



# Trading Practices of Korai Grass (*Cyperus* sp.) Mats in Central Tamil Nadu

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**Received:** August 25, 2025; **Published:** August 30, 2025

## Abstract

Musiri Block of Tiruchirappalli District is traditionally known for Korai cultivation and mat weaving activities. It is a unique activity in Tiruchirappalli District and hence the researchers were aimed at documenting the status of performance of Mat manufacturing units which are groomed in one block which is Musiri. Though there were so many mat manufacturing units, almost the industries in contact for the study, have not shown any positive attitude to provide data. On request and after providing complete information for education purpose, only one firm has agreed to provide data after examining whether we are the students or not and for what purpose it is going to be used. In this circumstance, the researcher has collected the data following a case study approach to study the performance of mat industry. The study has aimed at answering the performance of the mat industry and the market potential that exists in generating the employment opportunities to the rural poor. The raw material could be mobilized through the area under Korai grasses spread in an area of 429 ha. The cost of production of single mat is arrived at Rs. 35. Whereas, it was sold at the price of Rs. 83.10 and the producer of mat industry could generate a net return of Rs. 48 per unit. Such an industry is facing few constraints. Among these, the nonavailability of trained man power for weaving operations followed by stiff competition from plastic mat industry and the poor quantity of raw material supply to sustain the weaving operations. To alleviate these constraints, few strategies were also discussed. On implementing the strategies, the mat industry could face an upward trend in their production and trading activities.

**Keyword:** Performance of Mat Industry, Korai Grass Production, Marketing Efficiency and Marketing Channels

## Introduction

The Korai mat industry occupies a unique position in the rural economy of Tamil Nadu, particularly in the districts of Tiruchirappalli and Karur. Rooted in tradition yet adapting to modern market demands, this industry demonstrates the intersection of agriculture, craftsmanship and trade. Despite its long-standing cultural and economic significance, the industry is undergoing a transition, with traditional handloom methods gradually giving way to machine-operated looms. While corporate presence in this sector is limited, the industry thrives through a cooperative network of farmers, traders, and artisans. Farmers cultivate and supply Korai grass (*Cyperus* sp.), traders coordinate orders based on customer requirements, and weavers transform the harvested grass into a wide range of woven products for both domestic and international markets. Korai mats are not only utilitarian household items but also products of cultural value and health benefits. Traditionally used for sleeping, Korai mats are believed to promote better sleep, improve blood circulation, reduce stress, alleviate back pain, regulate body temperature

and prevent allergies. Beyond household use, Korai mats and their derivatives serve as construction materials, fences, screens, placemats, and decorative wall hangings, with artisans increasingly diversifying into value-added products that fetch higher returns. The production process of Korai mats involves multiple stages, including harvesting, drying, weaving, and finishing. The mats are broadly classified into coarse, medium, and fine varieties, with Tiruchirappalli and Karur primarily specializing in coarse and medium types. Handloom weaving—locally referred to as *Kaithari*—involves intricate craftsmanship, where artisans work with natural cactus fibers as warp threads and Korai grass as weft, often producing customized designs for special occasions. In contrast, power looms employ cotton or nylon warp threads and enable faster production to meet growing market demand. Despite its cultural and economic importance, the Korai mat industry faces challenges in sustaining traditional methods while catering to modern trade demands. The industry stands at a critical juncture where opportunities for value addition, domestic trade expansion, and export potential coexist with constraints related to raw material availability, technological shifts,

and market access. Against this backdrop, the present study focuses on analyzing the trading aspects of Korai mats, with particular attention to production linkages, marketing practices, and the opportunities and constraints influencing the industry's growth.

