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**DJ Chaudhari**

Assistant Professor, ASPEE  
College of Horticulture and  
Forestry, Navsari Agricultural  
University, Navsari, Gujarat,  
India

**Narendra Singh**

Professor and Head,  
Department of Agricultural  
Economics, N M College of  
Agriculture, Navsari  
Agricultural University, Navsari,  
Gujarat, India

## Awareness and utilization of market information by the farmers and traders in Navsari district of South Gujarat

**DJ Chaudhari and Narendra Singh**

**Abstract**

Agricultural market information is essential for all the stakeholders in the system of marketing to take the appropriate decisions. In Navsari district of South Gujarat, fruits and vegetables were the major crops cultivated on large area. Wide fluctuation in prices of these commodities affect the decision making of different stakeholder in marketing process. Therefore the present investigation was under taken to study the awareness and utilization of agricultural market information by the farmers and traders in Navsari district for the horticultural crops. For present investigation primary data for the year 2018-19 was collected from 80 farmers and 40 traders from four major markets of Navsari district, which were selected randomly. Simple tabular analysis and ranking score method was adopted to arrive at conclusion. The result of study showed that in the study regions farmers were always aware about the prices of commodity that prevailed in reference market while traders always aware about the prices in other market and reference market. Neighbour/ relative was the major source of market information for farmer in village. Display board was the major source of market information in the market for the farmers and traders. On the basis of available market information the decision of farmers 'where to sale?' was ranked first while 92% traders take the decision related to sale price of the commodity.

**Keywords:** Agricultural market information, awareness, utilization, dissemination

**Introduction**

Indian economy is called as agrarian economy. Indian agriculture contributes 13.7% in GDP of the country and 52% of population depends on agriculture for their employment. Presently the production is market oriented. Though there is huge production of agricultural commodities in country, but it is meaningless if the marketing system is not efficient. To keep the market healthy, increase the production and productivity of crops, reduce the marketing cost and timeliness in delivery of agricultural commodity, the marketing information system should be efficient. (Dagar, 2015) [2]. For efficient and smooth operation of the marketing system, market information plays an important role. Accurate, adequate and timely availability of market information facilitates decisions about when and where to market the produce?. It is crucial to the farmers to make informed decisions about what to grow?, when to harvest?, to which market produce should be sent and whether or not to store it. Improved information should enable traders to move produce profitably from a surplus to a deficit market and to make decisions about the viability of carrying out storage where technically possible. Market information is essential for the Government to decide the policies regarding marketing of produce, import, export etc. For long run sustainability of Indian agriculture, the availability and dissemination of accurate and relevant agricultural market information is essential (Sharma, 2012) [9]

The cropping pattern of farmers in Navsari district majorly includes the horticultural crops. Navsari district having 0.72 lakh ha area and 10.17 lakh MT production of horticultural crops which contribute to 4.25% and 4.35% of total area and production of Gujarat state of horticultural crops, respectively during year 2017-18 (Directorate of Horticulture, GoG) [3]. These horticultural commodities arrive in to the market for sale. There are four major market yards functioning in trading of these horticultural commodities in Navsari district. Farmers mostly sell their produce in these markets. At present wide fluctuation in prices of most of agricultural commodities was observed which adversely affected on decision making of different stakeholders engaged in marketing of these commodities. Majority of farming community is unable to use the market information in decision making due to the reasons like unavailability of adequate market information, unable to interpret the information, lack of proper source of information etc. Therefore it is important to study the existing situation of market information system i.e. the sources, utilization, dissemination of market information by

**Corresponding Author:****DJ Chaudhari**

Assistant Professor, ASPEE  
College of Horticulture and  
Forestry, Navsari Agricultural  
University, Navsari, Gujarat,  
India

the stakeholders in Navsari district. Taking into consideration the above points, the present investigation was undertaken with following objectives.

