International Journal of Chemical Studies

P-ISSN: 2349–8528
E-ISSN: 2321–4902
IJCS 2017; 5(5): 1285-1289

Received: 09-07-2017
Accepted: 11-08-2017

Talukdar Bidyasagar
Master Research Fellow, Agricultural Economis & Farm Management, Biswanath College of Agriculture, AAU, Jorhat, Assam, India

SRF Nicra
SRF, NICRA, Krishi Vigyan Kendra, Dhubri, Assam, India

Correspondence
SRF Nicra
SRF, NICRA, Krishi Vigyan Kendra, Dhubri, Assam, India

Marketing channel and marketing efficiency analysis for rice in Nalbari district of Assam (India)

Talukdar Bidyasagar and SRF Nicra

Abstract
The present study was carried out in the Nalbari district of Assam to analyze marketing of rice. Both marketing and constraints related important factors were studied. The Nalbari district was selected purposively for the study as the district is a predominantly rice growing district and also from the points of convenience and acquaintance of the researcher. A Multistage Stratified Random Sampling technique was used to select the ultimate sample units i.e., the rice growing farmers from six selected villages of two development blocks, viz, Tihu and Borigog-Banbhag. In total 120 rice growers were selected randomly for the study. The study indicated that major thrust should be given on, good road network for better transportation, dissemination of new technology, assured input supply and strong marketing support like storage structure, processing facilities in rural areas.

Keywords: marketing, farmers, efficiency, agriculture, consumers, stratified random sampling.

1. Introduction
At present, rice (*Oryza sativa*) occupies about two-third of the total cropped area in Assam. Being the major contributor towards agricultural GDP, where the stock of food-grains (Rice and Wheat) was 43.5 million tonnes as on December 01, 2016 compared to 50.5 million tonnes as on December 01, 2015 vis-à-vis the buffer stock norm of 30.77 million tonnes as on October 01, 2015 (Economic Survey 2016-17) [2]. Rice plays a significant role in the state economy. Further, its importance in the consumption basket the average monthly consumption per capita is about 13kg (Barah*et.al*, 2009) [4] also speaks volumes on the rice orientation of the state. Another specialty is that rice is traditionally-grown throughout the year viz. winter, autumn and summer seasons, with winter (Kharif) rice as the main crop. Rice is the major food crop in Assam as well as in the country. The crop accounts for nearly 41 percent of the total area under production (Barah *et.al*, 2009) [4] in India and around 20 percent in total world rice contribution. As per economic survey of Assam 2014-15 the paddy cultivation, during the year 2013-14 occupies 89.0 percent of the net cropped area and 60.0 percent of the gross cropped area in the state. Assam is one of the seven states of northeast India, which is located between 260/N and 5805'/N latitudes and 91007/E and 91047/E longitudes. Wide variation of physiographic features and climatic characteristics have resulted three distinct growing seasons of rice viz., *ahu*(Feb /March - June /July), *Sali* (June/July - Nov /December) and *boro* (Nov /December -May /June). Rice production in Assam plays an important role because rice is a staple food for Assam. So the production pattern and trend must be ascertained to identify the constraints associated with rice production. There are many threats related with rice production like continuous use of traditional varieties due to the non-availability of seeds, farmer's lack of awareness about high yielding varieties, Poor adoption of improved crop production technology etc. As per Economic Survey of Assam in 2014 [1] rice production in Assam was 2101 kg/ha that was promising but the state need to produce more for exporting rice to improve the state economy.

