

coriander are considered as major spices as they have the foremost position in value terms in the world spice trade, beside that Cardamom is one of the most important spices exported from India to other parts of the nation as well as to Srilanka^[9]. But India is a leading producer and exporter of turmeric in the world. Andhra Pradesh , Tamil Nadu, Odisha, Karnataka, West Bengal, Gujarat, Maharashtra, Assam are some of the important states cultivating turmeric. Share of Odisha in the country is around 22% in terms of area and 8% in terms of production. Kandhamal occupies a unique position in the state with 40% share in area and production. The climate and soil of this state is very suitable for growing organic turmeric. The most important thing is no fertilizer and pesticides are used for cultivating turmeric that is totally organic by default (kandhamal.nic.in/km-flori/k-1).

Turmeric, the Golden Spice, is one of the most studied botanical in modern science. *Curcuma longa* L. is gaining the reputation to be the single most important herb for many health and dietary need. Turmeric is a powerful medicine that has long been used in the Chinese and Indian system of medicine as an anti-inflammatory agent to treat a wide variety of condition including flatulence, jaundice, menstrual difficulties, bloody urine, hemorrhage, tooth ache, bruises, chest pain and colic.

The organic turmeric growers are facing several marketing problems and information marketing aspect of turmeric is also limited. The turmeric marketing problems in this area have not been studied in a systematic way even though number of studies has been conducted in the country. Presently KASAM (Kandhamal Apex Spices Association for Marketing) agency has been established since 1st September 1998 and has been able to solve the problems in marketing of organic turmeric to a great extent. Intensified efforts are needed to identify the specific problems related to turmeric marketing. Hence, with this backdrop, the present study was undertaken to elicit the marketing scenario of organic turmeric in Daringbadi block come out with policy implications with the following specific objectives

1. To identify the marketing channels and of organic turmeric in the study area
2. To identify constraints faced in turmeric marketing and to suggest appropriate measures to improve the situation.

METHODOLOGY:

Kandhamal district of Odisha was purposefully selected for the study of marketing of organic turmeric. Most of the villages of Daringbadi block were dominant in organic turmeric

production. Daringbadi Block was one of them where turmeric production and marketing status was more. A multi stage stratified random sampling technique was used for the purpose of study. Two major organic turmeric producing villages namely Sikakota & Sraniketa were chosen at random for the selection of farmers. A list of turmeric growers was prepared. The sample households were stratified into three categories namely marginal farmers (less than one hectare of land), small farmers (one to two hectare of land), large farmers (more than two hectare of land) and these were selected by probability proportional sampling (PPS) method. By PPS method seventy farmers were selected. Primary data was collected for the year 2015-16 using semi-structured interview schedules from seventy turmeric growers selected from ten villages to study the marketing practices and channels involved in the marketing of organic turmeric, as well as to identify major constraints in marketing of organic turmeric.

Table 1. Classification of Organic Turmeric farmers in Kandhamal district of Odisha, India

Type of farmers on the basis of land holding	Area in ha.	No. of farmers
Marginal	<1.00	52
Small	1.01-2.00	13
Large	>2.01	5

Marketing channel

The chain of intermediaries through which the various farm commodities pass between producers and consumers is called a marketing channel. Major marketing channels in the transportation of vegetables from farmer to the ultimate consumer were identified. The volumes of transaction through each channel were estimated to calculate the effectiveness of each channel.

Marketable Surplus: In this study, the term marketable surplus was used to denote the quantity which was a real of the surplus under varying conditions after the consumption and other requirements of the farmer were met.

It was computed by the formula,

$$MS = P - C$$

Where MS = marketable surplus

P = gross production

C = total requirement

Marketed surplus:

In this study the term marketed surplus was used to denote the actual quantum of sales by the production irrespective of their requirements.

Relation between Marketed surplus and Marketable surplus:

Marketed surplus may be less than, equal to or greater than marketable surplus. Mostly in case of small and marginal farmers marketed surplus is higher than marketable surplus.

