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# Price spread of turmeric in Guntur district of Andhra Pradesh

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**Abstract**
The study was conducted in the year 2017-2018 to study the "Marketing Cost, Marketing Margin and Price Spread of Turmeric in Guntur district of Andhra Pradesh". It revealed that, price spread in channel - I, and channel - II, were (Rs.2021.12/quintal, and Rs. 2177.68/quintal) respectively. Producer's share in consumer's rupee for the channel - I was 74.97 per cent and channel - II was 74.07 per cent. Marketing efficiency for channel - I was 2.97 per cent and channel - II was 2.84 per cent.

**Keywords:** price spread, marketing channels and turmeric.

## 1. Introduction
India is popularly known as the "Spice Bowl of the World" as a wide variety of spices with premium quality are grown in the country since ancient times. In Vedas, as early as 6000 BC, scruples evidences are available regarding various spices, their properties and utility. Among the commodities that were traded during that period, spices occupied a major portion due to their superior quality and diversity which attracted foreigners to India. India has been well known for the trade since the period of exploration of sea routes, because of its various spices and superior quality. This was the key reason because of which India has invaded by the European countries and was imperialized.
According to the International Organization for Standardization (ISO), 65 spices are grown in India. The spices are grown throughout the country from tropical to temperate climate. India has the highest number of spice varieties in the world. As per the definition of International Spice Group "Spices are any of the flavored or aromatic substances of vegetable origin obtained from the tropical or other plants, commonly used as condiments or employed for the other purposes on account of their fragrance preservation or medicinal qualities".
India is the largest producer, consumer and exporter of turmeric in the world. Indian turmeric is considered to be the best in the world market because of its high curcumin content. India accounts for about 80 per cent of world turmeric production and 60 per cent of world exports. Other major producers are Pakistan, China, Haiti, Jamaica, Peru, Taiwan and Thailand. Asian countries consume much of their turmeric production.
India is the largest producer, consumer and the exporter of Turmeric. It accounts for 80per cent of the world output. Other major producers are China, Myanmar, Nigeria, Bangladesh, Pakistan, Sri Lanka, Taiwan, Burma, Indonesia, Malaysia, Vietnam, Thailand and Central America etc. Global production is around 8 to 9 Lakh tonnes. Indian turmeric industry contributes about 78per cent of world production and 60per cent of the exports of Turmeric. Asian countries consume much of their own turmeric production nearly 90per cent.

**Table 1:** Share of Turmeric in Global Production (per cent)

| Sl. no | Countries | Per cent age |
|---|---|---|
| 1 | India | 78 per cent |
| 2 | China | 8 per cent |
| 3 | Myanmar | 4 per cent |
| 4 | Nigeria | 3 per cent |
| 5 | Bangladesh | 3 per cent |
| 6 | Others | 4 per cent |

From the above table 1.1 the major share is taken by India. It accounts for 78 per cent of total World production followed by China (8per cent), Myanmar (4per cent), Nigeria and Bangladesh together (6per cent). (Table 1) India is the largest consumer, producer and exporter of turmeric in the world.

The country consumes most (80 per cent) of its turmeric production and it exports the surplus. Turmeric is grown in as many as 25 states of India with Andhra Pradesh, Tamil Nadu, Karnataka and Odisha being the leading producers. Other main producers of turmeric are Gujarat, West Bengal, Assam, Meghalaya and Maharashtra. India has nearly 1.73 lakh hectares under turmeric cultivation with a total production of 8.55 lakh tonnes during the year. Andhra Pradesh, topped both in area and production during the year 2005-2006, with 69990 hectare (40.46per cent) and 518550 tonnes (60.60per cent), respectively. Tamil Nadu followed with acreage of 25970 hectares (15.01per cent) and production of 143358 tonnes (16.75per cent).

India has the lion share in production, consumption and export of the world. It accounts for 78per cent of the world output and 60per cent of world exports. Indian turmeric is considered to be the best in the world market because of its high curcum in content. In India it is cultivated in states of Andhra Pradesh, Maharashtra, Orissa, Tamil Nadu, West Bengal, Karnataka and Kerala. In India, the important states which grow turmeric are Andhra Pradesh (56,822 hectares), followed by Orissa (23,640 hectares), Tamil Nadu (17,280 hectares) and Assam (12,066 hectares). In India more or less 20 states cultivate turmeric. Out of them, Andhra Pradesh ranks first in area (58,478 ha), production (260,000 tonnes) and productivity (4,389 kg ha-1) (2015-16). In Andhra Pradesh out of the 23 districts, turmeric crop was recorded in 20 districts. Among the turmeric growing districts of Andhra Pradesh, Telangana state Karimnagar (14,422 ha) stood first in area followed by Nizamabad (9,568 ha), Warangal (9,399 ha), Adilabad (6,394 ha), Ranga Reddy (5,221 ha), Guntur (4,289 ha), Kadapa (2,476 ha) and Visakhapatnam (2,073 ha). Thus in Andhra Pradesh, Kadapa ranks seventh in area (2,476 ha) and production (17,221 tonnes) and fourth in productivity (6,955 kg/ ha) of turmeric.

