%), poor knowledge about seed variety, seed rate, seed treatment and right time of sowing (50.00%) and lack of knowledge of recommended package of practices (46.67%), predominance of the inorganic farmers in the locality (40%).

For organic bottlegourd, the most severe constraint was initial yield loss, that is faced by 83.33 percent of respondents followed by scarcity of labour (60%), small land holding (53.33%), inadequate of capital (46.67%), knowledge about seed variety, seed rate, seed treatment and right time of sowing (36.67%), predominance of the inorganic farmers in the locality (46.66 %), lack of knowledge of recommended package of practices (33.33%), need of more irrigations (33.33%), costly seeds (26.67%) and lack of improved seed (16.67%). In case of organic guava, the initial yield loss was expressed as most severe constraint faced by 100.00 percent of respondents followed scarcity of labour (93.33%), need of more irrigations (86.67%), knowledge about seed variety, seed rate, seed treatment and right time of sowing (67.67%), costly seeds (63.33%), lack of capital (60.00%), lack of improved seed (43.33%), small land holding (43.33 %), predominance of the inorganic farmers in the locality (40.00 %), and lack of knowledge of recommended package of practices (36.67%).

Nutrients and Plant Protection material Constraints of Organic Farming in Haryana

Organic fertilizers are generally much more expensive than chemical fertilizers, mostly because chemical fertilizers have more concentrated levels of nutrients per weight of product than that of organic

Table 2. Nutrients and plant protection material constraints of organic farming in Haryana

Sr. No.	Constraints	Wheat (N=30)	Basmati paddy (N=30)	Bottlegourd (N=30)	Guava (N=30)
1	Nutrients :				
a)	Unavailability of desired manures and bio-fertilizers and difficult method of its preparation	27(90)	26(86.67)	22(73.33)	25(83.33)
b)	Costly manures and bio-fertilizers	28(93.33)	29(96.67)	21(70)	27(90)
c)	Slow process of organic manure preparation	30(100)	30(100)	27(90)	29(96.67)
d)	Distant location of supply agencies	18(60)	17(56.67)	15(50)	20(66.67)
2	Plant protection material:				
a)	Inclination towards use of pesticides	20(66.67)	22(73.33)	19(63.33)	20(66.67)
b)	Difficult method for preparation of bio-insecticides	27(90)	29(96.67)	19(63.33)	29(96.67)
c)	Unavailability of bio-pesticides	19(63.33)	19(63.33)	16(53.33)	22(73.33)
d)	inadequate input supply centres	20(66.67)	20(66.67)	18(60)	23(76.67)
e)	Ineffectiveness of bio-pesticides	28(93.33)	30(100)	26(86.67)	30(100)
f)	Less knowledge about type, application time, method and proper dose of pesticides or bio-pestcides choose proper word complete	20(66.67)	22(73.33)	17(56.67)	22(73.33)
g)	Lack of skilled labour	22(73.33)	26(86.67)	21(70)	28(93.33)

Note: Figures in parenthesis are the percentage to the total number of respondent of a particular crop
N= Sample size

fertilizers. The nutrients (manure, bio-fertilizers) and plant protection constraints of sampled respondents cultivating wheat, basmati paddy, bottlegourd and guava organically are presented in Table 2. Data in the Table, in case of organic wheat reveal that about 100 percent of sampled respondents strongly reported that organic manure preparation was a slow process and 93.33 percent respondents said that manures and bio-fertilizers are very costly and there is less effect of bio-pesticides. Other constraints faced by the farmers were unavailability of desired manures and bio-fertilizers and difficult method of its preparation (90.00%), difficult method for preparation of bio-insecticides (90.00%), lack of skilled labour (73.33%), inclination towards use of chemical pesticides (66.67%), inadequate input supply centres (66.67%), less knowledge about type, application time, method and proper dose (66.67%), unavailability of bio-pesticides (63.33%) and distant location of input supply agencies (60.00%).

