

# Lab in a Bag Promotes Cotton

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in building the technical textiles Dr. Seshadri Ramkumar Textile Association (India). He sector in India and developing writes a column called "TexSnips," Professor, Nonwovens & U.S.-India relationships in cotton Advanced Materials Laboratory which gets distributes to over 2000 Texas Tech University, and textiles sector. He has been people all over the world. Lubbock, Texas, USA

Cotton needs to be presold based on its environmental friendliness. Plastic pollution is receiving highest attention with the recent conclusion of the 4th session of intergovernmental negotiating committee to negotiate global plastic treaty held in Ottawa, Canada, April 23-29, 2024. Importantly, the document on plastic production and pollution prepared by the United Nations Environmental Program was used as an aide memoir during the discussion.

According to the document, there is a link between plastic pollution and human health and the environment. It calls for ending the pollution instructing the need for bold vision and plan.

This gives impetus for natural fiber sectors like cotton to go on a high gear in cotton productivity and quality improvements, thinking beyond the commodity and common fashion products. There needs to be more encouragement for developing advanced products from cotton and natural fibres that can serve as alternatives to plastics. Importantly, industry must be involved in outreach and engagement to tell positive stories of cotton and how it can combat pollution.

Leading cotton associations like the Cotton Association of India, the USA-based National Cotton Council and Cary, NC-based Cotton Incorporated are doing their part to promote the



positive values of cotton by marketing campaigns and supporting research.

In addition to these laudable efforts, it is important that these campaigns reach youngsters at middle and high schools, colleges, and universities as these are future consumers with independent decision making and buying powers. In the United States, which is one of the leading cotton producers and exporters of cotton, academic institutes emphasise the importance of outreach and engagement with the industry and society. Such efforts must be replicated in other cotton nations, where there are active engagements with stake holders to gather latest information and increase the footprint of cotton in various products. An interesting engagement activity, "Lab in a Bag," from our laboratory may be valuable to the cotton industry and allied sectors.

#### Lab in a Bag Showcases Sustainability

Engaging with customers, community, and the next generation is important to promote sustainability and new values.

On April 17, 2024, as part of the 6th annual Engaged Scholarship Symposium organised by Texas Tech University, sustainability aspects of cotton and advanced applications were

highlighted using a mobile laboratory, termed as "Lab in a Bag."

I had an opportunity to present our engaged research with High Plains' cotton prod" "Engaged Research in National Defense, Human Health, and Environmental Protection," that focuses on finding new applications for cotton, developing alternatives to plastics, and exploring opportunities for cotton in defense and industrial sectors.

The symposium highlighted various aspects of engagement such as using theatre plays to simulate disaster days, pictorial representation of a situation, etc. The power of effective engagement with stakeholders was stressed in the event. Presentations involved researchers from arts, engineering, family science and English all focusing on outreach and engagement.

Our work featured a mobile laboratory using a "Lab in Bag," that has materials to highlight the earth friendliness of natural materials like cotton. The way the mobile laboratory can be put together with ease attracted the attention of the audience in the meeting. Such a makeshift laboratory can be used by different industries to highlight their uniqueness.

Lab in a Bag set-up consists of a packet of cotton, cotton nonwoven samples, oil absorption set-up, experimental oil and safety equipment. This set-up can be quickly assembled and can be used to demonstrate new applications of cotton such as oil absorption to school students, consumers, and for promoting the product.

People in the audience such as those belonging to the education sector enquired about sustainability approaches followed in the cotton sector. Practical demonstrations enhance awareness and interest in sustainable products. In the case of oil absorption by raw cotton, "Lab in a Bag," projects the scientific mechanism to the audience as well as how such products are biodegradable. Show and tell engages well with



(Photo Courtesy: Brad Thomas, TTU)



the audience and can serve as great advertisement tools.

It was clear that people are aware of microplastic pollution, and the industry must involve in aggressive engagement with the society to highlight the positiveness of cotton such as the development of value-added products, biodegradability, and providing livelihood to many farmers in developing nations such as those in Africa.