1. To study extent of awareness and utilization of market information by stakeholders
2. To study constraints in dissemination and utilization of market information by stakeholders

### Materials and Methods

The major horticultural commodities that arrive in the different markets of Navsari district were the fruits and vegetables. On the basis of highest arrivals these commodities were selected for study purpose. Navsari district had four major market yards viz. Navsari, Bilimora, Chikhali and Vasanda. These markets were selected for study purpose. To study extent of awareness, utilization and constraints in dissemination and utilization of market information primary data was collected for the year 2018-19. For this purpose two categories of stake holders i. e. farmers and traders (Wholesaler or commission agent cum wholesaler) were studied. About 20 respondent farmers per market, who sell their produce in these markets and 10 traders per market were selected with simple random technique. Thus in all 80 farmers and 40 traders from four markets were personally interviewed and data was collected with help of schedule prepared for study. To arrive at conclusion the data was analysed with simple tabular analysis by using simple average and

percentage. The ranking score method was adopted for giving the rank to different parameters. The response of farmers and traders was scored giving weight of 3 for 'always', 2 for 'sometime' and 1 for 'rarely' and 0 for 'never'.

### Results and Discussion

#### Farmer's awareness about agricultural market information

Table 1 showed degree of awareness of farmers about market information in Navsari district. It was found that awareness of farmers about prices in reference market was Rank – I<sup>st</sup> whereas awareness about prices in other market, arrivals in reference market, quality or grade required and arrivals in other market was rank II<sup>nd</sup>, III<sup>rd</sup>, IV<sup>th</sup> and V<sup>th</sup>, respectively. The awareness about import-export status got lowest rank. It was observed that about 78% of farmers always aware about the information regarding prices in reference market, about 36% of farmers sometime aware about arrivals in reference market whereas 28% of farmers rarely keep the information regarding arrivals in reference market and prices in other market. Table showed that very less percent of farmers always aware about packaging (7.50%), area under crop (3.75%) and export-import status (1.25%) while up to 13% of farmers sometimes keep the information regarding arrivals in other market, packaging and post-harvest handling. Similar results were found by Amrutha (2009) [1]

**Table 1:** Farmer's awareness about agricultural market information in Navsari District (n=80)

Particulars	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Prices in reference market	189	78.75	28	17.50	3	3.75	220	I
Prices in other market	72	30.00	44	27.50	23	28.75	139	II
Arrivals in reference market	51	21.25	58	36.25	23	28.75	132	III
Quality / Grade required	54	22.50	40	25.00	18	22.50	112	IV
Arrivals in other market	36	15.00	22	13.75	22	27.50	80	V
Packaging	18	7.50	22	13.75	16	20.00	56	VI
Post-harvest handling	0	0.00	4	2.50	18	22.50	22	VII
Area under crop	9	3.75	0	0.00	6	7.50	15	VIII
Export-Import status	3	1.25	0	0.00	4	5.00	7	IX

#### Farmer's sources of market information at village and market level

Farmer's sources of market information at village and market level presented in Table 2. On the basis of ranking score it was observed that at village level neighbours/ relatives were the major source of market information of farmers of Navsari district which got I<sup>st</sup> rank followed by progressive farmer in village, co-operative society and news paper on II<sup>nd</sup>, III<sup>rd</sup>, IV<sup>th</sup> and V<sup>th</sup> rank. At market level display board, commission agent and input dealer got I<sup>st</sup>, II<sup>nd</sup> and III<sup>rd</sup> rank, respectively. Table 2 further showed that about 57.50% of farmers always, 32.50% of farmers sometime and 10.00% of farmers rarely prefer neighbours/ relatives as source of market information at village level implied that majority of farmers depends on neighbours and relatives for market information. According to

Sharma (2012) [9] in Odisha majority of farmers depends on their peers for fetching the market information. Less than 10 percent of farmers always prefer the other sources of market information like SMS, internet, mobile app, magazine, TV and KVK. About 40% of farmers rarely prefer newspaper as source of market information at village level. At market level 73.75% of farmers always use display board followed by commission agent (35.00%) as a source of market information indicated that display board and commission agents were major source of market information at market level for the farmers of Navsari district. Similar results were found by Amrutha (2009) [1]. Lakshmi (2016) [6] found that commission agent was the major source for market information in the market for all categories of farmers in Meghalaya.

