वस्त्र मंत्रालय
MINISTRY OF
TEXTILES
सत्यमेव जयते

NATIONAL JUTE BOARD

Azadi Ka Amrit Mahotsav

INVEST INDIA
NATIONAL INVESTMENT PROMOTION & FACILITATION AGENCY

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सत्यमेव जयते

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GOVERNMENT OF INDIA
MINISTRY OF TEXTILES
UDYOG BHAWAN, NEW DELHI - 110 011

Bharat tex 2024 Global Textile Expo New Delhi | Feb 26-29 | TEXTILES FASHION SUSTAINABILITY

Azadi Ka Amrit Mahotsav

FOREWORD

I am pleased to know that the National Jute Board is organizing a Jute Symposium with special focus on Jute Geotextiles on 21 December 2023 in New Delhi.

In the area of technical textiles, jute has high potential usage due to its inherent advantages such as, strength, dimensional stability, hygroscopicity, low extensibility and abundant availability at reasonable price in the country. Efficacy of Jute Geotextiles in the field of civil engineering applications has already been established.

The National Jute Board is taking several initiatives to develop and promote various jute based technical textiles through Research & Product Development and Marketing Schemes under the National Jute Development Program.

In this book being released during this Event, the latest developments on jute diversification and statistical information relating to the Jute sector have been compiled.

I congratulate NJB and wish them success in facilitating meaningful discussions leading to enhanced use of jute products as technical textiles.

Rachna

(Rachna Shah)

New Delhi
5th December 2023

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आज़ादी का अमृत महोत्सव

भारत सरकार
वस्त्र मंत्रालय
Government of India
Ministry of Textiles
Udyog Bhawan
New Delhi-110 011

MESSAGE

It is a matter of great pleasure that the National Jute Board is holding the Jute Symposium with special focus on Jute Geotextiles on 21st December 2023 in New Delhi.

Jute is a versatile natural fibre abundantly available in the country. Other than conventional end uses of jute like sacks, garden twine, ropes, and carpets etc. there are various value-added products that are being explored particularly in the field of technical textiles segments, which include Industrial textiles, functional textiles, performance textiles, engineering textiles etc. Needless to mention that the strength of Jute fibre is comparable or better than that of other natural / synthetic fibres of similar technical applications. Out of twelve majorcategories of technical textilesjute holds nearly eight categories of technical textiles like Geotech, Packtech, Agrotech, Buildtech , Hometech, , Protech, Mobiletech, Oekotech etc.

I am glad that these crucial topics are compiled in this book **"Jute The Golden fibre of India"** and released during the Jute Symposium.

I extend my compliments to the delegates, speakers, exhibitors, participants and congratulate National Jute Boardand my best wishes for the grand success of the event.

(Prajakta L Verma)

New Delhi
8th December, 2023

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INDIAN JUTE - AT A GLANCE

1.	Average land area under raw jute & mesta cultivation (Average of last four years)	:	799 thousand hectares	
2.	Average production of raw jute & mesta (Average of last four years)	:	9840 thousand bales	
3.	Number of composite jute mills	:	101 (23 Closed Jute Mills)	
4.	State-wise distribution of composite jute mills	:	West Bengal	73
			Andhra Pradesh	13
			Bihar	4
			U. P.	3
			Assam	2
			Odisha	3
			Chhattisgarh	2
			Tripura	1
5.	Number of workers employed in composite jute mills (as on 31st March 2019)	:	1,15,846 approx (Permanent workers) 1,29,876 approx (other workers)	
6.	Average production of jute goods in composite jute mills (Average of last four years)	:	1092.3 thousand tonnes per annum.	
7.	Average export of jute goods (Average of last four years)	:	121 thousand M.Tons per annum with value of Rs.27,119 Million per annum	
8.	Average domestic demand for jute goods (Average of last four years)	:	1037.1 thousand tonnes per annum.	
9.	Government of India - owned jute mills under control and management of National Jute Manufactures Corporation Ltd.	:	Alexander, Khardah, Kinnison, National, RBHM and Union.	
10.	100% export-oriented units (as on 1st April, 2022)	:	There is one 100% EOU in jute sector producing broadly high jute Decorative fabrics, fine hessian cloth, jute bags and blended fabrics. 1. Cheviot Co. Ltd. (Falta SEZ)	
11.	Installed looms in jute mills (as on 1st April., 2022)	:	46203	Hessian 14654 Sacking 22417 C B C 537 Others 8595
12.	Installed spindles in jute mills other than 100% export-oriented units (as on 1st April., 2022)	:	760058	Fine 619496 Coarse 140562
13.	Installed capacity of composite jute mills other than 100% export-oriented units, (on the basis of 305 working days per year & JMDC Productivity Norms) as on 1st April., 2022)	:	2767 thousand tonnes per annum.	

Footnote : The number of workers figures relate to about 67 out of 101 composite jute mills. Thirty jute mills were either under suspension of work / closure or did not submit information on the date of report.

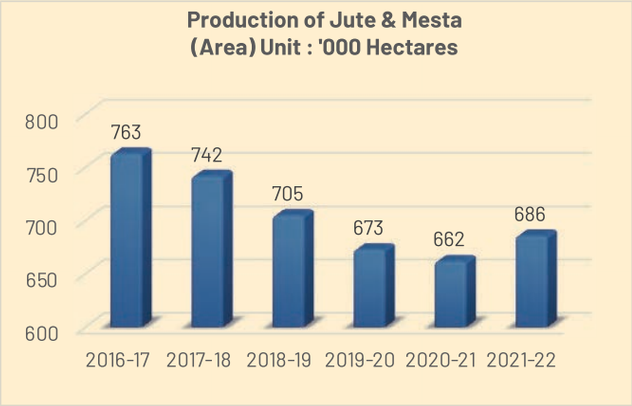
1.1 Production of Raw Jute

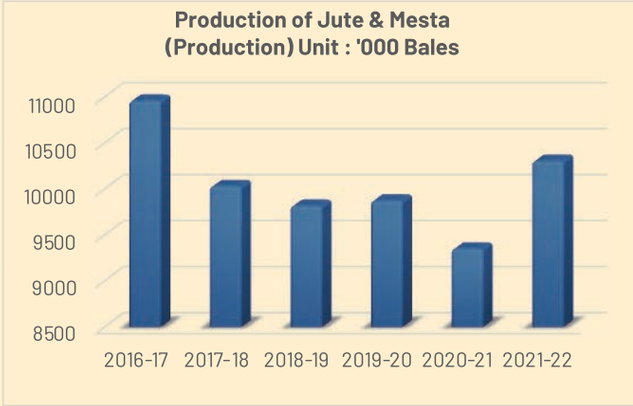
Footnote : The number of workers figures relate to about 67 out of 101 composite jute mills. Thirty jute mills were either under suspension of work / closure or did not submit information on the date of report.

Unit : Area-'000 Hectares, Qty : '000 Bales, Yield : Quintal/Hectare

Period	Jute			Mesta			Jute & Mesta		
July - June	Area	Prod	Yield	Area	Prod	Yield	Area	Prod	Yield
2016-17	706	10432	26.60	57	530	16.64	763	10962	25.85
2017-18	686	9591	25.17	56	442	14.20	742	10033	24.35
2018-19	665	9497	25.69	40	323	14.71	705	9820	25.08
2019-20	628	9446	27.06	45	431	17.28	673	9877	26.41
2020-21	622	8953	25.91	41	402	17.82	662	9354	25.42
2021-22	643	9908	27.74	40	400	18.00	686	10308	27.09

(Source : Agricultural Statistics Divn., Directorate of Economics & Statistics, Govt. of India & DJD, Kolkata)





1.2 State-wise Production of Jute and Mesta

Period – July-June | Area-'000 Hectares | Qty : '000 Bales

	2016-17		2017-18		2018-19		2019-20		2020-21	
Jute	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.	Area	Prod.
West Bengal	522	8188	515	7512	518	7698	505	7901	506	7452
Bihar	91	1356	84	1110	71	929	48	647	43	618
Assam	75	803	70	841	66	762	64	792	63	774
Odisha	1	1	1	13	1	2	1	2	1	10
Tripura	1	5	1	5	1	6	1	3	1	4
Meghalaya	7	68	7	69	7	69	7	69	7	69
Nagaland	3	6	3	33	3	33	3	33	3	26
Madhya Pradesh	6	5	6	9	0	0	0	0	0	0
Total	**706**	**10432**	**686**	**9591**	**665**	**9497**	**628**	**9446**	**622**	**8953**

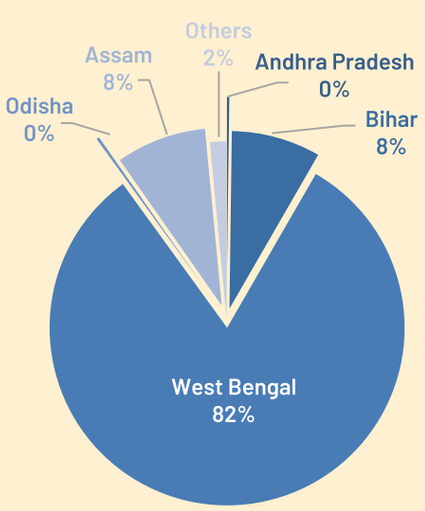
Source : Indian Jute (Statistical Bulletin-2022) published by National Jute Board

Period – July-June | Area-'000 Hectares | Qty : '000 Bales

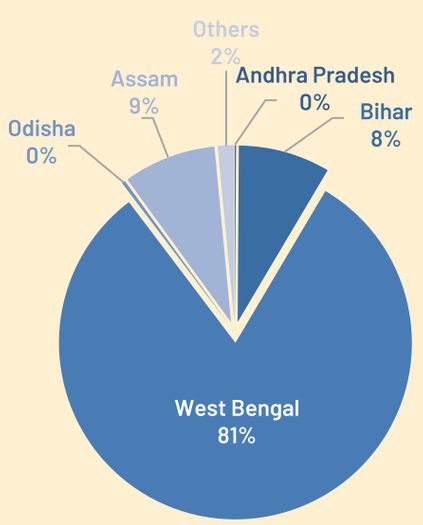
	2016-17		2017-18		2018-19		2019-20		2020-21	
Mesta	**Area**	**Prod.**	**Area**	**Prod.**	**Area**	**Prod.**	**Area**	**Prod.**	**Area**	**Prod.**
West Bengal	14	162	10	126	11	73	12	166	12	141
Bihar	16	215	21	170	15	156	14	155	13	169
Assam	4	21	3	20	3	20	3	20	3	21
Odisha	6	32	6	31	0	0	5	24	4	19
Andhra Pradesh	7	63	5	47	3	30	2	21	1	10
Tripura	1	5	1	5	1	4	1	2	1	2
Meghalaya	4	26	4	26	4	26	4	27	4	27
Madhya Pradesh	2	2	2	2	0	0	1	2	0	0
Chhatishgarh	1	2	1	2	1	2	1	2	1	1
Nagaland	2	2	2	12	2	12	2	12	2	12
Total	**57**	**530**	**55**	**442**	**40**	**323**	**45**	**431**	**41**	**402**

(Source : Agricultural Statistics Divn., Directorate of Economics & Statistics, Govt. of India & DJD, Kolkata)

Statewise production of Jute and Mesta (2019-20)



Statewise production of Jute and Mesta (2020-21)



1.3 State-wise Procurement of Raw Jute by JCI

Period : July-June | Qty : '000 Bales

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
West Bengal	97.08	199.40	69.70	86.28	80.04	1.00
Assam	82.43	96.36	0.34	9.36	3.06	1.48
Bihar	22.60	38.17	2.25	3.35	6.07	4.72
Odisha	0.23	5.00	0.37	0.32	0.54	0.00
Andhra Pradesh	23.14	0.00	0.00	0.00	0.00	0.00
Tripura	0.67	0.02	0.00	0.00	0.00	0.00
Total	226.14	338.95	72.66	99.31	89.71	7.19

(Source : JCI, Kolkata)

1.4 Ready prices of representative variety of Raw Jute at Kolkata

Unit : FOR/Kolkata | Rs/Quintal | Variety : TD-5/TDN-3

Ex-West Bengal

	Minimum Support Price	Maximum	Minimum	Average
2016-17	3200.00	5900.00	3375.00	3910.42
2017-18	3500.00	4075.00	3335.00	3693.65
2018-19	3700.00	4825.00	3900.00	4381.94
2019-20	3950.00	5000.00	4200.00	4648.66
2020-21	4225.00	8800.00	4650.00	6447.91
2021-22	**4500.00**	**8400.00**	**5750.00**	**6573.41**
July'21		8400.00	6800.00	7791.00
August'21		6450.00	5750.00	6109.00
September'21		6800.00	5850.00	6370.00
October'21		6600.00	6500.00	6505.00
November'21		6500.00	6500.00	6500.00
December'21		6500.00	6500.00	6500.00
January'22		6500.00	6500.00	6500.00
February'22		6500.00	6500.00	6500.00
March'22		6500.00	6500.00	6500.00
April'22		6500.00	6500.00	6500.00
May'22		6700.00	6500.00	6532.60
June'22		6575.00	6100.00	6320.00

(Source : IJMA, Kolkata)

Note : Central Govt. have decided to merge the existing eight grade (TD-1 to TD-8) to five grades (TDN-1 to TDN5) by merging TD-1 & TD2 (TDN-1), TD-3 & TD-4 (TDN-2), TD-6 & TD-7 (TDN-4) and TD-8 will be TDN-3 and the corresponding Minimum Support Price for all the new grades of jute and mesta have been mentioned in respect of the jute year 2015-16 onwards

1.5 Supply and Distribution of Raw Jute

Period : July-June | Qty : '000 Bales

Supply	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22 (Estd)
Carry Over	600	2200	2240	1840	1800	1100
Production	9200	7600	7200	6800	6000	8600
Import	400	340	400	400	200	300
Total Supply	10200	10140	9840	9040	8000	10000
Distribution						
Mill Consumption	7000	6900	6800	5400	6200	7200
Domestic & Industrial Consumption	1000	1000	1000	1000	800	1000
Total Distribution	8000	7900	7800	6400	7500	8200
Carry Over Stocks	2200	2240	2040	2640	500	1800

(Source : IJMA, Kolkata)