## Design of the Study

In the Cauvery Delta, cultivation of Paddy was found to be the eligible crop and the same is approved by the Department of Agriculture and Farmers Welfare. Amidst the recommended crop for cultivation, few of the farmers hailing from Musiri Taluk of Tiruchirappalli District, located in the fertile Cauvery delta region was practicing the cultivation of Korai Grass as their commercial crop and are reaping profit. Agriculture forms the backbone of the rural economy with paddy, sugarcane, banana, vegetables, and fruits as their major crops. The region is also known for Grass mat weaving, which provides an important source of livelihood for farm households. In this respect, Musiri taluk was purposively chosen due to the availability of raw material and concentration of mat-weaving units

### 2.1. Sampling Design

Tiruchirappalli District of Tamil Nadu was selected purposively, as it has significant area under Korai grass cultivation and is traditionally known for Korai mat weaving. For that purpose, the study area was selected as Musiri Taluk of Tiruchirappalli District as it encompasses large number of farmers, processors cum manufacturers of grass mats whom are interestingly weaving the mats and hence it was selected purposively in the first stage from the records of Department of Economics and Statistics. In the second stage, the block wise weavers of mats are also enlisted from the records of Department of Economics and Statistics and finally the blocks in which higher number of weaving industries prevalent are considered and selected in the third stage to collect the data with respect to production and trading aspects of Grass Mats. With all these efforts, the researchers have approached the mat weaving industries for primary data collection. But most of the industries are totally hesitant to provide the data. Later on, the researchers have briefed the importance of data collection for the project. On highlighting the need and importance, only one industry has come forward after ascertaining our origin and the purpose of data collection and hence a case study approach is practiced to collect the data.

### 2.2. Data Collection

The study relied on both primary and secondary data sources, with particular emphasis on the trading and marketing aspects of Korai grass mats. Primary data were collected through a structured interview schedule, administered via personal interviews with mat-weaving units and traders. Data on area under cultivation of Korai grass, Procurement of raw materials, marketing channels, Market demand during auspicious occasions and seasonal fluctuations and Constraints and challenges in accessing wider and competitive markets. Secondary data were sourced from official records of the Department of Agriculture and Farmers' Welfare, Agricultural and Processed Food Products Exports Development Authority (APEDA) and the Department of Economics and Statistics, Tiruchirappalli. These included information on area under cultivation of Korai grass, volume of export and employment generation. Reports and publications on rural industries and value-added products were also reviewed to provide context on trade performance and marketing trends.

### 2.3. Study Period

The study reference year was 2024 (agricultural year), and data collection was carried out during April to June 2024

## 2.4. Tools of Analysis

Conventional percentage analysis, Marketing cost, Net margin, Price spread and Marketing efficiency of Korai grass mats were carried out to assess the performance of trading practices involved in distribution of Korai grass mats.

### 2.4.1. Conventional Percentage Analysis

Percentage means a number or a ratio represented in the form of fractions of 100.

$$\text{Percentage (\%)} = (\text{Actual value} / \text{Total value}) \times 100$$

### 2.4.2. Marketing Efficiency

Before assessing the marketing efficiency, the researcher has to analyze its components like marketing cost, marketing margin and net margin realized using the Acharya's formula. According to Acharya (2003), an ideal measure of marketing efficiency, particularly for comparing the efficiency of alternate market channels should take into account all of the following

- α) Total Marketing Costs (MC)
- β) Net Marketing Margin (MM)
- χ) Prices received by the Farmer (FP)

$$\text{Acharya's Marketing Efficiency} = \left( \frac{FP}{MC + MM} \right)$$

### 2.4.3. Price Spread Analysis

Market related information was collected from the individual farmers and proprietors of mat industry. The costs included the transport, loading and unloading, storage, commission charges and other expenses incurred for marketing the produce. The process of marketing of *Cyperus*, the difference between price paid by the consumer and the price received by the farmer producer for an equivalent quantity of *Cyperus* was defined as "Price Spread".

#### 2.4.3.1. Farmer's Share in the Consumer's Rupee

The farmers share in the consumer's rupee was calculated with the help of the following formula.

$$FS = \left( \frac{FP}{CP} \right) \times 100$$

Where,

- FS = Farmer's Share in the Consumer's Rupee (Percentage)
- FP = Farmer's Price
- CP = Consumer's Price

While assessing the marketing efficiency among the different channels, the channel which is capable of generating highest score by fulfilling the needs of intermediaries and their cost will be considered as efficient channel by which the weavers can concentrate.

