Weekly Publication of

Cotton Association of India

COTTON STATISTICS & NEWS

Edited & Published by Amar Singh

2016-17 • No. 26 • 27th September, 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

Science, Sense and Commerce

(Dr. K.R. Kranthi, Director of Central Institute for Cotton Research (CICR), Nagpur has completed his Ph.D in Entomology from IARI, New Delhi. He has more than 20 years of experience in the field of cotton research.)

EXPERT's Column

Dr. K.R. Kranthi

'Commercial crop' –This is how cotton is described across the world. Indeed the crop is surrounded by commercial corporate interests. Inputs for the crop are provided by small scale entrepreneurs to large global multinational giants. The seed, fertilizers, bio-fertilizers, farm yard manure, compost, micronutrients, insecticides, bio-pesticides, biological control, fungicides, herbicides, plant growth regulators, pheromone traps, light traps, sticky traps, farm machinery, drip irrigations systems, plastic mulches, etc constitute a large market.

While science lays a foundation for the best possible optimised use of these inputs for cotton cultivation, good sense is necessary to make informed decisions from the available options to minimize input costs to obtain maximum profits. The all pervading corporate sector is in constant vigil to make hay while the sun shines. Many a times, short gains are made, unmindful of long term consequences. There is always a promise of hope, but uncertainty is the name of the farming game. This is where the farmer walks into the maze, and walks out in a daze. Sample this. There are about 2000 Bt-cotton hybrids approved by the genetic engineering appraisal committee (GEAC) of the Ministry of Environment and Forests. With such a long list of hybrids, that is only getting longer by the day, it is almost impossible, even for the best of experts, to sift the spurious brands from the authentic approved ones. And the farmer's hopes depend on a brand of seed, the choice of which is made out of the shop keeper's advice. There are more than 1000 pesticide formulations available in the market incorporating the 65 chemicals approved by the Central insecticide Board Registration Committee (CIBRC) of the Ministry of Agriculture. The list of 65 chemical pesticides includes six fungicides, nine herbicides, five bio-pesticides and 45 chemical insecticides. The pesticides are sold at various concentrations in different formulations called SP, WP, EC, AS, DP, FS, SG, CG, etc. For sure, it is impossible to find an expert in the country who would know all the formulations to make an informed prescription. Not to mention the great possibility of spurious pesticides on the shelf in any shop that the farmer may visit. Then there are plant growth regulators, micronutrients, bio-pesticides and many such products which are add-on recommendations by shop-keepers to build more hope for a miracle crop.

I would like the reader to appreciate the complexities of cotton farming, which are actually further complicated by the corporate companies who in pursuit of profits establish a market which has a complicated matrix of input usage choices which unwittingly may become counterproductive to farming interests itself. In the following passages, I shall describe the science, commerce and sense related only to two aspects here; the variety (seed) and chemical inputs, which have the greatest influence on productivity (yield/ha) and profits.

The Science

Scientific studies show that cotton plants need 80 to 85% of their water and nitrogen requirement

during the flowering and fruiting phase. The duration of the reproductive phase (critical window) of the variety, timing, quantity and type of chemical inputs determine as to how well the plant's needs are met during the critical reproductive phase. Good yields with desirable fibre quality traits can be obtained only if the nutrient and water demands are fulfilled at the flowering and fruiting phase. It is relatively easier to provide water and nutrients to the crop as per the crop's need in irrigated farms. However, under rain-fed conditions, water and nutrient management is a challenge. Monsoon extends for a period of 80 to 100 days during June to September in the cotton growing states of Central and South India, where 50% cotton in MP and more than 90% in Maharashtra and Telangana, is grown under rain-fed conditions. Soil moisture is retained for a slightly longer period in medium-deep and deep black cotton soils as compared to shallow soils. Plants will be able to absorb nutrients only when the soil has adequate natural soil moisture levels. Providing nutrients to the crop at the critical reproductive phase of the crop in rain-fed conditions is most challenging in rain-fed farms, especially in long duration varieties. Therefore the yields are low in rain-fed regions in India.

Water and nutrient requirements of rain-fed cotton can be met in a relatively easier manner in short duration varieties. Out of the 300 varieties and hybrids notified in India thus far, only 15-16% of them are of less than 160 days duration to qualify as short duration. It is not clear as to why Indian plant breeders chose to develop 'long duration' cotton varieties in India historically. Currently, only India cultivates hybrid cotton. Even today majority of the cotton hybrids are of more than 180 days duration. Many of them extend to 240 days. Elsewhere in other countries, cotton is cultivated for not more than 150-160 days. It appears that the general feeling of 'risk aversion due to multiple pickings' in long duration varieties, may have prompted the scenario.