In case of organic basmati paddy, 100 percent of the respondents expressed that organic manure preparation is a slow process and bio-pesticides are less effective. Other major constraints faced by the respondents were high cost of manures and bio-fertilizers (96.67%), difficult method for preparation of bio-insecticides (96.67%), unavailability of desired manures and bio-fertilizers and difficult method of its preparation (86.67%), Lack of skilled labour (86.67%), Inclination towards use of chemical pesticides (73.33%), Less knowledge about type, apply time, method and proper dose (73.33%), inadequate input supply centres (66.67%), unavailability of bio-pesticides (63.33%), distant location of input supply agencies (56.67%). In the cultivation of organic bottlegourd, the restraints expressed by the respondents were slow process of organic manure preparation (90.00%), ineffectiveness of bio-pesticides (86.67%), unavailability of desired manures and bio-fertilizers and difficult method of its preparation (73.33%), lack of skilled labour (70.00%). costly manures and bio-fertilizers (70.00%), inclination towards use of chemical pesticides (63.33%), difficult method for preparation of bio-insecticides (63.33%), inadequate input supply centres (60.00%), less knowledge about

Table 3. Marketing and other important constraints expressed by organic growers in Haryana

Sr. No.	Constraints	Wheat (N=30)	Basmati paddy (N=30)	Bottlegourd (N=30)	Guava (N=30)
1	Marketing constraints:				
a)	Need of certification for sale of organic product	30(100)	30(100)	27(90)	28(93.33)
b)	Distant location of certification agencies	28(93.33)	26(86.67)	28(93.33)	29(96.67)
c)	Unaware about PGS certification system	24(80)	25(83.33)	25(83.33)	22(73.33)
d)	Inadequate purchase agencies	23(76.67)	22(73.33)	16(53.33)	25(83.33)
f)	Involvement of middleman in disposal of organic product	27(90)	28(93.33)	26(86.67)	28(93.33)
g)	High marketing charges	20(66.67)	23(76.67)	22(73.33)	25(83.33)
h)	Distant location of procurement agencies	21(70)	22(73.33)	22(73.33)	24(80)
i)	Higher transportation charges	22(73.33)	21(70)	18(60)	24(80)
j)	Lack of marketing news	30(100)	28(93.33)	27(90)	29(96.67)
k)	Lack of knowledge about prices	30(100)	30(100)	28(93.33)	30(100)
l)	Lack of demarcated place for sale of organic products in in regulated markets	30(100)	30(100)	30(100)	30(100)
m)	Lack of storage facilities	10(33.33)	13(43.33)	8(26.67)	7(23.33)
n)	Non-remunerative price of organic product	18(60.00)	15(50.00)	17(56.66)	15(50.00)
2	Other constraints:				
a)	Lack of proper guidance and training	25(83.33)	28(93.33)	22(73.33)	26(86.67)
b)	Lack of knowledge about benefits of organic product among consumers	26(86.67)	25(83.33)	25(83.33)	28(93.33)
c)	Irregular visit of agriculture officers	22(73.33)	26(86.67)	25(83.33)	23(76.67)
d)	non-availability of government facilities	28(93.33)	29(96.67)	30(100)	28(93.33)
e)	Inadequate availability of credit	27(90)	28(93.33)	27(90)	26(86.67)
g)	Disagreement of family members	26(86.67)	25(83.33)	23(76.67)	28(93.33)

Note: Figures in parenthesis are the percentage to the total number of respondent of a particular crop.
N= Sample size

type, apply time, method and proper dose (56.67%), unavailability of bio-pesticides (53.33%) and distant location of input supply agencies (50.00%). For organic cultivation of guava in the state, the most vital constraints faced by farmers were ineffectiveness of bio-pesticides (100.00%) followed by slow process of organic manure preparation (96.67%), difficult method for preparation of bio-insecticides (96.67%), lack of skilled labour (93.33%), costly manures and bio-fertilizers (90.00%), unavailability of desired manures and bio-fertilizers and difficult method of its preparation (83.33%), inadequate input supply centres (76.67%), unavailability of bio-pesticides (73.33%), less knowledge about type, apply time, method and proper dose (73.33%), distant location of input supply agencies (66.67%) and inclination towards use of chemical pesticides (66.67%).