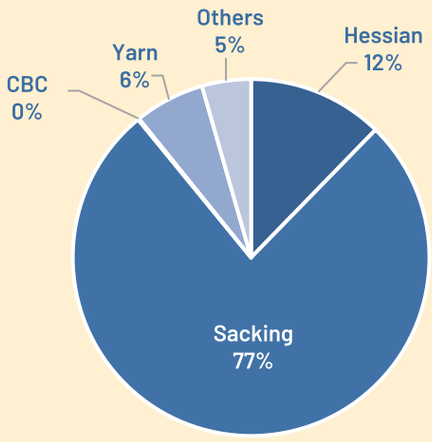
1.6 Production of Jute Goods

Qty : '000 M. Tons

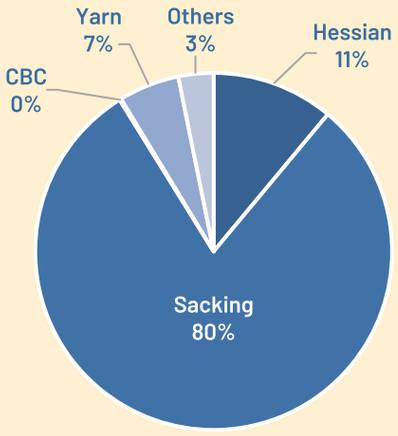
Period – April-March	Hessian	Sacking	Carpet Backing Cloth	Yarn	Others	Total
2016-17	178.6	871.6	3.0	43.3	45.8	1142.3
2017-18	173.3	902.7	1.9	51.7	48.5	1178.1
2018-19	147.6	912.3	2.0	52.7	46.8	1161.4
2019-20	127.5	923.5	0.9	66.0	47.2	1165.1
2020-21	118.4	739.2	1.1	61.3	42.8	962.8
2021-22	**119.4**	**865.1**	**1.7**	**59.4**	**34.4**	**1080.0**
April'21	11.6	66.2	0.1	7.1	4.2	89.2
May'21	8.7	54.1	0.1	4.4	2.2	69.5
June'21	8.1	53.5	0.1	3.3	1.7	66.7
July' 21	7.7	59.7	0.2	3.0	2.6	73.2
August' 21	8.8	86.0	0.1	5.7	2.0	102.6
September'21	9.6	94.0	0.1	4.7	2.4	110.8
October'21	9.1	88.8	0.1	5.6	2.4	106.0
November'21	9.6	77.2	0.2	4.5	3.1	94.6
December'21	11.3	82.3	0.1	4.9	3.6	102.2
January'22	11.1	69.6	0.2	5.5	3.6	90.0
February'22	11.6	61.0	0.2	5.1	3.3	81.2
March'22	12.2	72.7	0.2	5.6	3.3	94.0

(Source : IJMA, Kolkata)

Major product-wise production of jute goods 2020-21



Major product-wise production of jute goods 2021-22



1.7 Production of Jute Goods other than Hessian, Sacking, Carpet Backing Cloth & Yarn

Qty : '000 M. Tons

Period April-March	Canvas & Tarpaulin	Deco Fabrics	Webbing	Matting	Felt	Soil Saver	Scrim Cloth	Spl. Hess	Any Other	Total
2016-17	26.3	3.0	0.2	0.3	1.3	1.7	1.8	2.6	8.5	45.7
2017-18	28.1	2.4	0.2	0.2	0.2	3.8	3.1	3.5	7.1	48.7
2018-19	25.8	2.2	0.3	0.2	0.5	2.3	0.0	3.5	11.9	46.7
2019-20	25.83	2.3	0.2	0.3	0.2	1.8	0.0	4.9	11.6	47.1
2020-21	28.0	2.3	0.2	0.1	0.2	1.4	0.0	4.7	5.3	42.2
2021-22	14.7	0.8	0.2	0.0	0.1	1.0	0.0	6.2	11.4	34.5

(Source : IJMA, Kolkata)

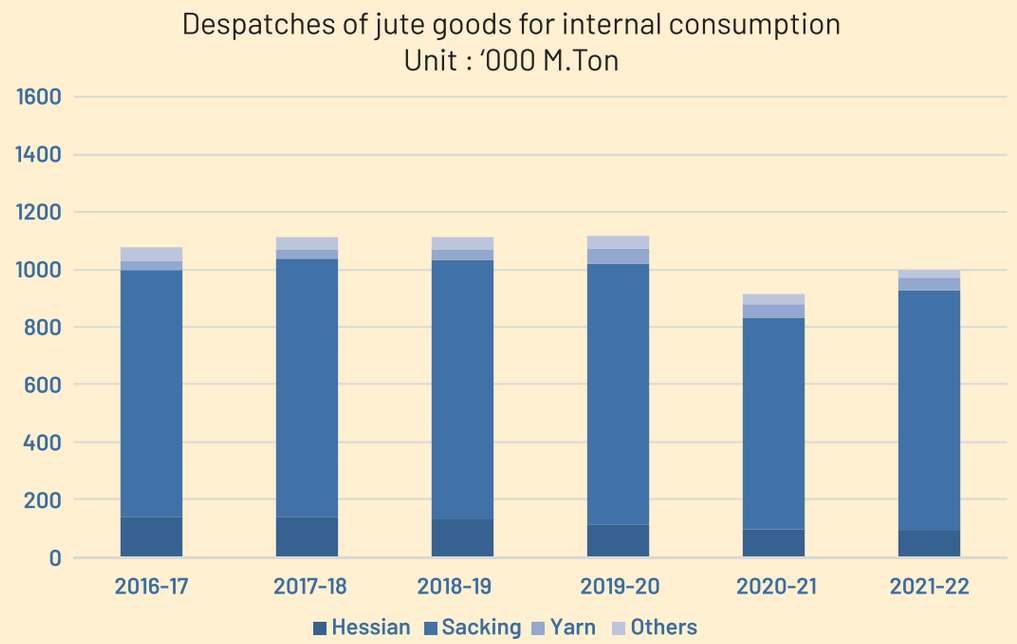
1.8 Despatches of Jute Goods from Mills for Internal Consumption

Qty : '000 M. Tons

Period – April-March	Hessian	Sacking	Carpet Backing Cloth	Yarn	Others	Total	% to Total Production
2016-17	140.9	856.6	1.5	31.5	45.9	1075.4	94%
2017-18	141.9	894.3	0.9	33.5	42.1	1112.7	94%
2018-19	130.2	900.8	1.2	35.4	46.0	1113.6	96%
2019-20	113.8	907.9	0.5	50.1	44.6	1116.9	96%
2020-21	96.0	736.4	1.0	48.1	34.8	916.3	95%
2021-22	**93.1**	**834.0**	**0.4**	**42.4**	**29.8**	**999.7**	**93%**
April'21	8.8	66.1	0.0	4.5	1.6	81.0	
May'21	6.0	55.0	0.0	2.6	1.4	65.0	
June'21	6.8	52.2	0.0	2.5	1.8	63.3	

Period – April-March	Hessian	Sacking	Carpet Backing Cloth	Yarn	Others	Total	% to Total Production
July'21	5.1	56.9	0.0	2.6	2.1	66.7	
August'21	7.7	84.0	0.1	5.3	1.9	99.0	
September'21	8.4	92.7	0.0	3.9	3.0	108.0	
October'21	8.3	83.0	0.0	4.0	2.7	98.0	
November'21	7.2	74.6	0.0	2.6	2.6	87.0	
December'21	9.5	81.2	0.1	3.4	4.0	98.2	
January'22	8.4	63.8	0.0	3.8	2.7	78.7	
February'22	7.9	55.1	0.0	3.3	3.2	69.9	
March'22	9.0	69.0	0.0	3.9	2.8	84.7	

(Source : IJMA, Kolkata)



1.9 Despatches of Jute Goods from Mills for Export

Qty : '000 M. Tons

Period April-March	Hessian	Sacking	Carpet Backing Cloth	Yarn	Others	Total	% to Total Production
2016-17	39.1	22.4	1.6	14.0	5.0	82.2	7 %
2017-18	27.7	13.7	0.6	18.5	5.0	65.6	6 %
2018-19	24.4	11.7	0.6	16.7	1.5	54.9	5 %
2019-20	18.5	10.6	0.6	15.6	2.0	47.3	4 %
2020-21	19.5	12.9	0.4	14.1	3.1	50.0	5 %
2021-22	**24.2**	**28.4**	**1.1**	**15.0**	**7.6**	**76.4**	**7 %**
April'21	2.4	1.0	0.2	2.0	1.4	7.0	
May'21	1.2	0.8	0.1	1.5	0.7	4.3	
June'21	1.0	1.0	0.1	1.3	0.4	3.8	
July'21	1.6	1.5	0.1	0.6	0.5	4.3	
August'21	2.3	2.3	0.1	0.7	0.4	5.8	
September'21	2.2	1.5	0.1	0.9	0.6	5.3	
October'21	2.0	2.4	0.1	1.0	0.4	5.9	
November'21	2.3	4.4	0.1	1.3	0.7	8.8	
December'21	2.1	4.4	0.0	1.0	0.5	8.0	
January'22	2.4	3.4	0.1	1.6	0.8	8.3	
February'22	2.4	2.3	0.1	1.5	0.7	7.0	
March'22	2.3	3.4	0.2	1.6	0.6	8.1	

(Source : IJMA, Kolkata)

1.10 End – Month Stocks of Jute Goods

Qty : '000 M. Tons

Period: April – March	Hessian	Sacking	Carpet Backing Cloth	Others	Total
2016-17	22.3	35.9	0.6	4.2	63.0
2017-18	26.0	30.6	1.0	5.1	62.7
2018-19	19.0	30.4	1.1	4.9	55.4
2019-20	14.2	36.0	1.0	5.4	56.6
2020-21	17.1	25.9	0.6	9.4	53.0
2021-22	**19.2**	**28.6**	**0.7**	**8.4**	**56.9**
April'21	17.5	25.0	0.5	11.1	54.2
May'21	19.0	23.3	0.6	11.5	54.4
June'21	19.3	23.6	0.6	10.5	54.0
July'21	20.3	24.9	0.6	10.4	56.2

Period: April – March	Hessian	Sacking	Carpet Backing Cloth	Others	Total
August'21	19.1	24.6	0.5	9.7	54.0
September'21	18.1	24.4	0.6	8.4	51.5
October'21	16.9	27.8	0.6	8.3	53.6
November'21	17.0	26.0	0.7	8.7	52.4
December'21	16.7	22.7	0.7	8.3	48.4
January'22	17.0	25.1	0.7	8.6	51.4
February'22	18.3	28.3	0.7	8.4	55.7
March'22	19.2	28.6	0.7	8.4	56.9

Source : Indian Jute (Statistical Bulletin-2022) published by National Jute Board

1.11 Ready Prices of Representative varieties of Jute Goods

FAS/Kolkata

	Hessian Cloth			Sacking Bags		
Period : July – June	101.5 Cm : 305 gm (1002)/ Sq Mtr Exports – Rs. /100 Metres			B.Twills-44" x 261/2" (1020 gms) Exports – Rs. /100 Bags		
	Max	Min	Average	Max	Min	Average
2016-17	3355.00	2640.00	3027.66	7950.00	6750.00	7266.78
2017-18	3135.00	2920.00	3023.48	7250.00	6650.00	6876.70
2018-19	3290.00	2890.00	3078.77	8250.00	6750.00	7517.94
2019-20	3910.00	3075.00	3422.16	8875.00	7650.00	8172.33
2020-21	4840.00	3725.00	4374.06	11700.00	8700.00	9942.65
2021-22	**4720.00**	**4130.00**	**4471.88**	**11400.00**	**10400.00**	**10931.69**
July'21	4655.00	4410.00	4534.42	11200.00	11000.00	11084.62
August'21	4410.00	4130.00	4172.40	11200.00	11000.00	11088.00
September'21	4410.00	4190.00	4277.50	11400.00	11200.00	11207.69
October'21	4655.00	4350.00	4506.58	11400.00	11200.00	11294.74
November'21	4655.00	4595.00	4626.25	11200.00	10800.00	11054.17
December'21	4595.00	4530.00	4549.81	10900.00	10900.00	10900.00
January'22	4720.00	4530.00	4643.13	10900.00	10900.00	10900.00
February'22	4625.00	4530.00	4589.35	10900.00	10800.00	10895.65
March'22	4595.00	4530.00	4547.69	10900.00	10900.00	10900.00
April'22	4595.00	4400.00	4531.46	10900.00	10600.00	10820.83
May'22	4400.00	4345.00	4398.96	10600.00	10500.00	10550.00
June'22	4345.00	4255.00	4285.00	10500.00	10400.00	10484.62

(Source : GTA and IJMA, Kolkata)