## Results and Discussion

The present study was undertaken to examine the area under Korai grass cultivation as a raw material source and the trading aspects which included marketing channels and their efficiency and the export of Korai grass (*Cyperus sp.*) mats to the developing and the developed nations become important which is discussed in detail elsewhere(1-6).

### 3.1. Area under Different Crops in Musiri Block of Tiruchirappalli District

The farmers of Musiri block are expressing interest in cultivating Korai grass as a companion crop. In this respect, Korai grass cultivation is carried out in larger area in Musiri block and hence the researcher has made efforts to present the raw material base. Besides, how much importance is given for cultivation of Korai grass in this block is delineated by presenting the area under different crops in Musiri block of Tiruchirappalli District and are presented in Table 1.

Sl. No	Name of the Crop	Total Area in Ha	Percentage to Total Area
<b>Cereals</b>			
01	Paddy	2838.48	21.94
02	Maize	251.87	01.95
03	Sorghum	5828.46	45.05
04	Pearl Millet	01.25	00.01
<b>Total Area under Cereals</b>		8920.06	68.95
<b>Pulses</b>			
05	Red Gram	574.85	04.46
06	Black Gram	131.98	01.03
<b>Total Area under Pulses</b>		706.83	05.49
<b>Oil Seeds</b>			
07	Groundnut	2048.95	15.83
08	Gingelly	03.41	00.03
09	Sunflower	15.66	00.21
<b>Total Area under Oil Seeds</b>		2068.02	16.07
<b>Commercial Crops</b>			
10	Cotton	500.10	03.86
11	Korai Grass	429.02	03.32
12	Sugarcane	77.66	00.60
<b>Total Area under Commercial Crops</b>		1006.78	07.78
<b>Horticultural Crops</b>			
13	Onion	156.10	01.23
14	Banana	36.98	00.29
15	Tapioca	22.91	00.19
<b>Total Area under Horticultural Crops</b>		215.99	01.67
<b>Total Area under Agricultural Crops</b>		12,701.69	98.33
<b>Total Area under Horticultural Crops</b>		215.99	01.67
<b>Total Area under Crops</b>		<b>12,917.68</b>	<b>100.00</b>

**Table 1:** Area under Different Crops in Musiri Block of Tiruchirappalli District (2023-24).

(Source: Department of Agriculture and Farmers' Welfare and Department of Economics and Statistics, Tiruchirappalli)

From Table 1, one could understand that there are 12918 hectares of land was allocated to various crops. Out of this, only 1.67 Percent of the total area under crops is allocated under horticultural crops. However, 12702 hectares which is accounted for 98.33 Percent of the total area under crops in Musiri Block of Tiruchirappalli District was in favour of agricultural crops. Among the area under agricultural crops, the Cereal crop alone accounted for 69 Percent of the total area under crops.

The area commercial crops in Musiri Block is 1667 hectares which is accounted for 7.78 Percent of the total area under commercial crops. Among the Commercial crops, the Korai grass area is arrived at 429 ha which is accounted for 3.32 per cent to the total area under commercial crops. The area under Korai grass is almost feeding the requirement of all the mills in this block. However, on deficiency of raw materials, these are pumped from Karur and its surrounding villages to the mat industries in Musiri block.

### 3.2. Details of Sources of Raw Materials Supplied to Mat Industries

The success of any manufacturing unit mainly depends upon its raw materials availability and its sustained supply to the industries particularly the mat industry. Mat industry is able to generate its raw materials from nearby villages of Musiri Block. The supply of raw materials to the mat industries are enlisted and documented in Table 2.

Sl. No	Name of the Village	Quantity Supplied in Bundles /Month	Percentage to Total
01	Aamur	32.00	10.67
02	Ayyampalayam	62.00	20.67
03	Evur	41.00	13.66
04	Gunaseelam	48.00	16.00
05	Kilianallur	07.00	02.33
06	Kodunthurai	10.00	03.33
07	Neyveli	14.00	04.67
08	Thinnakonam	11.00	03.67
09	Vellur	57.00	19.00
10	Umaiypuram	18.00	06.00
<b>Total Bundles</b>		<b>300.00</b>	<b>100.00</b>