**Table 2:** Farmer's sources of market information at village and market level in Navsari district (n=80)

Source	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Sources of Market information at village level								
Neighbours/ Relatives	138	57.50	52	32.50	8	10.00	198	I
Progressive farmers	51	21.25	28	17.50	33	41.25	112	II
Co-op Society	21	8.75	18	11.25	24	30.00	63	III
Newspaper	0	0.00	8	5.00	32	40.00	40	IV
SMS	18	7.50	18	11.25	2	2.50	38	V
Internet	6	2.50	12	7.50	8	10.00	26	VI
Mobile app	6	2.50	12	7.50	5	6.25	23	VII
Magzine	3	1.25	2	1.25	13	16.25	18	VIII
TV	0	0.00	4	2.50	8	10.00	12	IX
KVK	0	0.00	0	0.00	3	3.75	3	X
Sources of Market Information at market								
Display Board	177	73.75	18	11.25	12	15.00	207	I
Commission agent	84	35.00	64	40.00	18	22.50	166	II
Input dealer	3	1.25	0	0.00	9	11.25	12	III

### Awareness and utilization of facilities available in market by the farmers

Table 3 showed the percentage of farmers who were aware and utilize the facilities available in market for market information. It was observed that 100 percent of farmers were aware and utilize the notice board in market for the information of prices. About 92.50%, 11.25% and 17.50% of

farmers aware about information through telephone, SMS service and AGMARKNET while these facilities were utilized by 42.50%, 10% and 5% of farmers, respectively. Similar results found by Sharma (2012) [9]. He reported that, in Odisha agricultural market information was provided through notice board and also uploaded into AGMARKNET portal.

**Table 3:** Awareness and utilization of facilities available in market by the farmers for market information in Navsari district (n=80)

Facilities in markets	Awareness		Utilization	
	No.	Percentage	No.	Percentage
Notice Board/ Display Board	80	100	80	100
Information through telephone/mobile	74	92.50	34	42.50
SMS service	9	11.25	8	10
AGMARKNET (Daily price reporting)	14	17.50	4	5

### Extent of market information utilization by farmers

Extent of market information utilization by farmers in Navsari district presented in Table 4. From the table on the basis of ranking score it was observed the decision regarding where to sell? of commodity rank I<sup>st</sup> followed by the decision regarding grading, crop to be sown, whom to sell? and when to sell? ranked II<sup>nd</sup>, III<sup>rd</sup>, IV<sup>th</sup> and V<sup>th</sup>, respectively implied that on the

basis of market information the major decision taken by farmers related to where to sell the commodity. It was found that about 18.75% farmers always, 36.25% farmers sometime and 15.00% farmers rarely take the decision regarding grading. Less than 40% of farmers rarely take the decision like whom to sell?, when to sell?, quantity to sell, storage and area to be sown under the crop.

**Table 4:** Extent of market information utilization by farmers in Navsari district (n=80)

Particulars	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Production decisions								
Crop Sown	12	5.00	34	21.25	16	20.00	62	III
Area Sown	0	0.00	12	5.00	20	25.00	28	VI
Marketing decisions								
Where sell	18	7.50	66	41.25	34	42.50	118	I
Grading	45	18.75	58	36.25	12	15.00	115	II
Whom sell	0	0.00	22	13.75	32	40.00	54	IV
When sell	0	0.00	22	13.75	21	26.25	43	V
Quantity to sell	3	1.25	4	2.50	19	23.75	26	VII
Storage	0	0.00	0	0.00	5	6.25	5	VIII

### Trader's awareness about market information

Trader's awareness about market information in Navsari district presented in Table 5. On the basis of ranking score awareness of traders about prices in other market was on I<sup>st</sup> rank followed by awareness about prices in reference market and arrivals in reference market got II<sup>nd</sup> rank, arrivals in other market on III<sup>rd</sup> rank and quality/ grade required was on IV<sup>th</sup> rank. It was observed that among the selected traders 90.00% farmers were always aware about prices in other markets,

87.50% traders always aware about prices and arrivals in reference market, 80.00% traders always aware about arrivals in other market and 45.00% traders always aware about grading of fruits and vegetables. Less than 35.00% farmers were found aware about area, production, post-harvest handling and export-import situation of crops. The results are in conformity with Amrutha (2009) [1], Sain *et.al.* (2017), Lakshmi and Panda (2015)

