

Perception of Growers on Contract Farming in Nagpur Mandarin

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ABSTRACT: Nagpur mandarin orchards are concentrated mostly in Amravati and Nagpur districts of the Vidarbha region of Maharashtra. The present study was conducted during 2014-15 in these two districts with the objective of knowing the growers perception towards contract farming and find out the issues governing profitability. The total sample of 300 was derived from six taluka of Amravati and four talukas of Nagpur district using simple random sampling. The data collected through a structured interview schedule were analyzed using the t-test of significance of difference between sample and population means. The study found that education ($t=4.685$), communication behavior ($t=2.002$), annual income ($t=2.442$) and per hectare productivity ($t=2.444$) showed significant relationship regarding the perceived acceptability of contract farming. The guaranteed and fixed pricing structures was perceived as the main reason which attracted the attention of maximum respondents (RBQ=286.25). The shield against market fluctuations ranked to be the second (RBQ=270) in terms of relative advantages. It shows that, like any other farmers the mandarin growers too expect fair and assured price to their farm produce.

Key words: Nagpur mandarin, contract farming, perception

INTRODUCTION

Nagpur mandarin (*Citrus reticulata* Blanco) is the main fruit crop of Central India. Its area has been increasing every year due to the growing interest of farmers in Madhya Pradesh and Rajasthan. The crop productivity is affected by knowledge and input gap, whereas profitability is affected due to marketing constraints. Many Nagpur mandarin growers regularly harvest 25-30 tons/ha, but the average productivity hovers between 9-10 tons/ha. Moreover, due to sale to pre-harvest contractors the producer's share in consumer rupee is 35 per cent as against 53 per cent when sold directly to the consumers. Such glaring difference in terms of profit margin dampens their spirit of producing more but receiving fewer profit margins. This issue can be resolved only if there is insulation from market risk and subsequently their focus would shift from price concern to productivity concerns. The Nagpur mandarin growers have been expressing their anxiety about remunerative prices since long. Lack of an alternative to the existing marketing system puts them into quagmire and thereby compels to sell it to pre-harvest contractors. Contract farming is a system where companies engaged in processing and or marketing of

agricultural/horticultural produce enters into contract with the farmers. In most schemes, a company provides advice, farm inputs, credit in return for farm produce of a certain minimum quality or grade with a rate specified in advance. Contract farming is confined to certain crops in select pockets. However, there is enormous scope for contract farming. (L. V. Hirevenkanagoudar, et.al., 2004) Most of the companies do the job of capacity building and skills transfer besides supplying the latest technology package to the farmers. Hence to ascertain the prospects of contract farming in citrus by knowing the growers perception towards contract farming as an alternative to their current problem of efficient marketing and find out the issues governing profitability this study was undertaken.

METHODOLOGY

The sample comprised of farmers in the Amravati and Nagpur districts of the Vidarbha region of Maharashtra. The respondents comprised of Nagpur mandarin growers whose orchards attained bearing age and had previous experience of marketing their produce. Six talukas from Amravati and four talukas from Nagpur district were selected. For collection of

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data, simple random sampling method was used and a structured interview schedule based on the objectives of the study was administered to the respondents. Three villages in each taluka covering large acreage under mandarin and ten respondents from each village formed the total sample of 300. The statements to ascertain feasibility of contract farming were measured on four-point continuum

namely, feel strongly, feel moderately, feel neutral and not feeling with the score 'four', 'three', 'two' and 'one' respectively. The eight issues governing profitability were enlisted and against it the responses were elicited on three point grading scale with appropriate coding. The rank based quotient for each aspect was worked out and the rank order was decided.

<i>Amravati district</i>		<i>Nagpur district</i>	
<i>Taluka</i>	<i>Villages</i>	<i>Taluka</i>	<i>Villages</i>
1. Teosa	1. Satargaon 2. Nimbhora(Delwadi) 3. Bharaswadi	1. Saoner	1. Kharduka 2. Kelwad 3. Umri
2. Chandur(rly)	1. Amla 2. Karla 3. Kawatha Kadu	2. Narkhed	1. Aagra 2. Belona 3. Mohagaon (Bhadade)
3. Chandur Bazaar	1. Sirasgaon (Kasba) 2. Bramhanwada (Thadi) 3. Ghatladki (Kurankhed)	3. Kalmeshwar	1. Mhasepathar 2. Pipla(Kinkhede) 3. Dhapewada
4. Achalpur	1. Dhotarkheda 2. Wadgaon (Fattepur) 3. Gaurkheda (Kumbhi)	4. Katol	1. Dhamangaon 2. Masod 3. Digras
5. Morshi	1. Sawarkhed 2. Salbardi 3. Ghoddev		
6. Warud	1. Tembhurkheda 2. Ghorad 3. Bhemadi (Mothi)		

RESULTS AND DISCUSSION

Perceived acceptability of contract farming

Perception enables an individual to interpret information to form a coherent and unified view of the subject or an issue. The data on perceived acceptability of contract farming in Table 1 showed highly significant relationship between education (t=4.685) and perceived acceptability of contract farming at 1 per cent level of significance. It is indicative of the fact that, openness to change and acceptance for the new initiative has bearing on the level of education. The communication behavior (t=2.002), annual income (t=2.442) and per hectare productivity (t=2.444) also showed significant relationship at 5 per cent level of significance. It connotes that, better educated ones had improved communication behavior, which also got reflected in their annual income and per hectare productivity. They were more receptive to change than their counterparts who exhibited skepticism about the possible advantages of the contract farming. The rest of variables did not show any significant relationship owing to the positive outlook on contract farming by

majority; considering their past experiences in marketing and qualms about the unfair profit margin.