It is becoming clear that better messaging and reaching out to practitioners in other disciplines such as theater, music and art can produce positive campaigns to relay facts about cotton and other natural products.

#### **Reaching Out to a Broader Community**

Interesting show and tell efforts like the Lab in a Bag attract youngsters and public alike in knowing the benefits of using cotton in commodity and industrial applications.

Industry associations and academia in India can promote cotton in education settings, laboratory open houses, etc. The Nonwovens and Advanced Cotton Laboratory at Texas Tech University engages with local workforce development organisations and Chamber of Commerce to create awareness on cotton.

As a case in point, this past January, we made efforts to engage with an elementary school to promote cotton in a STEM event organised by a Parents Teachers Association. Among all the high-tech demonstrations such as robotics, an engaging demonstration of raw cotton soaking up oil attracted the audience. Aditya R, a seventh-grade student from Hutchinson Middle School in Lubbock, USA demonstrated value-added applications of cotton. The demonstration attracted good interest among the visitors.

"Wax in natural cotton being nonpolar attracts nonpolar oil," explained Aditya. Recognising the importance of cotton to the economy of Lubbock and its natural biodegradability, Aditya demonstrated the instantaneous

oil absorption by natural cotton nonwoven fabric.

Graduate students from the Nonwovens & Advanced Materials Laboratory at Texas Tech University engaged enthusiastically with young students and parents from the region. Our Nonwovens & Advanced Materials Laboratory is active in outreach to school students in promoting sustainability and STEM projects.

Nandhanaa Anand, a 10th grade student at the Lubbock High School is collaborating with us on a project that focuses on sustainable products for advanced applications.

The highlight of the event was the showcasing of different STEM areas such as robotics, engineering, sustainability and forensic sciences.

Pre-K to 5th grade students displayed their projects using poster presentations and models.

Such outreach efforts must be conducted to encourage more students to take STEM majors in higher education. Innovative ideas can evolve because of participation in multidisciplinary showcase events and exhibitions. It will also help with collaborations with different industrial sector and disciplines.

Cotton industry must look for opportunities to engage with global organisations that have focus on sustainability to educate public about the benefits of cotton. Industry can also support summer internships and small projects and entice students to participate. These will pay off well for the cotton sector.

(The views expressed in this column are of the author and not that of Cotton Association of India)

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### CAI Maintains its April Cotton Pressing Estimate for 2023-24 Cotton Season at 309.70 Lakh Bales

otton Association of India (CAI) has released its April estimate of the cotton pressing numbers for 2023-24 season, which began on 1st October 2023. CAI has retained its cotton pressing estimate for 2023-24 season at 309.70 lakh bales of 170 kgs. each (equivalent to 324.99 lakh running bales of 162 kgs. each). Based on input received from the members of 11 cotton growing state associations and other trade sources, the Committee has maintained pressing figures for 2023-24 season at the same level as estimated by it previously. The Statewise break-up of the Cotton pressing numbers as well as Balance Sheet for the season with the corresponding data for the previous crop year are given below.

The total cotton supply till end of April 2024 is estimated at 315.86 lakh bales of 170 kgs. each (equivalent to 331.46 lakh running bales of 162 kgs. each) which consists of the pressings of 281.96 lakh bales of 170 kgs. each (equivalent to 295.88 lakh running bales of 162 kgs. each), imports of 5.00 lakh bales of 170 kgs. each (equivalent to 5.25 lakh running bales of 162 kgs. each) and the opening stock estimated by the CAI at 28.90 lakh bales of 170 kgs. each (equivalent to 30.33 lakh running bales of 162 kgs. each) at the beginning of the season.

