

# Constraints in Production and Marketing of Citrus Fruit in Jammu region of J&K State

Anil Bhat<sup>1\*</sup>, Jyoti Kachroo, Manish Sharma and Rajinder Peshin

<sup>1</sup>Sher-e-Kashmir University of Agricultural Sciences and Technology – Jammu, Faculty of Agriculture, Chatha, J&K – 180009, India.

\*Corresponding author: anilxb@rediffmail.com

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## ABSTRACT

The various production and marketing constraints faced by the Citrus growers of various districts of Jammu region were studied by selecting a sample of 192 citrus growers from four districts of Jammu region and suggestions were also made to overcome the said constraints. The data revealed that in Jammu region as a whole it was observed that in the cultivation of citrus several constraints such as lack of finance and credit facilities, inadequate irrigation facilities, non availability of good quality seedlings, farmyard manure, educated members of their family go outside and lack of latest technical knowledge were predominant and expressed by most of the farmers. In the process of marketing, lack of processing units and marketing societies was the major constraint as expressed by almost all the respondents. Moreover, not getting remunerative price for the produce, un-organized marketing, low price paid to farmers, less demand of fruits, lack of market information and cheating in marketing by the middlemen in the form of malpractices, high and undue marketing margins and deductions in the market were the other major problems expressed by the farmers. To overcome the constraints the 100 per cent respondents suggested that government should take initiative to establish fruit processing units in rural areas. There were other large number of respondents who demanded the bank loan facility at nominal interest rates and at proper time. The majority of the farmers also expressed that adequate provision for obtaining remunerative prices be made available and market information regarding market prices by opening of information centre at village level should be made available to them were also few suggestions given by them.

**Keywords:** citrus, production, marketing, constraints

Citrus is one of the most important fruit crops of Jammu region of Jammu and Kashmir state. The cultivation of citrus is mainly concentrated in Jammu, Rajouri, Kathua and Samba districts covering about 73 per cent of the total area in the state. Although the area and production under crop is increasing it is quite low and is at slow pace because the farmers face number of constraints in use of resources and production (Anonymous, 2009b).

However, the farmers may face a number of other constraints also which might cause difficulty in marketing of the citrus fruits. The perishable nature of the citrus fruits results into high risks in the production and marketing and the farmers at this stage are not capable to take right decisions regarding cultivation and marketing except progressive farmers. Therefore, an attempt has been

made in this study to understand the problems that were faced by the growers in production and marketing of citrus in the area under study. If the constraints in the production and marketing of citrus are identified and feasible suggestions are made to overcome these constraints, then the production of citrus fruits can be increased further in the Jammu region. In view of this, the present study was undertaken with the objectives to study the constraints faced by the citrus growers in production and marketing and to obtain the suggestions made by the respondents to overcome the constraints faced by them.

## Materials and Methods

A multi stage sampling was adopted for the selection of samples, with districts, blocks, villages and orchardists as the first, second, third and fourth

**Table 1. Constraints faced by the sample orchardists in production of citrus in Jammu, Rajouri, Kathua and Samba district of Jammu region**

