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Marketing information system (MIS) on minor forest produce (MFP) in high altitude and tribal (HAT) zone of Andhra Pradesh

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Abstract

Timely, accurate information is advantageous in planning and decision making for farmers, entrepreneurs and any organization. Market information is regarded as public good and who act as in charge to provide timely, accurate and essential information to stakeholders. The present study was carried out in HAT zone, investigated on how market information was collecting and disseminating to tribal farmers on MFP. The paper looks into study existing marketing information system. Total of 360 sample farmers, where 120 from GPCMS (Girijan Primary Co-operative Marketing Society) and 240 from shandies (weekly market), 120 traders and 10 GPCMS staff were selected for the study. Tabular analysis was applied for draw appropriate information from tribal farmers. The results revealed that existing MIS was regulated by GCC (Girijan Cooperative Corporation) with its head office located at Visakhapatnam. Market information was gathered through personal visit to sales points. Collate of market information mainly on arrivals and prices of MFP. Documentation of collected market information was carried out with help of qualified personals at GPCMS level in the form electrical and written mode. Traders are playing ameliorate role in utilization of market information then local tribal farmers. Need to educate tribal farmers in utilization of market information on post harvesting handling, and corporation should be focus on documentation of post-harvest information.

Keywords: MIS, HAT zone and MFP

Introduction

HAT zone of Andhra Pradesh was selected in view of the major availability of MFP among six agro climatic zones and this zone covers hilly areas of four districts viz., East Godavari, Visakhapatnam, Vizianagaram and Srikakulam of Andhra Pradesh. According to Forest Stewardship Council, "All forest products, except timber, including other materials obtained from trees such as resins and leaves, as well as any other plant and animal products" are considered as MFP (Ministry of Environment and Forests, 1999) [8]. Six commodities namely, seeded tamarind (*Tamarindus indica*), myrobalan (*Terminalia chebula*), marking nut (*Semecarpus anacardium*), honey, naramamidi bark (*Litsea deccanensis*) and hill broom (*Thysanolaena maxima*) under study because it contributes 84 per cent share value of income. HAT zone produces a wide range of Minor Forest Produce (MFP), and their exorcence in local, national and global economies, their contribution to the food security and significance to the biological diversity gained widespread recognition during the past decade. MFP serve as vital sources of food, spices, beverages, medicines, flavorings, perfumes, polishes, construction materials, paints and extracts used in the chemical industry (Arnold and Ruiz Perez, 1998) [2].

Market information is crucial for timely collection, improving marketing and distribution strategies (Oladele, 2006) [11]. In order to compete at global level in transacting MFP, the tribal farmers should have latest information regarding new techniques of collection, quality promotion, Government policies, domestic and export competitiveness deserve considerable attention. It is known that MIS as a process of gathering, processing, storing and using information to make better marketing decisions and to improve marketing exchange (Nickels, 1986) [10]. So, access to MIS is very crucial towards stabilizing the annual income of tribal farmers through realizing higher prices for their MFP. This is important in the sense of contributing towards more efficient marketing, particularly improved spatial distribution of MFP. Both tribal farmers and traders are the beneficiaries for increasing their access to more market opportunities.

In HAT zone of Andhra Pradesh, the existing MIS was regulated by GCC with its Head Office located at Visakhapatnam. Currently, GCC possesses a vast network comprising of 26 affiliated GPCMS, and serves as a funding agency to its societies for MFP procurement. GPCMS procure the MFP through PPCs at the door steps of the tribals, at constantly updated prices fixed and declared by GCC and deliver the produce to GCC periodically or occasionally. The statistics of arrivals, sales and prices are generally maintained by GPCMS/ PPCs. So, the dissemination of market information is an important function of GPCMS/PPCs, which is performed through displaying of the prices prevailing in the market on the notice boards and broadcasting through SMS, television, All-India Radio (AIR) and other media. Hence, with this back ground of the study objective framed on existing marketing information system and their contribution on marketing information activities for tribal farmers in the study area.

Material and Methods

In the present study primary data was collected through multi-stage sampling design i.e. Division level, GPCMS level and shandies (local village markets). The tribal farmers of HAT zone transact their MFP in shandies. In shandies transact their produce either GPCMS or private traders or both depending upon the relative prices offered by these two market players. Present study covered six MFP based on total share value of the produce, two samples were drawn from six MFP transacted by the tribal farmer. Sample was collected from both GCC and shandies. Thus, 120 farmers from 10 GPCMS (across five Divisions) and 240 farmers from 20 shandies, 120 traders who transact six MFP and GCC staff were selected for in depth investigation during 2020-21. Descriptive statistics such as frequency, percentage and mean were used to draw meaningful relevant information from the collected data.