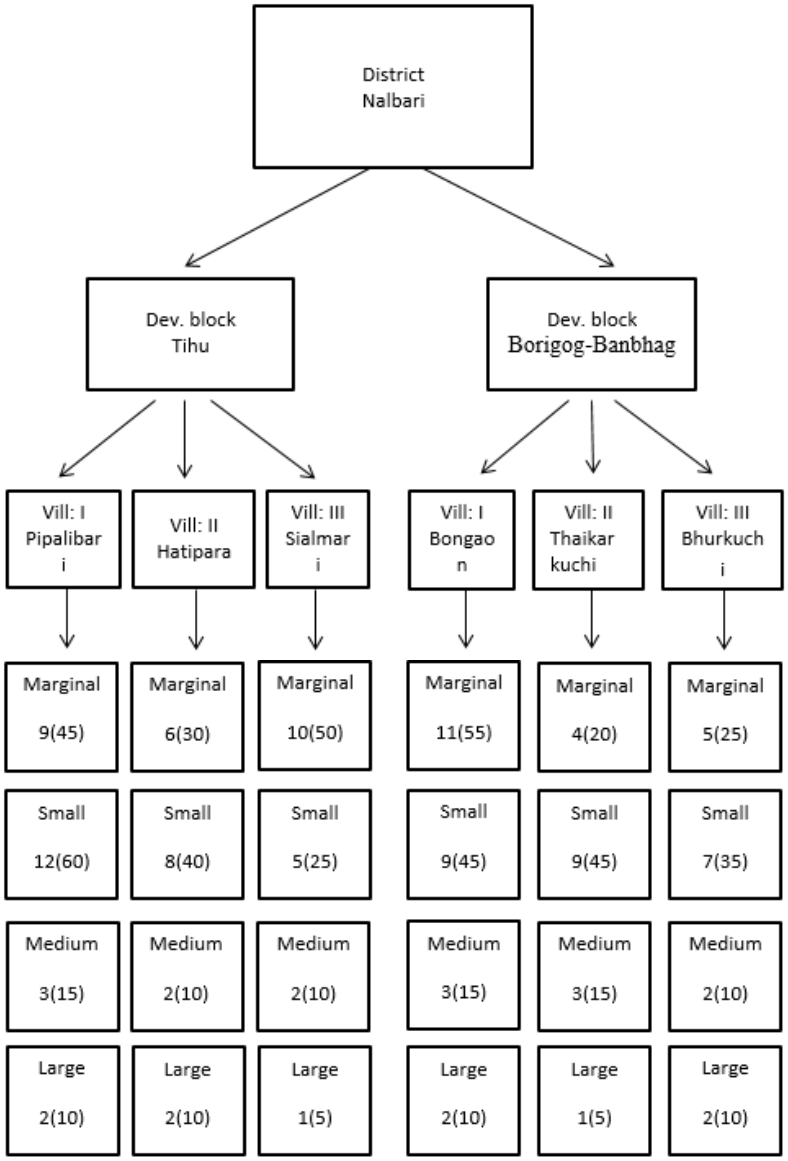
2. Methodology
In this present research work on marketing channel and marketing efficiency rice in the Nalbari district of Assam (India), we were used to study following objectives
To Study was carried out for marketing channel and marketing efficiency of rice by below mentioned methodology-

2.1 Sampling method

A Multistage Stratified Random Sampling technique was used to select the ultimate sample units, i.e., the rice growing farmers from the selected villages of two development blocks, viz, Tihu and Borigog-Banbhag.

The primary data collected from the sample households through personal interview method pertained to the agricultural year 2015-16. A pilot survey was carried out before conducting the main survey to have an idea about the status of availability of rice grower in the district and in the two dev blocks, viz Tihu and Borigog Banbhag. From each of the block, 3 villages were selected randomly. The lists of farmers i.e., rice growers were prepared for all the six villages. The farmers were classified as marginal, small, medium and large based on their operational holdings (Economic survey of Assam, Govt. of Assam, 2014) [1]. A simple random sample was drawn without replacement from different categories of farmers for detailed analysis. From each of the farmer categories a random sample of 20 percent was drawn for collection of data with the help of pretested schedules and questionnaires for detail analysis. In total 120 rice growers were selected for the study. Detailed sampling plan is given below.

2.2 Flow chart of sample design



2.3 Computation of marketing efficiency

Shepherd (1965), suggested that the ratio of total value of goods marketed to the marketing cost may be used as a measure of marketing efficiency. The higher the ratio, the higher is the efficiency and vice-versa. Shepherd's formula does not take into account the net margin retained by the intermediaries and the net price received by the farmers in assessing the marketing efficiency. Shepherd's formula assumes that the marketing cost itself includes some fair margins of intermediaries'. But if the margins retained by the intermediaries' are excessive, it is argued that this should not be treated as a part of marketing cost.

According to Acharya (2011) [3], an ideal measure of marketing efficiency particularly for comparing efficiency of alternative marketing channels should be such which takes in to account the followings.

