Weekly Publication of
Cotton Association of India
COTTON STATISTICS & NEWS
Edited & Published by Amar Singh
2016-17 • No. 28 • 11th October, 2016 Published every Tuesday
Cotton Exchange Building, 2nd Floor, Cotton Green, Mumbai - 400 033
Phone: 30063400 Fax: 2370 0337 Email: cai@caionline.in
www.caionline.in

Microplastics: A Danger to the World Environment and Human Health

With a Ph.D. in Agricultural and Resource Economics from Oregon State University in the USA, Dr. Terry Townsend is a consultant on commodity issues. He is currently working with the African Cotton and Textile Industries Federation (ACTIF). He served as executive director of the International Cotton Advisory Committee (ICAC) and has also worked at the United States Department of Agriculture for five years, analyzing the U.S. cotton industry and editing a magazine devoted to a cross-section of agricultural issues.

EXPERT's Column

Dr. Terry Townsend

A study of microplastics in the Great Lakes in North America published in September of this year provides additional evidence that polyester fibres in clothing pose a previously unacknowledged risk to the environment and human health. Researchers looked for microplastic particles (0.33 to 1 mm) in samples of water, and the most common forms found were plastic microfibres from clothes, diapers and cigarette butts.

http://www.plasticsnews.com/article/20160915/NEWS/160919900/microplastics-found-throughout-great-lakes-rivers-in-new-study#utm_medium=email&utm_source=pn-daily&utm_campaign=pn-daily-20160915&email_pndaily

https://www.usgs.gov/news/widespread-plastic-pollution-found-great-lakes-tributaries

The research shows that microplastics are harmful to animal health and potentially to human health. Ingested microplastics can cause digestive and reproductive problems, as well as death, in fish, birds and other animals. Unhealthy additives in the plastic, including flame retardants and antimicrobials, have been associated with cancer and endocrine disruption in humans. <https://www.epa.gov/endocrine-disruption/what-endocrine-disruption>. Also, pollutants such as pesticides, trace metals and even pathogens can accumulate at high concentrations on microplastic particles.

Scientists have found microplastics nearly everywhere. Aside from rivers, microplastics are also common in lakes and oceans, in freshwater and marine fish, oysters and mussels, and in sediment. They are deposited onto land and water surfaces from the atmosphere.

More broadly, all forms of plastic, not just microplastics, pose threats to the environment. As quoted from, "Bottles, bags, ropes, and, toothbrushes: the struggle to track ocean plastics," by Daniel Cressey in Nature, 17 August 2016<http://www.nature.com/news/bottles-bags-ropes-and-toothbrushes-the-struggle-to-track-ocean-plastics-1.20432>, *"From Arctic to Antarctic, from surface to sediment, in every marine environment where scientists have looked, they have found plastic. Other human-generated debris rots or rusts away, but plastics can persist for years, killing animals,polluting the environment and blighting coastlines.By some estimates, plastics comprise 50–80% of the litter in the oceans."*

The issue of plastic and microplastic pollution is rising on the agenda of the international community. The United Nations Environment Programme (UNEP) passed a resolution at its Nairobi meeting in May 2016, stating that "the presence of plastic litter and microplastics in the marine environment is a rapidly increasing serious issue of global concern that needs an urgent global response".

Even retailers, who are usually the last to be aware of science or to care about empirical reality that might impede their sales or sales margins, are beginning to acknowledge the negative impacts of microfibres from synthetic apparel. For instance,the clothing retailer Patagonia funded a study of pollution from synthetic microfibres, a subcategory of microplastics consisting of fibres shed from clothing or other textiles. The study, "Microfiber pollution and the apparel industry," by Bruce, Hartline, Karba, Ruff and Sonar, with Faculty Advisor Holden of the Bren School of Environmental Science & Management, University of California, Santa Barbara, found that synthetic apparel contributes substantially to microplastic pollution when water is discharged from washing machines. <http://brenmicroplastics.weebly.com/project-findings.html>

In addition to pollution from the microfibres themselves, research indicates that hazardous chemicals are transported into the environment along with the fibres. Aquatic organisms throughout the food chain consume microplastics and microfibres, causing harmful impacts ranging from starvation to reproductive impacts. Microplastics and microfibres have also been found in marine organisms consumed by humans, with unknown effects.

Fashion Trends Encourage Micro Particle Pollution

According to experts in manmade fibre production, the most significant advances by the polyester fibres industry over recent decades have all been linked to the development of finer, more delicate products made from finer deniers. Therefore, manmade fibres seem to have migrated in a direction which precisely amplifies the production of microparticles. Polyester's progress in these new fibre types has been particularly rapid, and this is the key engine that has allowed it to gain market share from other fibres. One logical response to the micro particle challenge is stronger polymers and heavier dpf (denier per filament) products, which would roll back 20-30 years of aesthetic improvement.

