

Research Paper

# Present Status and Future Prospects of Jute Diversified Products in Domestic & Export Markets

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Received: 16-09-2023

Revised: 27-11-2023

Accepted: 06-12-2023

## ABSTRACT

Now a day's products diversification and commercialization are very challenging work in the field of agriculture. Jute is one of the cheapest as well as the strongest amongst the all other natural fibres. India is the largest producer of jute followed by Bangladesh and China and world leader in manufacturing jute goods. Tremendous competition from synthetic materials as well as declining demand for traditional jute goods, demand is expected to rise in respect of its value-added diversified products like fine yarn, blended yarn, speciality fabrics and non-woven based on jute and jute waste. Lots of innovative new products have been developed with high value-addition by the researchers now a days, viz., home textiles, jute composites, jute geo-textiles, paper pulp, technical textiles, chemical products, handicrafts and fashion accessories etc. Globally, demand for diversified jute products is growing particularly in developed country markets such as USA, Canada, Australia and Japan, where peoples are becoming increasingly conscious about carbon footprint of consumer goods.

## HIGHLIGHTS

- ① The jute industry contributes about ₹ 3786 crores annually to the export earnings for the country (equivalent value US\$ 512.06 Million during 2021-22).
- ① Jute Diversified Products export constitutes a low proportion of the value of world trade, but its cultivation along with processing is labour-intensive and therefore provides a livelihood for many farmers and their families in India.
- ① Production of diversified jute products increased through medium and small sector entrepreneurs, NGOs, SHGs, WSHGs and individual manufacturers.

**Keywords:** Products Diversification, Natural Fibres, Synthetic Materials, Value-Added, Innovative, Geo-Textiles, Consumer Goods

Diversification and commercialization of agriculture and conservation of natural resources are some of the new challenges. In order to respond to these complex challenges, the focus is on sharing of demand driven research agenda by the research organizations and private industry based on their comparative advantages. Despite tremendous competition from synthetic materials as well as declining demand for traditional jute goods, demand is expected to rise in respect of its value-added diversified products like fine yarn, blended yarn, speciality fabrics and non-woven based on jute and jute waste. Jute sectors needs to provide

major emphasis on diversification of its product base through decentralized sector which would help employment generation in a highly decentralized manner covering various parts of the country.

Jute is a natural fibre. It is popularly known as the golden fibre. It is one of the cheapest as well as the strongest amongst the all other natural fibres. Thus,

**How to cite this article:** Roy, S.B., Mitra, K., Kundu, Kr T., Ghosh, S. and Mukherjee, P.M. (2023). Present Status and Future Prospects of Jute Diversified Products in Domestic & Export Markets. *Econ. Aff.*, **68**(04): 2009-2015.

**Source of Support:** None; **Conflict of Interest:** None



jute fibre may be considered as fibre for the future. It is a long barkly fibre that can be spun into coarse, strong yarns. On average jute plant is about 6 to 12 feet in length. The jute plant's fibre lies beneath the bark and surround the woody central part of the stem. Jute fibre production is considered as second to cotton in world's textile fibres production.

There are 101 (23 closed) composite jute mills in India and about 4 million families are dependent on cultivation of Jute and Mesta and about 1.16 lakh permanent workers & 1.30 lakh other workers employed in the Jute industry as on March 31, 2022. Several thousand other peoples are engaged in several jute related diversified goods manufacturing in the small and tiny sectors. Total jute goods production in composite jute mills is 1092.3 thousand tonnes per annum of which 121 thousand tonnes with value of ₹ 271190 lakh per annum were exported (average of last four years: 2018-19 to 2021-22).

### Data and Methodology

Time series data on jute diversified products export for the last two decades (2000-01 to 2020-21) used for analysis and forecasting for another five years.

### Compound Annual Growth Rate (CAGR)

$$CAGR = \left( \frac{V_{final}}{V_{begin}} \right)^{1/t} - 1$$

CAGR = Compound annual growth rate

$V_{begin}$  = Begin value

$V_{final}$  = Final value

$t$  = Time in years

### Trend analysis and forecasting

Trend analysis is a technique used in technical analysis that attempts to predict future price and production movements based on recently observed trend data. The Trend and Forecasting function find out a regression line or line of best fit. When applied to a time series, it forecast future values. Two types of trend patterns were followed for the analysis and selected best fitted functions based on  $R^2$  values.