**Table 2:** Sources of Raw Materials Supplied to Mat Industries in Trichy District.

(Source: Primary Survey: Figures in Parenthesis indicates Percentage to Total)

Table 2 revealed that around 10 villages are contributing the requirement of Raw materials to the mat industries. The villages which are contributing the raw materials are Aamur, Evur, Vellur, Ayyampalayam, Gunaseelam, Neyveli, Umaiypuram, Kodunthurai, Thinnakonam and Kilianallur. Among these 10 villages, Ayyampalayam, Vellur and Gunaseelam are the three villages which are predominant in supply of Grass bundles to the mat industries which are respectively accounted for 20.67 per cent, 19 per cent and 16 per cent to the total raw materials supply. The total quantity of grass bundles supplied to a mat industry is arrived at 300 per month. It is observed that one industry requires around 300 bundles per month on an average.

### 3.3. Details of Manufacturers cum Exporters of Korai Grass Mats

The Korai grass mats is traded across the domestic and international markets. The trading is mostly facilitated by the traders at different levels like Wholesalers, Retailers and other intermediaries like commission agents. In this respect, the details of manufacturers cum exporters are also analyzed zone wise and the details are presented in Table 3.

S. No	Zones	Number of Traders	Percentage to Total
01	North Eastern Zone	13	16.46
02	North Western Zone	18	22.78
03	Western Zone	08	10.13
04	Southern Zone	08	10.13
05	Cauvery Delta Zone	32	40.50
<b>Total Number of Traders</b>		<b>79</b>	<b>100.00</b>

**Table 3:** Details of Manufacturers cum Exporters of Korai Grass Mats

Table 3 outlines that the mats are distributed in the domestic market of Tamil Nadu. The details of distribution of Korai mats are not available to the researcher and hence the distribution within Tamil Nadu was analyzed and presented. Among the five zones, the Cauvery Delta Zone had the maximum manufacturers cum exports whom are accounting to 40 per cent of the total followed by North Western Zone blessed with

23 per cent of manufacturers cum traders. The north western zone takes the produce for distribution to the hilly tracks like The Nilgiris. North Eastern Zone is the next best one to have 13 manufacturers cum exporters whom are accounted for 16 per cent to the total.

The Western Zone and Southern Zone are having minimum of 8 Manufacturers each and are able to receive the raw materials from Musiri Taluk for their activity. In respect of Western Zone, the mat industry is operated at household level by erecting a shed and does their business of weaving the mats.

The quality mats produced by the mat industries are also exported to different countries. Our products are being demanded in 17 countries which included both the developing and the developed nations. The export of Korai grass mats to different countries is in the form of shipments and the details are presented in Table 4.

Sl. No	Country to Which Mats are Exported	Quantity in Shipments	Percentage to Total
01	Australia	100	00.02
02	Brazil	21245	04.66
03	Brunei	120	00.02
04	France	040	00.01
05	Kuwait	350	00.08
06	Malaysia	14421	03.20
07	Maldives	190	00.04
08	North Korea	54000	11.81
09	South Korea	274200	60.12
10	Oman	10727	02.35
11	Papua New Guinea	017	00.00
12	Singapore	5210	01.14
13	Scyhelles	050	00.01
14	Sri Lanka	61321	13.45
15	United Arab Emirate (UAE)	11114	02.44

16	United States of America(USA)	2888	00.63
17	United Kingdom	085	00.02
<b>Total</b>		<b>456078</b>	<b>100.00</b>

**Table 4:** Details of Grass Mats Exported to Different Countries from India (2023).

(Source: Agricultural and Processed Food Products Exports Development Authority (APEDA) Government of India)

Table 4 revealed the details of export of Korai Grass Mats to different countries. Totally the produce is exported to 17 different nations. Among the 17 nations, South Korea is able to receive higher shipments of Korai Grass Mats from India which is accounted for 60.19 per cent to the total shipments followed by Sri Lanka which is able to receive the mats to the tune of 13.48 per cent to the total shipments. Third country which receives our product is North Korea. Its share is accounted for 11.81 per cent to the total shipments. Brazil is another country which could receive only 4.66 per cent to the total shipments. The total shipments of Korai Grass Mats are arrived at 456078 during the year 2023. Malaysia is yet another country which could receive the grass mats to the tune of 3.20 per cent to the total shipments.