S.No.	Constraints Jammu (N=48)		Districts						
			Rajouri (N=48)	Kathua (N=48)	Samba (N=48)	Overall (N=192)	Chi square (p- value)	Rank	
A.	Production Problems								
1	High labour cost	Yes	16 (33.33)	20 (41.67)	26 (54.17)	17 (35.42)	79 (41.15)	5.226 (0.156)	X
		No	32 (66.67)	28 (58.33)	22 (45.83)	31 (64.58)	113 (58.85)		
2	Non-availability of labour during peak period	Yes	20 (41.67)	12 (25.00)	15 (31.25)	25 (52.08)	72 (37.50)	8.711* (0.033)	VIII
		No	28 (58.33)	36 (75.00)	33 (68.75)	23 (47.92)	120 (62.50)		
3	Non availability of well decomposed FYM in time	Yes	34 (70.83)	40 (83.33)	24 (50.00)	29 (60.42)	127 (66.15)	11.812** (0.008)	V
		No	15 (29.17)	8 (17.67)	23 (50.00)	19 (39.58)	65 (33.85)		
4	Occurrence of citrus diseases (citrus canker, powdery mildew etc)	Yes	20 (41.67)	10 (20.83)	6 (12.50)	4 (8.33)	40 (20.83)	19.200** (0.000)	IV
		No	28 (58.33)	38 (79.17)	42 (87.50)	44 (91.67)	152 (79.17)		
5	High cost of pesticides	Yes	21 (43.75)	18 (37.50)	11 (22.92)	14 (29.17)	64 (33.33)	5.438 (0.142)	IX
		No	27 (56.25)	30 (62.50)	37 (77.08)	34 (70.83)	128 (66.67)		
6	Inadequate or no irrigation facilities	Yes	36 (75.00)	46 (95.83)	25 (52.08)	19 (39.58)	126 (65.63)	39.619** (0.000)	III
		No	12 (25.00)	2 (4.17)	23 (47.92)	29 (60.42)	66 (34.37)		
7	Lack of good quality seedlings in sufficient quantity	Yes	38 (79.17)	42 (87.50)	32 (66.67)	30 (62.50)	142 (73.96)	9.843* (0.020)	VI
		No	10 (20.83)	6 (12.50)	16 (33.33)	18 (37.50)	50 (26.04)		
8	Lack of latest technical knowledge	Yes	28 (58.33)	45 (93.75)	19 (39.58)	16 (33.33)	108 (56.25)	43.175** (0.000)	II
		No	20 (41.67)	3 (6.25)	29 (60.42)	32 (66.67)	84 (43.75)		
9	Lack of finance and credit facilities	Yes	44 (91.67)	43 (89.58)	34 (70.83)	38 (79.17)	159 (82.81)	9.477* (0.024)	VII
		No	4 (8.33)	5 (10.42)	14 (29.17)	10 (20.83)	33 (17.19)		
10	Educated members go outside	Yes	14 (29.17)	10 (20.83)	40 (83.33)	37 (77.08)	101 (52.60)	59.725** (0.000)	I
		No	34 (70.83)	38 (79.17)	8 (16.67)	11 (29.92)	91 (47.40)		

Note\* Significant at 5% level of significance (p&lt;0.05)

\*\* Significant at 1% level of significance (p&lt;0.01)

**Table 2: Constraints faced by the sample orchardists in marketing of citrus in Jammu, Rajouri, Kathua and Samba district of Jammu region**