Further, the CAI has estimated cotton consumption upto the end of April 2024 at 192.50 lakh bales of 170 kgs. each (equivalent to 202.00 lakh running bales of 162 kgs. each) while the export shipments upto 30th April 2024 are estimated by the CAI at 21.50 lakh bales of 170 kgs. each (equivalent to 22.56 lakh running bales of 162 kgs. each). Stock at the end of April 2024 is estimated at 101.86 lakh bales of 170 kgs. each (equivalent to 106.89 lakh running bales of 162 kgs. each) including 40.50 lakh bales of 170 kgs. each (equivalent to 42.50 lakh running bales of 162 kgs. each) with textile mills which is over 45 days consumption and the remaining 61.36 lakh bales of 170 kgs. each (equivalent to 64.39 lakh running bales of 162 kgs. each) with CCI, Maharashtra Federation and others (MNCs, MCX, traders, ginners, etc.) including cotton sold but not delivered.

The CAI has retained its total cotton supply till end of the cotton season 2023-24 (i.e. upto 30th September 2024) at the same level as estimated previously i.e. at 359.00 lakh bales of 170 kgs. each (equivalent to 376.73 lakh running bales of 162 kgs. each). The total cotton supply consists of the opening stock of 28.90 lakh bales (equivalent to 30.33 lakh running bales of 162 kgs. each) at the beginning of 2023-24 season on 1st October 2023, cotton pressing numbers estimated for the season at 309.70 lakh bales of 170 kgs. each (equivalent to 324.99 lakh running bales of 162 kgs. each) and imports for the season estimated at 20.40 lakh bales of 170 kgs. each (equivalent to 21.41 lakh running bales of 162 kgs. each). Although there is no change in the total cotton pressing numbers estimated for the entire year i.e. 309.70 lakh bales, the cotton pressing numbers of Telangana State have now been estimated higher by 1 lakh bales i.e. 35.00 lakh bales of 170 kgs. each (equivalent to 36.73 lakh running bales of 162 kgs. each) than estimated previously at 34.00 lakh bales of 170 kgs. each (equivalent to 35.68 lakh running bales of 162 kgs. each). The cotton pressing estimates of Tamil Nadu State for the current crop year have however now been reduced by 1 lakh bales i.e. 5.50 lakh bales of 170 kgs. each (equivalent to 5.77 lakh running bales of 162 kgs. each) against 6.50 lakh bales of 170 kgs. each estimated previously. The cotton pressing numbers estimated previously for other states have remained unchanged. The cotton imports estimated by the CAI for the season are higher by 7.90 lakh bales of 170 kgs. each compared to last year.

The domestic consumption estimated by the CAI is the same as estimated previously i.e. 317 lakh bales of 170 kgs. each (equivalent to 332.65 lakh running bales of 162 kgs. each). The exports for the season 2023-24 estimated by the CAI are the same as estimated previously i.e. 22 lakh bales of 170 kgs. each (equivalent to 23.09 lakh running bales of 162 kgs. each) as against 15.50 lakh bales of 170 kgs. each (equivalent to 16.27 lakh running bales of 162 kgs. each) estimated for 2022-23 season.

The CAI will review and finalise its estimated cotton balance sheet for ongoing crop year 2023-24 including cotton production, consumption, exports, imports numbers at the ensuing all India meeting of its National Crop Committee with Stakeholders which is scheduled to be held on Monday, the 10th June 2024 in Ludhiana (Punjab). This meeting is very important and entire cotton value chain including spinning mills, MNCs, ginners, traders, importers, exporters, brokers, Presidents / Secretaries of upcountry associations representing all 11 cotton growing states will attend this meeting.

#### Salient Features of the CAI Crop Committee Meeting held on 10th May 2024

The Crop Committee of the Cotton Association of India (CAI) held its meeting on Friday, the 10th May 2024 virtually, which was attended by 20 members representing various cotton growing regions of the country. Based on the input given by the representatives of each state association, the CAI Crop Committee has estimated total cotton pressing numbers for 2023-24 season and has also drawn cotton balance sheet for 2023-24 season. The following are the salient features of the CAI crop report: -

#### 1. Consumption

The CAI has maintained cotton consumption for 2023-24 season at 317 lakh bales of 170 kgs. each (equivalent to 332.65 lakh running bales of 162 kgs. each) i.e. same as estimated previously.

Upto 30th April 2024, the consumption is estimated at 192.50 lakh bales of 170 kgs. each (equivalent to 202.00 lakh running bales of 162 kgs. each).