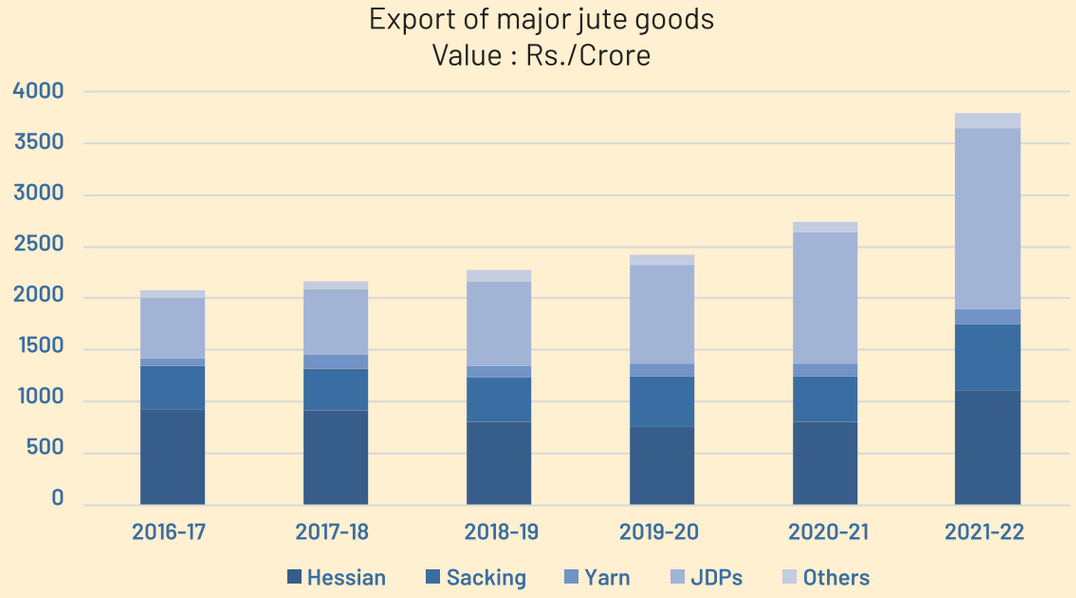
1.12 B-Twill purchase on government a/c

Unit : 50 Kg Packing

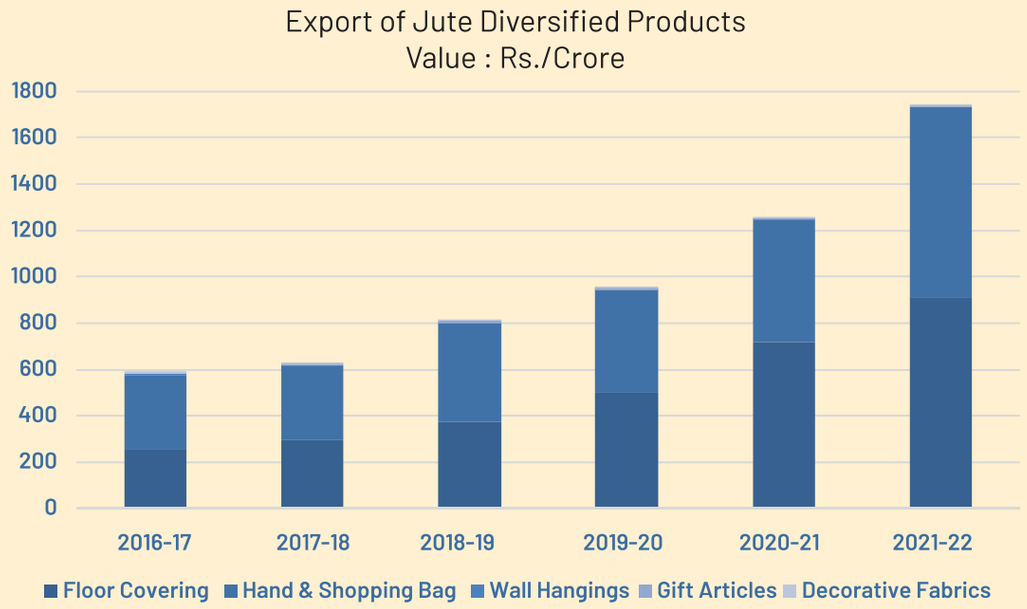
Period : April - March	Quantity purchased in Bales	Notified Price Rs./100 Bags	Average Market Price Rs./100 Bags
	50 Kg	50 Kg	50 Kg
2016-17	2668728		4653.22 (580 gms)
2017-18	2772848	Type B (580 gms)	3959.52 (580 gms)
2018-19	2987236	4324.27	4228.67
2019-20	3503306	4682.61	4760.73
2020-21	2496661	5208.36	5331.77
2021-22	**2663567**	**6319.98**	**6361.88**
April'21	204278	6178.04	6168.17
May'21	172829	6487.53	6447.67
June'21	149482	6806.47	6745.19
July'21	219866	7034 .36	6538.38
August'21	296618	7014.98	6658.40
September'21	274250	6310.81	6636.54
October'21	293004	5975.74	6538.74
November'21	193460	5907.71	6215.67
December'21	234914	5986.70	6101.15
January'22	154474	6016.69	6094.83
February'22	171028	6051.08	6090.00
March'22	299864	6069.70	6107.85

(Source : IJMA, Kolkata)

1.14 Actual export of jute goods



1.15 Export of jute goods other than hessian, sacking, carpet backing cloth and yarn

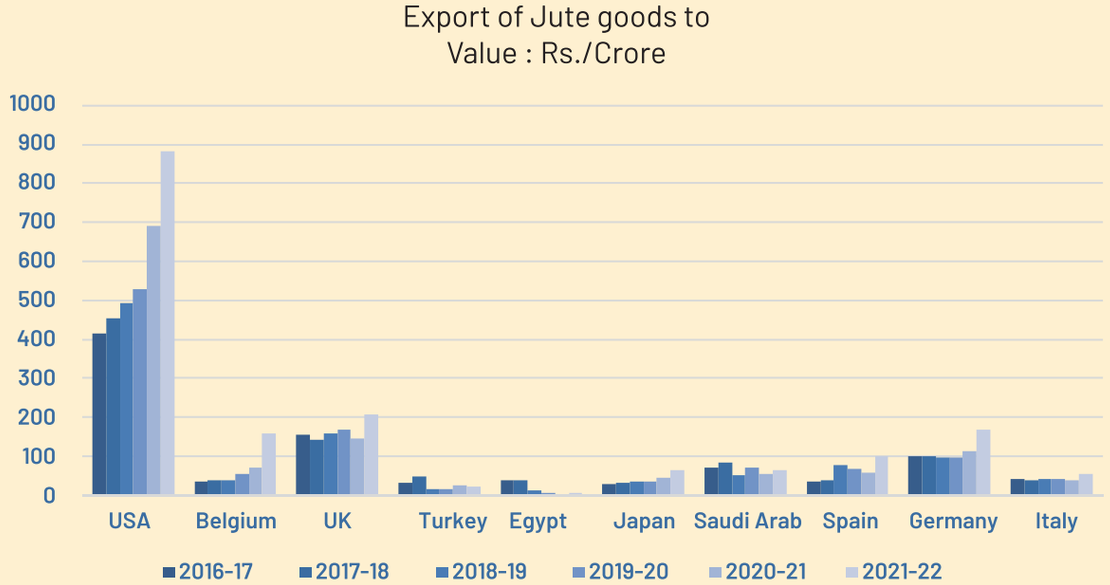


1.16 Unit value of export of jute goods

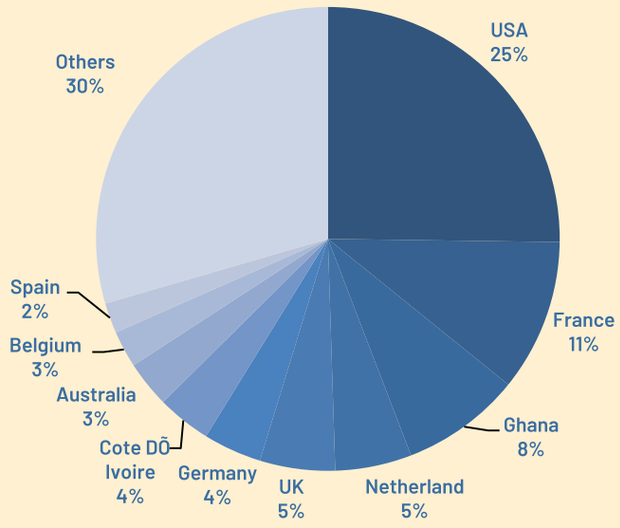
Period : April-March | Unit : Per M.Ton

	2016 - 17		2017 - 18		2018 - 19		2019 - 20		2021 - 22	
	Rs.	USD	Rs.	USD	Rs.	USD	Rs.	USD	Rs.	USD
Hessian	109193	1627	112838	1751	141296	2020	158780	2221	180412	2440
Sacking	87656	1306	90650	1407	116594	1667	125629	1757	124021	1677
Yarn	78584	1171	76696	1190	80421	1150	83323	1165	137963	1866
Cavas / Tarp.	169278	2522	129974	2017	112396	1607	124955	1748	213528	2888
Webbing	227083	3383	236131	3665	180993	2587	213130	2981	231148	3126
Soil Saver	73221	1091	86386	1341	91998	1315	122217	1709	129776	1755

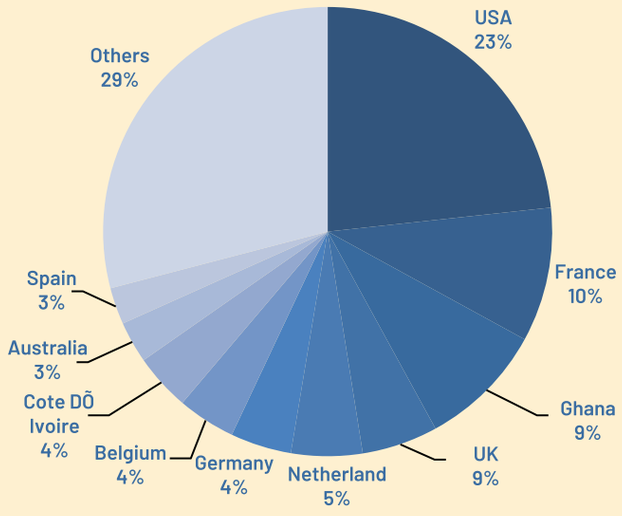
1.17 Export of jute goods to



Export of jute goods to top 10 countries (2020-21)



Export of jute goods to top 10 countries (2021-22)



WORLD JUTE

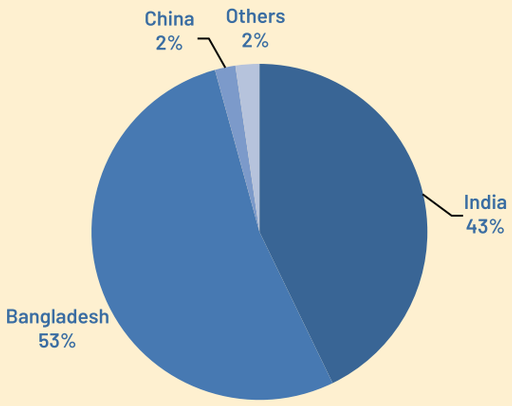
W.1 World production of jute, kenaf and allied fibres

Unit : '000 M. Tons

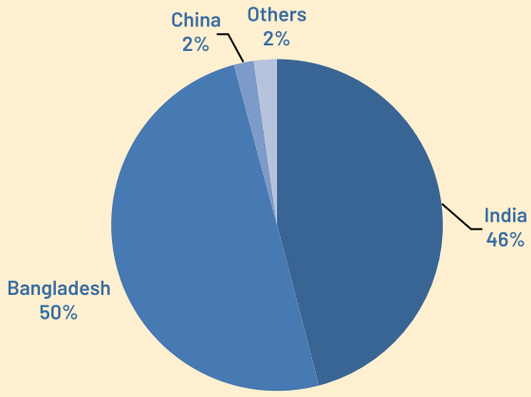
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
World	3097.0	2785.2	2827.4	3328.4	3112.1	3026.4	3095.7
Developing Countries	3090.1	2778.4	2820.6	3321.6	3105.3	3019.6	3088.9
Far East	3042.6	2725.8	2771.9	3275.5	3059.4	2973.7	3042.9
Bangladesh	1338.5	1350.9	1530.0	1549.0	1620.0	1601.0	1544.0
China	61.2	56.0	53.0	53.0	55.0	60.0	60.0
India	1620.0	1296.0	1170.0	1656.0	1368.0	1296.0	1422.0
Indonesia	3.5	3.5	3.3	3.2	3.0	3.1	3.3
Myanmar	0.4	0.5	0.3	0.3	0.3	0.3	0.3
Nepal	15.7	16.0	12.5	11.6	11.0	11.2	11.2
Thailand	1.0	0.7	0.5	0.4	0.3	0.3	0.3
Vietnam	1.0	0.9	0.8	0.8	0.5	0.6	0.6
Other	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Latin America and Caribbean	29.4	31.6	28.1	25.2	25.2	25.2	25.3
Africa	14.7	15.2	15.0	15.1	15.1	15.1	15.1
Near East	3.4	5.8	5.6	5.7	5.6	5.6	5.6
Developed Countries	6.9	6.8	6.8	6.8	6.8	6.8	6.8

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020

World production of jute, kenaf & allied fibres (2018-19)



World production of jute, kenaf & allied fibres (2019-20)



W.2 Area, production and yield of Jute, Kenaf and Allied fibres in major producing countries

	BANGLADESH	CHINA	INDIA	MYANMAR	NEPAL	THAILAND
AREA (thousand hectare)						
2013-14	665.74	17.10	837.00	1.02	11.30	1.00
2014-15	656.80	14.42	818.00	1.67	11.35	0.74
2015-16	664.89	13.44	742.00	1.29	8.64	0.60
2016-17	725.00	12.22	754.00	1.28	8.01	0.50
2017-18	737.00	11.50	746.68	1.26	8.01	0.57
2018-19	818.00	10.80	740.00	1.25	7.61	0.50
2019-20	-	11.90	-	1.25	7.10	0.50
YIELD (tonne / hectare)						
2013-14	2.01	3.58	1.94	0.36	1.39	1.01
2014-15	2.06	3.89	1.58	0.31	1.41	1.01
2015-16	2.30	3.95	1.58	0.25	1.45	0.86
2016-17	2.14	4.34	2.20	0.24	1.45	0.72
2017-18	2.20	4.78	1.83	0.24	1.38	0.47
2018-19	1.96	5.55	1.75	0.24	1.47	0.52
2019-20	-	5.04	-	0.24	1.57	0.52
PRODUCTION ('000 tonnes)						
2013-14	1,338.52	61.20	1,620.00	0.36	15.70	1.01
2014-15	1,350.90	56.04	1,296.00	0.51	16.00	0.75
2015-16	1,530.00	53.03	1,170.00	0.32	12.55	0.51
2016-17	1,549.00	53.00	1,656.00	0.30	11.63	0.36
2017-18	1,620.00	55.00	1,368.00	0.30	11.02	0.27
2018-19	1,601.00	60.00	1,296.00	0.30	11.16	0.26
2019-20	1,544.00	60.00	1,422.00	0.30	11.16	0.26