**Linear patterns:** Linear patterns in data show a constant rate of increase or decrease in product sales over time. If trend analysts and forecasters plot the

data points on a graph, they would take the shape of a straight, diagonal line, moving upward or downward, depending on the success of the item.

**Exponential patterns:** While linear patterns may depict a steady increase in sales, an exponential pattern depicts rapid growth. Plotted exponential data on a graph represent sales value of exported JDPs and JPs that were slow in the beginning and then increased noticeably over a short phase of time.

### Changing Jute Scenario

Today, jute can be defined as an eco-friendly natural fibre with versatile application prospects ranging from low value geo-textiles to high value carpet, apparel, composites, decorative, upholstery, furnishings fabric, fancy non-woven for new products, decorative colour boards etc. Jute with its unique versatility rightfully deserves to be labelled as the "fibre for the future".

India is the largest producer of jute followed by Bangladesh and China and world leader in manufacturing jute goods. Near about 85 % of jute fibre produced is still used for making traditional products like sacking, hessian, yarn, carpet backing cloth and other minor items etc. for storing food grains, sugar, fertilizer etc. Need for diversification into areas of consumer and industrial use has become a necessity, with the increasing availability of synthetic packaging materials to avoid enormous price competitiveness.

Jute and Mesta is primarily grown in West Bengal, Bihar, Assam, Meghalaya, Tripura and Andhra Pradesh.

West Bengal, Bihar and Assam accounts for almost 99% of India's total raw jute production as per Fig. 1.

The jute textile industry contributes a lot in the national economy and placed in an important position. The jute industry is labour-intensive and the industry has huge potential to emerge as a major foreign exchange earner for the country, particularly at the time when the global performance is shifting towards natural fibres. The jute industry contributes about ₹ 3786 crores annually to the export earnings for the country (equivalent value US\$ 512.06 Million during 2021-22). Jute industry is one of the major industries in West Bengal.

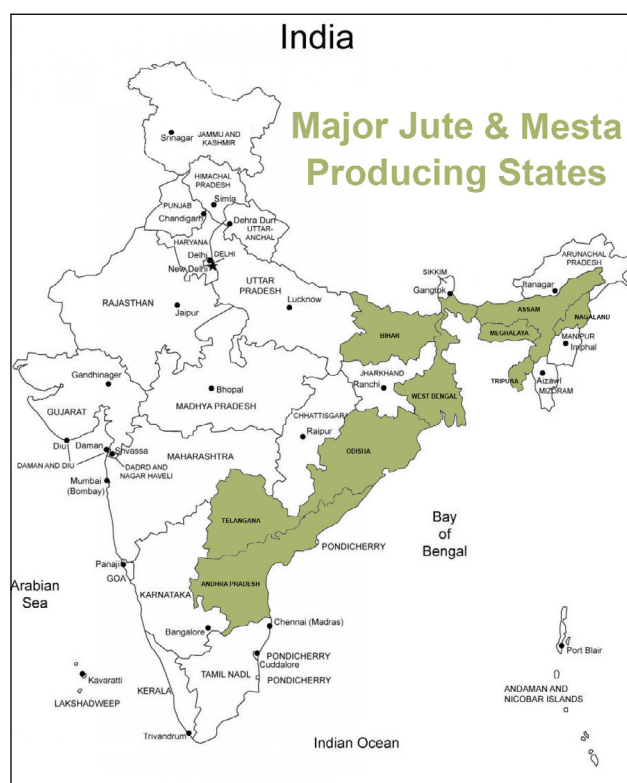


Fig. 1: Major Jute & Mesta producing states

In order to overcome the declining market of conventional products of jute, new technologies have been evolved for bulk use of jute, as a raw material in the production of high valued and price competitive intermediaries or end products. Lots of innovative new products have been developed with high value-addition by the researchers now a days, viz., home textiles, jute composites, jute geo-textiles, paper pulp, technical textiles, chemical products, handicrafts and fashion accessories etc. These products developed for new, alternative and non-traditional use of jute, are generally

termed as *Diversified Jute Products*. Among the various diversified jute products, floor coverings, home textiles, technical textiles, geo-textiles, jute nonwovens, jute reinforced composites, pulp & paper, particle and fibre boards, shopping bags, handicrafts, fashion accessories, apparels etc. having potential of wider use and application.