Nutrient management of the crop influences pest management. Healthy soils with a good profile of carbon and naturally available balanced macro and micro nutrients will have healthier plants that are naturally tolerant to insect pests and diseases. The tolerance levels are raised to higher levels in healthy soils, if the plants are genetically endowed with traits that confer resistance to insect pests and diseases. Plant breeders strive to develop varieties that produce more fibre with the desired fibre qualities. In the process, it is possible that the resultant variety is a high yielder with excellent fibre traits, but may be susceptible to one or more insect pests or pathogens. Susceptibility of the variety may get aggravated with nutrient imbalances in the soil. Application of nitrogen, in slight excess can tilt the balance to make varieties more susceptible to insect pests or diseases.

Scientific studies have shown that excessive nitrogen application renders the crop vulnerable to many diseases and insect pests, mainly leaf hoppers, aphids, whiteflies and bollworms. Adequate amounts of potassium, phosphorus, secondary and micronutrients are essential for crop tolerance to insect pests, diseases and also to get good fibre properties. In general, fertilizer recommendations for cotton range from 60 to 180 kg nitrogen (N) per hectare, 30 to 90 kg phosphorus (P) per hectare and 30-90 kg potash (K) per hectare. The dosage depends on soil type and irrigation, with higher quantities required for deep soils under irrigated conditions. The time of fertilizer application is also crucial. Phosphorus, potash and nitrogen (1/4 to 1/3) are recommended to be applied as basal dose either at sowing or 2-3 weeks after sowing. Rest of nitrogen must be applied in splits during the flowering and fruiting phase depending on available soil moisture. Excessive application of nitrogen during vegetative phase (0-45 days) leads to excessive vegetation thereby causing delay in onset of flowering. Sometimes, excess nitrogen during the early phase can also cause staggered flowering extending over longer duration in some varieties.

Science of insect pest management is all about ecology of the crop. Undisturbed ecology evolves a natural balance comprising of insect pests that harm the crop and predatory and parasitic insects which harm the pests. Insecticides kill insects, irrespective of whether these are pests or beneficial natural enemies of pests such as predators (insects that feed on pests) or parasitoids (insects which develop inside the pest). However some insecticides are relatively selective to kill more of pests and less of beneficial insects. Selectivity can be due to the systemic nature of the pesticide, where the chemical is absorbed into the plant and kills the insects which feed on them, while the beneficial insects are unharmed because they do not feed on the plants. Very few natural predatory insects feed on dead insect pests, and are thus spared the toxic insecticide effects. But with extensive use of such insecticides, the predators may be deprived of insect pests on which they feed, thereby resulting in starvation and decline in predator populations. Several broad spectrum insecticides kill insects indiscriminately irrespective of whether these could be pests, predators or parasitoids. In many cases, crop pests develop resistance to insecticides more rapidly compared to predators and parasitoids, resulting in outbreaks. Many beneficial insects are highly susceptible to insecticides to the extent that a single spray of a chemical would be enough for the beneficial insect populations to be eliminated from the ecosystem for a very long period of time. In the absence of beneficial insects, pest numbers revive, survive, proliferate and cause more damage to the crop. Across the globe in the history of pest management, there are innumerable recorded

instances of insecticide induced pest resurgence and pest outbreaks. Therefore, the choice of insecticide during the particular crop phase is critical, depending on how the chemical influences the ecological balance of pests and beneficial insects.

Scientific studies conducted by ICAR-CICR showed that almost all the insect pests of cotton have developed resistance to the conventional insecticides that were approved a decade ago. The sap-sucking pests such as whiteflies and leaf hoppers have developed high levels of resistance to all the neonicotinoid group of pesticides and organophosphate group of insecticides across the country. Some insecticides cause resurgence of insect pests due to disruption of ecology and also by influencing the physiology of the surviving insects to breed in a prolific manner to cause outbreaks. However, insects in many parts of the country are still susceptible to some groups of insecticides that were recently approved over the past 10 years.

A combination of indiscriminate use of nitrogen and indiscriminate use of insecticides can be devastating for the crop to favour insect pests and diseases. There is a general feeling that cotton is a non-edible crop and thus can be subjected to pesticide applications at will. More nitrogen results in a lush green crop at the vegetative stage, which is a feast to the eyes, but also results in low yields because of initial nutrient exhaustion. This in turn leads to subsequent nutrient imbalance that has negative effects on nutrient availability during the reproductive phase of the crop. As mentioned earlier, a combination of excessive nitrogen and indiscriminate insecticide sprays, especially in susceptible varieties can play havoc with cotton pest management.