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 -FAO

W.3 World apparent consumption of Jute, Kenaf and Allied fibres

Period : January-December | Unit : '000 M. Tons

	2015	2016	2017	2018	2019
WORLD	**2614.7**	**2729.3**	**2761.9**	**2701.9**	**0.0**
DEVELOPING	**2432.0**	**2554.7**	**2573.1**	**2523.8**	**0.0**
Africa	80.4	70.4	96.1	74.6	79.4
Algeria	6.6	5.3	4.6	4.8	4.8
Ethiopia	2.3	2.0	0.7	0.3	0.8
Ghana	19.9	17.8	24.1	22.4	24.2
Kenya	1.3	1.7	2.1	1.3	1.2
Morocco	4.3	3.6	2.9	4.3	5.5
Tanzania United Rep	4.6	3.6	4.0	2.0	2.6
Zimbabwe	1.7	0.4	1.5	2.5	3.6
Latin America and Caribbean	**49.2**	**45.7**	**42.6**	**43.5**	**45.8**
Argentina	0.7	1.0	0.6	1.8	2.4
Brazil	18.0	13.5	10.0	12.1	15.9
Mexico	1.7	2.0	4.1	4.4	5.4
Cuba	12.6	12.6	12.8	12.8	12.8
Near East	**400.9**	**371.0**	**433.4**	**348.1**	**384.8**
Egypt	18.7	14.7	20.0	15.5	15.2
Iran Islamic Rep. of	42.2	45.7	44.7	34.1	38.2
Sudan	56.9	51.7	51.7	51.7	51.7
Syrian Arab Republic	28.4	28.4	28.4	33.7	33.7
Turkey	215.1	200.8	258.1	182.3	220.2
Far East	1901.5	2067.6	2001	2057.6	0
Bangladesh	252.4	370.1	305.1	319.9	0.0
China (Mainland)	213.3	187.3	215.7	232.9	199.1
India	1305.3	1395.9	1348.3	1352.5	0.0
Indonesia	38.2	35.6	34.6	39.7	35.0
Pakistan	76.0	55.0	75.0	90.5	85.0
Myanmar	0.3	0.3	0.3	0.3	0.3
Thailand	0.2	1.0	1.0	1.0	1.0
Vietnam	1.2	2.4	1.4	1.1	1.1
DEVELOPED	**182.7**	**174.6**	**188.8**	**178.1**	**176.0**
North America	**50.9**	**45.6**	**46.4**	**42.6**	**41.6**
United States of America	46.6	41.5	42.0	38.4	37.9
Canada	4.3	4.1	4.4	4.2	3.7

	2015	2016	2017	2018	2019
Europe	**69.0**	**66.9**	**70.1**	**66.1**	**58.6**
EU28	54.5	54.4	56.1	52.4	44.9
Belgium-Lux	8.7	9.4	6.0	3.1	
France	3.4	3.2	4.0	4.9	
Germany	12.0	13.5	13.5	11.7	
Netherlands	12.4	11.3	14.0	16.8	
Spain	6.6	7.0	4.6	6.4	
United Kingdom	9.6	8.4	12.1	12.5	
Other Europe	2.7	2.0	1.9	1.9	
CIS	**36.6**	**35.6**	**47.0**	**47.0**	**53.9**
Russian Federation	20.5	20.9	20.7	18.4	18.8
Other	16.0	14.7	26.3	28.6	35.1
Oceania	**17.1**	**17.8**	**17.2**	**14.5**	**15.5**
Australia	13.6	13.7	13.9	10.8	12.0
New Zealand	3.5	4.1	3.3	3.7	3.5
Other Developed	**9.2**	**8.6**	**8.1**	**7.9**	**6.4**
Japan	5.9	6.4	5.7	5.8	4.9
South Africa	2.2	1.1	1.3	0.8	0.3

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 - FAO

W.4 World exports of Raw Jute, Kenaf and Allied fibres

Period : July-June | Unit : '000 M. Tons

	2015-16	2016-17	2017-18	2018-19	2019-20
Jute fibre :					
World	**245.6**	**253.8**	**277.0**	**197.5**	**221.5**
Developing Countries	**235.2**	**241.3**	**263.0**	**182.1**	**205.6**
Far East	**232.6**	**239.7**	**259.9**	**179.7**	**203.5**
Bangladesh	204.8	219.7	232.6	150.0	175.5
India	25.2	18.7	25.9	27.4	24.5
Other	2.6	1.3	1.4	2.2	3.5
Developing Countries	**10.4**	**12.5**	**14.0**	**15.3**	**15.9**
Kenaf and Allied fibres :					
World	**2.2**	**0.8**	**1.5**	**1.0**	**1.0**
Developing Countries	**2.2**	**0.8**	**1.5**	**1.0**	**1.0**
Far East	**2.2**	**0.8**	**1.5**	**1.0**	**1.0**
China	0.0	0.1	0.1	0.0	0.0
Thailand	1.2	0.0	0.3	0.4	0.3

	2015-16	2016-17	2017-18	2018-19	2019-20
Other	1.0	0.7	1.2	0.6	0.7
Other Developing	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Developed Countries	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Total Jute, Kenaf and Allied Fibres :					
World	**247.8**	**254.5**	**278.5**	**198.5**	**222.5**
Developing countries	**237.4**	**242.0**	**264.5**	**183.1**	**206.6**
Far East	**234.8**	**240.4**	**261.4**	**180.7**	**204.5**
Bangladesh	204.8	219.7	232.6	150.0	175.5
China	0.0	0.1	0.1	0.0	0.0
Thailand	1.2	0.0	0.3	0.4	0.3
India	25.2	18.7	25.9	27.4	24.5
Other	3.5	2.0	2.6	2.8	4.2
Other Developing	**2.6**	**1.6**	**3.1**	**2.5**	**2.1**
Developed Countries	**10.4**	**12.5**	**14.0**	**15.3**	**15.9**

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 - FAO

W.5 World exports of products of jute, kenaf and allied fibres

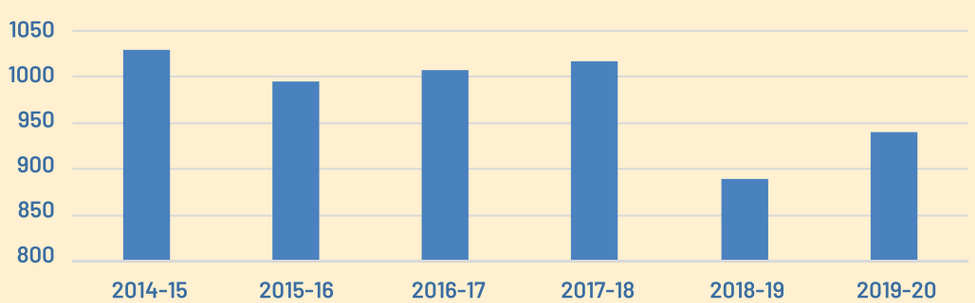
Period : July-June | Unit : '000 M. Tons

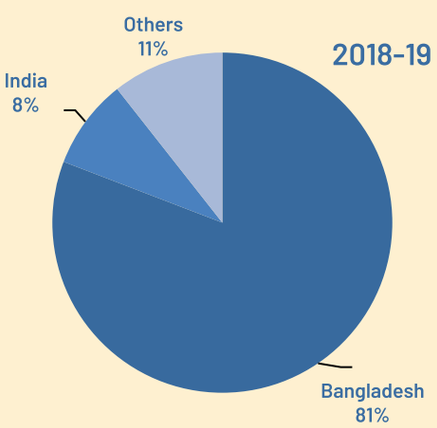
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
WORLD	**1028.9**	**995.1**	**1008.0**	**1017.3**	**889.2**	**939.7**
DEVELOPING	**1012.3**	**978.7**	**988.0**	**1000.1**	**870.5**	**920.4**
AFRICA	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
Latin America	**1.1**	**1.2**	**1.7**	**2.3**	**1.5**	**2.3**
El Salvador	0.4	0.8	1.3	1.9	1.2	2.0
Guatemala	0.2	0.0	0.0	0.0	0.0	0.0
Mexico	0.4	0.3	0.3	0.3	0.2	0.2
Near East	**9.5**	**8.5**	**9.8**	**9.8**	**11.4**	**13.3**
Egypt	0.6	0.2	2.7	1.0	0.9	0.2
Saudi Arabia	0.7	0.8	0.3	0.6	0.5	1.2
Syria	4.0	3.5	3.5	3.5	3.5	3.5
Turkey	4.1	4.0	3.4	4.7	6.5	8.4
Far East	**999.2**	**966.5**	**974.0**	**985.6**	**855.1**	**902.3**
Bangladesh	817.4	825.5	827.3	827.1	718.7	750.0
China	6.0	3.1	6.4	8.2	5.8	6.0
India	111.3	87.3	91.5	91.8	76.1	72.0
Nepal	51.0	41.0	40.0	44.8	43.9	47.4
Pakistan	9.5	4.9	6.1	9.3	4.2	13.3

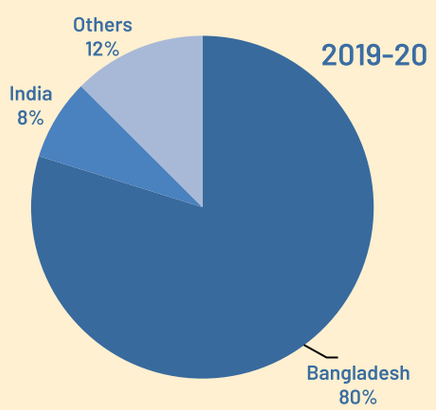
	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Thailand	2.8	4.1	1.8	6.2	5.0	12.2
DEVELOPED	**16.6**	**16.4**	**20.0**	**17.0**	**18.8**	**19.4**
North America	**1.5**	**1.4**	**1.0**	**0.9**	**2.5**	**3.0**
USA	1.5	1.4	0.9	0.8	2.4	2.9
Europe	**13.5**	**13.9**	**17.7**	**15.0**	**14.8**	**14.4**
EU(28)	12.9	13.2	16.6	14.2	14.3	14.1
Belgium-Lux.	6.0	7.0	7.5	3.9	3.0	3.0
France	0.5	0.5	0.4	0.4	0.2	0.2
Germany	1.9	2.1	2.2	2.0	2.0	1.7
Netherlands	1.4	1.3	1.7	2.2	2.0	2.6
Other Europe	**0.6**	**0.7**	**1.1**	**0.8**	**0.5**	**0.3**
UK	0.4	0.7	1.0	0.7	0.4	0.2
CIS	**0.3**	**0.1**	**0.3**	**0.2**	**0.3**	**0.3**
Oceania	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Australia	0.0	0.0	0.0	0.0	0.0	0.0
Other Developed	**1.3**	**0.9**	**1.0**	**0.9**	**1.2**	**1.7**
Japan	0.0	0.0	0.0	0.0	0.0	0.0
South Africa	1.2	0.9	1.0	0.9	1.2	1.7

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 - FAO

World exports of products of jute, kenaf & allied fibres
Unit : '000 M.Ton







W.6 World imports of Raw Jute, Kenaf and Allied fibres

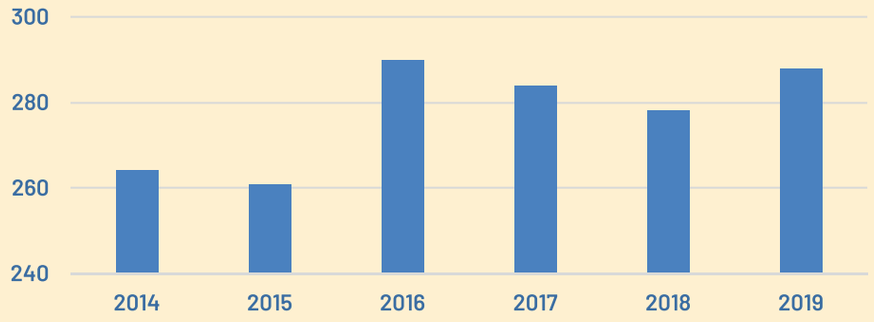
Period : January-December | Unit : '000 M. Tons

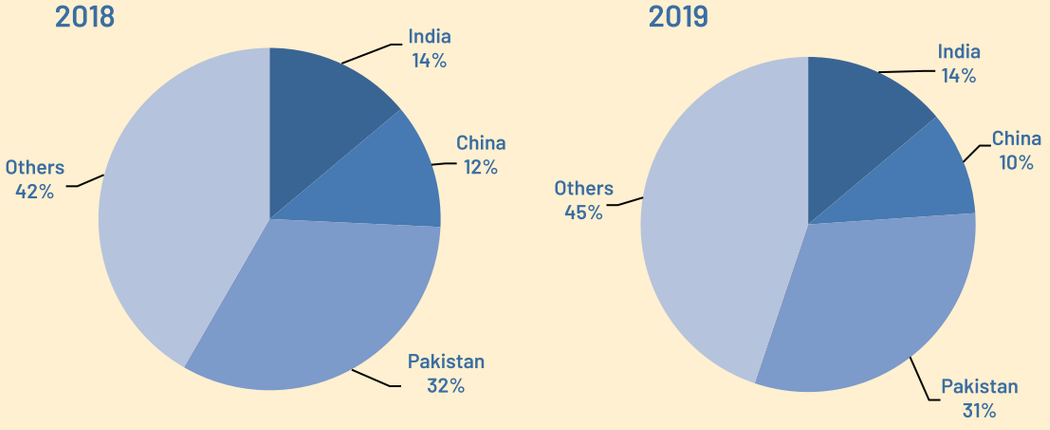
	2014	2015	2016	2017	2018	2019
WORLD	**264.3**	**261.3**	**299.4**	**288.9**	**278.2**	**288**
DEVELOPING	**234.2**	**232.9**	**271.4**	**258.7**	**250.3**	**261.1**
AFRICA	**15.4**	**11.9**	**8.0**	**24.5**	**6.9**	**8.1**
Cote d'Ivoire	10.7	6.2	2.7	19.6	3.1	4.0
Ethiopia	3.8	2.3	2.0	0.7	0.3	0.8
Ghana	0.0	0.7	0.0	0.5	0.1	0.0
Mozambique	0.0	0.1	0.2	0.4	0.4	0.4
Nigeria	0.0	0.1	0.0	0.0	0.0	0.0
Tanzania	0.0	0.0	0.0	0.0	0.0	0.0
Tunisia	1.0	2.3	3.1	3.4	3.0	3.0
Latin America	**7.4**	**10.7**	**7.8**	**6.4**	**7.9**	**9.8**
El Salvador	0.5	1.5	1.3	1.9	1.4	0.7
Nicaragua	0.0	0.0	0.0	0.0	0.0	0.0
Cuba	1.0	1.2	1.0	1.0	1.0	1.0
Brazil	6.0	8.0	5.6	3.5	5.5	8.1
Near East	**1.4**	**1.5**	**0.5**	**1.1**	**1.3**	**0.5**
Egypt	0.2	0.5	0.2	0.2	1.0	0.2
Iran	0.1	0.2	0.1	0.1	0.0	0.0
Jordan	0.3	0.3	0.1	0.1	0.0	0.0
Saudi Arabia	0.8	0.5	0.2	0.6	0.3	0.3
Turkey	0.1	0.0	0.0	0.1	0.0	0.0
Far East	**210.0**	**208.9**	**255.0**	**226.7**	**234.1**	**242.6**
China	33.7	23.8	23.8	31.1	32.9	28.9
India	48.8	76.7	136.6	65.9	62.6	76.2
Nepal	41.8	31.5	38.1	41.4	38.7	40.0
Pakistan	73.6	66.6	47.1	78.3	90.7	90.0
Sri Lanka	0.1	0.1	0.1	0.1	0.0	0.0
Indonesia	1.1	1.7	0.8	1.8	1.7	1.2
Republic of Korea	6.3	5.9	5.7	5.2	5.4	4.2
DEVELOPED	**30.1**	**28.4**	**28.0**	**30.2**	**27.9**	**26.9**
North America	**2.6**	**3.0**	**2.8**	**3.1**	**2.9**	**2.2**
United States	2.4	2.2	2.2	2.5	2.6	2.1
Europe	**17.4**	**18.3**	**20.0**	**21.8**	**20.9**	**21.0**
EU (28)	14.0	13.9	15.5	15.2	13.7	13.8