### Jute Diversified Products

Jute export constitutes a low proportion of the value of world trade, but its cultivation along with processing is labour-intensive and therefore provides a livelihood for many farmers and their families in India. Jute Diversified Products (JDP), such as hand & shopping bags, geo-textiles, floor coverings, wall hanging, decorative fabrics and other gift items are manufactured in relatively small quantities. However, their share in the value of total exports is on the rise day by day due to environmental apprehension. Globalization has opened up enormous numbers of new markets along with enormous numbers of new competitors for jute diversified product manufacturers.

Production and commercialization of value-added jute products created additional employment opportunities and assisted in alleviating poverty in India especially in the eastern part of the India. Production of diversified jute products increased through medium and small sector entrepreneurs, NGOs, SHGs, WSHGs and individual manufacturers.

### Growth Analysis and Export performance of JDP

Contribution of JDP export to the all jute goods export from India during the period 2000-01 to

Table 1: State wise jute production in last five years (2016-17 to 2020-21)

STATE	2016-17		2017-18		2018-19		2019-20		2020-21#	
	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
West Bengal	0.54	8.35	0.53	7.64	0.53	7.77	0.52	8.07	0.52	7.61
Bihar	0.11	1.57	0.10	1.28	0.09	1.08	0.06	0.80	0.06	0.98
Assam	0.08	0.82	0.07	0.86	0.07	0.78	0.07	0.81	0.07	0.80
Others	0.05	0.21	0.04	0.25	0.02	0.18	0.03	0.20	0.02	0.17
All India	0.76	10.96	0.74	10.03	0.70	9.82	0.67	9.88	0.66	9.56

Source: Directorate of Economics & Statistics, DAC&FW; # Fourth Advance Estimates.

**Table 2:** Export of Jute from India: JDPs Vs Total Jute Goods (₹ In Crores)

Year	Jute Goods Export						Total JDPs	Total Jute Goods	Share of JDPs
	Floor Covering	Shopping Bag/ Hand Bag	Blanket	Decorative Fabrics	Gift Articles	Wall Hanging			
2000-01	66.31	54.53	0.43	4.21	—	5.67	131.15	931.71	14%
2001-02	76.63	39.97	0.77	2.52	—	6.38	126.27	613.32	21%
2002-03	124.18	60.98	2.82	2.81	5.44	6.93	203.16	913.32	22%
2003-04	104.37	106.57	8.20	1.30	2.24	0.59	223.27	1051.88	21%
2004-05	155.75	80.87	10.94	3.88	1.68	0.64	253.76	1146.90	22%
2005-06	213.39	88.00	6.24	2.29	2.16	0.46	312.54	1186.24	26%
2006-07	167.57	70.31	15.01	2.19	0.97	0.42	256.47	1055.16	24%
2007-08	182.59	112.28	0.68	1.68	1.11	0.22	298.56	1178.49	25%
2008-09	124.24	165.68	2.37	1.72	0.40	0.11	292.16	1216.16	24%
2009-10	126.89	98.13	1.77	2.15	1.76	0.12	229.06	859.46	27%
2010-11	134.24	126.42	0.76	2.86	2.29	3.00	268.80	1854.15	14%
2011-12	142.01	163.66	0.07	8.61	1.46	4.10	319.84	2094.96	15%
2012-13	178.99	169.69	0.24	7.25	6.17	0.21	362.55	1951.08	19%
2013-14	216.09	244.80	0.14	18.44	3.83	0.57	483.74	2121.95	23%
2014-15	238.89	251.84	0	12.37	4.08	0.84	508.57	1813.81	28%
2015-16	222.31	322.18	0	10.01	6.76	0.61	562.40	1892.34	30%
2016-17	255.10	322.91	0	7.67	3.59	0.93	590.95	2074.20	28%
2017-18	299.52	316.17	0	9.30	5.54	0.73	631.49	2158.56	29%
2018-19	371.04	430.03	0	6.29	7.03	0.65	815.51	2273.27	36%
2019-20	498.29	444.18	0	5.09	7.98	0.24	963.44	2423.84	40%
2020-21	717.65	530.30	0	6.65	4.93	0.17	1260.79	2740.46	46%

Source: Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata, under the Ministry of Commerce, Government of India.