Garrett's Ranking Technique

To know the perceptions of farmers and document the constraints in marketing of organic turmeric, Garrett's ranking technique was used. Basically it gives the change of orders of constraints and advantages into numerical scores. The major advantage of this technique as compared to simple frequency distribution is that the constraints and advantages are arranged based on their importance from the point of view of respondents. Hence the same number of respondents on two or more constraints may have been given different rank. Garrett's formula for converting ranks into per cent was given by

$$\text{Per cent position} = 100 * (R_{ij} - 0.5) / N_j$$

Where,
 R_{ij} = Rank given for i^{th} factor by j^{th} individual
 N_j = Number of factors ranked by j^{th} individual

The per cent position of each rank then converted into scores referring to the table given by Garret and Woodsworth (1969). For each factor, the scores of individual respondents were added together and divided by the total number of the respondents for whom scores were added. These mean scores for all the factors were arranged in descending order, ranks were given and most important factors were identified.

RESULTS AND DISCUSSION:

Marketing channels of organic turmeric in the study area

Through marketing channels the organic turmeric were marketed from producer's field to consumer's house. Mostly three types of marketing channels were identified in the study area.

1. Channel – I Producer → Consumer
2. Channel – II Producer → wholesaler retailer → Consumer
3. Channel – III Producer → KASAM agency → state wholesaler retailer → Consumer.

Table 2. Marketing channels of organic turmeric in Kandhamal district of Odisha, India (n=70)

Sl. No.	Marketing Channel	Channel	No. of farmers
1	Channel – I	Producer → Consumer	10 (14.28)
2	Channel – II	Producer → wholesaler retailer → Consumer	22 (31.42)
3	Channel – III	Producer → KASAM agency → state wholesaler retailer → Consumer	38 (54.28)

(Figures in parentheses indicate percentage of total production)

(Sl. No stands for Serial Number)

Marketable and marketed surplus of organic turmeric in sample farms

Table 3 reveals that the production of the organic turmeric was highest in case of large farmers (1.964t) followed by small farmers (1.69t) and marginal farmers (1.578t). The farmers stored about 4.5-5 q/ha for seed purpose for the next season.

It was observed that marketable surplus was 1.509t in large farmers as compared to small farmers 1.204 t and marginal farmers 1.074 t. It was observed that marketable surplus increases with increase in production. A similar finding was seen in case of the marketable surplus and marketing efficiency of vegetables in Indore district of Madhya Pradesh (Rupali *et al.*,2010).

Table 3. Marketable and marketed surplus of organic turmeric in sample farms (t/acre)

Sl.No.	Particulars	Farm size categories		
		Marginal (n ₁ =52)	Small (n ₂ =13)	Large (n ₃ =5)
1	Total production	1.578	1.69	1.964
2	Retained for seed	0.5	0.48	0.45
3	Family consumption	0.004	0.006	0.005
4	Marketable surplus	1.074	1.204	1.509
5	Marketed surplus	1.074	1.20	1.495

Constraints faced by sample respondents in marketing of organic turmeric

Table 4 presents major marketing problems of organic turmeric included lack of proper storage facility, non-availability of varieties that fetch higher market value, higher commission charges, unawareness among organic turmeric growers about its sky-rocketing prices in cities and export market, obligation of the poor farmer producer to repay the loan and lack of nearest market.

Table 4. Constraints faced by sample respondents in marketing of organic turmeric in Kandhamal district of Odisha, India

Sl. No	Problem	Garrett Score	Rank
1	Lack of proper storage facility	73.81	I
2	Obligation of the poor farmer producer to repay the loan	69.78	II
3	Unawareness among organic turmeric growers about its sky-rocketing prices in cities and export market	58.76	III
4	Non-availability of varieties that fetch higher market value	54.45	IV
5	Lack of nearest market	54.46	V
6	Higher commission charges	44.30	VI

PERFORMANCE OF KASAM AGENCY:

KASAM was born on 01.09.1998 by the members of 61 number of Spices Development Societies (SDS). KASAM is registered (Reg. No. Pboo-2385/28-1998-99) under society's registration Act, 1860 with a Bye-laws. Presently it has got 11237 no. of (ST-78%, SC-15% & other-7%) farmers as its primary members. The district collector is its president and there is a Governing body with a General Manager (Marketing) to look after its business and a Secretary as head of the management.

Motto: The motto of KASAM is to generate employment, poverty alleviation, extension of species area, production of quality and value added hygienic spices and to set up viable

154 marketing net work to minimize the exploitation by traders through inculcating a feeling of self
155 confidence and self reliance among the producers.

156 **Infrastructure**

157 With the coordination of local farmers & government supported body KASAM is able to have a
158 well equipped infrastructure, which includes two no. of processing unit namely:-

159 1. KASAM at Bandhagada

160 2. KASAM at Daringbadi

161 And also KASAM is having four no. of ware-house of capacity 5000MT for the storage of food
162 product namely:

163 1. KASAM ware-house at Bandhagada

164 2. KASAM ware-house at Bramhanigaon

165 3. KASAM ware-house at Daringbadi.