Implications for Cotton

Cotton has been demonised for decades because of the self-interests of advocates of organic cotton and retailers seeking brand differentiation. (Demonisation is defined as describing practices decades out of date as being current, giving statistics without context or perspective, and alleging linkages between cotton and harm without scientific basis.)

Because cotton is a perennial, broad leafed crop, it is inherently technology intensive, meaning that cotton cannot be produced on a commercial scale without using fertilizer and pesticides. In addition, cotton is a water efficient crop and so is grown in arid and semi arid regions, like West Africa, Central Asia and the states of Maharashtra, Gujarat, Punjab and Andhra Pradesh in India. Incredibly, the World Wildlife Fund (WWF) and other environmental groups criticise cotton for being grown in areas of water scarcity, as if farmers would be better off growing other crops in such areas instead.

Other agricultural products also face criticism from environmental groups for a variety of factors, ranging from antibiotic use in poultry, to biotechnology in corn and soybeans, to nitrogen fertilizer runoff from corn production in the Midwest of the United States. Cotton might get extra scrutiny because it is labour intensive, and so prone to labour abuses, and because it is a cash crop, not a food crop, and so it is easier to criticise small holder production.

However, the new research on the presence of microplastic particles in the environment from polyester in clothing may begin to change the structure of incentives that encourages the demonisation of cotton. For all of cotton's problems, at least it is all biodegradable, and all the inputs used in cotton production are themselves natural products or biodegradable products. At some point, environmentalists and retailers, whose criticism of cotton has always been an implicit endorsement of polyester, will have to begin to weigh the realities of tradeoffs in fibre use.

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

COTTON
ASSOCIATION
OF INDIA
Established 1921

COTTON STATISTICS & NEWS

SUBSCRIPTION RATES

Effective from 1st April 2014

FOR NON-MEMBERS

ANNUAL SUBSCRIPTION (for 52 issues)	**Rs.4,000/-** (inclusive of Rs.1,000/- courier cost)

FOR MEMBERS

ANNUAL SUBSCRIPTION	**FREE** Rs.1,000/- for courier cost

Special Offer

Subscription for three years Rs.7,500/-*

* Courier Charges Rs.1000/- per year extra

To subscribe, please contact:

Ms. Sudha B. Padia
Cotton Association of India,
Cotton Exchange Building, 2nd Floor, Cotton Green (East), Mumbai – 400 033
Telephone No.: 3006 3405 Fax No.: 2370 0337 Email: publications@caionline.in

Rainfall Distribution (01.10.2016 to 07.10.2016)

Sr. No.	State	Day 07.10.2016				Period 01.10.2016 to 07.10.2016			
		Actul (mm)	Normal (mm)	% Dep.	Cat.	Actul (mm)	Normal (mm)	% Dep.	Cat.
1	Punjab	0.0	0.6	-98%	S	1.9	11.8	-84%	S
2	Haryana	0.1	0.5	-72%	S	5.1	8.0	-36%	D
3	West Rajasthan	0.0	0.1	-100%	NR	17.5	2.4	631%	E
	East Rajasthan	4.2	1.0	322%	E	30.9	6.8	355%	E
4	Gujarat	5.9	1.3	355%	E	62.1	7.3	751%	E
	Saurashtra & Kutch	3.7	0.9	310%	E	59.3	6.0	888%	E
5	Maharashtra	0.9	3.1	-70%	S	59.1	28.1	110%	E
	Madhya Maharashtra	0.3	2.9	-90%	S	55.0	29.4	87%	E
	Marathwada	0.0	2.6	-99%	S	83.1	24.0	246%	E
	Vidarbha	1.8	3.2	-45%	D	40.3	22.8	77%	E
6	West Madhya Pradesh	3.8	1.4	174%	E	34.1	13.8	147%	E
	East Madhya Pradesh	8.2	2.2	272%	E	19.2	16.7	15%	N
7	Telangana	1.0	4.7	-78%	S	25.3	33.0	-23%	D
8	Coastal Andhra Pradesh	6.9	8.1	-14%	N	34.5	49.7	-31%	D
	Rayalseema	0.0	6.0	-99%	S	6.8	40.6	-83%	S
9	Coastal Karnataka	0.4	7.0	-94%	S	3.6	62.7	-94%	S
	N.I. Karnataka	0.0	5.2	-99%	S	15.8	40.3	-61%	S
	S.I. Karnataka	0.0	6.4	-100%	NR	0.8	45.5	-98%	S
10	Tamil Nadu & Pondicherry	0.4	6.3	-93%	S	6.6	35.2	-81%	S
11	Orissa	19.7	4.2	368%	E	53.6	36.7	46%	E

Source : India Meteorological Department, Hydromet Division, New Delhi

Monthly Average Cotlook A Index (FE) from 2011-12 onwards
(in US Cents per lb.)