	2014	2015	2016	2017	2018	2019
Belgium - Lux	1.8	1.8	2.3	1.2	1.4	1.2
Germany	5.5	5.7	6.3	7.3	5.3	4.4
Netherlands	0.2	0.1	0.0	0.2	0.1	0.1
Spain	1.8	2.6	2.8	1.0	2.7	3.6
United Kingdom	2.1	2.9	3.4	5.5	6.1	6.2
Other EU	4.8	3.7	3.9	5.5	4.2	4.5
Other Europe	**3.4**	**4.4**	**4.5**	**6.6**	**7.1**	**7.2**
CIS	**8.8**	**6.3**	**4.5**	**4.7**	**3.7**	**3.2**
Oceania	**0.6**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**
Australia	0.6	0.2	0.0	0.0	0.0	0.0
Other Developed	**0.6**	**0.6**	**0.7**	**0.5**	**0.4**	**0.4**
Japan	0.3	0.5	0.6	0.5	0.4	0.4

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 - FAO

World imports of raw jute, kenaf & allied fibres
Unit : '000 M.Ton





W.7 World imports of products of Jute, Kenaf and Allied fibres

Period : January-December | Unit : '000 M. Tons

	2014	2015	2016	2017	2018	2019
WORLD	**928.2**	**951.9**	**856.7**	**970.3**	**835.7**	**860.7**
DEVELOPING	**767.2**	**788.5**	**695.3**	**799.2**	**669.7**	**694.5**
AFRICA	**57.7**	**54.9**	**48.1**	**57.9**	**53.5**	**56.9**
Algeria	8.4	6.2	4.9	4.3	4.5	4.5
Cameroon	1.7	3.0	2.0	4.4	3.0	3.0
Ghana	19.9	17.9	16.6	22.0	20.9	22.6
Kenya	3.9	3.3	3.6	4.0	3.2	3.2
Morocco	4.2	4.0	3.4	2.7	4.0	5.1
Tanzania	4.4	5.9	3.7	5.5	3.0	3.5
Zimbabwe	2.6	1.7	0.8	1.0	1.4	1.4
LATIN AMERICA	**15.7**	**10.9**	**13.5**	**12.6**	**11.2**	**12.3**
Argentina	0.5	0.6	0.9	0.6	0.7	0.4
Brazil	7.9	3.8	4.7	3.4	3.5	4.4
Costa Rica	0.9	0.6	0.9	0.8	0.6	0.7
Mexico	2.5	1.9	2.2	3.2	2.4	2.4
Uruguay	0.2	0.2	0.2	0.2	0.2	0.2
NEAR EAST	**405.2**	**376.7**	**350.8**	**408.8**	**330.5**	**367.2**
Egypt	15.0	15.3	14.3	17.6	12.5	12.2
Iran	50.0	39.4	42.8	40.9	30.0	33.0
Saudi Arabia	17.0	21.0	11.6	13.4	12.8	9.7
Sudan	40.0	49.9	45.0	45.0	45.0	45.0
Syria	30.0	30.0	30.0	30.0	35.0	35.0
Turkey	240.3	205.0	191.1	246.0	177.3	214.3
Other	13.0	16.0	16.0	16.0	18.0	18.0
FAR EAST	**288.6**	**346.0**	**282.9**	**319.8**	**274.4**	**274.4**
China	119.5	130.7	109.7	129.3	136.7	109.0
India	114.9	168.6	129.0	147.9	91.9	107.7
Indonesia	31.8	31.0	29.6	27.9	32.6	28.4
Korea Rep.	3.3	4.2	4.5	4.8	4.6	2.6
Malaysia	1.6	2.9	1.1	1.1	2.0	2.5
Pakistan	3.0	4.3	4.3	4.5	3.1	3.5
Sri Lanka	2.7	2.8	2.8	2.4	2.7	2.3
Thailand	11.8	1.7	1.8	2.0	0.8	2.1
DEVELOPED	**161.0**	**163.3**	**161.4**	**171.1**	**166.1**	**166.1**

	2014	2015	2016	2017	2018	2019
North America	**36.4**	**41.3**	**36.5**	**36.5**	**35.9**	**36.1**
United States	33.9	38.0	33.1	32.9	31.9	32.7
EUROPE	**73.0**	**69.7**	**71.3**	**71.4**	**68.5**	**61.3**
EU (28)	64.8	61.5	64.5	63.4	61.1	54.2
Belgium - Lux	22.3	19.3	21.6	17.9	13.9	12.6
Germany	10.7	8.7	9.6	8.3	8.7	7.6
Netherlands	10.3	12.8	12.3	15.3	17.7	13.2
Spain	5.7	5.4	5.7	4.7	4.7	4.9
United Kingdom	7.3	7.0	5.8	6.9	6.4	6.4
Other Europe	0.9	1.2	1.0	1.0	1.0	1.0
CIS	**27.0**	**28.2**	**29.3**	**39.8**	**40.8**	**40.8**
Russian Federation	11.1	13.4	15.5	15.2	13.9	13.9
Oceania	**14.9**	**15.8**	**16.6**	**16.1**	**13.5**	**13.5**
Australia	12.0	12.5	12.8	13.0	10.0	10.0
Other Developed	**9.7**	**8.2**	**7.6**	**7.3**	**7.5**	**7.5**
Israel	1.0	1.0	1.0	1.0	1.2	1.2
Japan	6.7	5.1	5.4	4.9	5.1	5.1
South Africa	2.0	2.2	1.2	1.3	1.2	1.2

Source : Jute, Kenaf, Sisal, Abaca, Coir and Allied fibres Statistical Bulletin 2020 - FAO

JUTE BASED TECHNICAL TEXTILES

Use of Jute other than Gunny Bags (Sacking) with Special Emphasize on Technical Textiles

Introduction:

Jute, the golden fibre is a versatile natural fibre which is totally bio-degradable, agro-renewable, eco-friendly and having different application areas. It is one of the strongest natural multicellular ligno-cellulosic bast fibres and may be considered as very important fibre of the future.

It has variety of conventional end uses, e.g sacks, garden twine, ropes, and carpets etc. It is not only a major textile fiber for conventional products but also a green raw material for value-added products particularly in the following technical textiles segment which include Industrial textiles, functional textiles, performance textiles, engineering textiles etc.

Clothing is not the only use to which fabric is put. So-called technical textile materials and products are used in a wide variety of applications other than normal clothing. Broadly Technical textiles may be classified in twelve major categories.

For instance, fabric used to package products and crops or cereals including wheat, rice, potato, tobacco, tea leaf and coffee beans is called packaging textile (Pack-Tech). Those used in household furnishing, home crafts and floor coverings are called home textiles (Home-Tech). Fabric used as soil saver for hill slopes, protection materials or as geosynthetics for underlay or overlay in road construction, are geo textiles (Geo-Tech). Cloth used as mulch or as sapling pots or as fruit nets are agricultural textiles (Agro-Tech). Fabric used in automotive furnishings in cars, railways and aviation as components like door panels, tyre cords and fuel filters are automobile textiles (Mobil-Tech).

Those used as rigid fibre reinforced composites for wood and structural substitutes are build textiles (Build-Tech). Fabric used as rope, twine or as conveyor belting and cordage are industrial textiles (Indu-Tech); for use as filter fabric for chimney hot air/gases or effluent are eco-textiles (Eco-Tech/

Oeko-Tech); for use as fire retardant, heat and cold insulated or sound insulated or pesticide barrier or rain protection are protective textiles (Pro-Tech); for use as any sports goods from textiles like swim wear, athletic wear, badminton racket etc are sports textiles (Sports-Tech); for use as bandage, suture and leucoplast, sanitary pad are medical textiles (Medi-Tech); and specialised clothing for astronauts, defence services, intelligent textile wear or smart textile wear (chemolinic or chromotropic, thermotropic etc) are clothing textiles (Cloth-Tech).

To engineer such technical textiles, the selection of high performance fibres and design of right textile products for specific end use are essential. In some major application areas, fabric or fibrous components or their combinations are selected primarily, but not exclusively, for specific performance. These include moisture or water or air transportation, filtration, insulation from heat and thermal degradation. The engineering design and production of such end-use specific technical textiles requires intensive research and development. So, there is need to maintain extensive evaluation standards for suitability in the intended end-use.

Twelve major categories of technical textiles jute can be used bellow mentioned categories

1. **Geotech** (Jute Geotextiles for rural infrastructure development, landscaping and other civil engineering applications)
2. **Packtech** (Used for Packaging)
3. **Agrotech** (Used in Agriculture, Horticulture, Forestry, Aquaculture etc.)
4. **Hometech** (Used for Furniture, household and floor covering etc.)
5. **Buildtech** (Used for Building and construction sector)
6. **Protech** (Protective wears)
7. **Mobiletech** (Automotive industry)
8. **Oekotech** (Ecofriendly food grade jute bag, Ecofriendly handmade paper bag)

Jute being a versatile fibre and other than traditional applications of jute as mainly a woven packaging material, it has found wide applications from macro to nanoscale particularly as a reinforcing fibre for polymer composite products due to the increasing demand for using sustainable materials. As a natural fibre, wide variations in microstructural and mechanical properties exist in the jute fibre, yarn or fabric.

High strength, modulus, stiffness, irregular surface morphology, moderate internal surface areas and aspect aspect ratio, low specific heat and low thermal conductivity, relatively higher thermal stability and dimensional stability (prominent aromaticity and cross linked structure of lignin provides highly rigid, isotropic, more thermally stable, non crystalline matrix with high bonding capacity through unsaturation and phenolic –OH functionality, besides highly accessible COOH and OH functionality of hemicellulose and usual OH functionality of Cellulose),good resin binding capacity (through higher propensess possess some problems if jute is not pre-dried at 170°C) and amenable to suitable chemical modifications to suit better compatibility with resin or thermoplastic matrix.

Overall, the jute fibre has the ability to replace environmentally harmful man-made fibre and synthetic materials and, in the near future, diversified applications of the jute fibre and its derivative nanomaterials in biodegradable packaging, high-value products and Jute based Technical Textiles are expected to increase significantly.

GEOTECH (JUTE GEOTEXTILES- JGT):

Technical advantages of Jute as a raw material for manufacturing technical textiles (JGT) compared to other fibres

A fibre would be suitable for manufacturing Geotextiles /Agrotextiles when it possesses suitable mechanical and hydraulic properties. The properties of jute compared to other natural and manmade fibres used in geosynthetics are given as below:

Type of fibre	Tenacity (N/Tex)	Extension at Break (%)	Initial Modulus (N/tex)	Volume Swelling (%)	Moisture Regain (%)	Lignin Content (%)
Jute	0.3-0.9	1-1.8	17-19	44.3	12-14	12-14
Coir	0.18	41-45	4.22	-	10	30
Sisal	0.37-4.7	1.9-4.5	25-26	39.5	11-14	9.9
Polyester	0.3-0.8	15-55	6-12	-	0.4-0.6	NIL
Polypropylene	0.3-0.8	15-35	2-9	-	<0.1	NIL

Applications of JGTs and steps taken by NJB towards its promotion / propagation:

Man-made geotextiles owe their origin to natural components like tree-shreds, reeds that were used to combat soil erosion in earlier days. Research, studies and field application of man-made geotextiles developed for a variety of geotechnical applications have paved the way for standardization of the products and their ultimate acceptability to the engineers using them. However, long life of man-made geotextiles and their probable immiscibility with soil on which they are laid leaves room for doubt about their eco-compatibility. It is this aspect that bestows predominance on Jute Geotextile (JGT) over its artificial counterpart. Some unique features of jute like, flexibility, drapability, high initial strength and low extensibility make Jute Geotextiles an ideal substitute for man-made geotextiles in addressing many soil related problems and geotechnical applications.

Jute geotextiles (JGTs) is an emerging engineering product with application-potential in many areas of civil engineering faced with soil related problems. The products have already been successfully tried in protection of banks of rivers and canals, management of slopes, strengthening of roads, controlling of subsidence of railway tracks, stabilizing embankments & overburden dumps in mines. Continuing research on JGTs is opening up potential of the product in new areas like strengthening soft soil, controlling soil erosion, pond ash stabilization etc. etc.

The advantage of JGTs is its availability, economic price-range and eco-compatibility. Besides, JGTs can be tailor-made as per end-users' technical requirements like porometry, permittivity, tensile strength and other parameters. It is a perfect "Make in India" product.

It is worth mention here that various Depts. of State and Central Government like, State Rural Road Agencies, PWD, Irrigation & Waterways, BRO, Indian Railways have included JGT as an item of work in their Standard Schedule of Rates. Indian Railways and Indian Roads Congress (IRC) have also published the Codes as guidelines for use of JGT in the respective field of works.