Results

In the present study existing MIS was regulated by GCC the results corroborates with the findings of Barakade 2011^[3]; Mittal and Mehar 2012^[9]; Magesa *et al.* 2014^[7]. In the year 1956 marked the establishment of "Andhra Scheduled Tribes Finance & Development Corporation Ltd.", and then State Government's initiative aimed at improvement of the living conditions of Scheduled Tribes and protects them against exploitation by the more affluent sections of the society. It was renamed to GCC in 1970, headquartered at Visakhapatnam.

Apex body of the corporation collect the currently market information from Divisional, GPCMS and PPC level, and analyze with previously existed aged data with experts of various departments of the corporation for final decision and disseminate the information back accordingly.

Table 1: Method of collection of market information

S. No.	Method of collection	GPCMS/PPCs	Shandies
1	Personal visit to sale points	✓	✓
2	Telephone/fax	x	x
3	Personal interactions with farmers	✓	x
4	Personal interactions with traders	✓	x

Note: '✓' indicates positive response (Yes); 'x' indicates negative response (No)

To know about root level market position of MFP during commencement of procurement season, traditional methods like personal visit to the sale points by the personnel working in PPCs /random checks by GPCMS, personal interactions with farmers and traders were the major methods of collection of market information (Table 1) while transacting produce through GPCMS/PPCs. In shandies, the data are maintained only through random checks at sale points. Thus, the data documented at GPCMS/PPCs level is more authentic compared to shandy level. It is disappointing that the advanced Information and Communication Technologies (ICTs) like fax and internet are rarely used as a means for collecting market information.

Table 2: Market information documentation in GPCMS/PPCs and Shandies

S. No.	Market Information	GPCMS/PPCs	Shandies
1	Arrivals	✓	✓
2	Prices		
	a. Maximum	✓	✓
	b. Minimum	✓	✓
	c. Modal	✓	✓
3	Quality/grades/ standards	x	x
4	Post-harvest handling	x	x
5	Pattern of packing	x	x
6	Storage facilities available	x	x

Note: '✓' indicates positive response (Yes); 'x' indicates negative response (No)

It is observed from Table 2, that market arrivals and prices (maximum, minimum and modal) were the only two major types of market information documented and made available to the farmers on daily basis in GPCMS/PPCs and weekly conducted shandies in the HAT zone this finding is in line with the findings of Dagar 2015^[4].

However, no attempt was made in documentation of information like quality / grade standards, post-harvest handling, pattern of packing the produce and availability of storage facilities (in GPCMS/PPCs).

Table 3: Mode and level of documentation of market information

S. No.	Mode	GPCMS/PPCs	Shandies
1	Mode of documentation		
	a. Written form	✓	✓
	b. Electronic form	✓	✓
2	Level of documentation		
	a. GPCMS	✓	x
	b. PPC	✓	x

Note: '✓' indicates positive response (Yes); 'x' indicates negative response (No)

The arrivals and prices information were documented both in written form and electronic form (Table 3) both at GPCMS and PPCs and also for shandies conducted by the local authorities. The documented information on daily basis in PPCs are compiled and reported on weekly basis to GPCMS and monthly basis to the end user (GCC).

Table 4: Nature of personnel involved in documentation of market information

S. No.	Particulars	GPCMS/PPCs	Shandies
1	Number of Personnel	1	1
2	Regularity of employment	1	0
3	Casual / contract worker	1	1
4	Qualification		
	a) Matriculation	0	1
	b) Graduation	1	0
5	Formal Training	1	1
6	Un-trained	0	0
7	No. of MFP covered / person	25	25

Note: '1' indicates presence; '0' indicates absence

A regular and trained employee (data operator) is being involved in documentation of market information in all (Table 4), GPCMS/PPCs and GCC. Regarding the qualification, the

data operator is a degree holder in GPCMS/PPC, while in shandies, the data operator is a matriculate.

Table 5: Frequency of dissemination of market information

S. No.	Agency / mode	Daily	Weekly	Monthly	Annually
1	GPCMS/PPCs Notice Boards	✓	x	x	x
2	Mobile	✓	x	x	x
3	Newspapers	✓	x	x	x
4	Television (local channels)	x	✓	x	x
5	Radio	x	✓	x	x
6	GCC website	✓	✓	✓	✓
7	A.P. Forest Department	x	x	x	✓
8	Gram Panchayat	x	x	x	✓
9	Horticulture Research Stations	x	x	x	✓
10	ITDA	x	x	x	✓
11	District Statistical Officer	x	x	x	✓

Note: '✓' indicates positive response (Yes); 'x' indicates negative response (No)

There are different modes of dissemination of the market information in HAT zone. The market information was mainly transmitted through notice boards in GPCMS/PPCs, mobile, newspapers and television (Table 5). The market information was disseminated daily by GPCMS/PPCs, mobile and newspaper. From GPCMS, the information reaches to GCC official website on daily, weekly, monthly and annual

basis this finding is in line with the findings of Rawal and Bhatta 2017^[12]; Sachan *et al.* 2019^[13]; Amrutha and Hugar 2010^[1]. Similarly, the market information was also sent to Andhra Pradesh Forest Department, gram panchayat, local horticulture research stations, Integrated Tribal Development Agency (ITDA) and District Statistical Officer (DSO) once in a year in the form of annual reports.