1. Total marketing cost(MC)
2. Net marketing margin(MM)
3. Price received by the farmer(FP)
4. Prices paid by the consumer or retail price (RP)

In this study Acharya's Modified Marketing Efficiency (MME) approach is used to find out marketing efficiency various channels. The formula for MME is given below.
MME=FP/(MC+MM)
Where,
FP=Price received by the farmer
MC=Total marketing cost
MM=Net marketing margins

Acharya's method of Modified Marketing Efficiency can also be stated as
MME= [RP/(MC+MM)]-1
Because RP=FP+MC+MM,
Where,
RP=Price paid by the consumer
MC=Total marketing cost
MM=Net marketing margin
FP=Price received by the farmer

3. Discussion and Results

Table 1: Marketing Channels for Autumn Rice Growers

Channel	Marketing Channel	Average Percentage of farmers adopting the channel out of 29 autumn rice growers
Channel-1	Producer Consumer	20.68(29)
Channel-2	Producer P consumer	17.24(29)
Channel-3	Producer WSM P consumer	13.79(29)
Channel-4	Producer P WSM R consumer	3.44(29)
Channel-5	Producer VT LMCA P R consumer	6.89(29)
Channel-6	Producer P R consumer	37.93(29)

Note: VT: Village Traders, WSM: Whole Sale Market, P: Processor, LMCA: Local Market Commission Agent: R: Retailer.

From the (Table 1) it is observed that in autumn rice among the farmers who sold directly to the processor (37.93 %) mainly sold rice through channel-6 and only 3.44 percent of farmers sold autumn rice through channel-4. Most of the farmers preferred the commission agents as their intermediary because the commission agents provided credit facilities to the farmers whenever they needed. Some of the rice grower preferred channel- 3(13.79 %) and channel -2 (17.24 %). Only few of the rice grower followed channel-5(6.89 %). Due to prevailing traditional marketing system in Assam, the producers were not getting actual prices of their agricultural produces but as compared to channel-2, 3, 4. The channel-1 (20.68 %) covered more farmers where the rice was sold to consumer directly.

Table 2: Marketing Channels for Winter Rice Growers

Channel	Marketing Channel	Average Percentage of farmers adopting the channel out of 54 winter rice growers
Channel-1	Producer consumer	16.66(54)
Channel-2	Producer P consumer	12.96(54)
Channel-3	Producer WSM P consumer	9.25(54)
Channel-4	Producer P WSM R consumer	5.55(54)
Channel-5	Producer VT LMCA P R consumer	7.40(54)
Channel-6	Producer P R consumer	48.14(54)

From the **(**Table 2) it is observed that in case of marketing of winter rice in the district majority of farmers (48.14 %) sold their produce through channel-6 followed by channel-1 (16.66 %). Only 9.25 percent of farmers directly brought their produce to the wholesale market for sale as indicated by channel-3. About 7.40 percent of farmers sold through channel-5 which was the longest of all the channels, where the local market commission agent and wholesale and processor were involved. Marketing to regional wholesalers or large chain store distribution centers require consistent quality significant volumes and in some cases, year-round supplies. These buyers often have specific and demanding requirements for product uniformity.

Table 3: Marketing Channels for Summer Rice Growers

Channel	Marketing Channel	Average Percentage of farmers adopting the channel out of 37 summer rice grower
Channel-1	Producer consumer	21.62(37)
Channel-2	Producer P consumer	18.91(37)
Channel-3	Producer WSM P consumer	13.51(37)
Channel-4	Producer P WSM R consumer	5.40(37)
Channel-5	Producer VT LMCA P R consumer	8.10(37)
Channel-6	Producer P R consumer	40.54(37)

From the (Table 3) indicated that in case of marketing of summer rice majority, 40.54 percent of farmers sold rice through channel-6. Channel-1, which was the direct channel and was adopted by 21.63 percent of farmers. The lowest, 5.40 percent of farmers sold through channel-4 where, many middlemen took lion share of profit and consequently the price went up abnormally. About 8.10 percent of farmers sold through channel-5 which was the longest of all the channels. Most of the farmer did not know where they could reach potential buyers, but as compared to channel-2, 3, 4, the channel-1 (21.62 %) had more adopters where the rice was sold directly to consumer.
The marketing efficiency and producer's share in consumer's rupees is presented below.

Table 4: Marketing Efficiency and Producer's Share in the Consumer's Rupee in Different Marketing Channels of Autumn Rice in the Nalbari District

No of channel	Consumer price Rs/Kg	Producer's share in consumer rupee (%)	Modified Marketing Efficiency(MME)
Channel-1	30.39	100	-
Channel-2	30.45	39.34	0.649
Channel-3	30.40	39.14	0.643
Channel-4	31	38.06	0.614
Channel-5	30.50	38.36	0.622
Channel-6	32	40.62	0.684

Table 5: Marketing Efficiency And Producer's Share In The Consumer's Rupee In Different Marketing Channels Of Winter Rice In The Nalbari District

