

Constraints Perceived by the Tribal and Non-Tribal Farmers in Coriander Production Technology in Jhalawar, Rajasthan

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ABSTRACT

Coriander is an important dominant and highly valued spice grown in India. It is the first probably the first spices to be used by men as common flavouring substance. The stem leaves and grains have a pleasant aroma. The entire plant used in preparing "Chatany" whereas, leaves are used for flavouring curries, sauce and soups. The dry grains are extensively used in preparation of curry powder, pickling spices and seasoning. This study was conducted in Khanpur Panchayat Samiti of Jhalawar district, which was selected purposely. Among the four constraints, constraints related to miscellaneous was the major constraints perceived by the coriander growers. This constraint was followed by constraints related to input, marketing. Least perceived constraints were technical constraints. The overall constraints faced by the tribal respondents were 56.78 MPS. Whereas in case of non-tribal respondents it was 49.58 MPS. There were rank order correlations in all aspects of constraints between tribal and non-tribal coriander growers.

Seed spices as a group of crops and in particularly coriander, fenugreek, cumin and fennels are very important not only for home consumption but also for improving economic condition of the farmers at large. Seed spices are the crops in which interest of industries is also increasing consistently. Traders and exporters are equally concerned about development of seed spices in the country. From these considerations, seed spices are not only cash crop but also they can be termed as "dynamic crop commodities" particularly in the view of their great export potential.

Coriander is an important dominant and highly valued spice grown in India. It is the first probably the first spices to be used by men as common flavouring substance. The stem leaves and grains have a pleasant aroma. The entire plant used in preparing "Chatany" whereas, leaves are used for flavouring curries, sauce and soups. The dry grains are extensively used in preparation of curry powder, pickling spices and seasoning.

Rajasthan contributes around 44 per cent of the total national production. The major coriander producing districts of Rajasthan are Jhalawar, Baran, Kota, Chittorgarh and Bundi. Kota region alone contributes nearly about 98 per cent of the area and production of coriander crop. The average productivity of coriander crop is 1144 kg/ha and there are possibilities to increase its productivity up-to 40 to 50 per cent by adoption of improved technologies.

METHODOLOGY

The present study was conducted in Khanpur Panchayat Samiti of Jhalawar district, which was selected purposely. Similarly, from Khanpur Panchayat Samiti, five Gram Panchayats were selected on the basis of having highest area and production of coriander among all the Gram Panchayats of Khanpur Panchayat Samiti. From the selected Gram Panchayats five villages were selected on the basis of area as well as having tribal population. From each village 32 coriander growers (16 tribal and 16 non-tribal) were selected randomly.

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RESULTS AND DISCUSSION

1. Distribution of respondents according to constraints perceived by them in adoption of coriander production technology.

Table 1. Shows that majority (65.00 %) of overall coriander growers perceived medium level of constraints in adoption of coriander production technology. Further around equal number of them falls in high and low category of perceived constraints.

Table 1. Distribution of respondents according to constraints perceived by them in adoption of coriander production technology.

S. No	Extent of constraints	Tribal (n=80)		Non-Tribal (n=80)		Overall (n=160)	
		F	%	F	%	F	%
1	Low (below 50 score)	7	8.75	20	25.00	27	16.88
2.	Medium (50 - 67)	46	57.50	58	72.50	104	65.00
3.	High (above 67 score)	27	33.75	2	2.50	29	18.13

F= frequency; %= Percentage

The data in table further indicate that 57.50 per cent tribal and 72.50 per cent non-tribal respondents were perceived medium constraints. Further 8.75 per cent of tribal respondents and 25.00 per cent non-tribal respondents were perceived low constraints, while, 33.75 per cent of tribal respondents and only 2.50 per cent non-tribal respondents perceived high constraint in adoption of coriander production technology.

2. Constraints related to input as perceived by respondents regarding adoption of coriander production technology.

A critical examination of table 2. reveals that overall

respondents were facing major problem of unavailability of variety maintaining green colour after harvest (78.13 MPS) followed by unavailability of short duration varieties (75.21 MPS) and higher labour cost (72.29 MPS) in the adoption of improved coriander production technology. Uncertainty of good production, seed, fertilizer and chemical are costly, lack of finance for input and lack of irrigation facility were ranked 4th, 5th, 6th and 7th for respectively. Least problems faced by them was related to unavailability of improved seed at the time of sowing.

Table 2. Constraints related to input as perceived by the respondents in adoption of coriander production technology.