#### 2. Cotton Pressing

As per the crop report submitted by upcountry associations and trade sources at the meeting of the CAI Crop Committee, the Committee has retained its cotton pressing estimate at 309.70 lakh bales of 170 kgs. each (equivalent to 324.99 lakh running bales of 162 kgs. each) with slight changes. The Committee has increased cotton pressing estimate of

#### CAI's Cotton Pressing Estimate for the Seasons 2023-24 and 2022-23

(in lakh bales of 170 kg.)

		Indian Cotton pr	Pressed Cotton Bales as on 30th April 2024				
State	202	3-24	202	2-23	2023-24		
	In running b/s of 162 Kgs. each	In lakh b/s of 170 Kgs. each	In running b/s of 162 Kgs. each	In lakh b/s of 170 Kgs. each	In running b/s of 162 Kgs. each	In lakh b/s of 170 Kgs. each	
Punjab	3.67	3.50	2.89	2.75	3.81	3.63	
Haryana	14.17	13.50	11.54	11.00	12.76	12.16	
Upper Rajasthan	15.74	15.00	18.89	18.00	15.85	15.10	
Lower Rajasthan	14.69	14.00	11.81	11.25	13.76	13.11	
Total North Zone	48.27	46.00	45.12	43.00	46.17	44.00	
Gujarat	91.30	87.00	99.07	94.41	78.17	74.49	
Maharashtra	83.95	80.00	84.70	80.71	79.74	75.99	
Madhya Pradesh	18.89	18.00	20.46	19.50	17.84	17.00	
Total Central Zone	194.14	185.00	204.23	194.62	175.75	167.48	
Telangana	36.73	35.00	32.01	30.50	35.53	33.86	
Andhra Pradesh	13.12	12.50	17.21	16.40	11.54	11.00	
Karnataka	20.99	20.00	23.61	22.50	19.83	18.90	
Tamil Nadu	5.77 5.50		5.72 5.45		1.07	1.02	
Total South Zone	76.60	73.00	78.55	74.85	67.98	64.78	
Orissa	3.88	3.70	3.60	3.43	3.88	3.70	
Others	2.10	2.00	3.15	3.00	2.10	2.00	
Total	324.99	309.70	334.65	318.90	295.88	281.96	

\* Including loose

Telangana State for the entire year by 1 lakh bales of 170 kgs. each i.e. from 34.00 lakh bales to 35.00 lakh bales of 170 kgs. each while cotton pressing estimate of Tamil Nadu State for the current year has been reduced by 1 lakh bales i.e. from 6.50 lakh bales of 170 kgs. each to 5.50 lakh bales of 170 kgs. each.

The Committee members will have a close watch on the pressing numbers of cotton in the subsequent months and if any addition or reduction is required to be made in the pressing numbers, the same will be made in the CAI report.

#### 3. Imports

The estimates of cotton imports into India during 2023-24 season are also maintained at the same level as estimated earlier i.e. at 20.40 lakh bales of 170 kgs. each (equivalent to 21.41 lakh running bales of 162 kgs. each) as against 12.50 lakh bales of 170 kgs. each (equivalent to 13.12 lakh running bales of 162 kgs. each) estimated for last season. The cotton imports estimated for the ongoing crop year 2023-24 are higher by 7.90 lakh bales of 170 kgs. each compared to last year.

Upto 30th April 2024, about 5.00 lakh bales of 170 kgs. each (equivalent to 5.25 lakh running bales of 162 kgs. each) are estimated to have arrived the Indian Ports.