2020-21 is increased from 14 per cent to 46 per cent ranging from ₹ 131.15 crores to 1260.79 crores in monetary terms. India’s total jute goods exports were ₹ 931.71 crores and ₹ 2740.46 crores during the same period. There is about 30.86 per cent increase in JDP export value during 2020-21 as compared to 2019-20 due to high jump in export of mainly floor covering and shopping bags. Compound Annual Growth Rate (CAGR) of Jute Diversified Products (JDP) Export over the two decades is 11.98% i.e. 12%; Where  $V_{final} = 1260.79$  crores;  $V_{begin} = 131.15$  crores and  $t$  in years = 20. Whereas, Compound Annual Growth Rate (CAGR) of Total Jute Products (JP) Export is only 5.54%, Where  $V_{final} = 2740.46$  crores;  $V_{begin} = 931.71$  crores during the same period. On examination, the relative performance of Jute Diversified Products (JDP) export in total jute products export observed during last two decades increased significantly.

**Trend Analysis**

Trend analysis of jute diversified products export in value term showed different directions for different products over the years. Linear trend line was fitted with last ten years export data and forecasted for five years for individual identified jute diversified products contributing significant amount in foreign exchange earnings for India.

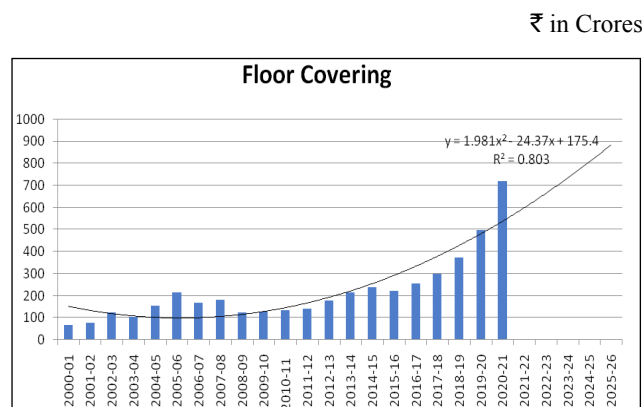


Fig. 2: Export of Floor covering year wise

Export value of floor coverings is increasing over the years and shows a promising scope of enhancement in near future. The prediction of the volume of export may be increased from 700 crores in the year 2020-21 to 900 crores in next five years (2025-26) with an annual compound growth rate of 5.15 per cent approximately.

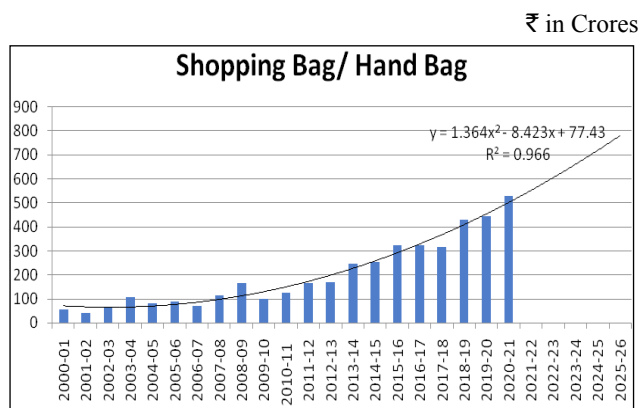


Fig. 3: Export of Shopping Bag / Hand Bag year wise

Among all the Jute Diversified Products (JDPs), Jute shopping bag or hand bag export earnings is the highest and consistently increasing over the decades with an increasing trend. R<sup>2</sup> value (96.6%) of the exponential trend line is confirming best fitted for forecasting the future values in the year 2025-26 is around 800 crores from present export value of 520 crores in the year 2020-21.

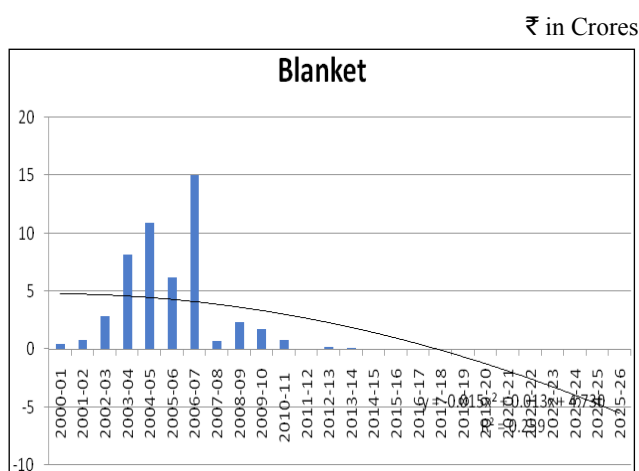


Fig. 4: Export of Blanket year wise

Fig.4 depicts different picture of export earning over the decades as it is not exporting noticeable amount since 2011-12 and has zero share on Total JDPs export. It shows that the trend of JDPs consumptions is changing in JDPs importing countries.