### 3.4. Marketing Channels Present in the Distribution of the Produce

Marketing channel is the path by which the movement of produce from producer to the ultimate consumers. In the process of marketing of Korai Grass Mats, there are three channels involved. These details are presented in Table 5.

Sl. No	Channel No	Prevalent Marketing Channels for Korai Grass Mat
01	I	Producers of Grass Mats → Ultimate Consumers
02	II	Producers → Retailers → Ultimate Consumers
03	III	Producers → Wholesalers → Retailers → Ultimate Consumers

**Table 5:** Marketing Channels Prevalent in the Distribution of Korai Grass Mats.

Table 5 revealed the details of transferring the produce through four different channels.

Among the three, the one could generate higher share to the producer from the consumers' rupee is called as an efficient channel.

Channel – I transfer the Grass Mat straight away to the ultimate consumers. This is possible in the industry itself. The consumers in the local villages approach the producer firm for their needs of one or two pieces. Small volume of movement of mat is possible in the channel.

Channel – II involved the retailers as an intermediary between the producers and the ultimate consumers. Small retailing units in the neighboring and the local villages used to meet the owner of the firm for their needs. Little higher volume of movement of produce is possible through this channel.

Channel – III is the one which takes almost two intermediaries between the owner producer and the ultimate consumers. This channel is capable of consuming higher quantity of output generated from the industry. The wholesaler is used to approach the producer firm for higher volume of output and negotiate the price by which it can be offered. Normally,

the wholesalers are the receiver who receives the produce regularly and hence less amount of negotiation is possible in this channel. This channel found to be the effective one in transferring the produce from producer to the ultimate consumers and hence the price spread between the producers' rupee and consumers' rupee is assessed and the details are presented in Table 6.

**(Producers → Wholesalers → Retailers → Ultimate Consumers)**

Sl. No.	Particulars of Costs	Unit price(Rs)	Percentage Share
<b>Producers of Grass Mats</b>			
01	Producer Price at Industry Level	83.10	66.48
<b>Wholesalers</b>			
02	Purchase Price	83.10	66.48
03	Loading and Unloading Charges	01.50	
04	Transportation Charges	02.00	
05	Miscellaneous Charges	01.00	
06	Total Marketing Cost	04.50	
07	Net Margin to Wholesaler	12.40	
08	Selling Price to the Retailer	100.00	80.00
<b>Retailers</b>			
09	Retailers' Purchase Price	100.00	
10	Loading and Unloading Charges	02.00	
11	Transportation Cost	03.00	
12	Storage Charges	01.00	
13	Miscellaneous Expenses	01.00	
14	Total Marketing Cost for the Retailers	07.00	
15	Net Margin to the Retailer	18.00	
16	Selling Price of Grass Mat to the Consumers	125.00	100.00
<b>Ultimate Consumers of Grass Mat</b>			
17	Ultimate Consumer Price per Grass Mat	125.00	
18	Price Spread	41.90	

**Table 6:** Price Spread in the Marketing Channel.

(Source: Primary Survey: Figures in Parenthesis indicates Percentage to Total)

Table 6 revealed that the price of the mat offered by the producer is Rs 83.10 which is offered to the wholesaler. Wholesaler took the produce and incurs some cost in transferring the produce which is called as marketing costs. The marketing costs incurred by the wholesaler is arrived at Rs. 4.50 per unit and he is fixing the net margin as Rs. 12.40 and then the produce was transferred to the retailer at a cost of Rs. 100 per unit.

The retailer took the produce from the wholesaler and does rearrangement and incurs some marketing cost comprises of loading and unloading, transportation charges and the storage expenses. He used to incur a marketing cost of Rs. 7 per unit and he is fixing the net margin of Rs. 18 per unit and then the produce was sold to the ultimate consumers at the price of Rs. 125 per unit. While examining the price spread between the producer and the ultimate consumers, around Rs. 41.90 is found to be the price spread. The producers' share in the consumers' rupee is arrived at 66.48 per cent to the total.