Standards & Guidelines of Jute Geotextiles:

a. BIS Standards:

   i. Guidelines for application of Jute Geo-textiles for rain water erosion control in road & railway embankments and hill slopes (IS 14986:2001)

   ii. Guidelines on rural road construction with JGT (IS 14715 Part I : 2016)

   iii. Guidelines on river bank protection with JGT (IS 14715 Part II : 2016)

b. Indian Roads Congress (IRC) Code & Publications—

   Guidelines for the Design and Construction of Low Volume Rural Roads Using Jute Geotextiles, IRC :SP:126-2019

   State-of-the Art Report on JGT prepared jointly by CRRI, IJIRA & NJB has been published by Indian Roads Congress in November 2011

   Specifications for road & bridge works (2001) & recommended practice for treatment of embankment slope & erosion control (1991)

c. Schedule of Rates –

   PWD, WBSRDA & I / W – Govt. of WB, PWD – Govt. of Assam & Meghalaya, BRO and all the 17 Divisions of Indian Railways

d. RD&SO, Ministry of Railways –

   i. Guideline no GE:G1 (July 2003)—

   ii. Guidelines for earthwork in railway projects, 2007

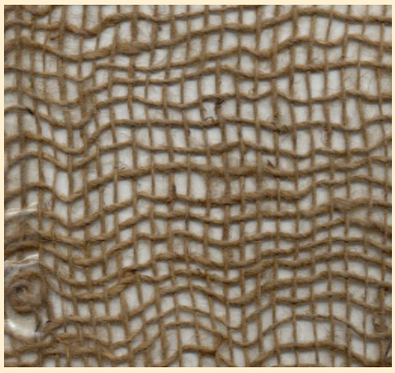
   iii. Unified Standard Schedule of Rates (Earthwork in Cutting & Embankment, Bridge Work and P.Way Works)- 2019

National Jute Board (NJB), a statutory body under Ministry of Textiles, Govt. of India, provides technical support and guidance to the manufactures for producing standard quality of JGT, customization of JGT to address site-specific requirements and also provides technical support and guidance in selection of right type of JGT & its installation at site apart from other remedial measures. NJB conducts awareness programme, conferences all over the country and sensitizing the trainee civil engineers at IAHE, IRICEN. CRRI, RCTRC, NITs and other Engineering Colleges across the country. Recently, NJB has organized a National Conference on JGT in association with IISc, Bangalore and NIT, Karnataka, on 18.05.2023 where engineers from the users' agencies from the Southern region including Academicians have participated and mutually benefitted.

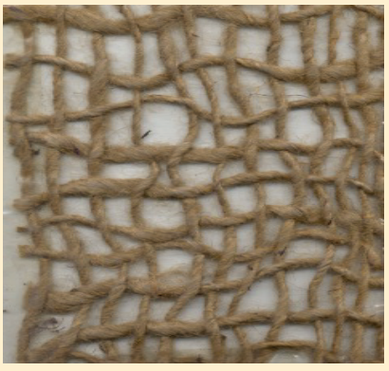
- Following standard Jute geotextiles with technical specifications, application areas & its availability are given below:

Technical Specifications of Open Weave Jute Geotextile (IS 14986:2001)

TYPE / PROPERTIES	3	2	1	Test Method
Weight (g/m^2) at 20% M.R.	730	500	292	ASTM D5261
Threads/dm (MD x CD)	7 x 7	6.5 x 4.5	12 x 12	IS 1963
Thickness (mm)	6	5	3	ASTM D5199
Width (cm)	122	122	122	IS 1954
Open area (%)	40	50	60	-
Strength (kN/m) [MD x CD]	12 x 12	10 x 7.5	10 x 10	ASTM D459



Type 1: 292 gsm



Type 2: 500 gsm

Type 3: 730 gsm

Application areas:

- Slopes of road, railway and hill
- Bridge approach, slope of reservoirs and emabankments
- Stabilization of sand dunes on sea beach, over burden dumps of open cast mines and fly ash dumps of power plants.
- Afforestation in semi-arid zones

APPLICATION PHOTOS

Destabilized slope

JGT laid over the prepared slope

Slope covered with vegetation

Technical Specifications of woven jute geotextiles:

Properties	D.W. Plain (IS 14715 Part I : 2016)	Water repellant & durable (IS 14715 Part II : 2016)	Test Method
Weight (g/m^2)	724	627	ASTM D5261
Threads/dm (MD x CD)	94 x 39	85 x 32	IS 1963
Thickness (mm)	1.85	1.7	ASTM D5199
Width (cm) min	100	100	IS 1954
Strength (kN) (MD x CD),min	25 x 25	20 x 20	ASTM D4595
Elongation at break (%) (MD x CD)	10 x 10	8 x 8	ASTM D4595
Pore size (O_{90}) Micron	150 - 400	150 - 400	ASTM D4751
Permittivity at 50 cm water head (sec^{-1})	350 x 10^{-3}	350 x 10^{-3}	ASTM D4491
Puncture resistance (kN)	0.500	0.400	ASTM D4833

724 gsm

627 gsm

Application Areas:

- Strengthening road pavement
- River and canal bank protection
- Construction of road & railway embankments on soft soil

APPLICATION PHOTOS

Strengthening of Sub-grade with Jute Geotextiles

Before construction

Laying of JGT

Condition of the road after 2 year

Control of Potholes & Reflection Crack on Road Surface

Nature of distress

Laying of JGT on treated surface

Applying PMC

River Bank protection work

Before application

During application

After application

Slope Stabilization work

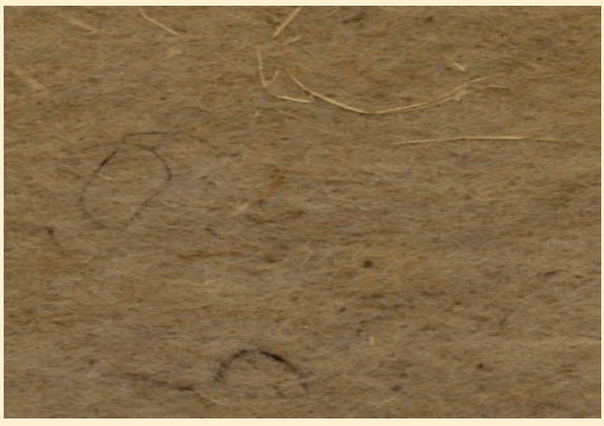
Eroded Slope

Installation of JGT

Slope Stabilized with Vegetation

Technical Specifications of non –woven geotextiles (IS 17070-2018):

PROPERTIES	1	2	Test Method
Weight (g/m2) at 20% M.R.	500	1000	ASTM D5261
Thickness (mm)	4	8	ASTM D5199
Width (cm)	150	150	IS 1954
Strength (kN/m) [MD x CD]	4 x 5	6 x 7	ASTM D4595
Elongation at break (%) (MD x CD)	20 x 25	20 x 25	ASTM D4595
Pore size (O90) Micron	500	300	ASTM D4751
Co-eff. of water permittivity (m/s)	3.4×10^{-3}	3.4×10^{-4}	ASTM D4491



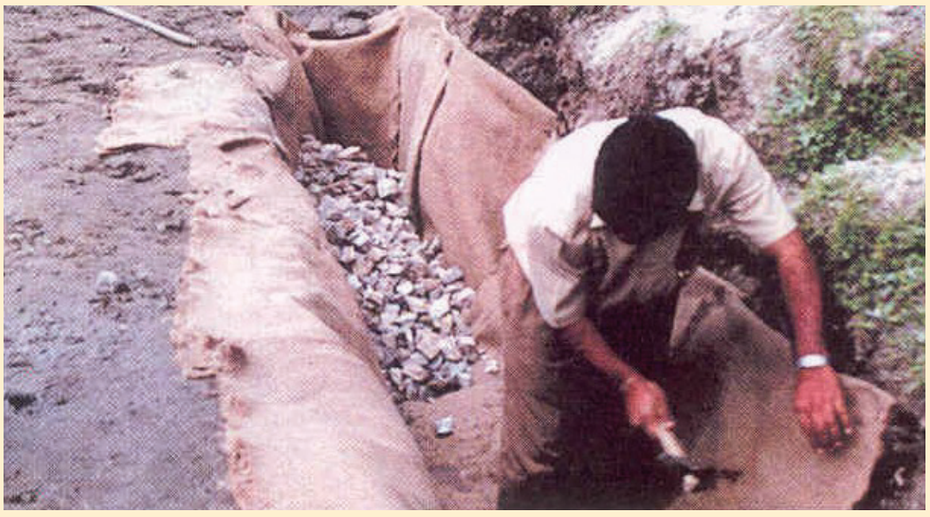
500 gsm

1000 gsm

Application areas:

- Construction of concealed rubble drains by the side of roads and railways
- As mulching fabric

APPLICATION PHOTO



NON WOVEN JUTE GEOTEXTILE AS TRENCH DRAIN

JUTE NONWOVEN AS MULCHING FABRIC

NONWOVEN JUTE AGROTEXTILE IS AN IDEAL AGROMULCHING MATREIAL FOR GROWTH OF PLANT

List of JGT Manufacturers :

Sl No	Mill Name and Address	Name	Contact No	Email	Type of Fabric	Fabric GSM	IS Code
1	Hooghly Infrastructure Pvt.Ltd Unit-Hukum Chand Jute Mills	Mr.B.Sarkar Mr.P.Banerjee	9903905010 9903905029	edp.hipl@hooghlygroup.com	Woven	724	IS-14715 Part-1 2016
						627	IS-14715 Part-2 2016
2	The Naihati jute Mill Co.Ltd	Mr.K.K Sonthalia	9831037979	kksonthalia@naihatijute.com	Woven	724	IS-14715 Part-1 2016
3	Aditya Trans Link Private.Limited, Unit Shyamnagar Jute Mill Co.Ltd 33 JL Nehru Road,Chatterjee International, 6th floor,Kolkata-71	Dr. Sumant Poddar	9830083626	sumant.poddar@gmail.com	Woven	724	IS-14715 Part-1 2016
						627	IS-14715 Part-2 2016
4	Gloster Limited 21 Strand Road, Kolkata-700001	Mr.D.C.Baheti Mr.B.L.Atal	9830020786 9674175751	marketing@glosterjute.com	Woven	724	IS-14715 Part-1 2016
					Non Woven	500	IS-17070 2018
						1000	
					Open Weave	292	IS-14986 2001
						500	
						730	
5	Reliance Jute Mills (International) Limited 13/C Kashinath Mallik Lane,1st Floor,Kolkata-73	Mr.Mukesh Suhasaria	9830053094	mktgho@reliancejute.com	Woven	724	IS-14715 Part-1 2016
					Open Weave	292	IS-14986 2001
						500	
						730	
6	Birla Corporation Ltd,Unit-Birla Jute Mills,Birla Building,4 th Floor,9/1 R.N Mukherjee Road, Kolkata-700001	Mr. G. R. Verma Mr. Deepak Kumar Gupta	9339734696 9903538990	grverma@birlacorp.com deepakkumar.gupta@birlacorp.com	Woven	724	IS-14715 Part-1 2016
						627	IS-14715 Part-2 2016
					Non Woven	500	IS-17070 2018
						1000	
					Open Weave	292	IS-14986 2001
						500	
						730	
7	Auckland Jute Mills,P.O-Jagaddal,North 24 Pargana,Pin-743125	Mr.H.S.Bayed Mr.S.C.Bhutoria	9831000453 9831000469	ail@aucklandjute.com	All Types of Jute Geo Textiles as per market demand.		
8	Anglo India Jute & Textile Industries Pvt. Ltd.	Mr. O. P. Sharma	9831631614	anglo@gayatrigroup.co	Open Weave	500	IS-14986 2001
						730	

Sl No	Mill Name and Address	Name	Contact No	Email	Type of Fabric	Fabric GSM	IS Code
9	Ludlow Jute & Specialities Limited 23C Ashutosh Choudhary Avenue Kolkata 700019	Mr.Anand Saraff Mr.Amit Somani	9831225662 9830213627	anand.saraff@ludlowjute.com amit.somani@ludlowjute.com	Woven	724	IS-14715 Part-1 2016
						627	IS-14715 Part-2 2016
					Non Woven	500	IS-17070 2018
						1000	
					Open Weave	292	IS-14986 2001
						500	
						730	

PACKTECH

Packtech includes several flexible packaging materials used for industrial, agricultural, consumer and other goods. Besides conventional jute bags for packing food grains, sugar etc., non-traditional jute bags includes food grade jute bags, postal bags, tea-bags, waste disposal bags, vegetable bags, leno jute bags, etc are also being manufactured and marketed including stretchable spiral bag for packaging of raw cotton and specially designed wool pack for raw wool when packaging requirement is of the order of 500 kg to 1000 kg

Recently, light weight bio-degradable packaging boxes for fruits & dry foods packing has been developed by ICAR-NINFET under the NJB sponsored project. The waste jute and jute sticks are being used as raw material for manufacturing such boxes.

Special Property Advantages of Jute for Its Suitability in Technical Textiles as PACKTECH

- Irregular surface and high co-efficient of friction rendering Non slip nature and stack stability of jute sacks
- High strength & modulus offering high drop strength
- Low extensibility offering good dimensional stability
- Good moisture absorption and air permeability offering breathability
- Good cut through resistance favouring hook resistance
- Low cost & easy national availability
- Agro-renewability, biodegradability & ecofriendly nature

AGROTECH

Jute fabrics are now being used as agricultural textiles for sun screens, plant nets, wind shield, harvesting nets, field-nets for protecting crop from birds, weed protection, mulching on seed bed, soil conservation, development of forests in semi-arid zones, nursery pots/sleeves and nets and sapling purposes etc.

Advantages of Jute for its Suitability in Technical Textiles as AGROTECH

- High strength/modulus & dimensional stability facilitating attenuation of wind effects in use as agro-net.
- Moderate draping quality facilitating easy laying of the fabric
- Irregular surface morphology preventing lateral and rotational slides with soil surface
- Good absorption of moisture, high air & water permittivity and transmittivity and easy dissipation of kinetic energy of raindrops.
- Modearate to good resistance to micro-climatic conditions (viz temperature & moisture in weather)
- Vegetation & bio-technical support with enhancement of organic matters and nutrient levels to the soil after degradation
- Eco-compatibility, biodegradability & soil friendliness
- Low cost, agro-renewability & easy availability.

Applications of Agrotech and Steps taken by NJB towards its promotion :

NJB has developed various types of fabric which are being used as sapling and mulching material. The standardization process of such fabric has also done by NJB.

- Guidelines for jute sapling bag for growth of sapling in nurseries (IS 16089 : 2013)
- Jute Agrotextiles for growth of plants and suppression of weeds (IS 17070 :2018)

HOMETECH

Bleached, dyed, printed, and finished jute or jute/cotton unionized furnishing fabrics, floor coverings, floor mattings, aprons, gloves, eco-friendly jute decorative cloth, fiberfill, mattress , pillow components, carpet backing cloth, mosquito nets, tarpaulins / canvas made out of jute and jute unions / blends are manufactured and marketed by the industry.

Advantages of Jute for its suitability in Technical Textiles as HOMETECH

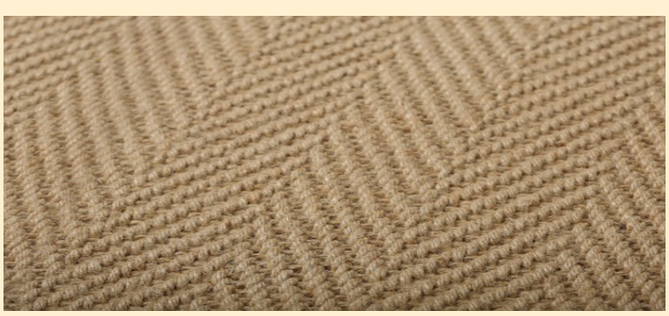
- Unique natural colour and special surface texture
- Hand crafted look and heaviness with smart appearance
- High strength and modulus
- Moderate to good draping
- Good moisture absorption and breathability
- Good bleachibility, dyeability and printability with different class of dyes and pigments as well as natural dyes.
- Low cost & easy national availability,
- Agro-renewability, biodegradability & eco-friendliness.