S.No.	Constraints Jammu (N=48)		Districts						
			Rajouri (N=48)	Kathua (N=48)	Samba (N=48)	Overall (N=192)	Chi square (p- value)	Rank	
A.	Marketing Problems								
1	Not getting remunerative price for the produce	Yes	40 (83.33)	30 (62.50)	34 (70.83)	40 (83.33)	144 (75.00)	5.832 (0.120)	X
		No	8 (16.67)	18 (37.50)	14 (29.17)	8 (16.67)	48 (25.00)		
2	Packing material is costly	Yes	16 (33.33)	27 (56.25)	23 (47.92)	27 (56.25)	93 (48.44)	6.177 (0.103)	IX
		No	32 (66.67)	21 (43.75)	25 (52.08)	21 (43.75)	99 (51.56)		
3	Packages are not returned to the growers	Yes	4 (8.33)	6 (12.50)	0 (0.00)	2 (4.17)	12 (6.25)	7.111 (0.068)	VIII
		No	44 (91.67)	42 (87.50)	48 (100.00)	46 (95.83)	181 (93.75)		
4	Less demand of fruits because of competition of other fruits	Yes	38 (79.17)	24 (50.00)	18 (37.50)	25 (52.08)	105 (54.69)	17.608** (0.001)	IV
		No	10 (20.83)	24 (50.00)	30 (62.50)	23 (47.92)	87 (45.31)		
5	Cheating by middlemen	Yes	18 (37.50)	22 (45.83)	33 (68.75)	30 (62.50)	103 (53.65)	10.909* (0.012)	V
		No	30 (62.50)	26 (54.17)	15 (31.26)	18 (37.50)	89 (46.35)		
6	High cost of transportation	Yes	15 (31.25)	18 (37.50)	29 (60.42)	35 (72.92)	97 (50.52)	23.500** (0.000)	III
		No	33 (68.75)	30 (62.50)	19 (39.58)	13 (27.08)	95 (49.48)		
7	High commission charges	Yes	14 (29.17)	20 (41.67)	17 (35.42)	15 (31.25)	66 (34.38)	.938 (0.816)	XIII
		No	34 (70.83)	28 (58.33)	31 (64.58)	33 (68.75)	126 (65.62)		
8	Non receipt of payment in time	Yes	2 (4.17)	1 (2.08)	0 (0.00)	0 (0.00)	3 (1.56)	3.725 (0.293)	XI
		No	46 (95.83)	47 (97.92)	48 (100.00)	48 (100.00)	189 (98.44)		
9	Lack of market information	Yes	45 (93.75)	41 (85.42)	25 (52.08)	10 (20.83)	121 (63.02)	68.902** (0.000)	II
		No	3 (6.25)	7 (14.58)	23 (47.92)	38 (79.17)	71 (36.98)		
10	Un-organised marketing and low price paid to farmers	Yes	42 (87.50)	29 (60.42)	34 (70.83)	34 (70.83)	125 (65.10)	9.044* (0.029)	VI
		No	6 (12.50)	19 (39.58)	14 (29.17)	14 (29.17)	67 (34.90)		

11	High perishability of the fruits	Yes	16 (33.33)	20 (41.67)	20 (41.67)	18 (37.50)	74 (38.54)	.967 (0.809)	XII
		No	32 (66.67)	28 (58.33)	28 (58.33)	30 (62.50)	118 (61.46)		
12	Non-availability of market	Yes	16 (33.33)	32 (66.67)	0 (0.00)	1 (2.08)	49 (25.52)	74.613** (0.000)	I
		No	32 (66.67)	16 (33.33)	48 (100.00)	47 (97.92)	143 (74.48)		
13	Lack of processing units and co-operative societies	Yes	48 (100.00)	46 (95.83)	48 (100.00)	44 (91.67)	186 (96.88)	7.570 (0.056)	VII
		No	0 (0.00)	2 (4.17)	0 (0.00)	4 (8.33)	6 (3.12)		

Note\* Significant at 5% level of significance ( $p < 0.05$ )

\*\* Significant at 1% level of significance ( $p < 0.01$ )

**Table 3: Distribution of respondents according to their suggestion made to overcome their problems faced in production and marketing of citrus fruit in Jammu region**

(N = 192)

S.No.	Suggestions	Number	Per cent
1	Insecticide, pesticides and fertilizer should be provided in time and at cheaper rate	145	75.52
2	Produce the quality seedling to provide the farmers by reputed institutes	80	41.67
3	Give the details about the new production technology and techniques through the training cum demonstration	155	80.73
4	Supplied the drip irrigation facilities with subsidy on it	124	64.58
5	Bank loan facilities to be increase	170	88.54
6	Bank loan to be available in a nominal interest at proper time	185	96.35
7	Prepare the tar road for connectivity with farm	85	44.27
8	Government should give minimum price support price to produce	102	53.13
9	Packing materials should be made available at reasonable rate	90	46.88
10	Storage facilities for fruits should be provided at nearby locality	168	87.50
11	Government should motivate the farmers for adopting the group marketing	98	51.04
12	Open the information centre at village level to provide information about market prices of different markets	177	92.13
13	Government should take initiative to start fruit processing units in rural areas	192	100.00
14	Adequate provision for obtaining remunerative prices be made available	159	82.81
15	Government control on middlemen	161	83.85