**3.4.1. Marketing Margin and Efficiency**

Marketing margin is referred to as the net margin gained in the channel by different intermediaries and the costs involved in transferring the produce from producer to the consumers. Marketing Efficiency is the maximization of output – input ratio. Here output refers to the producers' price and the input refers to the marketing margin. Using these concepts, the marketing efficiency aspects were worked out and the details are presented in Table 7.

Sl. No	Particulars of Marketing Costs and Margin	Cost / Margin in Rs	Percentage to Marketing Margin
01	Total Marketing Costs	11.50	27.45
02	Net Margin Gained in the Channel	30.40	72.55
03	Marketing Margin	41.90	100.00
04	Marketing Efficiency (Producers' Price / Marketing Margin)	01.98	

**Table 7:** Marketing Margin and Efficiency.

(Source: Primary Survey: Figures in Parenthesis indicates Percentage to Total)

Table 7 revealed that the marketing efficiency is arrived at 1.98. Almost it is nearing 2. Out of one unit of marketing costs and the margin, the producer is able to reap around one unit of return out of it. The total marketing costs is arrived at Rs. 11.50 and the Net margin gained in the channel is arrived at Rs. 30.40. Put together, the marketing margin is arrived at Rs. 41.90 which has produced the marketing efficiency of 1.98 and the channel is found to be an efficient one. All other channels were not considered here for working out the marketing efficiency because either it is directly receivable and the other one is unable to be understood the involvement of marketing costs and the margin incurred by the different intermediaries.

**3.5. Constraints Faced by the Mat Industries in Manufacturing of Korai Grass Mats**

Any production and trading activity naturally commands certain issues or constraints. In this respect, the proprietor of the case firm was personally discussed and the constraints were enlisted and the details are presented in Table 7.

Sl. No	Name of the Constraints	Rank Given
01	Non-Availability of Trained Labour for Timely Operations	I
02	Mat Industries are not Brought under Small Scale Industry	II
03	Stiff Competition from Plastic Mat Industry	III
04	Poor Arrival of Korai Raw Materials for Production of Mats	IV

**Table 8:** Constraints Faced by the Manufacturers of Korai Grass Mats.

Table 8 revealed the details of constraints faced by the producer of the Korai Grass mats from the mat industry. The proprietor of the case firm himself has ranked and prioritized the problem as number one. The number one constraint is found to be the non-availability of trained man

power for timely operations of the mat industry. The second rank given to the problem is that the Mat industries are not brought under small scale industry to gain the benefits that accrue to the small scale industry and hence the producer of grass mat is unable to gain the benefits of small scale industries. Another constraint faced is stiff competition from the plastic mat industry. The Plastic mats are now in the market at cheaper price and hence most of the consumers are approaching for the cheapest product without learning the benefits of korai grass mats. The last and the least one is the poor arrival of Korai Raw materials for running the industry smoothly during all seasons. This is not possible for the mat industries as the season of availability is varying.

### Conclusion and Policy suggestion

The Mat weaving industry can opt for Textile diploma personnel for mat weaving whom are well trained in textile business and its weaving methods. Their services can be imparted to the mat industry so as to utilize their expertise and effective run of the business. With their support, some new designs and new products can also be thought off which could enable the case firm to gain profit. Currently, most of the firms have entered in either a cluster approach or a form of Farmer producer companies to gain profit and to establish a collective bargaining approach for their produce. Through their collective bargaining approach one could visualize higher profits and outturn for their produce. Another constraint they face is stiff competition from plastic mat industry. To reduce the stiff competition, the promotional measures should be intensified by the Grass Mat industries highlighting the beneficial aspects of usage of Korai grass mats comparing the ill effects of plastic mats. Promotional measures should be strengthened through mass media and social media networks. Raw material supply is found to be poor is another constraint. To alleviate from that, the producers of Grasses should be given a contractual method of rearing by establishing an annual contract with the producer of Korai Grasses and the Mat industries by declaring advanced price agreements per unit of the produce or the price prevailing at the time of harvesting the produce. Such practices would elevate the raw material supply. On doing so, the Korai grass mat industries will poise their production in a dynamic setting and one could reap the return better per unit of the produce.

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