## 2. Objective

To workout the disposal pattern, Marketing cost, marketing Margin and Price spread of Turmeric

## 3. Materials and Methods

Guntur district is the major Turmeric growing district in Andhra Pradesh, Guntur district alone contributes an area of 5211hectares of turmeric with production of 34286 million tonnes (2016-2017). District is specialized in the cultivation of turmeric on commercial scale and it is a major Turmeric growing district. Thus, Guntur district were selected purposively for the study. A list of turmeric growers and villages in Guntur district was obtained from joint director's office of agricultural and district statistical office Guntur. A cluster of 14 villages were selected in major of turmeric growers from Duggirala block selected delibrately, because more number of villages represent higher area under turmeric production, among them the 6 villages were selected randomly. They are given in the following table 2.

**Table 2:** Selection of sample villages in Duggirala block.

| Sl.no | Taluka/Block | Name of the village | Random numbers |
|---|---|---|---|
| 1 | Duggirala | Chiluvuru | 16 |
| 2 | | Devarapalle | 17 |
| 3 | | Emani | 15 |
| 4 | | Godavarru | 19 |
| 5 | | Duggirala | 20 |
| 6 | | Perakalapudi | 16 |
| 7 | | Chinnapalem | 17 |
| | Total | | 120 |

Then ten percent of respondents/households were selected randomly from the selected villages. Thus all together 120 respondents' households were selected *viz.*, small medium large respondents respectively. The primary data with respect to input use pattern, economics of production of turmeric, constraints in production and marketing of Turmeric were collected from the sample respondents by personal interview method with the help of well- structured pre-tested schedule.

### 3.1.1 Marketing Analytics tools

**Cost of marketing**

The total cost incurred on marketing by various intermediaries involved in the sale and purchase of the commodity till it reaches the ultimate consumer was computed as follow.

$$C=Cf+Cm1+Cm2+Cm3+\ldots\ldots\ldots\ldots\ldots\ldots+Cmn$$

Where,
C= Total cost of marketing
Cf= Cost borne by the producer farmer from the produce leaves the farm till the sale of the produce, and
Cmn= Cost incurred by the $i^{th}$ middlemen in the process of buying and selling.

**Marketable surplus**

$$MS=P-C$$

Where,
MS= Marketable surplus
P= Total Production
C= total requirements (family and farm)

**Marketing Margin of Middlemen**

1. Absolute margin = $P_{Ri} - (P_{pi} + C_{mi})$
2. $$\text{Per cent margin} = \frac{P_{Ri} - (P_{pi} + C_{mi})}{P_{Ri}} X\ 100$$

Where,
$P_{Ri=}$ Total value of receipts
$P_{pi=}$Total purchase value of goods (purchase price) and
$C_{mi=}$Cost incurred in Marketing

**Producer's share in Consumer's Rupee**

$$P_{S=}\frac{P_F}{P_C} X\ 100$$

Where,
$P_S$ = Producer's share in Consumer's Rupee
$P_F$ = Price of the produce received by the farmer
$P_C$= price of the produce paid by the consumer

Price spread = Total Marketing Cost + Total Marketing Margin

**Marketing Efficiency:**

$$\text{Marketing efficiency} = \frac{\text{Consumer price}}{\text{Total marketing cost + marketing margin}}$$

## 4. Results and Discussion

**Table 3:** Marketing Cost, Marketing Margin and Price Spread in different Size of Farms Group Number of Respondents=120 S M L= 50+ 45+ 25 =120 Channel-I = Producer → Processor →Retailer →Consumer (Value in Rupees / quintal)

