Research Paper

Agency involved and factor influencing net price of mango in South Gujarat region

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ABSTRACT

With the growing commercialization in agriculture, marketing of farm product especially that of mango is more important for growers. Present study was undertaken to examine, agencies involved in marketing of mango and identify the factors influencing net price of mango in South Gujarat Region. On the basis of larger area under mango, Pardi taluka of Valsad district was selected for study purpose. The investigation was based on the farm level data obtained by survey method from the sample of 70 cultivators, 7 villages are selected from Pardi taluka of Valsad district for the year 2007-08. Total quantity marketed was 627.80 crates, out of this the quantity of mango marketed were 63.78, 117.28 and 446.74 crates by the small, medium and large size group, respectively. Regarding quantity marketed through different agencies by sample growers, maximum quantity (82.26 %) was sold through co-operative society and minimum quantity (1.07%) was sold through wholesaler/commission agents. In functional analysis the different factor were regressed on the net prices, which indicated that R^2 value was 0.89, 0.87, 0.79 and 0.98 in case of medium, small, large and overall farm size group, respectively. It implied that 89, 87, 79 and 98 % influencing variation in net price of mango on medium, small, large and overall farm size group, respectively.

INTRODUCTION

The Mango (*Mangifera indica* L.) a member of Anacardiaceae family is the most important among the tropical fruits of India. It is the most popular and choicest fruit of India and one of the best fruit of the world. It occupies relatively the same position as enjoyed by the apple in the temperate world. It is considered as the 'National fruit' of India and is rightly known as the "King of the fruit". Mango is grown in all the parts of Gujarat State. However, it is not considered as commercial proposition except in South Gujarat Region. The area of mango in Valsad district was 21,840 ha and the production was 2, 03,112 MT. in the year 2006-2007. Considering above importance, the present investigation has been undertaken with the following specific objectives to study the agencies involved in Marketing of Mango and to identify the factors influencing net price of mango.

MATERIALS AND METHODS

On the basis of maximum area under mango, Pardi taluka of Valsad district in South Gujarat Region was selected. About 70 mango growers from 7 villages of Pardi taluka were selected and classified as Small (1.01 to 2.0 ha), Medium (2.01 to 4.0 ha) and Large (more than 4.0 ha) farmers group, respectively. The data on the various aspects of the study were collected by survey method from the selected cultivators by the personal interview method with the help of the specially designed pre-tested questionnaire on different aspects for the year 2007-08. The collected data was analyzed by tabular method, percentages and various statistical techniques. The multiple regression models were used to identify the effect of various factors in net amount received.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 \ldots\ldots\ldots\ldots b_{10}X_{10} + eu$$
where,

Y = Net amount received (Rs.)

X_1 = Distance of market (Km.)

X_2 = Total quantity of grade –I produce sold (per crate)

X_3 = Total quantity of grade –II produce sold (per crate)

X_4 = Total quantity of grade –III produce sold (per crate)

X_5 = Quantity of produce sold through co-operative marketing societies (Qtls.)

X_6 = Quantity of produce sold through wholesaler (q)

X_7 = Quantity of produce sold through PHC (pre harvest contractor) (q)

X_8 = Quantity of produce sold through fruit merchant (q)

X_9 = Quantity of produce sold during April –May (a)

X_{10} = Quantity of produce sold during May –June (q)

a = Constant

bi's = Regression coefficient and

eu = Error term

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as well as relevant discussion have been presented under following heads :

Monthly average quantity sold and per crate price received:

Table 1 revealed that, the total quantity marketed was 627.80 crates, out of this the quantity of mango marketed were 63.78, 117.28 and 446.74 crates by the small, medium and large size group, respectively. From the total quantity of mango 11.80 % and 11.75 % was sold in April first and second fortnight, respectively. Whereas, 29.53 % and 34.88 % of mango was sold in May first and second fortnight respectively. At overall level, the maximum quantity of mango was sold in second fortnight of May

Table 1 : Monthly average quantity sold and per crate price received (Quantity in Crates)								
Group	Quantity and value	April			May			June	Total quantity
		I st fortnight	II nd fortnight	Total	I st fortnight	II nd fortnight	Total		
Small	Quantity	7.4 (11.60)	11.10 (17.40)	18.50 (29.00)	18.95 (29.71)	22.47 (35.23)	41.42 (64.95)	3.86 (6.05)	63.78 (100.00)
	Value	4515.18 (610.15)	4704.54 (423.83)	9219.72 (498.36)	7354.6 (388.10)	5560.42 (247.45)	12915.02 (311.80)	676.80 (175.33)	22811.54 (357.65)
Medium	Quantity	13.76 (11.73)	20.18 (17.22)	33.94 (28.95)	34.65 (29.54)	40.86 (34.83)	75.51 (64.37)	7.83 (6.68)	117.28 (100.00)
	Value	8013.45 (582.37)	8688.29 (430.53)	16701.74 (492.09)	13319.90 (384.41)	9900.90 (242.31)	23220.80 (307.51)	1008.13 (128.75)	40930.67 (348.99)
Large	Quantity	52.92 (11.85)	80.16 (17.95)	133.08 (29.80)	131.83 (29.51)	155.63 (34.83)	287.46 (64.34)	25.2 (5.86)	446.74 (100.00)
	Value	29965.21 (566.23)	34446.52 (429.72)	64441.73 (484.23)	50155.72 (308.45)	37312.16 (239.74)	87467.88 (304.27)	2926.10 (116.11)	154805.71 (100.00)
Total	Quantity	74.08 (11.80)	111.44 (17.75)	185.52 (29.55)	185.43 (29.53)	218.43 (34.88)	404.39 (64.41)	37.89 (6.04)	627.80 (100.00)
	Value	42493.84 (573.62)	47839.35 (429.28)	90333.19 (486.91)	70830.22 (381.97)	52773.48 (241.01)	123603.70 (305.65)	4611.03 (121.69)	218547.92 (348.11)