₹ in Crores

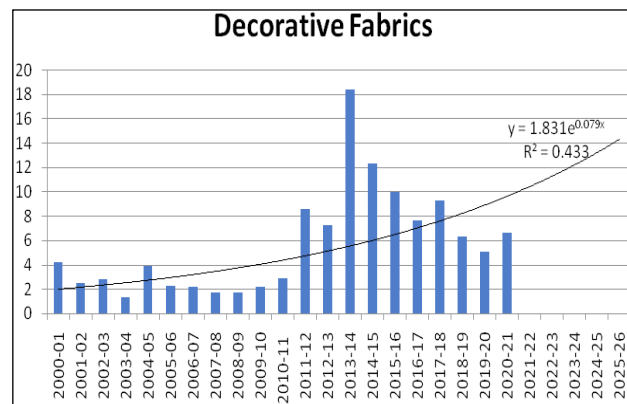


Fig. 5: Export of Decorative Fabrics year wise

Jute based decorative fabrics also not gaining share of export market over the periods and restricted to export in single digit figure in crores. No clear directions were found for the future scope of decorative fabrics. Its performance is mostly stagnant in nature.

₹ in Crores

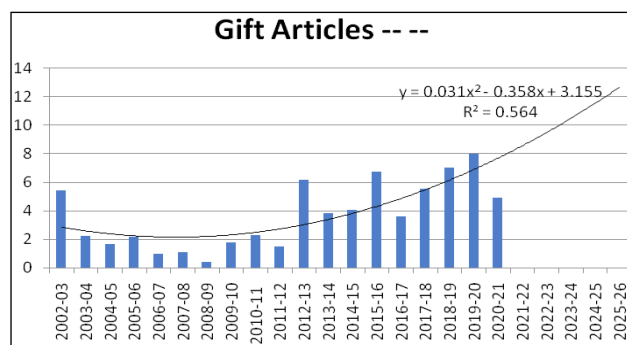


Fig. 6: Export of Gift Articles year wise

During the last decade, export performance is found promising for Jute fibre based gift articles and predicted increasing trend for near future to touch the double digit export vales in crores.

₹ in Crores

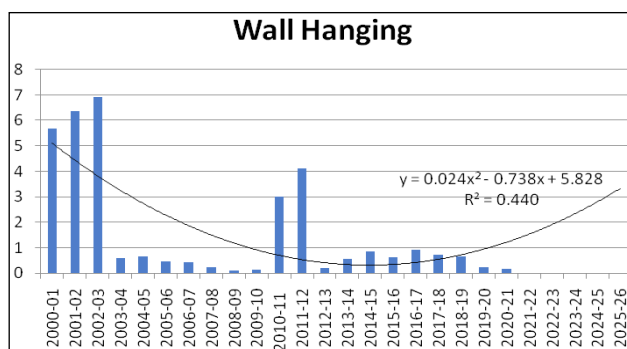


Fig. 7: Export of Wall Hanging year wise



Similar to the Jute based decorative fabrics and blanket from jute, Jute wall hanging is losing the export market share over the decades and little scope of revival.

At a glance, increasing trend were observed in case of floor covering and shopping/ hand bag export earnings over the last decade and showed bright prospect in near future (Fig. 2, 3 & 5). Whereas other jute diversified products showed decreasing trend indicating the changing preferences of consumer's attitudes towards these items (Fig. 4 & 7). And in case of Gift Article it showed (Fig. 6) constant export performance over the years. However, the total JDP export showed desired upward trend and vivid future for the exporters.