S. No.	Constraints	Tribal (n=80)		Non-Tribal (n=80)		Overall (n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Unavailability of improved seed at the time of sowing	30.83	13	21.25	13	26.04	13
2	Supply of inferior quality of seed	40.00	12	25.42	12	32.71	12
3	Unavailability of fertilizer during the peak season	51.25	8	41.25	10	46.25	9
4	Unavailability of recommended chemical for plant protection	40.83	10	25.83	11	33.33	11
5	Lack of irrigation facility	46.67	9	62.92	5	54.79	7
6	Uncertainty of good production	69.58	4	74.17	3	71.88	4
7	Small land holding	40.13	11	51.25	9	45.63	10
8	Require more organic manure	56.25	7	52.08	8	54.21	8
9	Unavailability of short duration varieties	73.33	2	77.08	2	75.21	2

10	Unavailability of variety maintaining green colour after harvest	76.25	1	80.00	1	78.13	1
11	Seed, fertilizer & chemical are costly input	62.50	6	58.33	6	60.42	5
12	Lack of finance for input	63.75	5	55.42	7	59.58	6
13	Higher labour cost	72.50	3	72.08	4	72.29	3
Pooled		55.67		53.62		54.65	

r_s = Rank correlation,
 ** = Significant at 1% level

$r_s = 0.90^{**}$
 $t = 7.16$

An effort was also made to find out the relationship in perception of input constraints between tribal and non-tribal coriander growers. The calculated value of rank order correlation r_s was 0.90. It indicates positive correlation. The calculated value of 't' (7.16) was higher than it's table value at 1 per cent level of significance. This leads to conclusion that there is an association between the ranks assigned by tribal and non-tribal coriander growers in different aspects of input constraints in spite of difference in magnitude of Mean Percent Score.

3. Constraints related to marketing as perceived by respondents regarding adoption of coriander production technology.

An examination of table reveals that overall respondents were facing major problems like, minimum support price not fixed by the government (76.25 MPS) and very high fluctuation in price (72.08 MPS) in the adoption of coriander production technology. Low price for good quality products, lack of storage facility and costly transport were ranked on 3rd, 4th and 5th, respectively. Average problem were faced by them was bounded by a local businessman and incorrect weight and measurement by businessman.

Table 3. Constraints related to marketing as perceived by the respondents in adoption of coriander production technology.

S.No.	Constraints	Tribal(n=80)		Non-Tribal(n=80)		Overall(n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Lack of storage facility	50.83	6	54.17	4	52.50	4
2	Costly transport facility	56.67	3	47.08	5	51.88	5
3	Lack of knowledge about market rates	46.25	8	34.58	9	40.42	9
4	Incorrect weight and measurement by businessman	49.58	7	45.42	6	47.50	7
5	Low price of good quality product	55.83	4	60.00	3	57.92	3
6	Unnecessary deduction	43.33	9	38.33	8	40.83	8
7	Bounded by a local businessman	53.75	5	44.17	7	48.96	6
8	Minimum support price not fixed by the government	81.67	1	70.83	1	76.25	1
9	Very high fluctuation in price	73.75	2	70.42	2	72.08	2
Overall		56.85		51.67		54.26	

r_s = Rank correlation,
 ** = Significant at 1% level

$r_s = 0.86^{**}$
 $t = 4.59$

The value of rank order correlation r_s was to be 0.86. It indicates positive correlation. The calculated value of 't' (4.59) was higher than it's table value at 1 per cent level of significance. This leads to conclusion that there is association between the ranks assigned by tribal and non-tribal coriander growers in different aspects of marketing constraints in spite of difference in magnitude of mean per cent score.

4. Constraints related to technical as perceived by respondents regarding adoption of coriander production technology.

A critical examination of table 4. reveals that overall coriander growers were facing major problem lack of knowledge about the grading and standardization, lack of knowledge about recommended seed rate and lack of knowledge of chemical weed control with 51.04, 46.21 and 45.63 MPS, respectively followed by lack of knowledge about cultivation of high yielding varieties with

41.67 MPS in the adoption of improved coriander production. Lack of knowledge of about the plant protection measures and poor knowledge about dose of chemical fertilizers were ranked 5th and 6th, respectively. Least problems were faced by them was related to poor knowledge about the irrigation management and unavailability of technical guidance.

An effort was also made to find out the relationship in perception of technical constraints between tribal and non-tribal coriander growers. The calculated value of rank order correlation r_s was 0.81. It indicates positive correlation. The calculated value of 't' (3.74) was higher than it's table value at 1 per cent level of significance. This leads to conclusion that there is an association between the ranks assigned by non-tribal and tribal coriander growers in different aspects of technical constraints in spite of difference in magnitude of Mean Percent Score.

Table 4. Constraints related to technical as perceived by the respondents in adoption of coriander production technology.