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
August	114.10	84.40	92.71	74.00	71.82	80.26
September	116.86	84.15	90.09	73.38	68.74	77.86
October	110.61	82.00	89.35	70.34	69.03	
November	104.68	80.87	84.65	67.53	69.22	
December	95.45	83.37	87.49	68.30	70.39	
January	101.11	85.51	90.96	67.35	68.75	
February	100.75	89.71	94.05	69.84	66.57	
March	99.50	94.45	96.95	69.35	68.73	
April	99.94	92.68	94.20	71.70	69.28	
May	88.53	92.70	92.71	72.89	70.28	
June	82.18	93.08	90.90	72.35	74.10	
July	83.97	92.62	83.84	72.35	81.06	

Source: Cotton Outlook

COTTON
ASSOCIATION
OF INDIA
Established 1921

COTTON STATISTICS & NEWS

ADVERTISEMENT RATES

effective from April 2015

RATES PER INSERTION

	For CAI Members	For Non-Members
Full Page	5,000	5,500
Half Page	3,000	3,300

RATES FOR FOREIGN ADVERTISERS

Full Page	US $ 100
Half Page	US $ 60

Special Offer

Pay for	For CAI Members	For Non-Members
8 Insertions, get 12 (Full Page)	40,000	45,000
8 Insertions, get 12 (Half Page)	24,000	26,000
3 Insertions, get 4 (Full Page)	15,000	18,000
3 Insertions, get 4 (Half Page)	9,000	10,000

Mechanical Data:

Full page print area:	172x250 mm (Non Bleed Ad) 210x297 mm (+ Bleed)
Half page print area :	172x125 mm (Non Bleed Ad) 148x210 mm (+ Bleed)

To advertise, please contact:
Shri Divyesh Thanawala, Assistant Manager
Cotton Association of India,
Cotton Exchange Building, 2nd Floor,
Cotton Green (East), Mumbai – 400 033
Telephone No.: 3006 3404 Fax No.: 2370 0337
Email: publications@caionline.in

Cotton Breeding and Physiology Research in Australia

G. A. Constable, CSIRO Agriculture, Narrabri, NSW, Australia
(ICAC Researcher of the Year 2015)

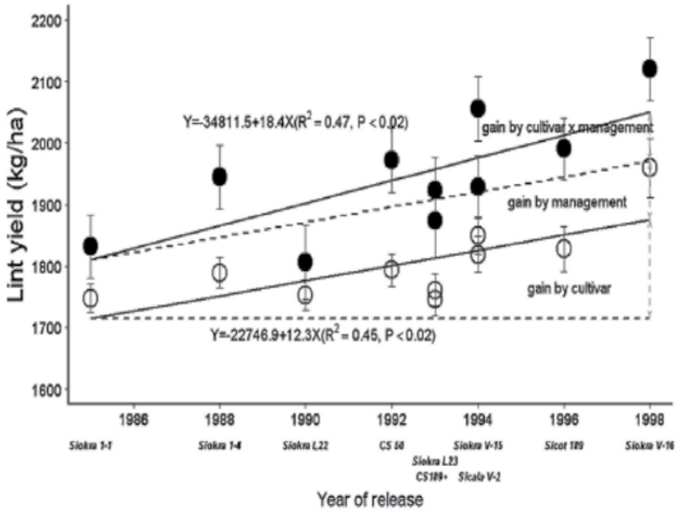
(Contd. from Issue No. 27)

Interaction Between Breeding and Crop Management

We used a large dataset of 325 sites from 1980 to 2009 to evaluate genetic gain from cotton breeding (Liu et al. 2013). The data showed increase in yield of about 1,320 kg/ha of lint over that period due to Cultivar (C, 634 kg/ha), Management (M, 370 kg/ha) as well as a significant C x M interaction (316 kg/ha), where modern cultivars responded more to modern management than older cultivars did (Figure 4).

Some of the Cultivar and Cultivar x Management components of yield increase can be explained by improved Verticillium resistance with newer cultivars, particularly when compared with the original cultivars released in 1984 and 1988 (Allen 2002). Clearly a cultivar susceptible to disease cannot respond to improved management. The increased yield due to Management improvement is from a better overall cropping system. Although the relative contributions of the various components have not been quantified, it is likely that minimum tillage, improved irrigation scheduling and higher N fertilizer rates at least are involved, along with better timeliness with all operations. Atmospheric CO2 increase is also likely to be part of the Management improvement (Mauney et al., 1978).