Commerce:

The Indian cotton seed business is worth about Rs. 4800 crores. There are about 50 seed companies who control the overall seed business in India. One of the main policies of the seed business was to ensure that the farmer buys seed every year from the market. Therefore the 'hybrid seed' policy was adopted as recurrent 'value capture'. Hybrid cotton technology was developed in 1971 in India. Thereafter a total number of only 40 hybrids developed by the public sector institutions were notified in the subsequent 30-40 years. The area under hybrid cotton reached only 40% by the year 2000 in 30 years after the hybrid cotton technology was developed. However after the introduction of the genetically modified (GM) Bt-technology in 2002, which was restricted only to hybrids, within a span of 5 years during 2006 to 2012 after the introduction of Bollgard-II in 2006, more than 1000 Bt-hybrids were approved by the GEAC and hybrid cotton area reached more than 90% of the cotton area in India by 2011. As a consequence, after 2006, yields decreased despite the 2.5 fold increase in fertilizer usage and doubling of insecticide usage. After 2002, there has been an intensive competition between seed companies to release Bt-hybrids.

Commercial considerations also disturbed the standard existing procedures of varietal identification and notification. As per standard procedures, superior cotton varieties and hybrids in India are identified for notification by the AICCIP (All India Coordinated Cotton Improvement Project of the ICAR) after three years of rigorous multi-location adaptive field trials before being notified by the Ministry of Agriculture. Only the highest yielding and resistant varieties were identified and notified. Thus every year 2-3 varieties that were superior to the existing best varieties were identified and notified. However, Bt-cotton hybrids were being notified by the GEAC of the Ministry of environment. The standard practice of testing varieties for three years was dispensed with for deregulated events and a short-cut method of one year routine non-competitive testing at any one location at any State Agricultural University was introduced as a pre-requisite for Bt-hybrid notification. This opened the flood gates and hundreds of Bt-hybrids that were susceptible to sap-sucking insect pests and diseases such as the dreaded Cotton Leaf Curl Virus were approved. The ludicrously large number of hybrids resulted in fields being flooded with hybrids that were susceptible to a wide spectrum of insect pests. Hardly any of the Bt-hybrids had their own robust package of practices, which was otherwise a standard practice under the AICCIP. Farmers were left utterly confused in a maze. They had to experiment with the innumerable Bt-hybrids and lose before deciding the better options. A vast majority of the hybrids were unsuitable for rain-fed farming. Indiscriminate approvals of Bt-hybrids, was the main reasons for yield decline, increase in fertilizers and insecticides.

Commercial considerations also disrupted the mandatory compliance of refuge strategy that had the potential to delay bollworm resistance to Bt-cotton. Seed companies were expected to provide 120 g of non-Bt hybrid seed for refuge purposes to delay bollworm resistance development to Bt-cotton. The cost of producing non-Bt-hybrid seeds would reduce profits of the seed companies. Some seed companies were providing refuge seed packets of inferior non-Bt seed either with inferior hybrids or straight varieties or seeds with poor germination, or with F-2-Bt-cotton seeds sourced from ginning yards or Desi cotton seeds that do not confirm to the refuge requirements. Because of the poor quality refuge seeds and other factors, farmers stopped using them and as a result bollworms are rapidly developing resistance to Bt-cotton.

Thus the commercial policy of restricting Bt-technology only to Bt-hybrids and non-conformity to good quality refuge has cost India dearly.

Insecticide market in cotton is worth about Rs. 1800 crores. Currently, a total of 65 chemicals have been approved as pesticides by the Central Insecticide Board (CIB) for use on cotton in India. At least 18 pesticides out of the 65 chemicals approved for use as pesticides in cotton are related to human cancer as listed by many global authorities such as the WHO (World Health Organization), IARC (International Agency for Research on Cancer) and US-EPA (United States Environmental Protection Agency). And, at least 7 out of the 65 chemicals belong to WHO Class-1 category of extremely or highly hazardous top the environment as WHO Class 1a (extremely hazardous category; methyl parathion & phorate) and WHO-Class 1b (highly hazardous; monocrotophos, dichlorvos, carbofuran, methomyl, triazophos and metasystox). The Annual Cancer Report 2015 published by the US-EPA lists the following commonly used pesticides under category-C (Possible human carcinogens): Acephate, Alpha-cypermethrin, Bifenthrin, Carbendazim, Cypermethrin, Dimethoate, Fipronil, Pendimethalin and Pyrithiobac sodium. Thiodicarb, Metiram and glyphosate are categorised under 'probable human carcinogens'. Three pesticides, Permethrin, Thiacloprid and Carbaryl are categorised as 'likely to be carcinogenic to human beings' and pesticides such as Buprofezin, Flonicamid and Fenoxa-prop ethyl are under the category of 'suggestive evidence of carcinogenic potential'.