S.No.	Constraints	Tribal(n=80)		Non-Tribal(n=80)		Overall(n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Lack of knowledge about seed treatment	42.50	7	26.67	7	34.58	7
2	Lack of knowledge about cultivation of high yielding variety	51.67	4	31.67	4	41.67	4
3	Lack of knowledge about the grading and standardization	58.43	1	43.75	1	51.04	1
4	Lack of knowledge about the recommended seed rate	56.67	2	35.75	3	46.21	2
5	Poor knowledge about the dose of chemical fertilizer	46.67	5	25.83	8	36.25	6
6	Lack of knowledge about plant protection measures	45.42	6	30.83	5	38.13	5
7	Poor knowledge about the irrigation management	39.17	9	28.42	6	33.79	8
8	Lack of knowledge about the chemical weed control	54.58	3	36.67	2	45.63	3
9	Unavailability of technical guidance	41.67	8	25.00	9	33.33	9
Pooled		48.53		31.62		40.07	

r_s = Rank correlation,

** = Significant at 1% level

$$r_s = 0.81^{**}$$

$$t = 3.74$$

5. Miscellaneous constraints as perceived by respondents regarding adoption of coriander production technology.

A critical examination of table 5 reveals that overall respondents were facing major constraints regarding to cloudy weather, rainfall at the time of flowering and seed formation with 78.13 MPS. Further constraints which were faced relatively lesser extent were early sown crop affected by the low temperature, unable to risk bearing capacity, harvested crop affected by the wind, late sowing reduce the yield and more insect pest incidence with 65.21, 65.96, 61.88, 58.54 and 54.97 MPS, respectively.

The table further shows that tribal coriander growers the major constraints regarding to cloudy weather, rainfall at the time of flowering & seed formation and early

sown crop affected by low temperature with 80.42, and 69.17 MPS, respectively. Further constraints related to which faced relatively extent were harvested crop affected by wind, unable to risk bearing capacity, late sowing reduce the yield and more insect pest incidence with 64.17, 61.67, 61.25 and 65.00 MPS, respectively.

An effort was also made to find out the miscellaneous constraints between tribal and non-tribal coriander growers. The calculated value of rank order correlation r_s was 0.82. It indicates positive correlation. The calculated value of 't' (2.96) was higher than it's table value at 1 per cent level of significance. This leads to conclusion that there is an association between the ranks assigned by tribal and non-tribal coriander growers in different aspects of miscellaneous constraints in spite of difference in magnitude of Mean Percent Score.

Table 5. Miscellaneous constraints as perceived by the respondents in adoption of coriander production technology.

S.No.	Constraints	Tribal(n=80)		Non-Tribal(n=80)		Overall(n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Cloudy weather, rainfall at the time of flowering and seed formation	80.42	1	75.83	1	78.13	1
2	Early sown crop affected by low temperature	69.17	2	61.25	3	65.21	2
3	Harvested crop affected by the wind	64.17	3	59.58	4	61.88	4
4	Unable to risk bearing capacity	61.67	4	66.25	2	63.96	3
5	Late sowing reduce the yield	61.25	5	55.83	5	58.54	5
6	More insect pest incidence	60.00	6	49.58	6	54.79	6
Pooled		66.11		61.39		63.75	

r_s = Rank correlation,
 ** = Significant at 1% level

$r_s = 0.82^{**}$
 $t = 2.96$

6. Overall constraints perceived by the respondents in adoption of coriander production.

The data in table 6 reveals that among the four categories of constraints, input, marketing, technical and miscellaneous. Out which miscellaneous constraints was

showed highest intensity. This constraint was faced by overall as well as tribal and non-tribal respondents. Miscellaneous constraints followed by input constraints, marketing constraints in overall. Technical constraints were perceived least by overall, tribal as well as non-tribal respondents.

Table 6. Overall constraints perceived by the respondents in adoption of coriander production technology.

S. No.	Constraints related to	Tribal(n=80)		Non-Tribal(n=80)		Overall (n=160)	
		MPS	Rank	MPS	Rank	MPS	Rank
1	Input constraints	55.67	3	53.62	2	54.65	2
2	Marketing constraints	56.85	2	51.67	3	54.26	3
3	Technical constraints	48.52	4	31.67	4	40.09	4
4	Miscellaneous constraints	66.11	1	61.39	1	63.75	1
Pooled		56.78		49.58		53.18	

r_s = Rank correlation,
 ** = Significant at 1% level

$r_s = 0.80^{**}$
 $t = 1.88$

The calculated value of rank order correlation (r_s) was to be 0.80 It indicates positive correlation. The calculated value of 't' (1.88) was higher than its table value at 1 per cent level of significance, which leads to the conclusion that there is association in realization of overall constraint between tribal and non-tribal coriander growers.

These findings are in the line of finding of Nagar (2006) who found that major constraints in adoption of coriander production technology were cloudy weather, rainfall at the time of flowering and seed formation; minimum support price is not fixed by the government, very high fluctuation in price and lack of knowledge about grading and standardization.

CONCLUSION

Among the four constraints, constraints related to miscellaneous was the major constraints perceived by the coriander growers. This constraint was followed by constraints related to input, marketing. Least perceived constraints were technical constraints. The overall

constraints faced by the tribal respondents were 56.78 MPS. Whereas in case of non-tribal respondents it was 49.58 MPS. There were rank order correlations in all aspects of constraints between tribal and non-tribal coriander growers.

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