Figure 4. The increase yield of new cultivars released between 1984 and 1998 in Australia. The lower line and open symbols are for experiments grown between 1980 and 1994; the upper line and solid symbols are for the same cultivars grown in experiments between 1995 and 2009. From Liu *et al.* (2013)



Other conclusions from this study were that candidate cultivars need to be tested in all environments and for at least three years before decisions on cultivar release are made; the more reliable sites for evaluation were identified and are now used in preference. Finally, management and climate factors involved in yield changes through time, need to be quantified to better understand CxM and to exploit it with future cultivars and cropping systems.

In addition to increased yield, fiber quality and disease resistance, there have been some interesting changes to new cultivar characteristics through time. These changes are: reduced leaf sodium uptake (Rochester and Constable, 2003); increased tolerance to waterlogging (Conaty et al., 2009); increased nutrient use efficiency (Rochester and Constable, 2015); and increased leaf photosynthesis (Conaty, pers comm). Additionally, the modern Cultivar x Management package has increased water use efficiency (Constable and Bange, 2015). These changes were measured retrospectively as a consequence of aggressive selection for yield, rather than as a result of direct selection.

Fiber Quality

It is generally agreed that cotton fiber quality needs to improve continually in order to compete with synthetic fibers. With more rapid ginning and spinning, fibers have to be stronger to survive processing. A shift in consumer preference to lightweight fabrics requires long, strong and fine fibers. There is also a breeding challenge in that genetically better quality (especially strength) often translates to lower yield (Clement et al., 2012). We have improved length and fineness in Australian cultivars, but maintaining yield while increasing strength is difficult. It might be that even if cotton can improve in overall fiber quality, there may not be a better price, but a sound demand and competitive position when compared with synthetics.

There can also be an important CxMxE interaction for fiber quality with some management systems, particularly for micronaire. High input systems are prone to high micronaire in full seasons; but in shorter seasons there is a danger of low micronaire. The frequency of these occurrences and the magnitude of price discounts will determine the importance of such effects and the attention required in breeding.

Genetic Diversity

There have been at least three bottlenecks in cotton's genetic diversity. The first was in the appearance of chance cotton tetraploids from two separate diploid species about 1.5 million years ago (Brubaker et al., 1999). The diploid parents may have been diverse, but the number of tetraploids may have been small. The second bottleneck was in domestication, where the same seed source may have been used over many generations and shared with others. Finally, breeding over the past 100 years has understandably tended to concentrate on elite parents rather than sourcing diverse parents. There are also some wide opinions on diversity: DNA polymorphism is low – even when phenotypes are diverse with wide range of agronomic performance. However, it is universally agreed that diversity is essential and breeders should generate diversity for their own system and environment, either by accessing germplasm (by exchange if possible) or by creating their own diversity in using parents to bring something extra by way of performance, disease resistance or growth habit. Introgression from race cottons or diploid cottons should be considered for the long term. It is also important to be aware that diverse material might not immediately result in elite yield.

Overall, cotton breeding has been successful in Australia with major contributions in yield, disease resistance and fiber quality. Economic analysis has shown large benefits from breeding, with a benefit/cost ratio of 80:1 (CIE, 2002).

The Future

Will a proportion of global cotton yielding <800 kg/ha of lint have an increased yield in future? There is a need to review low-yielding systems to determine limiting factors and which areas of research would be required to improve yield. This is an opportunity for increased production of cotton and in many cases there are more gains to be made from management rather than breeding.

There will be more GM traits and ever increasing breeding within GM populations. Although breeding with multiple GM traits is slower, the same breeding procedures are required with GM traits as for conventional; a simple backcross and bulk will not necessarily recover elite yield. Our experience is that there is diversity in yield performance within backcross-generated GM populations, so careful evaluation of elite lines is required. Yield of a GM cultivar with insect resistance or weed resistance under heavy insect or weed pressure will be higher in that system even if the genetic yield potential is less. In other words, in such cases genetic yield potential is hidden behind a large production constraint.

Will someone genetically engineer photosynthesis? What cotton plant growth habit would suit such a trait? This is a very interesting question as a plant with higher photosynthesis may be much more vigorous in the vegetative stage, necessitating a complete reversion to more compact plant types than currently used.

Molecular markers are yet to make a substantial contribution to breeding because most important traits of cotton are multigenic and the contribution of each marker may be small. However, future molecular tools may eventually be at least as important as GM traits.

A better understanding of CxMxE interactions is required to enable better exploitation of it, particularly for yield. High input management systems need to be reviewed to ensure the best use efficiency of water and nutrients.

Problems/challenges: Drought will occur with at least the same, if not greater, frequency in future. This climate impact on rainfed and irrigated cotton production systems will reduce production or at least cause variability of production. Political changes to water availability may also occur with competition between urban and agricultural demands. These effects may change where cotton is produced. Diseases, pests and weeds will remain an important issue for productivity of cotton and it is important to have programs to prevent their appearance as well as contingency plans for addressing each threat if it was to appear. Economic viability (price) will continue to be a challenge for producers, as cotton fiber competes with synthetics. Research on improving fiber quality therefore may also need to assess reducing loss of market to synthetics rather than increase in cotton unit value.