In small scale cotton production systems, it is very common for farmers to use the cheapest of available insecticides for pest control. Many of the cheaper insecticides either belong to WHO Class 1 (extremely or highly hazardous) or are related to carcinogenicity to some extent. There are 14 formulations of insecticide mixtures. While the antidotes for the single insecticide chemicals are defined, there is hardly any information on the antidotes that can be used on farmers in the case of accidental poisoning with chemical mixtures. The toxic effects can be lethal. There is a need to review the label claim recommendations in cotton.

Thus far farmers were using about 1.0 kg per hectare of insecticides only for the control of sap-sucking insect pests in Bt-cotton. The quantity of insecticides being used now is equivalent to the amount being used in cotton prior to the introduction of Bt-cotton in 2002. Prior to 2002 more than 90% of insecticide usage was for bollworm control. The Pink bollworm has now developed resistance to Bollgard-II. Farmers have started using insecticides for its control. Thus, we are now faced with Bt-cotton scenario which is flooded with Bt-hybrids that are highly susceptible to sap-sucking insects, cotton leaf curl virus and the pink bollworm. If the system continues the way it is proceeding, my prediction is that within five years from now the usage of insecticides in cotton may reach an unprecedented 2.0 kg per hectare, which would be double of the amount used prior to the introduction of Bt-cotton in India.

Seed companies are aware of the implications of non-compliance of refuge. However, it is only profit motives that have diluted the IRM (insect resistance management) strategy to curtail the life of Bt-technology itself. Similarly, pesticide companies are aware of the problems with pesticide application in India. However for purely commercial reasons, decisions are not being taken to phase out the chemicals in spite of environmental hazards, human safety and ecological harm that these chemicals can have from their application in cotton fields.

Sense

Science must be simplified for the farmer to make sense out of it. He cannot handle the urban complexities that the technological matrices now manifest.

Agriculture is only as good as the seed. The science of good seed lies in the genetic traits of the variety. A good variety is the one that gives the best economic produce with least negative impact on the environment. Ideally, the variety should produce good quality cotton and should be robust enough to sustain biotic stress factors such as insects, diseases and abiotic stress factors such as drought, heat, salinity, etc. Such varieties can lay the foundation for sustainable farming. A good variety is the one that is developed to harness the best of natural resources available to it. For rainfed regions at least, the definition of a good variety is as follows: "Short duration (140-160 days) with early maturing with synchronous flowering and fruiting; high root vigour; resistant to sap sucking insects, 'cotton leaf curl virus' and other diseases and possessing desirable fibre qualities for spinning or non-spinnable purposes." India must have access to Bt-varieties also.

Seed companies must restrict the number of hybrids to a bare minimum of 3-4 from each company. Farmers in any region should have access to not more than the best 20-30 Bt-cotton hybrids suitable for their region. The hybrids must be provided along with complete package of practices. Henceforth, all releases of Bt-cotton hybrids must be routed through the AICCIP to test them for three years and release only the superior hybrids obtained after intensive testing under multi-location trials. Short-medium

duration hybrids that are tolerant to sap-sucking pests must receive priority.

It is time for insecticide review in the country. There are several insecticides that need to be phased out because of concerns to the environment, ecology and human health. Spurious insecticides being sold in the market as duplicate brands and also in the name of bio-pesticides need to be severely scrutinised and stopped. There are a few recent insecticides that can have value in integrated pest management. Some of them may be short-listed and approved as 'IPM-compatible' chemicals. These chemicals should be formulated at concentrations and volumes that can be applied for one acre, so as to simplify the process for Indian farmers. Otherwise the calculations are complicated. Moreover the large number of more than 1000 brands is more of a nuisance. Some brand names are Blaze, Smash, Warrant, Balwan, Force, Strike, Radar, Flash, Tremor, Super Killer, Karate, Kung-fu etc., which even experts wouldn't identify with the common name of the chemical pesticide. Eventually, development of cropping systems comprising of legumes with high yielding short duration cotton varieties, through bio-fertilizers, robust IPM comprising of environmentally benign insecticides, good quality bio-pesticides and biological control can lay the foundation for sustainable cotton farming.