166 4. KASAM ware-house at G. Udayagiri (Katadaganda)

167 **Organic Certificate**

168 The most valuable aspect of Kandhamal turmeric is that these are produced “ORGANICALLY”
169 without use of any chemical fertiliser and pesticide. Organic species has got much demand in
170 foreign countries. In order to export organic species from the district, KASAM has entered an
171 agreement with the CUC (Control Union Certification) of Holland (an organic certifying agency)
172 and obtaining “ORGANIC CERTIFICATE” from 2000. This certificate could help KASAM for
173 export of Organic species from the district.

174 **Marketing**

175 Since its inception, KASAM has tried to purchase turmeric from its members by paying
176 remunerative price. The business of Organic Spices was started from 1999. Now KASAM has
177 also being listed nationally as a renowned manufacturer as well as a processor of organic spices
178 & also proposed to start direct export of organic spices in the year 2013, from Kandhamal
179 district, Odisha.

180 1. KASAM is purchasing spices from the members through SDS by giving a remunerative
181 price and through this it intervene in the market and provides bargaining capacity to the
182 farmers.

2. It has distributed 212nos of improved turmeric boiling units at subsidized rate to the members. The improved boiling unit is easy to handle, takes less time for processing and less fuel consumption.
3. Through KASAM 600nos of polythene sheets is being supplied to member at subsidized rate by Spices Board for drying spices hygienically.
4. KASAM facilitated for construction of 9nos of concrete drying yards of 50sq.mt size @ 90% subsidy to ST and 50% subsidy to SC and other category beneficiaries by Spices Board. 48nos of Vermicompost units @ Rs 1000 subsidy by Spices Board have been organized with the members for production of Vermicompost.

Future Strategy

KASAM envisages pursuing the following aspects for the benefit of its members.

1. Increase area of production by organizing new Spices Development Societies.
2. Set up another processing plant at Phulbani.
3. Help poor children of members in ITI Education.
4. Educate members on organic method of cultivation and increase production of hygienic and value added organic spices.
5. Market organic spices in export market.
6. Work with the line departments and WSHGs (Women Self Help Groups) to facilitate group marketing.

CONCLUSION:

As the India is popularly known as the “Spice Bowl of the World” as a wide variety of spices with premium quality is grown in the country since ancient times, countries like USA and UAE are not potential importers of spice, but it can be distributed to other countries in a formulated and stabilizing manner.^[10]

The finding of the study gives a sight into the predicament of organic turmeric marketing in Daringbadi and elicits the problems faced for the same. To overcome this problem and make organic turmeric marketing a profitable one, development of infrastructure and storage structures is essential. Extension services should be improved and Government should take an active role to disseminate farm technology and inculcate the knowledge of entrepreneurship. Awareness needs to be created among the organic turmeric growers about proper price and improved varieties. The trading of the spice has to be also done with the help of scientific advanced methodology, which

may include lots of manpower and technicalities. Increased potentialities of spice growing in the nation may also enhance the nutritional values of other nations. It can be said that spices are the taste builders of the food industries; rather indirectly it can also leads to prosper the growth of economy with proper serve of food to different industries as well as different countries in broader aspect the food industry is also dependent upon the spices and quality of a food is solely depends upon it.

COMPETING INTEREST:

There is no competing interest related to this manuscript. The work has not been funded by any organization.

DIFFERENT CONCEPTS USED FOR THE STUDY

Commission Agent- They are the market intermediaries who receive the produce from the seller farmer and take commission from the buyer wholesaler or retailer of the produce.

Wholesaler- They purchases the produce from the commission agent or from the producer and sells the same to different retailer.

Retailer- Those who sale produces directly to the consumer in the market are called retailers.

KASAM- KASAM stands for Kandhamal Apex Spices Association for Marketing. KASAM is being listed nationally as a renowned manufacturer as well as processor of organic spices and also proposed to start direct export of organic spices in the year 2013 from Kandhamal district Odisha. The motto of KASAM is to generate employment, alleviate poverty, extend area under spices, production of quality and value added hygienic spices and to set up viable marketing network to minimize the exploitation by trader through insulating a feeling of self confidence and self reliance among the producer.

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