No of channel	Consumer price (Rs)/Kg	Producer's share in consumer rupee (%)	Modified Marketing Efficiency (MME)
Channel-1	24.92	100	.-
Channel-2	25	40	0.666
Channel-3	26	38.07	0.614
Channel-4	26.50	36.98	0.586
Channel-5	25.50	38.23	0.619
Channel-6	27	44.44	0.800

Table 6: Marketing Efficiency and Producer's Share in the Consumer's Rupee in Different Marketing Channels of Summer Rice in the Nalbari District

No of channel	Consumer price Rs/Kg	Producer's share in consumer rupee (%)	Modified Marketing Efficiency(MME)
Channel-1	30.45	100	-
Channel-2	31	40.32	0.675
Channel-3	31.5	39.04	0.640
Channel-4	30	40.83	0.690
Channel-5	30.60	39.21	0.645
Channel-6	32	46.87	0.882

From (Tables 4 to 6) Modified Marketing Efficiency (MME) have been computed for all rice growers, where it has been observed that MME value of 0.880, was highest in case of summer rice in channel-6 as compared to all channels followed by winter and autumn rice with a value of 0.800 and 0.684 respectively. Thus among the channels involving intermediaries channel-6 was found to be more efficient as compared to other five marketing channels. The channel-1, where the rice had been marketed directly to the consumer groups did not bear any significance of estimating the MME values as there were no intermediaries involved in the channel. The produce's share in consumer's rupee were highest as expected in the first channels for all seasons of rice growers as these were the direct channels. Channel-1 of rice marketing indicated producer's share in consumer's rupee value of 100 (percent) to all. Among the channels from 2 to 6, the channel-6 had the highest producer's share in consumer's rupee value of 46.87, 44.44 and 40.62 percent summer, winter and autumn rice respectively. In the district most of the sellers did not know where and how they could reach potential buyers and distributed through channel-6, directly to the processor expecting lower marketing cost.

5. Conclusion

The forgoing discussion and analysis of data clearly indicated that rice has enormous potential in the study area despite a number of constraints being faced by the farmers. In the rice marketing handling, assembling, and transportation, storage and percentage loss affected the marketing process badly. Also Dr. C. Ramesh (2016) [6] found in his study that the market imperfection and the consequent loss in marketing efficiency are more pronounced in markets for perishable commodities which require quick transportation and better storage facilities, involving large number of intermediaries who take away high margins from the price paid by consumers. In total six number of marketing channels were identified in the district and of which channel-6 (producer-processor-retailer-consumer) was found to be more efficient as indicated value of Modified Marketing Efficiency. The study revealed that MME value of 0.880 was highest value for summer rice in channel-6 as compared to all channels followed by winter and autumn rice with a value of 0.800 and 0.684 respectively. Thus among the channels involving intermediaries channel-6 was found to be more efficient as compared to other five marketing channels. The channel-1, where the rice had been marketed directly to the consumer groups did not bear any significance of estimating the MME values as there were no intermediaries involved in the channel. Bharat Anil *et.al* (2015) [5] were also found in their study that the price spread in marketing that producers' share (82.56 per cent) in consumers' rupee worked out to be highest when the produce was sold directly to consumers without the intermediaries. For successful implementation of the agricultural development programmes, it is desirable to involve the farmers in the decision making process as well as in implementation of the programmes.

6. Suggestions

The long chain of channels affects the procurement price of paddy. Therefore, the Government should direct the co-operative and commercial banks in the study area to provide adequate loan facilities at reasonable rate of interest to the farmers without any rigid formalities. To sum up, a long term arrangement should be worked out by the Government of Assam to protect the interest of both producers and consumers and also to improve the production and marketing of paddy in the study area.

7. Reference

1. Annonymous. Economic survey of Assam, Govt. of Assam, 2014.
2. Annonymous. Economic Survey, 2016-17.

3. Acharya SS, Aggarwal NL. Agricultural Marketing in India. Third edition, Oxford & IBH Publishing Company, New Delhi, 2001.
4. Barah BC, Betne Rajeev, Bhowmick BC. Status of Rice Production System in Assam: Aresearch perspective, National Centre for Agricultural Economics and Policy Research New Delhi, 2009.
5. Bhat Anil, Kachroo Jyoti, Singh SP, Sharma Rakesh. Marketing costs and Price Spread Analysis for Citrus in Samba district of Jammu region, An International Journal of Agro Economist. 2015; 2(1):41-46.
6. Dr. Ramesh C. Marketing Efficiency: A Special Focus On Paddy Cultivators In Cuddalore District, Epra International Journal of Economic and Business Review. 2016; 4(8).