**Table 5:** Trader's awareness about market information in Navsari District (n = 40)

Particulars	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Prices in other market	108	90.00	8	10.00	0	0.00	116	I
Prices in reference market	105	87.50	10	12.50	0	0.00	115	II
Arrivals in reference market	105	87.50	10	12.50	0	0.00	115	II
Arrivals in other market	96	80.00	16	20.00	0	0.00	112	III
Quality/ grade required	54	45.00	20	25.00	4	17.50	81	IV
Production of crop	0	0.00	18	22.50	10	35.00	32	V
Post-harvest handling of produce	6	5.00	4	5.00	9	25.00	20	VI
Export/Import situation of crops	3	2.50	0	0.00	5	12.50	8	VII
Area under crop	0	0.00	2	2.50	2	5.00	4	VIII

### Trader's sources of market information

Table 6 showed the trader's source of market information in Navsari district. On the basis of ranking score, among the different sources of market information, contact in other market was ranked first followed by other traders in reference market, mobile app, previous data and newspaper which ranked II<sup>nd</sup>, III<sup>rd</sup>, IV<sup>th</sup> and V<sup>th</sup>, respectively indicated that contact in other market was the major source of market information for the traders in Navsari district. It was observed

that the highest percent of traders (85%) always used contact in other market as source of market information followed by other traders in reference market (82.50%) and mobile app (12.50%). Less than 30.00% traders use the other sources of market information sometimes and rarely like newspaper, internet, display board, magazine, SMS on mobile, bulletin and TV. Sain *et al.* (2017) [8], Lakshmi and Panda (2015) [7] and Amrutha (2009) [1] found the same results in their studies.

**Table 6:** Trader's sources of market information in Navsari district (n = 40)

Source	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Contact in other markets	102	85.00	12	15.00	0	0.00	114	I
Other traders in reference market	99	82.50	14	17.50	0	0.00	113	II
Mobile App	15	12.50	14	17.50	1	2.50	30	III
Previous year data	0	0.00	18	22.50	10	25.00	28	IV
News papers	0	0.00	10	12.50	12	30.00	22	V
Internet	0	0.00	8	10.00	9	22.50	17	VI
Display board	0	0.00	6	7.50	10	25.00	16	VII
Magazines	0	0.00	0	0.00	12	30.00	12	VIII
SMS on mobile	0	0.00	6	7.50	2	5.00	8	IX
Bulletin	6	5.00	0	0.00	1	2.50	7	X
TV	0	0.00	0	0.00	1	2.50	1	XI

### Awareness and utilization of facilities available in market for market information by the traders

Table 7 showed the percentage of traders who were aware and utilize the facilities available in market for market information. It was observed that 100 percent of traders were aware about the notice board and information through

telephone in market for the information of prices while these facilities were utilized by 32.50% and 17.50% traders. About 15.00% and 7.50% of traders aware about information through SMS service and AGMARKNET while these facilities were utilized by 10.00% and 2.50% of traders, respectively.

**Table 7:** Awareness and utilization of facilities available in market for market information by the traders in Navsari district (n = 40)

Facilities in markets	Awareness		Utilization	
	No.	%	No.	%
Notice Board/ Display Board	40	100	13	32.50
Information through telephone/mobile	40	100	7	17.50
SMS service	6	15.00	4	10.00
AGMARKNET (Daily price reporting)	3	7.50	1	2.50

### Extent of market information utilization by traders

Table 8 showed the extent of market information utilization by traders in Navsari district. From the table on the basis of ranking score it was observed that the decision regarding price of sell of commodity rank I<sup>st</sup> followed by the decision regarding price of purchase, where to sell, grading and whom to sell ranked II<sup>nd</sup>, III<sup>rd</sup>, IV<sup>th</sup> and V<sup>th</sup>, respectively implied that on the basis of market information the major decision taken by traders related to price of sale of commodity. With the help of obtained market information the highest number of traders

(92.50%) always took the decision regarding sale price of commodity followed by the decision which were always taken related to purchase price (90.00%), where to sell (65.00%) and grading (50.00%). Less than 23.00% of traders rarely take the decision related to storage of commodity. On the basis of available market information 92.50% traders always take the decision related to sale price of commodity and it was ranked first among the different decisions followed by the decision related to purchase price which ranked II<sup>nd</sup>.