Policies must be developed to simplify input choices with good sense keeping the illiterate farmer in mind, so as to enable him follow all the best package of practices to obtain the best possible yields with low input costs in an environmentally compatible manner. Adding hundreds of new hybrids and insecticide formulations to the existing hundreds of hybrids and hundreds of insecticide formulations will only complicate and confuse everything. No wonder, I was struck hard when a farmer recently introduced himself over the mobile, after he explained his intractable predicament and confusion with the choice of inputs available in the market. When asked to identify himself, the farmer said, sir, my name is 'Abhimanyu'.

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

Rainfall Distribution (01.06.2016 to 23.09.2016)

Sr. No.	State	Day 23.09.2016				Period 01.06.2016 to 23.09.2016			
		Actul (mm)	Normal (mm)	% Dep.	Cat.	Actul (mm)	Normal (mm)	% Dep.	Cat.
1	Punjab	1.6	2.7	-42%	D	351.1	471.0	-25%	D
2	Haryana	0.0	2.4	-99%	S	331.3	447.4	-26%	D
3	West Rajasthan	0.2	0.7	-69%	S	313.6	258.4	21%	E
	East Rajasthan	0.5	2.5	-79%	S	808.9	604.5	34%	E
4	Gujarat	2.1	2.6	-19%	N	531.1	654.6	-19%	N
	Saurashtra & Kutch	2.1	2.3	-10%	N	416.8	465.7	-10%	N
5	Maharashtra	17.0	5.8	193%	E	1092.0	966.5	13%	N
	Madhya Maharashtra	9.6	5.8	65%	E	781.0	686.0	14%	N
	Marathwada	28.5	5.5	419%	E	735.2	644.1	14%	N
	Vidarbha	3.7	4.6	-20%	D	962.5	928.1	4%	N
6	West Madhya Pradesh	1.6	5.2	-70%	S	1025.0	854.6	20%	E
	East Madhya Pradesh	1.8	4.1	-56%	D	1186.7	1029.5	15%	N
7	Telangana	49.7	6.3	689%	E	799.2	719.7	11%	N
8	Coastal Andhra Pradesh	18.4	6.0	207%	E	620.8	537.0	16%	N
	Rayalseema	0.7	5.5	-87%	S	372.4	362.7	3%	N
9	Coastal Karnataka	18.7	8.4	123%	E	2361.5	3011.9	-22%	D
	N.I. Karnataka	24.3	6.4	280%	E	495.7	463.5	7%	N
	S.I. Karnataka	2.0	5.3	-63%	S	504.9	619.1	-18%	N
10	Tamil Nadu & Pondichery	0.4	3.7	-90%	S	241.1	285.5	-16%	N
11	Orissa	12.1	6.6	84%	E	981.8	1109.8	-12%	N

Source : India Meteorological Department, Hydromet Division, New Delhi

COTTON ASSOCIATION OF INDIA
Established 1921

COTTON STATISTICS & NEWS

SUBSCRIPTION RATES

Effective from 1st April 2014

FOR NON-MEMBERS

ANNUAL SUBSCRIPTION — **Rs.4,000/-**
(for 52 issues) — (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

COTAAP Corner

Events for August- September 2016

Well distributed rain with good sunlight has facilitated the growth of cotton crop in the Khandesh belt. Although the crop has been delayed, there has been minimal outbreak of diseases or pest issues. Due to favourable climatic conditions, the number of pesticide and insecticide sprays required for cotton has drastically reduced as compared to last year. This in turn has benefitted farmers by reducing the cost of cultivating cotton this year.

The activities conducted by COTAAP during August – September 2016 were as follows:

Bamboo staking training and demo programme :

Bamboo staking demonstration by Shri. Dongre of Mahyco

COTAAP demonstrated an innovative cotton production technology - the bamboo staking production method - adopted from the Vidarbha region. Using this method has shown great results, with the yields almost doubling or tripling in quantity, ensuring better returns to the farmers. Bamboo staking ensures maximum exposure of foliage to the sunlight and this leads to increased yield. Shri. Digambar Belappa Dongre, Associate Manager of Mahyco, visited Chopda on 22nd of August, 2016, to demonstrate the technology of bamboo staking and to train the participating farmers. He conducted the demonstration in the field of Dr. Ravindra Nikam at Machla to all the participating farmers. Shri. Mahesh Kharade, Area Manager, Mahyco and Shri. Vijay Nhayade, Field Assistant, Mahyco were also present along with farmer coordination committee members and COTAAP's Extension Team

Distribution of Inputs :

With the aim of increasing farmer yield by adopting advance cultivation practices, COTAAP has been providing 19 different specialised agri-inputs to farmers which include bio-fertilizers, bio-pesticide, plant growth regulator, water soluble fertilizer and micro-nutrients. The distribution of the third and fourth lot of inputs was completed from 10 to 17 August in the following villages.