stage sampling units for citrus crop. Rajouri, Kathua, Jammu and Samba districts were selected because these four districts covered the maximum area under its cultivation (Rajouri covered 22.93 per cent, Kathua 20.56 per cent, Jammu 16.37 per cent and Samba 12.67 per cent out of the total area under citrus cultivation in Jammu region) (Anonymous, 2009a). Then three blocks from each district were selected on the basis of area under citrus fruit cultivation and from each

block two villages were selected. The ultimate units, that is, orchardists were selected randomly from each village so as to constitute a total sample of 192 (8 from each village) orchardists from the whole area under study. Data from citrus growers were collected through personal interview on recall basis with the help of pre-tested schedule. Among the citrus fruits, orange, kinnow and lemon were selected to be included in the study.

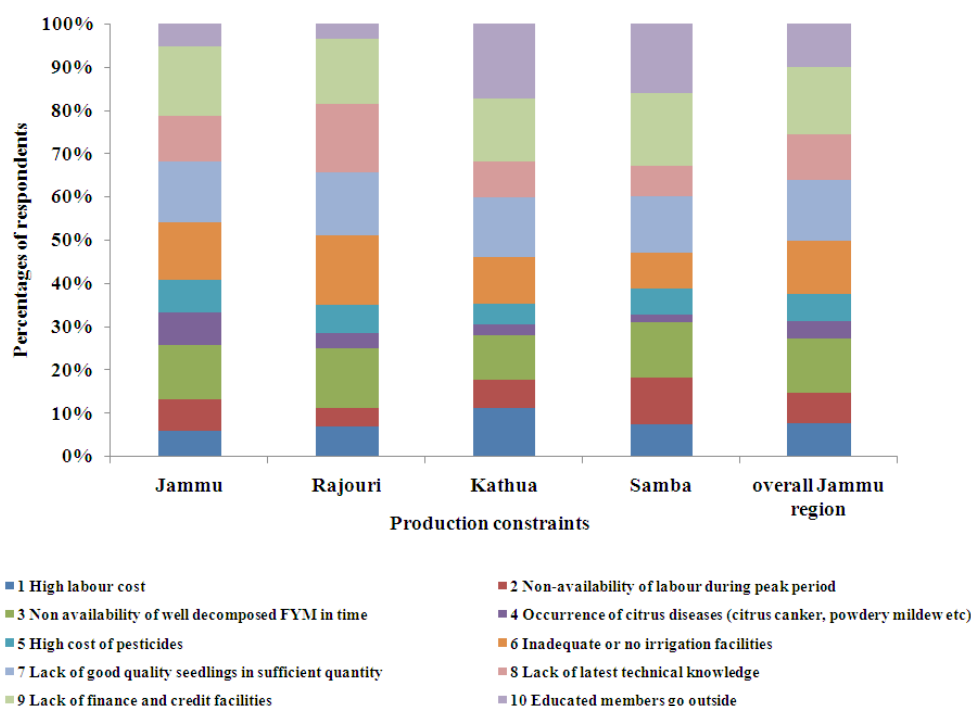


Figure 1: Per cent production constraints of fruit production in various districts of Jammu region