Acknowledgements

Many people have contributed to the Australian cotton research effort. Special thanks to Norm Thomson, Howard Rawson and Brian Hearn for their pioneering research and their support and encouragement of new scientists over a long period. The other CSIRO cotton breeders, Peter Reid, Warwick Stiller and Shiming Liu have provided skill and dedication in developing new elite germplasm and cultivars, ably supported by a dedicated technical team.

References

Allen, S.J. 2002. The impact of disease incidence and severity on the yield of cotton in Australia. In: McRae, J., Richter, D.A. (Eds.), Proceedings of Beltwide Cotton Conferences. National Cotton Council, Atlanta, January 8–12, 2002.

Baker, D.N., Hesketh, J.D., 1969. Respiration and the carbon balance in cotton (Gossypium hirsutum L.). In: Proceedings of the Beltwide Cotton Production Research Conferences, January 7–8, New Orleans, LA. National Cotton Council, Memphis, pp. 60–64.

Brubaker, C.L., Bourland, F.M. and Wendel, J.E. 1999. The origin and domestication of cotton. In: Smith CW, Cothren JT, editors. Cotton: origin, history, technology and production. New York: John Wiley; 1999. p. 3-31.

CIE. 2002. Cotton breeding & decision support: A benefit-cost analysis of CSIRO's research programs. Centre for International Economics. Canberra & Sydney. December 2002.

Clement, J.D., Constable, G.A., Stiller, W.N. and Liu, S.M. 2012. Negative associations still exist between yield and fibre quality in cotton breeding programs in Australia and USA. Field Crop. Res. 128, 1-7.

Conaty, W.C., Tan, D.K.Y., Constable, G.A., Sutton, B.G., Field, D.J. and Mamum. E.A. 2008. Genetic Variation for Waterlogging Tolerance in Cotton. J.Cotton Sci. 12, 53–61.

Constable, G.A. and Bange, M.P. 2015. The yield potential of cotton (Gossypium hirsutum L.). Field Crops Res. 182, 98-106.

Constable, G.A., Llewellyn, D.J., Wilson, L.J. and Stiller, W.N. 2011. An industry transformed: the impact of GM technology on Australian cotton production. Farm Policy J. 8, 23-41.

Damp, J.E. and Pearsall, D.M. 1994. Early cotton from coastal Ecuador. Econ. Bot. 48, 163-5.

Daniells, I.G. 1989. Degradation and restoration of soil structure in a cracking grey clay used for cotton production. Aust. J Soil Res., 27, 455-469.

Gulati, A.N. and Turner, A.J. 1929. A note on the early history of cotton. J. Text. Inst. Trans. 20(1), T1-T9.

Hearn, A.B. 1976. Crop physiology. In: Arnold, M.H. (Ed.), Agricultural Research for Development. Cambridge University Press, Cambridge, pp. 77–122.

Hearn, A.B., 1994. OZCOT: a simulation model for cotton crop management. Agric. Syst. 44, 257–299.

Hearn, A.B. and Bange, M.P. 2002. SIRATAC and CottonLOGIC: persevering with DSSs in the Australian cotton industry. Agric. Sys. 74, 27-56.

Hearn, A.B., Constable, G.A., 1984. Irrigation for crops in a sub-humid environment. VII. Evaluation of irrigation strategies for cotton. Irrig. Sci. 5, 75–94.

Liu, S.M., Constable, G.A., Reid, P.E., Stiller, W.N., Cullis, B.R., 2013. The interaction between breeding and crop management in improved cotton yield. Field Crops Res. 148, 149–160.

Mauney, J.R., Fry, K.E., Guinn, G., 1978. Relationship of photosynthetic rate to growth and fruiting of cotton, soybean, sorghum, and sunflower. Crop Sci. 18, 259–263.

Maurino, V.G., Weber, A.P.M., 2013. Engineering photosynthesis in plants and synthetic microorganisms. J. Exp. Bot. 64, 743–751.

McGrath, J.M., Long, S.P., 2014. Can the cyanobacterial carbon-concentrating mechanism increase photosynthesis in crop species? A theoretical analysis. Plant Physiol., 164(4), 2247-61.

Rochester, I.J. and Constable, G.A. 2003. Leaf nutrient concentrations in cotton cultivars grown on slightly sodic soils. In: Swanepoel, A. (Ed.), Proceedings of the World Cotton Research Conference-3, Cape Town South Africa. March 9–13, 2003. Agricultural Research Council – Institute for Industrial Crops, Pretoria, pp. 681–685.