Table 6: Market information utilization by tribal farmers

(n = 360)

S. No.	Nature/Type of decision	Number	Percentage
1	MFP to be collected	310.00	86.11
2	Where to sell the MFP (GPCMS/PPCs or Shandy)	248.00	68.88
3	When to sell	35.00	9.72
4	Whom to sell	32.00	8.89
5	Quantity to sell	34.00	9.44
6	Drying	20.00	5.56
7	Grading	11.00	3.06
8	Bagging	12.00	3.33
9	Transportation	11.00	3.06
10	Processing	12.00	3.33
11	Storage	10.00	2.78

Note: The percentages do not add up to 100 due to multiple or no response

A perusal of Table 6 indicated that the market information accessed by the farmers enable them in taking timely marketing decisions of MFP. It can be clearly seen that majority of the farmers utilized the market information for deciding the nature of MFP to be collected (86%) followed by place of its sale *ie.*, either at GPCMS/PPCs or in shandy depending upon the relative prices (69%) results corroborates with the findings of Hatai 2016^[6]. However, it is

disappointing that majority of the farmers were not making use of market information for performing marketing functions (storage, transportation, processing, grading *etc.*) and marketing decisions like when, where and whom to sell the MFP.

Table 7: Benefits derived from market information by tribal farmers

(n = 360)

S. No.	Benefits	Number	Percentage
1	By change of place of sale	98.00	27.22
2	By change of time of sale	32.00	8.89
3	Grading of MFP	29.00	8.06
4	Storing of MFP at times of low prices	19.00	5.28
5	Better mode of packaging	18.00	5.00
6	Realizing higher prices	164.00	45.56

Note: The percentages do not add up to 100 due to multiple or no response

The benefits that the farmers derived as per their opinion by utilizing market information are presented in Table 7. It was again observed that only few farmers used the market information in performing marketing functions like grading, storage and packaging decision-making. However, the farmers are interested in using the market information for realizing higher prices (46%) followed by changing the place of sale based on the relative prices across GPCMS/PPCs or shandies or across different GPCMS/PPCs or across different shandies (27%) the results corroborates with the findings of Hatai 2016 [6].

Table 8: Market information utilization by traders

(n = 120)

S. No.	Nature/Type of decision	Number	Percentage
1	MFP bought	112	93.33
2	Where to purchase the MFP (GPCMS/PPCs or Shandy)	98	81.67
3	When to buy	104	86.67
4	From whom to buy	99	82.50
5	Quantity to buy	94	78.33
6	Grading	89	74.17
7	Transportation	87	72.50
8	Processing	31	25.83
9	Storage	106	88.33

Note: The percentages do not add up to 100 due to multiple or no response

A perusal of Table 8 indicated the extent of market information utilized by traders in decision making. It can be clearly seen that traders mainly utilize the market information to purchase the MFP from farmers preferably at low prices (93%). That is, they also use the market information to plan their purchasing decision *ie.*, ‘when to buy’ (87%). They even take the decision to stock the produce when the prices are low in the market (88%). Other decisions like ‘where to buy’ (82%), ‘from whom to buy’ (82%) and storage (88.33%) are also taken by the traders based on the collected market information results corroborates with the findings of Hatai and Panda 2015 [5].

Conclusion

Tribal farmers of HAT zone are residents of hilly areas, where access to market information mostly through human contact like fellow farmers. Most of the tribal farmers are illiterates, poor mobile connectivity and lack of awareness on market information conditions keeping the tribal farmers under fetching the lower prices for their MFP. Study revealed that, gathering, documentation and timely disseminating of market information was regulated by GCC. Total of 25 different types of MFP and their prices and arrivals information collected by GCC officials through personal visit to sales points, interaction farmers and trades in the locality.

Information documentation of prices and arrivals was carried out in both electrical and written form. Traders are benefited compared to farmers by utilizing market information at right time with accuracy. Educate the tribal farmers in access market information in post-harvest activities and take right decision at right time for fetching good prices. Should be habituate of proper documentation by corporation on post-harvest activities, quality, grading and value addition, and disseminate the all these documented information to base level tribal farmers.

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