## The Balance Sheet drawn by the Association for 2023-24 and 2022-23 is reproduced below:

(in tukh butes of 170)								
Details	2023-24 (P)	2022-23 (P)						
Opening Stock	28.90	24.00						
Cotton Pressing	309.70	318.90						
Imports	20.40	12.50						
Total Supply	359.00	355.40						
Non-MSME Consumption	201.00	280.00						
MSME Consumption	100.00	15.00						
Non-Textile Consumption	16.00	16.00						
Total Domestic Demand	317.00	311.00						
Available Surplus	42.00	44.40						
Exports	22.00	15.50						
Closing Stock	20.00	28.90						

#### 4. Exports

The Committee has retained its cotton exports estimate at 22 lakh bales of 170 kgs. each (equivalent to 23.09 lakh running bales of 162 kgs. each). The cotton exports for 2023-24 crop year are estimated to be higher by 6.50 lakh bales of 170 kgs. each as against 15.50 lakh bales of 170 kgs. each (equivalent to 16.27 lakh running bales of 162 kgs. each) estimated for the last season.

#### 5. Closing Stock as at 30th September 2024

The closing stock as on 30th September 2024 is estimated at 20 lakh bales of 170 kgs. each (equivalent to 20.99 lakh running bales of 162 kgs. each) as against 28.90 lakh bales of 170 kgs. each (equivalent to 30.33 lakh running bales of 162 kgs. each) in last year.

Balance S	Sheet of 7 1	nonths i.	.e. from 1	.10.2023 t	0
30	).04.2024 fc	or the sea	son 2023	-24	

Details	In lakh b/s of 170 kg.	In '000 Tons
Opening Stock as on 01.10.2023	28.90	491.30
Pressings upto 30.04.2024	281.96	4793.32
Imports upto 30.04.2024	5.00	85.00
Total available	315.86	5369.62
Consumption	192.50	3272.50
Export Shipments upto 30.04.2024	21.50	365.50
Stock with Mills	40.50	688.50
Stock with CCI, Maha Fedn., MNCs, Ginners, Traders & Exporters	61.36	1043.12
Total	315.86	5369.62

#### Break-Up of the Stock of 61.36 Lakh Bales with Other Than Mills is as Under:-

(111	lakh b/s of 170 kgs. each)
CCI	26.46
MNCs	14.50
Ginners	20.00
MCX	0.40
TOTAL	61.36