Rochester, I.J. and Constable, G.A. 2015. Improvements in nutrient uptake and nutrient use-efficiency in cotton cultivars released between 1973 and 2006. Field Crops Res. 173, 14-21.

Source: The ICAC Recorder, VOL. XXXIII No. 4,
DECEMBER 2015

School Contact Program

at St. Xavier's School, Fort, on September, 19, 2016

The SCP at St. Xavier's School, Fort, on Sept 19, 2016, marked the completion of the Pilot Phase of this program that covered 20 schools across Mumbai. The guests who attended this SCP included Shri. R.K. Rewari , CAI Director, Smt. Meha Raina of Monsanto, Shri. Pranav Joshi of Altamount Capital Management and Shri. Sameer Mehta of Esteam Apparel Services Pvt. Ltd.

Some ex students of St. Xavier's School also attended the SCP and these included, Shri. Parindra Bhuta of Pari Chemicals, Shri. Darshan Bajaj of Prakash Securities and Shri. Percy Rustomjee, Chartered Accountant.

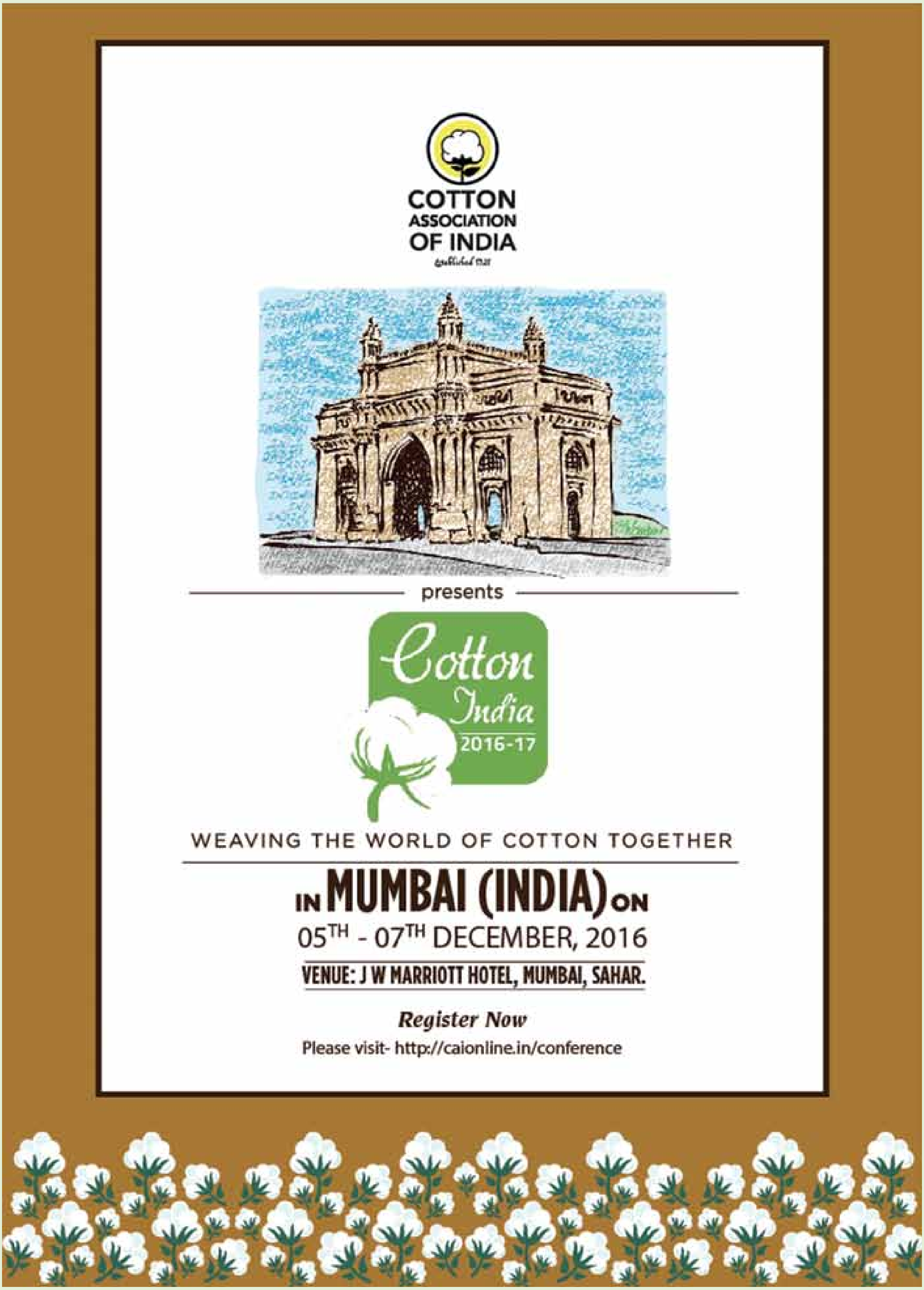
Production & Stock of Spun Yarn (SSI & Non-SSI)

(In Mn. Kgs.)