Table 1
Regression analysis between selected independent variables and perceived acceptability of contract farming (N=300)

<i>Sr No.</i>	<i>Variables</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>'t' value</i>
1.	Education	4.09	1.03	4.685**
2.	Social participation	1.21	0.69	0.957
3.	Occupation	2.69	0.70	1.139
4.	Communication behavior	10.10	1.92	2.002*
5.	Land holding under citrus	6.37	14.06	1.031
6.	Irrigated land holding	6.05	13.72	0.871
7.	Annual income from citrus	5,65,987	7,17,821	2.442*
8.	Average productivity	2.15	1.27	2.444*

** significant at 1% level * significant at 5 % level

- Education: Primary=1, middle school=2, High school=3, College=4, Graduate=5, Post graduate=6
- Social Participation: President/vice president=4, Secretary=3, Member=2, Non-member=1
- Occupation: Farming only=3, Farming + Govt. service=2, Farming + business=1
- Communication behavior : Regularly=3, Occasionally=2, Rarely=1
- Average productivity(per ha): 0-5 tns=1, 5-10 tns=2, 10-15 tns=3, 15-20 tns=4, 20-25 tns=5

Perceived advantages of contract farming

The perceived advantages of contract farming in citrus are presented in table 2. The guaranteed and fixed pricing structures was perceived as the main advantage which attracted the attention of maximum respondents (RBQ=286.25). The shield against market fluctuations ranked to be the second (RBQ=270) benefit. It shows that, like any other farmers the mandarin growers too expect fair and assured price to their farm produce. The findings are in conformity with Songsak Sriboonchitta and Aree Wiboonpoongse (2008), who reported that primary reasons of farmers' participation in contract farming were market certainty and price stability. Nalini Arumugam and Mohd Annas Bin Shamsudin (2013) also reported that the three most important reasons for participation in contract farming are - firstly market for their produce was guaranteed by the buyers or contractors; secondly, improved farming practices; and thirdly, price security of produce by the contractor. The reduced transaction cost (RBQ=266.25) as the third important factor connotes the underlying concern for the various taxes and commissions doled out by the growers during marketing. It is followed by provision

of production management services (RBQ=258.75) highlights their concern for availability of farm inputs in time. The findings are in conformity with Parmod Kumar (2007) who observed that, above 75 percent direct contract farmers and 60 percent indirect contract farmers, indicated that the system provided price protection and technical know-how and therefore it should be propagated at a wider scale and more crops should be brought in its net. The skill transfer (RBQ=241.25), insurance based contract (RBQ=239), access to credit linked input supply (RBQ=205.75) were rated to be the fifth, sixth, seventh and eighth in order of preference. The concern for reduction in pre and post harvest losses due to advisory services of the contract farming company (RBQ=203) and better quality produce (RBQ=186.25) were relegated to ninth and tenth position. It implies that their concern primarily ends or rather limits to volume of production and getting optimum price to their produce.

The Nagpur mandarin fruit crop like any other crops is prone to the vagaries of nature. The orchardist bears in mind such perceived risks and treads the path ahead with optimism of better price for his produce.

Table 2
Perceived advantages of contract farming (N=300)

Sr. No.	Items of the perceived advantages	RBQ	Rank Order
1	Provision of production management services	258.75	IV
2	Access to credit/credit linked input supply	215	VII
3	Access to improved/appropriate technology	205.75	VIII
4	Skill transfer	241.25	V
5	Guaranteed and fixed pricing structures	286.25	I
6	Reduction in pre and post harvest losses due to monitoring & advice of the contract farming company.	203	IX
7	Reduced transaction cost	266.25	III
8	Better quality produce	186.25	X
9	Insurance based contract	239	VI
10	Shield against market fluctuations	270	II

Table 3
Risk Factors in Nagpur Mandarin Farming (N = 300) (PMS) =900

Sl. No.	Risk Factors	Total Score	Mean Score	Rank Order
1	Hailstorm	615	87.85	V
2	Price uncertainty	811	117	I
3	Inadequate water for irrigation	520	74.28	VI
4	Fruit sucking moth/fruit fly	639	91.28	IV
5	Bumper production and fewer prices(Distress Sale)	723	103.28	III
6	Incidence of <i>Phytophthora</i> induced diseases like gummosis	513	73.28	VII
7	Excessive fruit drop due to unseasonal stormy weather and rains	776	110.85	II

*Possible Maximum Score

The risks like attack of fruit sucking moth and fruit fly in the previous years can be effectively managed with the available technology. However, certain risks are beyond his control that adversely affects the quality as well as quantity of produce and in turn profitability. The data in table 3 enlists the risks factors in citrus farming and the questions were asked on three point grading scale. The rank order shows the prioritization of risk factors perceived by the growers.