| Sl. No | Particulars | Sample Average |
|---|---|---|
| 1 | Producer sale price to processor | 6117.33 |
| 2 | Cost incurred by the producer | |
| i | Transportation cost | 12.43 (0.15) |
| ii | Packing cost | 10.43 (0.12) |
| iii | Packaging material cost | 20.43 (0.25) |
| iv | Loading & unloading charges | 10.43 (0.12) |
| v | Weighment charges | 5.43 (0.06) |
| vi | Miscellaneous | 3.43 (0.04) |
| 3 | Total cost incurred by the producer (i - vi) | 62.62 (0.77) |
| 4 | Net price received by the producer | 6054.70 (74.97) |
| 5 | Purchase/Sale price of processor to retailer | 6841.41 (84.71) |
| 6 | **Cost incurred by the processor** | |
| i | Transportation cost | 20.43 (0.25) |
| ii | Cleaning & washing | 4.43 (0.05) |
| iii | Grading | 6.43 (0.07) |
| iv | Storage cost | 3.43 (0.04) |
| V | Loading & unloading | 10.43 (0.12) |
| Vi | Processing | 18.43 (0.22) |
| Vii | Polishing | 25.43 (0.31) |
| viii | Packaging | 18.43 (0.22) |
| ix | Labour | 27.03 (0.33) |
| x | Miscellaneous | 6.43 (0.07) |
| xi | Tax | 15.43 (0.19) |
| 7 | Total Cost incurred by the processor (i - xi) | 156.41 (1.93) |
| 8 | Processors margin | 567.50 (7.02) |
| 9 | Net price received by the processor | 6685.00 (82.77) |
| 10 | Purchase /Sale price of retailer to consumer | 8075.83 |
| i | Storage cost | 15.43 (0.19) |
| ii | Packaging material cost | 10.43 (0.12) |
| iii | Packaging cost | 3.43 (0.04) |
| iv | Tax | 15.43 (0.19) |
| v | Carriage up to shop | 25.43 (0.31) |
| vi | Weighing | 6.43 (0.07) |
| vii | Shop rent | 15.43 (0.19) |
| viii | Miscellaneous | 8.43 (0.10) |
| 11 | Total cost incurred by the retailer (i - viii) | 100.5 (1.24) |
| 12 | Retailers margin | 1146.86 (14.20) |
| 13 | Net price received by the retailer | 7975.33 (98.75) |
| 14 | Consumer price | 8075.83 |
| 15 | Total marketing cost involved | 319.53 (3.95) |
| 16 | Total marketing margin | 1714.37 (21.22) |
| 17 | Price spread | 2021.12 |
| 18 | Producer share in consumer rupee | 74.97 |
| 19 | Marketing efficiency | 2.97 |

Table 3 reveals that the average marketing cost when producers sold their produce to processor/Retailers in the market was Rs. 62.62/qtl. Among these transportation Rs. 12.43/ha, followed by miscellaneous charges was Rs. 3.43/qtl, loading and unloading cost Rs. 10.43/qtl, packing material cost Rs. 20.43/qtl, weighing charges Rs.5.43/qtl, and packing cost was Rs. 10.43/qtl, respectively. The average marketing cost when produce was moved from processor to retailers was observed Rs.156.41/qtl, among these costs transportation (0.25%), followed by loading and unloading charges (0.12%), losses and miscellaneous (0.07%), cleaning and washing cost (0.05%), grading (0.07%), storage cost (0.04%), processing (0.22%), polishing (0.31%), labour (0.33%) and tax (0.19%) of the total marketing cost respectively. The average marketing cost involved when product moved to consumer from retailer was observed Rs.100.5/qtl, among these storage cost (0.19%), Packaging material cost (0.12%),Packaging cost (0.04%), tax (0.19%), carriage upto shop (0.31%), weighing (0.07%), shop rent (0.19%), miscellaneous charges was (0.10%) of the total cost incurred by retailer respectively Price spread was Rs. 2021.12/qtl on different size of farms groups. Marketing efficiency in channel-I was 2.97 per cent.

**Table 4:** Marketing Cost, Marketing Margin and Price Spread in different Size of Farms Group Number of Respondents=120 S M L= 50+ 49+ 21 =120 Channel-II = Producer → Trader/Wholesaler/Commission agent → Processor → Retailer → Consumer (Value in Rupees/quintal)