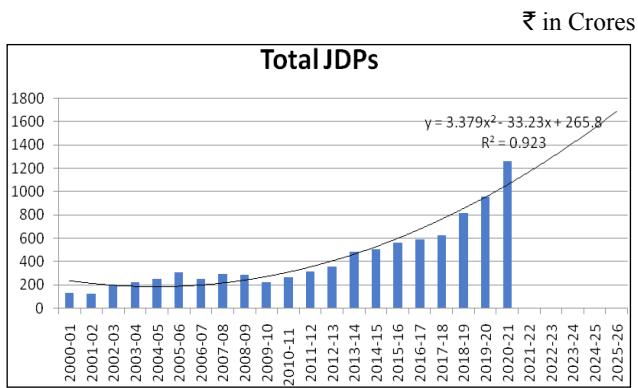


Fig. 8: Export of Total JDPs year wise

On examination, the relative performance of Jute Diversified Products (JDP) export in total jute products export observed during last decade increased significantly (Fig. 8). A closer look at the Indian diversified jute exports showed a very worthy trend. The share of diversified jute exports in total jute exports in the year 2020-21 was over 46%.

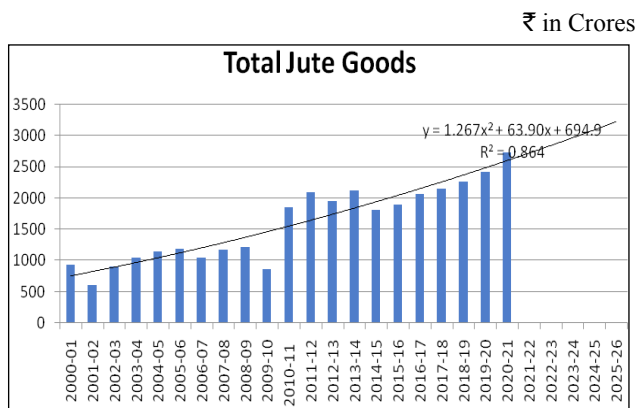


Fig. 9: Export of Total Jute Goods year wise

Export of jute diversified products in financial year 2020-21 was ₹ 1260.8 crores, which was a notable rise by 30.9 per cent rise in value terms over the corresponding figures of financial year 2019-20 in India. It needs to be pointed out here that the composition of JDP export base has continued to remain same with slight changes in their contributions. India's export basket is concentrated in only about five traditional jute products including yarn and five JDPs.

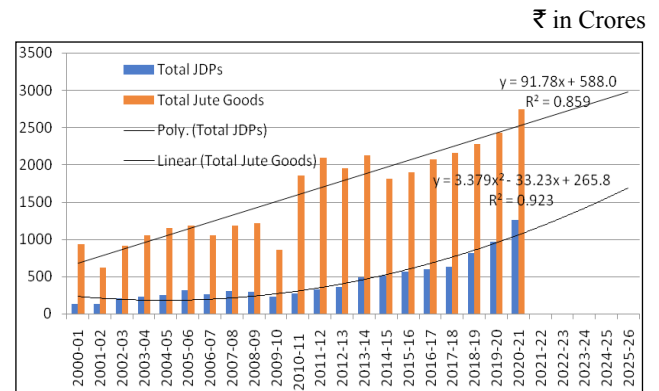


Fig. 10: Export Comparison year wise

It is important to note here that export value of jute goods was significantly higher than jute diversified products throughout the time period (Fig. 10).

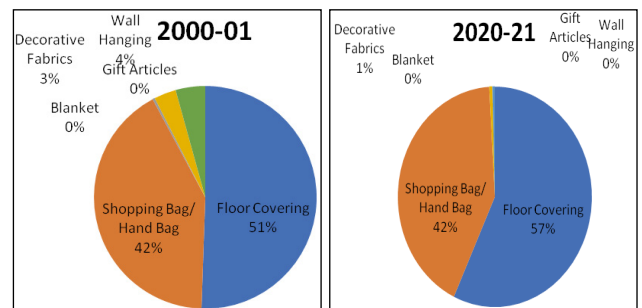


Fig. 11: Share of JDPs Export Items

Fig. 11 indicates that, contribution of jute shopping bag/ hand bag has constant 42 per cent share over the period 2000-01 to 2020-21 while share of floor covering increased from 51 per cent to 57 per cent during the same period.

### CONCLUSION

The increasing global awareness about the advantage of using natural fibres has now resulted in a rise in global demand for jute goods in view of environmental friendliness of these products. Globally, demand for diversified jute products is

growing particularly in developed country markets such as USA, Canada, Australia and Japan, where peoples are becoming increasingly conscious about carbon footprint of consumer goods. India is in a unique situation in jute production to take advantage of this growing consumer concern and the resultant interest in near future.

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