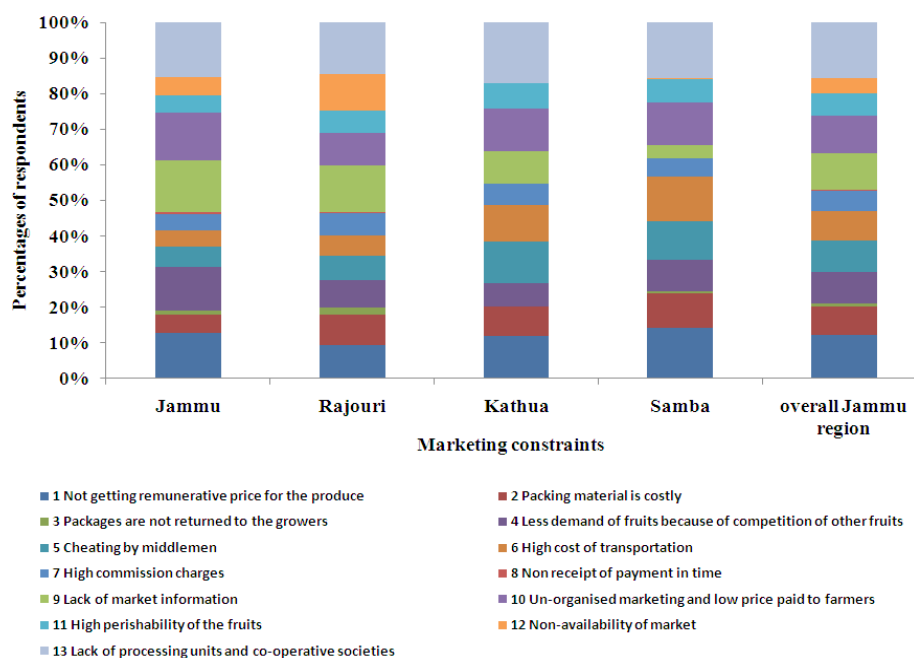


Figure 2: Per cent marketing constraints of fruits grown in various districts of Jammu region

The data thus collected were compiled, tabulated and subjected to the appropriate statistical analysis. The information on different aspects of production and marketing constraints faced by the orchardists was tabulated into frequency tables and expressed in percentages against each of the item.

Chi-Square test was applied to find out whether there is any significance of constraints on the production and marketing of citrus fruits with respect to districts. Ranks were also applied on the basis of  $\chi^2$  – value to indicate which constraint has more impact and which has less. The more the value

more is the significance of that particular constraint on production and marketing of citrus fruit.

## Results and Discussion

The production constraints faced by citrus growers in the sample area (Jammu, Rajouri, Kathua, Samba and overall Jammu region) are presented in Table 1 and Fig 1. The major constraints faced by the orchardists of the study area in production were that of irrigation facilities (75.00 per cent, 95.83 per cent, 52.08 per cent, 39.58 per cent and 65.63 per cent respectively) and lack of finance and credit facilities (91.67 per cent, 89.58 per cent, 70.83 per cent, 79.17 per cent and 82.81 per cent, respectively) and hence farmers had difficulty because the good quality seedlings, FYM and pesticides were more expensive and unavailable which contributed to the additional cost of cultivation and are of opinion that the government fails to provide these inputs timely. The other constraint in fruit production were the occurrence of citrus diseases (41.67 per cent, 20.83 per cent, 12.50 per cent, 8.33 per cent and 20.83 per cent, respectively), lack of latest technical knowledge (58.33 per cent, 93.75 per cent, 39.58 per cent, 33.33 per cent and 56.25 per cent, respectively) and non-availability of labour (41.67 per cent, 25.00 per cent, 31.25 per cent, 52.08 per cent and 37.50 per cent, respectively) which severely limited actual production in spite of great inherent production. These findings are in close conformity with Phuse *et al.* (2008). The p-value in table 1 also indicates the significance of the constraints on the production of crops. Non-availability of well decomposed FYM in time (11.812), occurrence of citrus diseases (19.200), inadequate irrigation facilities (39.619), lack of latest technical knowledge (43.175) and educated members go outside (59.725) were found to be significant at 1 per cent level of probability whereas Non-availability of labour during peak period (8.711), Lack of good quality seedlings in sufficient quantity (9.843) and lack of finance and credit facilities (9.477) were significant at 5 per cent level of probability. The variables like high labour cost and high cost of pesticides were non-significant.