Assistance provided by NJB for growth and promotion of Jute based Home textiles :

Modern factory floor and a modern loom for manufacturing value added jute woven (and jute blended) and or printed floor coverings which are manufactured and being exported from Kerala. These aesthetically made products are of high demand in the global markets. With regards to the floor covering industry, it is being used as wall to wall carpeting and as area rugs for indoor use. Most of the jute raw materials are sourced from West Bengal and are converted info functional Jute floor coverings both on machines in the factories & on hundreds of hand looms in the cottage sector. The Companies are exporting about Rs.300-Rs.350 Crores worth of jute floor coverings annually.

NJB is providing capital subsidy and marketing support to the industry. Major products are:

Wall to wall carpets



Printed rugs.

Bordered rugs

Handloom rugs

Other jute based technical textiles

Rigid jute- polyester (thermoset) composite can be used as door and window frame for low cost house, corrugated sheet for false roof, garden canopy, garden fence and furniture. Many product of this category are coming up to cater the need of railways and automobiles for the purpose of flooring and roofing to replace wood and plywood. Jute nonwovens and resinated felt are introduced commercially in automotive for building doors, B-pillar, A pillar headliner, package tray, underlay carpet material etc.

Jute waste and recycled polyolefin composites for garden canopy/ fence, street lamp etc,and Jute-PP or MAPP thermoplastic composites sheets moulded for door panels of cars. Admixed jute fibre with resin/ adhesive like shellacs soya resin and modified starch etc. bio-components may be produced for such applications.

Jute fabric may be coated with suitable polymer/ elastomer to develop products such as coated tarpaulins, conveyor belt, weather resistant cover, awnings, breathable aprons,hospital sheeting etc.

Jute home textiles and jute diversified products need to focus on colour ,surface texture, look, softness/ drape and aesthetics with appealing designs to the products rather than functional performance.

Jute webbing is a heavy duty webbing commonly used for furniture seats and

backs, luggage racks and other craft applications. It is made from natural non-stretched closely woven jute fibers and extremely strong, durable. Jute tape is a woven ribbon of jute fibre that is used to protect trees from parasites and harsh weather by wrapping trunks, as well as for decorative purposes.

In addition to the above, in recent time Jute is widely used in the **Defence Sector**. The following items are usually used as camouflage and shed making material.

Sl. No	Item Nomenclature
1.	Equipment Camouflage Scrim Garnishing Dyed/Un-dyed various sizes: 50MM, 75 MM
2.	Equipment camouflage Net (Jute) various sizes
3.	Cloth Hessian (Heavy/ Medium/ Light)
4.	Twine Jute 3 Ply
5.	Sand Bag
6.	Surfacing Hessian Pre-fabricated Bituminized 91.5 cm wide
7.	Non woven jute felt
8.	Twine Quilting Coarse

Jute hessian cloth based Natural Fibre Thermoset Composites (NFTC) are manufactured by the Industry and supplied to Railways as Floor Board, Roof Ceiling sheet and Packing Ring.

NJB initiated following Jute based products development under the following category of Technical Textiles:

BUILDTECH :

Textiles used in construction –concrete reinforcement, façade foundation systems, interior construction , insulations, proofing materials air conditioning, noise prevention, visual protection ,protection against sun, building safety, artictectural membranes, floor and wall coverings, scaffolding nets, awnings & canopies.

A Composite material made of Jute & Glass fibre has been developed by Government College of Engineering & Textile Technology (GCEET), Serampore under the NJB sponsored project as a "BUILDTECH" material. Low weight guard rail, door panel, stair can be made with this composite material.

Ahmedabad Textiles Industries Research Association (ATIRA) has also developed a porta cabin made of Jute foam sandwich composites under the NJB sponsored project as a "BUILDTECH" material. Recently, the newly developed porta cabin is being installed in a snow bound area in Tawang, Arunachal Pradesh in high altitude under the supervision of Eastern Command for assessment of its performance at high altitude & in extreme weather conditions.

Advantages of Jute for its Suitability in Technical Textiles as BUILDTECH

- High strength, modulus and stiffness, (these parameters per unit cost are more much high in jute as compared to other natural fibres)
- Higher density than synthetic fibres i.e. Heaviness in terms of weight /unit cost is high)
- Irregular surface morphology, moderate internal surface areas (even good in elementary cell level)
- Low specific heat and low thermal conductivity & relatively higher stability as compared to cellulosic fibres.

- Prominent aromaticity and cross-linked structure of lignin provides highly rigid, isotropic, more thermally stable matrix.
- Good resin binding capacity through unsaturation and phenolic -OH functionality besides highly accessible –COOH, and –OH functionality of hemicellulose and usual –OH functionality of cellulose
- Amenable to suitable chemical modifications to suit better compatibility with resin or thermoplastic matrix.

PROTECH

Protection against heat and radiation for firefighter clothing, against molten metals for welders, for bulletproof jackets etc, all these things are obtained by usage of technical textiles with high performance fibres, high altitude clothing, ballistic protective clothing, fire retardant apparel ,high versatility clothing, industrial gloves and others.

A molten metal splash resistance protective cloth made of Jute-Cotton Union fabric has been developed by North Indian Textiles Research Association (NITRA) under the NJB sponsored project as "PROTECH". The finalization of design of the work wear has already been done and product validation trial is on-going in a Steel plant at Ludhiana.

Advantages of Jute for its Suitability in Technical Textiles as PROTECH

- Diverse chemical functionality of jute attributes easy chemical modification and finishing treatments for production of protective textiles
- Despite susceptibility of jute towards mildew attack, the resistance to weather and microbial attack is relatively to some extent better than cotton due to presence of lignin in jute.
- Better thermal stability of Jute than Cotton, exhibiting relatively higher LOI value of jute than that for cotton.

MOBILETECH

Technical textiles used in automobiles, aircraft, railways and shipbuilding, such as tire cord fabrics, seat cover fabric/ upholstery, seat belts, cabin filters, tufted carpet, helmets, insulation felts, automotive interior carpets, airbags, seat belt webbing, car body covers air craft webbing and others.

Also NITRA has developed Jute blended nonwoven roofliners as an alternative to synthetic materials under the NJB sponsored project as a "MOBILETECH".

The key advantages of the developed product are given below:

a) **Sustainability:** Jute blended nonwoven roofliners provide a more sustainable alternative to synthetic materials commonly used in roofliners. Synthetic materials like polyester or nylon are derived from non-renewable resources and have a higher environmental impact during production. Jute, on the other hand, is a natural fiber derived from plants and is biodegradable, making it a more environmentally friendly choice.

b) **Thermal insulation:** Jute blended nonwoven materials offer superior thermal insulation properties compared to glass fibre materials. They have a higher ability to regulate temperature and reduce heat transfer through the roof. This can contribute to improved energy efficiency of the vehicle by reducing the need for excessive heating or cooling.

c) **Acoustic insulation:** Jute blended nonwoven roofliners have excellent sound-absorbing properties, which can significantly reduce noise levels inside the vehicle cabin. They effectively dampen and absorb noise from various sources, resulting in a quieter and more comfortable driving experience.

d) **Cost-effectiveness:** In long-run due to biodegradability of jute materials the environmental cost will be saved.

Production of Jute Goods (source: O/o the Jute Commissioner) and Exports of Jute Goods from India (source: DGCI&S, Kolkata) in last five years are also enclosed.

OEKOTECH

Use of technical textiles in environmental engineering and landfill waste management (geosynthetic products to secure landfills against leakage of municipal or hazardous waste); secondary protection in chemical/oil industries (ground covers and around process tanks as secondary containment for tank leaks).

Besides eco-friendly food grade jute bags satisfying IJO-98/01 specifications, there are ecofriendly jute based hand made paper bags, disposable waste bags and jute non-woven air filters for pollution control purpose.

Eco-Friendly Hand Made paper Bags from jute

Eco-Friendly Food Grade Jute Bag

Jute Nonwoven air filter fabric

NATIONAL JUTE BOARD

National Jute Board (NJB) as an apex body of the Ministry of Textiles, Govt. of India is responsible for promotion of jute and jute products in India and abroad. It is established under National Jute Board Act, 2008 by merging two organisations namely Jute Manufactures Development Council (JMDC), a statutory body under Ministry of Textiles, Govt. of India and National Centre for Jute Diversification (NCJD), an autonomous registered society, which came into effect from 1st April 2010.

The enactment aims at development of the cultivation, manufacture and marketing of jute and jute products and for matters connected therewith and incidental thereto. The Head office of National Jute Board is at Kolkata and it has 3 branch offices at Delhi, Hyderabad and Chennai.

NJB is mandated to undertake the following functions:

i. Evolve integrated approach to jute cultivation aimed at increasing the yield of jute and improving the quality thereon and promote production of better quality raw jute and jute products;

ii. Promote or undertake arrangements for better marketing and stabilisation of the prices of raw jute and Jute products and their standardization

iii. Suggest norms of efficiency for jute industry with a view to eliminating waste, obtaining optimum production, improving quality and reducing costs;

iv. Assist and encourage studies and research for improvement of processing, quality, techniques of grading and packaging; of raw jute and jute products;

v. Promote or undertake surveys or studies aimed at collection, compilation and formulation of statistics regarding raw jute and jute products and their dissemination;

vi. Promote the development of production of jute manufactures by increasing the efficiency and productivity and modernization of the jute industry;

vii. Maintain and improve existing markets and to develop new markets within the country and outside for jute manufactures and to devise marketing strategies in consonance with the demand for such manufactures in the domestic and international markets;

viii. Provide and create necessary infrastructural facilities and conditions conducive to the development of diversified jute products by way of assisting the entrepreneurs, artisans, craftsman, designers, manufacturers, exporters, non-governmental agencies for the purpose of promotion and development of jute and jute products;

ix. Incorporate measure for sustainable Human Resource Development of the jute sector and to provide necessary funds for the same;

x. Take steps to protect the interests of jute growers and workers and to promote their welfare by improving their livelihood avenues and to secure their better working conditions;

xi. Collaborate with any other body corporate for the purpose of promoting the jute sector or for promotion and marketing of jute and jute products in India and abroad.

Some of the important promotional schemes and programmes implemented by NJB are as follows:

NATIONAL JUTE DEVELOPMENT PROGRAMME (NJDP)

The National Jute Development Program (NJDP) - An Umbrella Scheme for Development and Promotion of Jute Sector has been approved in the meeting of Standing Finance Committee (SFC), held on 20th May'2021. NJDP comprises the following Schemes/ Sub-Schemes for implementation by National Jute Board (NJB) during 2021 -2022 to 2025-2026 (15th Finance Commission Period). The Schemes/ Sub-Schemes under NJDP with objectives are : -

(i) **JUTE-ICARE (Improved Cultivation and Advanced Retting Exercise) Programme**, introducing a package of modern and scientific agronomic practices, for quality and productivity improvement in Raw Jute Cultivation.

(ii) **Capital Subsidy for Acquisition of Plant & Machinery (CSAPM) Scheme** facilitating modernization/Upgradation of the existing Jute mills and MSME JDP Units for manufacturing Jute Diversified Products.

(iii) **Jute Resource Cum Production Centre (JRCPC) Scheme** spreading jute diversification programme through providing trainings to new artisans and WSHGs and sustained employment for production of JDPs.

(iv) **Jute Raw Material Bank (JRMB) Scheme** supplying jute raw materials to Jute Artisans, MSMEs JDP Producing units, and Beneficiaries of JRCPCs to manufacture Jute Diversified Products at Mill Gate Price.

(v) **Jute Retail Outlets (JRO) Scheme** facilitating existing and new Artisans / Entrepreneurs, for promotion & Sale of JDPs through Retail Outlets / Showrooms.

(vi) **Jute Design Resource Centre (JDRC)** facilitates designing and development of Market worthy innovative Jute Diversified Products and helping existing and new JDP manufacturers and exporters.

(vii) **Production Linked Incentive (PLI) Scheme** facilitating the Jute Mills and MSME JDP units exporting JDPs for support / incentive to make them cost competitive in the international markets and to help them to fetch export orders for JDPs.

(viii) **Market Development & Promotion Scheme (MDPS)** facilitating the JDP units and the registered jute exporters for promotion and sale of JDPs in the Domestic market and to boost export of jute goods.

(ix) **Scholarship Scheme for Girl Children of Workers of Jute Mills/MSME JDP units** supporting the girl children to pursue higher education and improvement in the education standard @ Rs 5000 for Secondary Examination and Rs 10,000 for Higher Secondary Pass Outs.

The details of NJDP Schemes have been uploaded in NJB's website: www.jute.com

For more information:

NATIONAL JUTE BOARD
3A & 3B Park Plaza, 71 Park Street
Kolkata – 700 016
Tel: 033-2217 2107 / 2226 3438
Fax: 033-2217 2456
Email: jute@njbindia.in

Indian Organisations for Development of Jute

National Jute Board (NJB) as an apex body of the Ministry of Textiles, Govt. of India is responsible for promotion of jute and jute products in India and abroad. It is established under National Jute Board Act, 2008 by merging two organisations namely Jute Manufactures Development Council (JMDC), a statutory body under Ministry of Textiles, Govt. of India and National Centre for Jute Diversification (NCJD), an autonomous registered society, which came into effect from 1st April 2010.