UPCOUNTRY SPOT RATES (Rs./Qtl)													
Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [By Jaw 66 (A) (a) (4)]						based	Spot Rate (Upcountry) 2023-24 Crop						
Sr. No	. Growth	Grade Standard	Grade	Staple	Micronaire	Gravimetric Trash	Strength /GPT	6th	7th	8th	9th	10th	11th
1	P/H/R	ICS-101	Fine	Below 22mm	5.0 - 7.0	4%	15	12598 (44800)	12598 (44800)	12541 (44600)	12598 (44800)	12513 (44500)	12513 (44500)
2	P/H/R (SG)	ICS-201	Fine	Below 22mm	5.0 - 7.0	4.5%	15	12766 (45400)	12766 (45400)	12710 (45200)	12766 (45400)	12682 (45100)	12682 (45100)
3	GUJ	ICS-102	Fine	22mm	4.0 - 6.0	13%	20	10348 (36800)	10348 (36800)	10404 (37000)	10461 (37200)	10517 (37400)	10517 (37400)
4	KAR	ICS-103	Fine	22mm	4.5 - 6.0	6%	21	12401 (44100)	12401 (44100)	12401 (44100)	12401 (44100)	12401 (44100)	12401 (44100)
5	M/M (P)	ICS-104	Fine	23mm	4.5 - 7.0	4%	22	14426 (51300)	14426 (51300)	14426 (51300)	14426 (51300)	14426 (51300)	14426 (51300)
6	P/H/R (U) (SG)	ICS-202	Fine	27mm	3.5 - 4.9	4.5%	26	15185 (54000)	15185 (54000)	15185 (54000)	15241 (54200)	15157 (53900)	15100 (53700)
7	M/M(P)/ SA/TL	ICS-105	Fine	26mm	3.0 - 3.4	4%	25	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)
8	P/H/R(U)	ICS-105	Fine	27mm	3.5 - 4.9	4%	26	15325 (54500)	15325 (54500)	15325 (54500)	15382 (54700)	15297 (54400)	15241 (54200)
9	M/M(P)/ SA/TL/G	ICS-105	Fine	27mm	3.0 - 3.4	4%	25	14426 (51300)	14426 (51300)	14482 (51500)	14482 (51500)	14482 (51500)	14397 (51200)
10	M/M(P)/ SA/TL	ICS-105	Fine	27mm	3.5 - 4.9	3.5%	26	15241 (54200)	15241 (54200)	15325 (54500)	15325 (54500)	15325 (54500)	15241 (54200)
11	P/H/R(U)	ICS-105	Fine	28mm	3.5 - 4.9	4%	27	15522 (55200)	15522 (55200)	15522 (55200)	15578 (55400)	15494 (55100)	15438 (54900)
12	M/M(P)	ICS-105	Fine	28mm	3.7 - 4.5	3.5%	27	15719 (55900)	15719 (55900)	15719 (55900)	15747 (56000)	15747 (56000)	15663 (55700)
13	SA/TL/K	ICS-105	Fine	28mm	3.7 - 4.5	3.5%	27	15775 (56100)	15775 (56100)	15775 (56100)	15803 (56200)	15803 (56200)	15719 (55900)
14	GUJ	ICS-105	Fine	28mm	3.7 - 4.5	3%	27	15860 (56400)	15860 (56400)	15860 (56400)	15888 (56500)	15888 (56500)	15803 (56200)
15	R(L)	ICS-105	Fine	29mm	3.7 - 4.5	3.5%	28	16113 (57300)	16141 (57400)	16169 (57500)	16197 (57600)	16169 (57500)	16085 (57200)
16	M/M(P)	ICS-105	Fine	29mm	3.7 - 4.5	3.5%	28	16141 (57400)	16141 (57400)	16141 (57400)	16169 (57500)	16169 (57500)	16085 (57200)
17	SA/TL/K	ICS-105	Fine	29mm	3.7 - 4.5	3%	28	16225 (57700)	16225 (57700)	16225 (57700)	16253 (57800)	16253 (57800)	16169 (57500)
18	GUJ	ICS-105	Fine	29mm	3.7 - 4.5	3%	28	16141 (57400)	16141 (57400)	16141 (57400)	16169 (57500)	16169 (57500)	16085 (57200)
19	M/M(P)	ICS-105	Fine	30mm	3.7 - 4.5	3.5%	29	16450 (58500)	16450 (58500)	16450 (58500)	16478 (58600)	16478 (58600)	16394 (58300)
20	SA/TL/K/O	ICS-105	Fine	30mm	3.7 - 4.5	3%	29	16478 (58600)	16478 (58600)	16478 (58600)	16506 (58700)	16506 (58700)	16422 (58400)
21	M/M(P)	ICS-105	Fine	31mm	3.7 - 4.5	3%	30	16788 (59700)	16788 (59700)	16788 (59700)	16816 (59800)	16816 (59800)	16759 (59600)
22	SA/TL/ K / TN/O	ICS-105	Fine	31mm	3.7 - 4.5	3%	30	16816 (59800)	16816 (59800)	16816 (59800)	16844 (59900)	16844 (59900)	16788 (59700)
23	SA/TL/K/ TN/O	ICS-106	Fine	32mm	3.5 - 4.2	3%	31	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)	N.A. (N.A.)
24	M/M(P)	ICS-107	Fine	34mm	2.8 - 3.7	4%	33	22355 (79500)	22355 (79500)	22496 (80000)	22496 (80000)	22496 (80000)	22496 (80000)
25	K/TN	ICS-107	Fine	34mm	2.8 - 3.7	3.5%	34	23199 (82500)	23199 (82500)	23340 (83000)	23340 (83000)	23340 (83000)	23340 (83000)
26	M/M(P)	ICS-107	Fine	35mm	2.8 - 3.7	4%	35	22918 (81500)	22918 (81500)	23058 (82000)	23058 (82000)	23058 (82000)	23058 (82000)
27	K/TN	ICS-107	Fine	35mm	2.8 - 3.7	3.5%	35	23621 (84000)	23621 (84000)	23902 (85000)	23902 (85000)	23902 (85000)	23902 (85000)

(Note: Figures in bracket indicate prices in Rs./Candy)