**Table 8:** Extent of market information utilization by traders in Navsari district (n = 40)

Source	Always		Sometime		Rarely		Total Score	Rank
	Score	%	Score	%	Score	%		
Purchase decision								
Price of purchase	108	90.00	8	10.00	0	0.00	116	II
Quantity to be purchased	51	42.50	0	0.00	5	12.50	56	VI
Storage decisions								
Deciding necessity of storage	0	0.00	0	0.00	9	22.50	9	IX
When to store	0	0.00	0	0.00	2	5.00	2	XI
Quantity to be stored	0	0.00	0	0.00	9	22.50	9	IX
Deciding duration of storage	0	0.00	0	0.00	5	12.50	5	X
Selling decision								
Quantity to be sold	12	10.00	4	5.00	18	45.00	34	VII
Price of sell	111	92.50	6	7.50	0	0.00	117	I
When to sell	0	0.00	8	10.00	16	40.00	24	VIII
Where to sell	78	65.00	18	22.50	5	12.50	101	III
Whom to sell	33	27.50	26	32.50	12	30.00	71	V
Post-purchase handling decisions								
Necessity of processing	0	0.00	0	0.00	0	0.00	0	--
Grading	60	50.00	26	32.50	5	12.50	91	IV

### Constraints faced by farmers and traders in agricultural market information system

Table 9 showed the constraints faced by farmers and traders in agricultural market information system in Navsari district. It was observed that the highest numbers of farmers (35.00%) reported that the facilities in market to provide market information were inadequate. Less than 20.00% of farmers faced the constraints like non availability of information on prices/ arrivals/ area/ production, non-availability of

information in required form, non-availability of information in time and unable to take the decision in relation to information available. About 15.00% and 12.50% traders faced the constraints of inadequate facilities in market to provide market information and inadequate network for information, respectively. Hegade and Madhuri (2013) [4] also reported that the market information available to farmers was inadequate. The use of electronic media should be increased for this purpose.

**Table 9:** Constraints faced by farmers and traders in agricultural market information system in Navsari district.

Constraints	Nos.	%
<b>Constraints faced by farmers (n = 80)</b>		
Not easily accessible	13	16.25
Non availability of information on prices/ arrivals/ area/ production	13	16.25
Non availability of information in required form	14	17.50
Non availability of information in time	13	16.25
Unable to interpret the information	17	21.25
Unable to take the decision in relation to information available	14	17.50
Inadequate facilities in market to provide market information	28	35.00
<b>Constraints faced by traders (n = 40)</b>		
Inadequate network for information	5	12.50
Inadequate facilities in market to provide market information	6	15.00

### Conclusions

From the present investigation it was found that the majority of farmers aware about the prices of horticultural commodities in the reference market and in other market. Neighbour/ relative at village level and display board at market level were the major sources of market information of horticultural crops for the respondent farmers in the study area. On the basis of available market information the decision 'where to sale?' of farmers was ranked first followed by grading on rank II<sup>nd</sup> while less than 40% of farmers rarely take the other decisions related to production and marketing. Cent percent farmers were aware and utilize the facility of display board in market for market information of the horticultural commodities. Majority of the traders in selected markets aware about the prices that prevailed in the reference market while 80 to 90% of traders were found aware about arrivals and prices prevailed in other market and reference market. To get the market information 85 percent of traders contact to the other markets. All the selected respondent traders were found aware and use the facility of display board present in the market. On the basis of available market

information 92.50% traders always take the decision related to sale price of commodity and it was ranked first among the different decisions followed by the decision related to purchase price which ranked II<sup>nd</sup>. From the present investigation it was observed that the agricultural market information system was inadequate for the farmers and the traders. The stakeholders in marketing of horticultural commodities in study region should increase the use of electronic media to get the fresh agricultural market information.

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