Sl. No.	Organisation	Main Activity
1.	**National Jute Board** Ministry of Textiles, Govt. of India	Established under National Jute Board Act 2008 - An apex body of the Ministry of Textiles, Govt. of India aiming at development of the cultivation, manufacture and marketing of jute and jute products.
	Head Office : KOLKATA 3A&3B Park Plaza, 71 Park Street, Kolkata-700 016 Phone : 91-33-2249 3825/2226 3438 Fax : 91-33-2217 2456 E-mail : jute@njbindia.in Website : http://www.jute.com	
	Regional Offices : NEW DELHI / HYDERABAD / CHENNAI	
	(i) "Prakash Deep" Flat Nos. 508 & 509 7, Tolstoy Marg, New Delhi – 110001 Phone : 91-11-2335 3519 E-mail : njbdel@gmail.com (ii) Chenetha Bhawan, (2nd Floor), Nampally, Hyderabad-500 001 Phone : 91-40-2465 6733, Telefax : 91-40-2461 4918 E-mail : njbhyd@gmail.com (iii) "TNSCB Complex" Pillaiyar Koil Thottam Ground Floor, New No. 130 (Old No. 212) R.K. Mutt Road, Mylapore, Chennai – 600 004 Phone : 91-44-2462 0059, Fax : 91-44-2462 0069 E-Mail : njbchennai@gmail.com	

Sl. No.	Organisation	Main Activity
2	**Office of the Jute Commissioner** Ministry of Textiles, Govt. of India 3rd MSO Building, E&F Wing, CGO Complex 4th Floor, Sector-I, DF Block Salt Lake City, Kolkata – 700 064 Phone :91-33-2337 6979/2337 6980 Fax :91- 33-2337 6972 / 2337 6973 E-mail : jcoffice@jutecomm.gov.in Website : www.jutecomm.gov.in	To advise Government and the jute industry and trade on all matters relating to the development of jute industry and to implement the Government policies.
3.	**Office of Development Commissioner (Handloom)** Ministry of Textiles, Govt. of India Udyog Bhavan New Delhi- 110011 Phone : 91-11-2306 2945,2306 3684 E-mail : dchl@nic.in	Development of jute-based handloom products alongwith other handloom products.
4	**Office of Development Commissioner (Handicrafts)** Ministry of Textiles, Govt. of India West Block-7, R.K. Puram New Delhi-110066 Phone : 91-11-2610 6902/2610 3562 E-mail : dch@mantraonline.com	Development of jute-based handicrafts alongwith other handicrafts.
5	**Indian Jute Mills Association** 6,Netaji Subhas Road, Kolkata – 700 001 Phone : 91-33-2230 9918, 2230 0742 Fax : 91-33-4001 4217, 2231 3836 E-mail : ijma@ijma.org Website : www.ijma.org	The representative body of the Indian jute industry.
6	**National Jute Manufactures Corporation Ltd.** Chartered Bank Buildings 4, Netaji Subhas Road, Kolkata – 700 001 Phone : 91-33-2230 6434 Fax : 91-33-2230 5103 E-mail : njmcltd@gmail.com Website : www.njmc.org.in	Apex body for management of all nationalized jute mills.
7	**The Directorate of Jute Development** Ministry of Agriculture, Govt. of India 234/4, A.J.C. Bose Road, Kolkata – 700 020 Phone : 91-33-2287 9465, 2287 9337 / 9532 Fax : 91-33-2287 9521 E-mail : djd@nic.in	To look after the development of raw jute cultivation and application of scientific methods of cultivation both at micro and macro levels.

Sl. No.	Organisation	Main Activity
8	**Central Research Institute for Jute & Allied Fibres (Indian Council of Agricultural Research)** Barrackpore, Kolkata – 700 120 Phone : 91-33-2535 6124, Fax : 91-33-2535 0415 E-mail : director.crijaf@icar.gov.in Website : www.crijaf.org.in	Engaged in-development of improved varieties, production and protection technologies of jute and allied fibres crops.
9	**Indian Jute Industries' Research Association** 17, Taratola Road, Kolkata – 700 088 Phone : 91-33-8626 9200, 6626 9229 Fax : 91-33-6626 9204 E-mail : ijiraweb@ijira.org.in Website : www.ijira.org.in	Engaged in fundamental and applied research on jute and its products.
10	**National Institute of Natural Fibre Engineering and Technology** **Indian Council of Agricultural Research** 12, Regent Park, Kolkata – 700 040 Phone : 91-33-2471 1807, 91-33-2421 2115, Fax : 91-33-2421 2116 91-33-2471 2583(F) E-mail : director.ninfet@icar.gov.in, Website : www.nirjaft.res.in	Engaged in fundamental and applied research on jute and other long vegetable fibres.
11	**Department of Jute and Fibre Technology** **Institute of Jute Technology, University of Calcutta** 35, Ballygunge, Circular Road, Kolkata – 700 019 Phone : 91-33-2461 5444, 2461 5477 Fax : 91-33-2461 5632, E-mail : ijt@cal2.vsnl.net.in Website : www.ijtindia.org.in	Premier Institution running jute technology course.
12	**Bureau of Indian Standards** 1/14, C.I.T. Scheme VII M VIP Road, Kankurgachi, Kolkata –700 054 Phone :91-33- 2337 8499, 2337 8626, Fax : 91-33-2337 7459 E-mail : erobis@cal2.vnl.net.in Website : http://www.del.vsnl.net.in/bis.org	To fix up standard of the quality product and providing technical guidance on ISO certification.
13	**Export Inspection Agency** 14/1B, Ezra Street, Kolkata-700 001 Phone : 91-33-2235 2651/2652, Fax : 91-33-2235 4562 E-mail : eia@cal2.vsnl.net.in	To enforce quality control and pre-shipment inspection of raw jute and jute products.

Sl. No.	Organisation	Main Activity
14	**The East India Jute & Hessian Exchange Ltd.** 43, Netaji Subhas Road, Kolkata-700 001 Phone : 2230 2739 / 2230 6119 Fax : 91-33-2230 6118 E-mail : eijhe@vsnl.net	Recognised association to regulate forward trading in raw jute and jute goods.
15	**The Jute Corporation of India Ltd.** 15N, Nelie Sengupta Sarani (7th floor) Kolkata-700 087 Phone :91-33-2252 7027 / 6770 / 6720 / 6951 Fax : 91-33-2252 1771 E-mail : jutecorp@gmail.com / jutecorp@vsnl.net Website : www.jci.gov.in	To ensure minimum support price to the jute growers and to act as raw jute price stabilising agency.
16	**The Jute Balers' Association** 12,India Exchange Place, Kolkata-700 001 Phone :91-33- 2230 2805	Recognised association for trading in raw jute.
17	**Gunny Trades Association** 5,Dr. Rajendra Prasad Sarani, Kolkata-700 001 Phone : 91-33-2230 3233 E-mail : gunny_trades@vsnl.net	Recognised association for trading in jute goods.
18	**Jute Products Development & Export Promotion Council (JPDEPC)** CDA – 149, Sector – I, Ground Floor Salt Lake City Kolkata-700 064 Phone : 91-33-4062 0624 E-mail : jute.jpdepc@hotmail.com	Export Promotion body responsible for export promotion of jute products.
19	**Association of Jute & Handicrafts Entrepreneurs of Eastern India** 30,Chittaranjan Avenue, 2nd Floor Kolkata-700 012 Fax : 91-33-2225 2098, E-mail : admin@ajheei.in	Association, responsible for promotion of jute entrepreneurs engaged in production of jute lifestyle products including handicrafts in Eastern India.

GLOSSARY

Bale	:	1 Bale of Raw Jute = 180 Kilogram
Hessian	:	Hessian (or burlap) is a plain woven fabric weighing 4½oz to 18oz a yard (139.5 gms to 434.0 gms per meter) with a normal basic width of 40" (101.60 cm). A wide range of hessian bags is manufactured to meet various packaging needs.
Sacking	:	Sacking is a heavy, loosely-woven cloth, manufactured from coarser yarn either plain or Twills, weighing from 12oz to 24oz a yard (372 gms to 744.1 gms a meter) of different width. Sacking bags are used as containers for packaging of varieties of commodities.
CBC	:	Carpet Backing Cloth is a special quality Broad-loom woven hessian weighing from 5.5oz to 13.25oz per yard (170.5 gms to 410.8 gms per meter) with the width range varying from 29" to 111" (73.8cm to 281.9cm) for Narrow Carpet Backing and 112" to 200" (284.5 cm to 508 cm) and above for wide Carpet Backing. CBC material is widely used as primary and / or secondary backing in tufted carpet industry including Handloom Woven Carpet.
JDPs	:	Jute Diversified Products: Floor coverings, Hand & Shopping bags, Decorative fabrics, Wall Hanging, Gift articles, Blankets, etc.

Retail Sale Outlets for Jute Diversified Products

HIMACHAL PRADESH
Sarkar Jute Craft
Mall Road, Manali
Himachal Pradesh -175131
M : 9330860651
Email: sarkarjute@gmail.com

JHARKHAND
Chotonagpur Craft Development Society
Road No 3, Hawai Nagar,
Ranchi
Jharkhand-834003,
M: 9771431432
Email: ccdsranchi1@gmail.com

KARNATAKA
Jute Cottage,
24, Jayanagar,
9th Block, 26th 'A' Main Road,
Bangalore – 560 069.
M: 9845923195
Email: jutecottage@gmail.com

Jute Cottage
295/1 Cambridge Layout
1st Cross, Halasuru
Bangalore-560008
M : 9845923195
Email: jutecottage@gmail.com

Jute Cottage
984, HAL 2nd stage
12th Main A, 1st Cross,
Indiranagar
Bangalore-560008
M : 9845923195
E-mail : jutecottage@gmail.com

Jute Cottage
Unit No 108, 1st Floor,
Forum Neighbourhood Mall
Whitefield Main Road,
Bangalore-560066
M : 9342233195
Email : jutecottage@gmail.com

MAHARASHTRA
Karaakruti
2nd , floor, Unit No 537A, Seasons Mall,
Magarpatta (S), Hadapsar,
Pune-411013
M: 8971490202
Email: mdedhajoshi07@gmail.com

TAMIL NADU
Snap Jutes
225 A/6, Rajiv Nagar
3rd Cross, St Pandavarmangalam
Kovilpatti-628501
Tamil Nadu
M : 9843175720
Email : snapjutes@gmail.com

UTTAR PRADESH
Durga Trading Company
SA 6/186-K-A, Aktha Patel Katara
Shop No 9, Paharia
Varanasi – 221007
M: 9415303090
Email: durgatrading07@yahoo.in

UTTARAKHAND
Bhartiya Gramotthan Sansthan
Upper Road, Dhalwala,
Rishikesh
Uttarakhand -249201
M: 9411571947
Email : bgsuttranchal@rediffmail.com

WEST BENGAL
Gitali Jute Enterprise
58/36, Bengal Para,
2nd Bye Lane, Andul Road,
Danesh Sheikh Lane
Howrah-711109
West Bengal
M: 9831742185
Email : gitalijuteenterprise07@gmail.com

Polempur Women Welfare Society
Tarapith, Vill + PO : Birchandrapur
P.S - Mayureswar-I,
Dist – Birbhum
West Bengal-731245
M: 9551509936
Email:pwws.bdn2008@gmail.com

Rakshak Foundation
41 Alipore Road,
Kolkata –700027
M: 9830468669,
Email : foundation@rakshak.net

JUTE RAW MATERIAL BANK

ANDHRA PRADESH
Sri Ganga Sutha Eco Eclectics
Plot No 2 & 3, VNR Grand City, Ponangi Road,
Eluru, West Godavari District, A.P-534002
Andhra Pradesh
Mob : 944097774
Email : sgsecoeclectics@gmail.com

Saraswathi Jute Creations
Andhra Pradesh
D No 1768101 Simhagiri Nagar Pendurthi,
Visakhapatnam,
Andhra Pradesh-531173
Mob : 9866406200
e.mail : vanasaraswathi15@gmail.com

HARYANA
Ashoka Handloom & Handicrafts Society
Building No 1456, NHBC,
Panipat, Haryana - 132103
Mob : 7206000843
Email : ashokangosociety@gmail.com

JHARKHAND
Chotanagpur Craft Development Society
Road No 3, Hawai Nagar,
Ranchi, Jharkhand - 834003
Mob : 9771431432
Email : sandip@jutefabs.com

TELANGANA
Association of Lady Entrepreneurs of India
D. No 8-2-120/86/9/A/30, 1st Floor, Road No 2,
Banjara Hills, Hyderabad,
Telangana-500034
Mob : 9849022397
Email : aleap93@gmail.com

The Jute World
37 93/6, Ground Floor, Madhura Nagar, Neredmet,
Hyderabad, Telangana-500056
Mob : 9493723271
Email : thejuteworld@gmail.com

Saran Jute Bags
12-2-826/A/21, LIC Colony, Medhipatnam,
Hyderabad, Telangana - 500028
Mob : 9701000234
Email : saranjutebags@gmail.com

Sri Manjira Handooms
H. No 11-11-4, Road No 1, Shop No 1, Ground Floor,
Telephone Colony,
Sri Ramakrishnapuram, Hyderabad,
Telangana-500102
Mob : 7569347374
Email : manjirajutebags@gmail.com

UTTAR PRADESH
Durga Trading Company
SA 6/186-K-A Aktha Patel Katara
Shop No 9 Pahariya
Varanasi-22100,
Uttar Pradesh
Mob : 9415303090
Email : durgatrading07@yahoo.in

Satyam Handicraft Trading Company
Paharpur Chauraha, Ghazipur Road,
Kushwaha Katra
U.P - 233306
(Non Operational)
Sh. Satyanarayan
Mob : 9125324712
Email : satyanarayanbuddha11@gmail. com

WEST BENGAL
Jharna Jute Handicrafts
West Bengal
A-40, Talpukur Road, Khudiram Pally,
Kolkata-61
Mob : 9681025624
Email : jharnajute123@gmail.com

Jute House
West Bengal
Hatudewan Pirtala, P.O- Bajepratappur,
Distt – Purba Bardhaman – 713101
Mob : 8906223423
Email : jutehouse.bdn@gmail.com

Polempur Womens Welfare Society
West Bengal
Vill- Polempur, P.O – Machkhanda,
P.S – Khandaghosh
Distt – Purba Bardhaman-713103
Mob : 9609221172
Email: pwws.bdn2008@gmail.com

Sarkar Jute Craft
907/1, South Behala Road,
Sarat Pally, Kolkata –7000 61
Mob : 9330860651
Email : sarkarjute@gmail.com

M/s Arrow India
Ramchandrapur , PO Narendrapur ,
Kolkata -700103,
West Bengal
Mob : 9339299100
Email : arrowindia218@gmail.com

Generic India
B1-1/New, Kalinagar Road Bye Lane A,
Kolkata-66, West Bengal
Mob : 8617263979
Email : debadityochaki.ju@gmail.com

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58/36 Bangal Para 2nd Bye Lane,
Andul Rd Danesh Seikh Lane
Howrah – 711109, West Bengal
Mob : 9831742185
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Netai Sewing
152/798 Madral Road,
Madral, North 24 Parganas
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OM FABRIC
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Mob : 9339412760
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