MONTH / YEAR	PRODUCTION				STOCK			
	COTTON	BLENDED	100% N.C.	G. TOTAL	COTTON	BLENDED	100% N.C.	G. TOTAL
2013-14	3928.26	896.19	484.99	5309.45	133.80	51.33	23.40	208.53
2014-15	4054.51	920.20	512.92	5487.64	140.60	48.30	22.48	211.38
2015-16 (P)	4137.83	972.50	554.79	5664.93	140.68	49.46	22.99	213.13
2016-17 (P) July	1367.86	341.17	190.75	1899.78	135.87	55.69	23.71	215.27
2013-14								
April-13	316.61	65.91	39.68	422.20	121.99	41.07	21.94	185.00
May-13	314.97	71.46	38.94	425.37	123.79	39.59	19.08	182.46
June-13	317.69	71.18	38.95	427.82	117.62	36.75	17.84	172.21
July-13	332.12	74.84	41.31	448.27	116.52	38.01	20.68	175.22
Aug.-13	336.29	78.66	42.21	457.17	120.07	37.18	18.27	175.52
Sept.-13	326.09	79.42	43.47	448.98	132.87	43.34	22.51	198.72
Oct.-13	328.80	78.03	43.05	449.88	132.74	49.76	25.43	207.93
Nov.-13	312.13	72.21	39.01	423.35	136.35	51.53	26.52	214.40
Dec.-13	341.67	80.55	40.41	462.63	132.43	53.00	24.27	209.69
Jan.-14	340.38	77.71	39.33	457.41	117.38	51.11	23.60	192.09
Feb.-14	321.31	71.27	37.21	429.80	128.59	54.60	25.79	208.99
Mar.-14	340.20	74.95	41.42	456.57	133.80	51.33	23.40	208.53
2014-15								
April-14	328.68	73.84	41.41	443.93	142.80	50.06	21.20	214.06
May-14	332.92	74.77	42.71	450.40	139.60	46.20	20.80	206.61
June-14	330.69	74.03	42.95	447.67	151.05	47.99	22.56	221.60
July-14	340.00	78.51	44.85	463.36	160.20	51.30	24.18	235.67
August-14	338.09	76.66	44.23	458.98	166.64	53.21	24.87	244.72
Sept-14	334.03	77.91	42.55	454.49	167.53	51.73	24.02	243.28
Oct.14	323.53	74.51	40.96	439.00	178.62	56.85	25.89	261.36
Nov.14	335.66	71.42	41.50	448.58	171.13	55.01	25.21	251.36
Dec.14	353.96	76.54	42.01	472.51	160.58	56.06	26.47	243.11
Jan.-15	349.83	80.16	43.25	473.23	161.61	55.80	24.17	241.57
Feb.-15	330.35	81.26	41.88	453.49	149.92	50.83	22.47	223.22
Mar.-15	356.79	80.59	44.62	481.99	140.60	48.30	22.48	211.38
2015-16 (P)								
April-15	349.38	77.11	44.07	472.51	141.19	51.45	21.33	213.98
May-15	348.14	80.02	44.74	472.90	153.07	52.34	23.79	229.21
Jun-15	346.72	79.68	45.27	471.66	158.57	55.72	23.93	238.22
Jul-15	356.36	82.15	47.48	485.98	160.33	61.25	26.62	248.20
Aug-15	354.67	82.24	49.97	486.88	166.34	63.73	27.88	257.95
Sept.-15	338.53	79.51	45.41	463.45	165.96	62.33	26.16	254.46
Oct.-15	342.12	83.61	47.35	473.08	170.07	64.46	25.69	260.23
Nov.-15	320.06	77.67	43.27	441.01	173.96	61.59	24.17	259.72
Dec.-15	353.31	81.30	49.86	484.31	158.66	58.22	25.34	242.22
Jan.-16	343.98	83.34	46.84	474.26	158.52	57.55	25.10	241.18
Feb.-16	336.55	80.94	43.12	460.60	155.36	52.18	22.81	230.35
Mar.-16	348.01	83.87	46.35	477.03	140.68	49.46	22.99	213.13
2016-17 (P)								
April-16	334.13	80.45	46.49	461.08	128.07	49.05	24.26	201.38
May-16	349.68	84.97	48.59	483.24	130.48	55.04	25.62	211.14
June-16	342.24	88.31	47.12	477.68	128.95	50.67	20.86	200.47
July-16	341.81	87.43	48.54	477.78	135.87	55.69	23.71	215.27

P - Provisional

Source : Office of the Textile Commissioner



COTTON
ASSOCIATION
OF INDIA

presents

Cotton India
2016-17

WEAVING THE WORLD OF COTTON TOGETHER

IN **MUMBAI (INDIA)** ON
05TH - 07TH DECEMBER, 2016

VENUE: J W MARRIOTT HOTEL, MUMBAI, SAHAR.