(Figures in parentheses under column quantity indicate percentage to the total quantity sold, whereas column under value indicate per crate price)   *Note: 1 Crate = 20 Kg.

| Table 2 : Details of agencies to whom mango sold					
Sr. No.	Group	Pre-harvest contractor	Local fruit merchants	Co-operative society	Wholesaler / commission agent	Total
1.	Small (N=20)	16.02 (24.51)	4.67 (7.92)	40.97 (64.24)	2.12 (3.33)	63.78 (100.00)
2.	Medium (N=22)	15.29 (13.04)	6.81 (5.80)	92.36 (78.76)	2.82 (2.40)	117.28 (100.00)
3.	Large (N=28)	53.30 (11.93)	8.53 (1.91)	383.13 (85.54)	1.78 (0.62)	446.74 (100.00)
	Total	84.61 (13.48)	20.01 (3.19)	516.46 (82.26)	6.72 (1.07)	627.80 (100.00)

(Figures in parenthesis indicates % of the total)
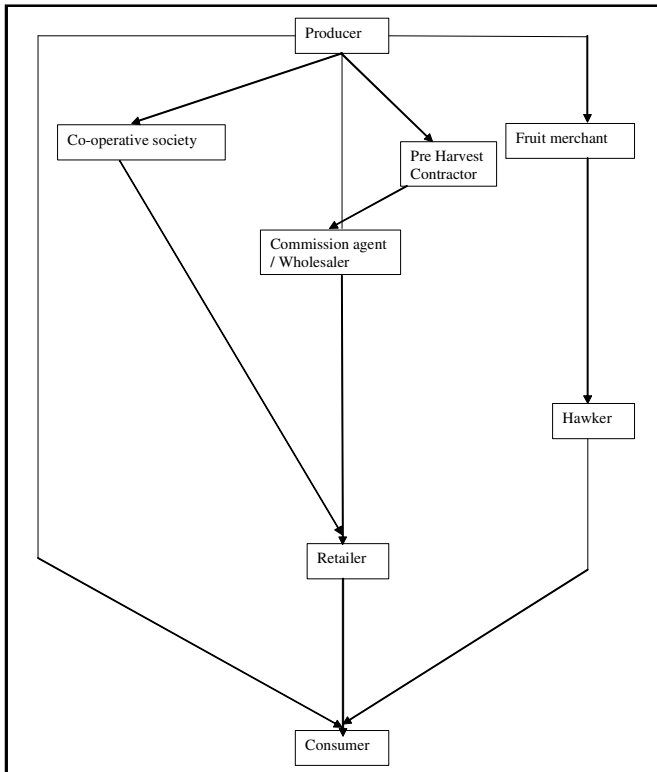
Fig. 1 : Marketing channels of mango in Pardi taluka of Valsad district

(34.88 %) and less quantity sold in June (6.04 %) was sold in June first fortnight. The per crate price received at overall level was minimum (Rs.121.69) in June first fortnight and maximum (Rs.573.62) in April first fortnight.

Details of agencies involved in mango marketing: - It was observed that mango passes through five different channels which are presented in Fig. 1 and Table 2.

– Producer - consumer (Local sale)

– Producer - wholesaler/commission agent - retailer - consumer.

– Producer - co-operative society - retailer consumer.

– Producer- pre-harvest contractor - commission agent – retailer consumer

– Producer- fruit Merchant – hawker-consumer.

Total quantity marketed was 627.80 crates, out of this 1.07 per cent has marketed through wholesaler / commission agent, 3.19 per cent has marketed through local fruit merchant, 13.48 per cent has marketed through pre harvest contractors and 82.26 per cent has marketed through co-operative society in the distant market. Among the different agencies involved in marketing, maximum quantity of mango was sold through the Co-operative Society by the small (64.24 %), medium (78.76%) and large (85.54%) size group of farmers, respectively.

Factors influencing net price of mango:

The net price received by the producer was governed by many factors which are presented in Table 3. In functional analysis, the effects of all factors which influence dependent variable are considered at a time. The value of R2 worked out to 0.87, 0.89, 0.79 and 0.98 for small, medium, large and at overall level respectively, implied that 87 %, 89 %, 79% and 98 % of variation influencing in net price of mango have been explained by various factors for these farm size groups.

In case of small farmer, distance (X_1), grade –I (X_2), grade – II (X_3), quantity sold through wholesaler (X_6), quantity sold during April –May (X_9) and quantity sold during May – June (X_{10}) were observed significant except quantity sold through pre harvest contractor (X_7) and quantity sold through fruit merchant (X_8). In case of medium farmer, grade – III (X_4) and quantity sold through wholesaler (X_6) were observed to be significant. In case of large farmer grade – III (X_4) and quantity sold through co-operative society (X_5) were observed to be significant. In case of overall farmer, grade –I (X_2), grade – III (X_4), quantity sold during April –May (X_9) and quantity sold during May – June (X_{10}) were observed significant.

Conclusion:

Total quantity marketed was 627.80 crates, out of this the quantity of mango marketed were 63.78, 117.28 and 446.74 crates by the small, medium and large size group, respectively. Regarding quantity marketed through different agencies by sample growers, maximum quantity was sold through co-operative society (82.26%) and minimum quantity was sold through wholesaler/commission agents (1.07%). In functional analysis the different factor were regressed on the net prices by various factors under considerations which indicated that R2 value was 0.89, 0.87, 0.79 and 0.98 in case of medium, small, large and overall farm size group, respectively. It also implies that 89, 87, 79 and 98 % influencing variation in net price of mango on medium, small, large and overall farm size group, respectively.

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