The price uncertainty was ranked the first highest risk factor followed by excessive fruit drop. The bumper production and fewer prices stood to be the third important risk factor whereas fruit sucking moth/ fruit fly was considered to be the fourth risk factors. The inadequate irrigation and incidence of *Phytophthora* induced diseases like gummosis relegated to the sixth and seventh position respectively.

Table 4
Perception on issues governing profitability (N = 300)*

Sl. No.	Issues governing profitability	Main		Secondary		Tertiary		RBQ	Rank
		f	%	f	%	f	%		
1	Selling the produce without proper grading and packing.	154	51.33	96	32.00	50	16.16	234.67	VII
2	Lack of government support / assistance in marketing the produce.	192	64.30	82	27.20	26	8.50	256.33	V
3	Middlemen, deciding the price of the produce.	186	62.00	94	32.00	20	6.00	255.33	VI
4	Lack of grower's co-operative organizations to facilitate group marketing.	152	50.66	116	38.66	32	10.66	240.00	VIII
5	Lack of or inadequate cold storage facilities in the market premises.	193	64.33	75	25.00	32	10.66	253.67	IV
6	Distress sale to pre-harvest contractors (due to immediate need of money and village tradition).	248	82.66	46	15.33	6	2.00	280.67	II
7	Over production and less market price	205	68.33	62	20.66	33	11.00	257.33	III
8	Unfair price	256	85.33	39	13.00	5	1.66	283.67	I

Although the overall profit margin is governed by the prevailing market rate at the time of sale, there are various interlinked issues playing its part in profitability. Table 4 delineates all such issues perceived to be of greater significance. Unfair price has been ranked as the number one followed by sale to pre-harvest contractors due to immediate need of money and over production and less price as the third important issue. The lack of or inadequate cold storage facilities in the market premises was rated as the fourth in order of importance. It means there is a

close connection among these four factors that govern profit margin. The lack of govt. support in marketing was ranked as fifth whereas the middlemen deciding the price of the produce as sixth and selling the produce without proper grading and packing as seventh in order of importance. The lack of grower's co-operative organizations to support group marketing was relegated to the last option. It points out towards the fact that the culture of co-operation has yet not been evolved in these areas.

Table 5
Opinion on what should constitute the agreement? (N = 300)

Sl. No.	Components in agreement doc.	Feel strongly		Feel moderately		Feel neutral		Not feeling		RBQ	Rank Order
		f	%	f	%	f	%	f	%		
1	Contract duration.	244	81.33	46	15.33	..	0.0	10	3.33	281	III
2	Quality standards.	180	60.00	60	20.00	40	13.33	20	6.66	250	V
3	Cultivation practices required by the sponsor.	62	20.66	92	30.67	83	27.66	63	21.00	188.25	VII
4	Advances and their recoveries	198	66.00	72	24.00	24	8.00	6	2.00	265.5	IV
5	Crop delivery arrangements.	246	82.00	42	14.00	8	2.66	4	1.33	282.5	II
6	Pricing arrangement and payment procedures	300	100	—	—	..	00	0	0.00	300.0	I
7	Insurance agreement and cost involved	169	56.33	88	29.33	36	12.00	7	2.33	254.75	VI

Table 5 enlists the priorities that should be taken cognizance while signing the agreement between growers and the contract farming company. The pricing arrangement and payment procedures received maximum preference followed by crop delivery arrangements and contract duration as the third. The advances and their recoveries as fourth and quality standards as fifth issue should find place in the agreements. Considering the climate change concerns, the respondents stressed the issue of crop insurance to be reflected in the agreement as sixth important issue and lastly the cultivation practices required by the sponsor.

CONCLUSION

On the basis of the above mentioned results and the discussion, it can be concluded that educated farmers were more responsive to the ideas of contract farming. Nonetheless, there was almost unanimity on welcoming the initiative if it offered the pre-decided assured price. Most of them candidly opined that, they cannot be good producers as well as good marketers. Hence, if the marketing part is taken care by the contract farming company that would address their major concern. Only after insulation from market risk, their focus can be shifted to increasing per hectare productivity. Based on their responses access to credit linked input supply would further help reinforce the bond between the company and the growers. However, presently the issue of government's

intervention in the contract farming agreement is not clear. In case of Punjab and then in Karnataka, the governments have decided to play its part. Similarly if the government of Maharashtra also comes forwards to be a part of the tripartite agreement, it will remove the apprehensions if any nurtured by them.

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