Register Now

Please visit- http://caionline.in/conference

UPCOUNTRY SPOT RATES

(Rs./Qtl)

Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [By law 66 (A) (a) (4)]							Spot Rate (Upcountry) 2016-17 Crop OCTOBER 2016					
Sr. No.	Growth	Grade Standard	Grade	Staple	Micronaire	Strength /GPT	3rd	4th	5th	6th	7th	8th
1	P/H/R	ICS-101	Fine	Below 22mm	5.0-7.0	15	8127 (28900)	8127 (28900)	8127 (28900)	7986 (28400)	7845 (27900)	7845 (27900)
2	P/H/R	ICS-201	Fine	Below 22mm	5.0-7.0	15	8267 (29400)	8267 (29400)	8267 (29400)	8127 (28900)	7986 (28400)	7986 (28400)
3	GUJ	ICS-102	Fine	22mm	4.0-6.0	20	7367 (26200)	7452 (26500)	7452 (26500)	7452 (26500)	7452 (26500)	7452 (26500)
4	KAR	ICS-103	Fine	23mm	4.0-5.5	21	9111 (32400)	9111 (32400)	9111 (32400)	9111 (32400)	9111 (32400)	9111 (32400)
5	M/M	ICS-104	Fine	24mm	4.0-5.0	23	10264 (36500)	10264 (36500)	10264 (36500)	10264 (36500)	10264 (36500)	10264 (36500)
6	P/H/R	ICS-202	Fine	26mm	3.5-4.9	26	11614 (41300)	11614 (41300)	11529 (41000)	11332 (40300)	11107 (39500)	10911 (38800)
7	M/M/A	ICS-105	Fine	26mm	3.0-3.4	25	11389 (40500)	11389 (40500)	11389 (40500)	11389 (40500)	11389 (40500)	11304 (40200)
8	M/M/A	ICS-105	Fine	26mm	3.5-4.9	25	11810 (42000)	11810 (42000)	11810 (42000)	11810 (42000)	11810 (42000)	11726 (41700)
9	P/H/R	ICS-105	Fine	27mm	3.5.4.9	26	11782 (41900)	11782 (41900)	11698 (41600)	11501 (40900)	11276 (40100)	11079 (39400)
10	M/M/A	ICS-105	Fine	27mm	3.0-3.4	26	11529 (41000)	11529 (41000)	11529 (41000)	11529 (41000)	11529 (41000)	11445 (40700)
11	M/M/A	ICS-105	Fine	27mm	3.5-4.9	26	12092 (43000)	12092 (43000)	12092 (43000)	12092 (43000)	12092 (43000)	12007 (42700)
12	P/H/R	ICS-105	Fine	28mm	3.5-4.9	27	11867 (42200)	11867 (42200)	11782 (41900)	11585 (41200)	11360 (40400)	11164 (39700)
13	M/M/A	ICS-105	Fine	28mm	3.5-4.9	27	12513 (44500)	12513 (44500)	12513 (44500)	12513 (44500)	12513 (44500)	12429 (44200)
14	GUJ	ICS-105	Fine	28mm	3.5-4.9	27	12373 (44000)	12373 (44000)	12373 (44000)	12373 (44000)	12373 (44000)	12288 (43700)
15	M/M/A/K	ICS-105	Fine	29mm	3.5-4.9	28	12654 (45000)	12654 (45000)	12654 (45000)	12654 (45000)	12654 (45000)	12570 (44700)
16	GUJ	ICS-105	Fine	29mm	3.5-4.9	28	12513 (44500)	12513 (44500)	12513 (44500)	12513 (44500)	12513 (44500)	12429 (44200)
17	M/M/A/K	ICS-105	Fine	30mm	3.5-4.9	29	12795 (45500)	12795 (45500)	12795 (45500)	12795 (45500)	12795 (45500)	12710 (45200)
18	M/M/A/K/T/O	ICS-105	Fine	31mm	3.5-4.9	30	13076 (46500)	13076 (46500)	13076 (46500)	13076 (46500)	13076 (46500)	12991 (46200)
19	A/K/T/O	ICS-106	Fine	32mm	3.5-4.9	31	13357 (47500)	13357 (47500)	13357 (47500)	13357 (47500)	13357 (47500)	13273 (47200)
20	M(P)/K/T	ICS-107	Fine	34mm	3.0-3.8	33	15325 (54500)	15466 (55000)	15607 (55500)	15607 (55500)	15607 (55500)	15607 (55500)

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