| Sl. No | Particulars | Sample Average |
|---|---|---|
| **Channel II Producer→Trader/whole saler/Commission agent →Processor→Retailer→Consumer** | | |
| 1 | Producer sale price to Trader | 6300 |
| 2 | **Cost incurred by the producer** | |
| I | Transportation cost | 29.15 (0.34) |
| Ii | Packing cost | 6.29 (0.07) |
| Iii | Packaging material cost | 20.58 (0.24) |
| Iv | Loading and unloading charges | 10.58 (0.12) |
| V | Weighing charges | 2.28 (0.02) |
| Vi | Market fee | 2.28 (0.02) |
| Vii | Commission charges | 3.58 (0.04) |
| Viii | Miscellaneous | 2.58 (0.03) |
| 3 | Total cost incurred by the producer (i to viii) | 77.68 (0.92) |
| 4 | Net price received by the producer | 6222.31 (7.40) |
| 5 | Purchase/Sale price of Trader / wholesaler to processor | 6900 (82.14) |
| I | Transportation cost | 10.58 (0.12) |
| Ii | Cleaning & sorting cost | 8.58 (0.10) |
| Iii | Loading & unloading | 8.58 (0.10) |
| iv | Market fee | 12.58 (0.14) |
| V | Miscellaneous | 5.58 (0.06) |
| 6 | Total cost incurred by the Trader/wholesaler (i-v) | 45.94 (0.54) |
| 7 | Trader/wholesaler margin | 554.05 (6.59) |
| 8 | Net price received by the Trader/wholesaler | 6854.05 (81.59) |
| 9 | Purchase /Sale price of processor to retailer | 7400 (88.09) |
| 10 | **Cost incurred by the processor** | |
| i | Transportation cost | 20.58 (0.24) |
| ii | Cleaning & washing | 4.58 (0.05) |
| iii | Grading | 6.58 (0.07) |
| iv | Storage cost | 3.58 (0.04) |
| v | Loading & unloading | 10.58 (0.12) |
| vi | Processing | 18.58 (0.22) |
| Vii | Polishing | 25.58 (0.31) |
| Vii | Packaging | 18.58 (0.22) |
| Viii | Labour charges | 27.08 (0.32) |
| Ix | Miscellaneous | 6.58 (0.07) |
| X | Tax | 15.58 (0.18) |
| 11 | Total cost incurred by the processor (i-x) | 159.72 (1.90) |
| 12 | Processors margin | 340.27 (4.05) |
| 13 | Net price received by the processor | 7240.27 (86.19) |
| 14 | Purchase/Sale price of retailer to consumer | 8400 |
| i | Storage cost | 15.58 (0.18) |
| ii | Packaging material cost | 10.58 (0.12) |
| iii | Packing cost | 3.58 (0.04) |
| iv | Tax | 15.58 (0.18) |
| v | Carriage up to shop | 25.58 (0.30) |
| vi | Weighing | 6.58 (0.07) |
| vii | Shop rent | 15.58 (0.18) |
| viii | Miscellaneous | 8.58 (0.10) |
| 15 | Total cost incurred by the retailer (i - viii) | 101.71 (1.21) |
| 16 | Retailers margin | 898.28 (10.69) |
| 17 | Net price received by the retailer | 8298.28 (98.78) |
| 18 | Consumer price | 8400 |
| 19 | Total marketing cost involved | 388.57 (4.62) |
| 20 | Total marketing margin | 1792.61 (21.34) |
| 21 | Price spread | 2177.68 |
| 22 | Producer share in consumer rupee (%) | 74.07 |
| 23 | Marketing efficiency | 2.84 |

**Note:** Figure in the parenthesis indicate percentage to the total consumer price

Table 4.2 reveals that marketing cost, marketing margin, and price spread for channel-II. The channel-II was not important because very less farms i.e. 29.93 per cent of growers preferring this channel to sale their produce. Two intermediaries were identified through which Turmeric reaches to the consumer's i.e. commission agents/ wholesalers and the Retailers. This is the longest channel among two identified channels. The producer sells his produce to the commission agent/wholesalers, who in turn sell it to retailers in the market. Finally the produce reaches to consumers after collecting margin. Average marketing cost when producers sold their produce to commission agents/wholesalers in the market was Rs. 77.68/qtl. Among these costs transportation cost was most important which accounted for Rs. 29.15/qtl,

followed by packing material cost was Rs.20.58, loading and unloading charges Rs.10.58/qtl, packing cost was Rs.6.29/qtl, commission charges Rs. 3.58/qtl, market fee Rs. 2.28/qtl, and weighing charges Rs.2.28/qtl, respectively. The average sale price of the trader /wholesaler to processor was Rs. 6900/qtl in different farms size groups.

In these channel the trader/wholesaler margin was 6.59 per cent and processors margin was 4.05 per cent and retailers margin was 10.69 per cent of the consumer paid price. Producer share in consumer price was (74.07 %). Price spread was Rs. 2177.68/qtl of consumer paid price. Marketing efficiency in channel II was 2.84 per cent in different size of farms groups.

## 5. Conclusion

The main objective is to study the disposal pattern, Marketing cost, marketing Margin and Price spread of Turmeric. Revealed that Total Marketing Cost, Price spread and Marketing Margin was highest in the channel II (Rs. 388.57/qtl, Rs. 2177.68/qtl and Rs. 1792.61/qtl). The Producer share in consumer's rupee and marketing Efficiency was highest in the channel I (74.97 per cent and 2.97 per cent). Study revealed that the maximum percent of producers share in consumer price is observed in channel-I was 74.97 per cent. The price spread was highest in Channel-II (Rs. 2177.68). The Marketing efficiency was highest in channel-I (2.97 per cent) respectively. The examination indicated that there is scope to increase the producer's share in consumer's rupee and marketing efficiency by making the market more effective so that the number of intermediaries is to be restricted and marketing costs and marketing margins to be reduced. This will be the way for making Turmeric cultivation more profitable.

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