Marketing and other important constraints expressed by organic growers in Haryana

Different marketing and other constraints in organic cultivation of wheat, basmati paddy, bottlegourd and guava identified during the course of investigation are presented in Table 3. The major marketing constraints noted from the respondents of organic wheat farmers were need for certification for sale as organic product (100.00%), lack of marketing news (100.00%) and lack of knowledge about prevalent prices (100.00%) followed by no separate place in regulated markets (100.00%), non-availability of government facilities (93.33%), location of certification agencies at distant places (93.33%), unavailability of loan facilities (90.00%), dependence on middleman for disposal (90.00%). More cost is charged by the middlemen as there was high premium price for organic produce since the organic farmers send their produce to the distant markets. lack of knowledge about benefits of organic among consumers (86.67%), disagreement of family members (86.67%), lack of proper guidance and training (83.33%), unaware about PGS certification system (80.00%), less number of agencies to purchase organic product (76.67%), irregular visit of agriculture officers (73.33%) and higher transportation charges (73.33%) are some other important constraints which were faced by the farmers. About 70 per cent of the respondents expressed the constraint of distant location of procurement agencies as the organic farmers in the study area have to travel a long distance for the sale of their organic product, as the purchasing agencies of organic products are 30-40 kiliometres away from their field area and about 66.67 per cent farmers agreed that there is high marketing charges in case of organic products. The marketing charges for organic produce is high as the marketing and the distribution chain for organic products is relatively inefficient and costs are higher because of relatively small volumes and the post-harvest handling of relatively small quantities of organic foods results in higher costs because of the mandatory segregation of organic and conventional produce, especially for processing and transportation and lack of storage facilities (33.33%) price is not remunerative (60.00%) are the other constraints. In case of organic basmati paddy, the most important constraints faced by 100 percent of the respondents were need for certification to sale organic products, lack of knowledge about prevalent prices and no separate place in regulated markets. The other constraints expressed by the farmers were non-availability of government facilities (96.67%), unavailability of loan facilities (93.33%), lack of marketing news (93.33%), lack of proper guidance and training (93.33%), dependence on middleman for disposal (93.33%), location of certification agencies at distant places (86.67%), irregular visit of agriculture officers (86.67%), unaware about PGS certification system (83.33%), lack of knowledge about benefits of organic (83.33%), disagreement of family members (83.33%), high marketing charges (76.67%), distant location of procurement agencies (73.33%), less number of agencies to purchase organic products (73.33%), more transportation charges (70.00%), lack of storage facilities (43.33%) and price is not remunerative (50.00 %). For the farmers cultivating bottlegourd organically, the major constraints were non-availability of government facilities (100.00%) and no separate place in regulated markets (100.00%) followed by location of certification agencies at ant places (93.33%), lack of knowledge about prevalent prices (93.33), lack of marketing news (90.00%), unavailability of loan facilities (90.00%), need for certification to sale organic products (90.00%), dependence on middleman for disposal (86.67%), unaware about PGS certification system (83.33%), lack of knowledge about benefits of organic among consumers (83.33%), irregular visit of agriculture officers (83.33%), disagreement of family members (76.67%), high marketing charges (73.33%), purchase agencies at long distance (73.33%), lack of proper guidance and training (73.33%), more transportation charges (60.00%), less

number of agencies to purchase organic product (53.33%), price is not remunerative (50.00%) and lack of storage facilities (26.67%).

The major constraints noted by the farmers cultivating guava organically were lack of knowledge about prevalent prices (100.00%), no separate place in regulated markets (100.00%), certification agencies at distant places (96.67%), lack of marketing news (96.67%), need for certification to sale organic products (93.33%), disagreement of family members (93.33%), price is not remunerative (93.33%), lack of knowledge about benefits of organic among consumers (93.33%), non-availability of government facilities (93.33%), lack of proper guidance and training (86.67%), unavailability of loan facilities (86.67%), less number of agencies to purchase organic products (83.33%), high marketing charges (83.33%), distant location of procurement agencies (80.00%), high transportation charges (80.00%), irregular visit of agriculture officers (76.67%), unaware about PGS certification system (73.33%), and lack of storage facilities (23.33%).

CONCLUSION

Overall, results concluded that among all the constraints faced in the organic cultivation of crops, the important constraints were low production in initial years, need of certification for sale of organic product, distant location of certification agencies and high certification charges, as all the sampled organic growers in the area had no certification for their produce and some farmers were under process for their produce. The investigation further revealed that non-remunerative price of organic products, lack of demarcated place for sale of organic products in in regulated markets, lack of proper guidance and training, lack of marketing news, inadequate input supply centres, slow process of organic manure preparation and lack of knowledge of recommended package of practices were also the major issue for organic products in the sample area.

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