The marketing constraints faced by the citrus growers of the Jammu, Rajouri, Kathua, Samba district and Jammu region as a whole presented in Table 2 and Fig. 2 depicted that due to either lack or

high cost of transportation in (31.25 per cent, 37.50 per cent, 60.42 per cent, 72.92 per cent and 50.52 per cent, respectively) and lack of market information (93.75 per cent, 85.42 per cent, 52.08 per cent, 20.83 per cent and 63.02 per cent, respectively), the fruits could not reach the right market at the right time, which compelled the fruit growers to sell the fruits in local market. Less demand of citrus fruit because of competition of other fruits resulted into low price received for the produce was another major marketing constraint. The problem of lack of processing units and co-operative societies expressed by 100 per cent respondents in Jammu and Kathua district and 95.83 per cent, 91.67 per cent, respectively in Rajouri and Samba district could have been the better option for the producers of the sample area to overcome the marketing problems upto certain extent but these units and societies were already facing shortage in the said area. These findings are supported by Sharan and Singh (2002).

The table further revealed that the variables like less demand of fruits because of competition of other fruits (17.608), high cost of transportation (23.500), lack of market information (68.902) and non-availability of market (74.613) were found to be positive and highly significant at 1 per cent level of probability whereas the other two variables cheating by middlemen (10.909) and unorganized marketing and low price paid to farmers (9.044) were positive and significant at 5 per cent level of probability. The variables such as not getting remunerative price for the produce, packing material is costly, packages are not returned to the growers, high commission charges, non receipt of payment in time, high perishability of the fruits and lack of processing units and co-operative societies were non-significant.

The distribution of respondents by their suggestion made to overcome their production and marketing problems in Jammu region is presented in Table 3. They were asked to offer suitable constructive suggestions to overcome the production and marketing constraints of citrus crop encountered by them. The table revealed that among the various suggestions made by the respondents, government should take initiative to start fruit processing units in rural areas was the most important suggestion made by 100.00 per cent respondents. In a present market system for citrus, they do not get remunerative price



for the sale of citrus fruits. So there were 87.50 per cent respondents who demanded the storage facility at nearby locality. Also, 51.04 per cent respondents had expressed their desire for cooperative marketing through group market that would provide better remunerative prices for their produce. 53.13 per cent respondents demanded that the government should give minimum support price to their produce. 92.13 per cent respondents felt that the daily information about the market prices of different markets should be made available to them through the opening of village information centre. The 41.67 per cent respondents also suggested the production of quality seedlings, 75.52 per cent demanded availability of insecticides and fertilizer at cheaper rate. The above findings are in close conformity with Ajotikar *et al.* (2001) and Phuse *et al.* (2008) and suggested that there is a need to make intensive efforts for providing latest technological information to the citrus growers.

### Conclusion and Policy Suggestions

The constraints faced by the orchardists of Jammu region as a whole in production and marketing were mainly lack of finance and credit facilities (82.81 per cent), lack of quality seedlings (73.96 per cent), non availability of well decomposed FYM in time (66.15 per cent), inadequate irrigation facilities (65.63 per cent), lack of processing units and cooperative societies (96.88 per cent), unorganised marketing and low price paid to farmers (65.10 per cent), lack of market information (63.02 per cent) and cheating by middlemen (53.65 per cent). As the 82.81 per cent respondents of the Jammu region were facing the problem of finance and credit facilities, so NABARD and other banks should come forward and institutional credit facilities should be made available to orchardists and the policy planners should emphasized such need in the future planning. 96.88 per cent respondents of the Jammu region were

facing the problem of lack of processing units and co-operative societies. So new cooperative marketing societies needs to be formed and old ones to be re-established, which will further ensure the marketing opportunities of the produce.

The efforts for regulated market or providing all the help to the growers for entering into direct market by providing the market information services, as about 63.02 per cent respondents have desired this as one of the major constraints. The government should also encourage the policies which will check the inadequate length and undue influence of intermediaries in the distribution of citrus fruit.

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