Date	Villages where input was distributed
10.08.2016	Tawase, Machla, Mangrul, Adawad
11.08.2016	Chandsani, Dhanora, Panchak, Narad, chopda
12.08.2016	Borajanti, Nagalwadi, Varad, Dondwade, Akulkheda
13.08.2016	Gorgawale, Khadgaon, Adgaon, Virwade
13.08.2016	Adgaon, Virwade
14.08.2016	Mamalde, Chunchale, Lasur, Chopda
15.08.2016	Patilgadhi, Majrehol, Tawase
15.08.2016	Kurwel , Gartad
16.08.2016	Chahardi, Ghadwel
17.08.2016	Dhupe, Bhardu, Hated, Budhgaon

The inputs distributed in this lot included:
12:61:00 (1 Kg),
Magnesium Sulphate (1 kg),
flonicamid (30 gm),
Calcium Nitrate (1 kg),
Boron (250 gm)
Zinc Sulphate (1 kg).

The farmers were also provided with informative literature explaining the content of the input, benefits and directions for use.

Pink bollworm awareness programme :

The cotton season of 2015-16 saw a drastic loss in cotton yield to farmers. In the 2016-17 season, though

Pheromone traps and yellow sticky traps placed in farms

Pheromone traps and sticky traps being distributed to farmers in Borajanti village

the Pink bollworm has not been much in evidence, COTAAP has as a precautionary initiative conducted Pink bollworm awareness campaign amongst farmer to prepare and empower them for any such infestation in the future. As a part of the extension programme, the following five villages were selected to conduct demonstrations of Pink bollworm awareness.

22.08.2016	Borajanti and Akulkheda
23.08.2016	Adgaon
24.08.2016	Varad
24.08.2016	Gartad

Each participating farmer was provided with three pheromone traps and two sticky traps to be placed in their farm adjoining to the FLD plot. Shri. Digambar Belappa Dongre, Associate Manager, Mahyco was present to guide the farmers and answer their queries.

CAI Maintains Cotton Crop For The 2016-17 Crop Year At 336 Lakh Bales

The Cotton Association of India (CAI) has released its August estimate of the cotton crop for the 2016-17 season beginning from 1st October 2016. The CAI has retained the August estimate of the cotton crop for the 2016-17 season at 336.00 lakh bales i.e. at the same level as in the last month. The projected Balance Sheet drawn by the CAI estimated total cotton supply for the cotton season 2016-17 at 398.00 lakh bales while the domestic consumption is estimated at 309.00 lakh bales thus leaving an available surplus of 89.00 lakh bales. A statement containing the State-wise estimate of the cotton crop and the balance sheet for the cotton season 2016-17 with the corresponding date for the ongoing crop year 2015-16 is given below:-

CAI's Estimates of Cotton Crop as on 31st August 2016 for the Seasons 2016-17 and 2015-16

(in lakh bales)

State	Production *		Arrivals As on 31st August 2016 (2015-16)
	2016-17	2015-16	
Punjab	8.00	7.50	7.25
Haryana	17.00	17.00	16.50
Upper Rajasthan	6.00	5.50	5.50
Lower Rajasthan	12.00	10.50	10.50
Total North Zone	**43.00**	**40.50**	**39.75**
Gujarat	88.00	88.00	87.75
Maharashtra	87.00	78.00	77.75
Madhya Pradesh	20.00	18.75	18.50
Total Central Zone	**195.00**	**184.75**	**184.00**
Telangana	48.00	58.00	58.00
Andhra Pradesh	15.50	24.00	24.00
Karnataka	21.50	18.50	18.50
Tamil Nadu	7.00	7.00	6.50
Total South Zone	**92.00**	**107.50**	**107.00**
Orissa	4.00	3.00	3.00
Others	2.00	2.00	2.00
Total	**336.00**	**337.75**	**335.75**

*Note: (1) * Including loose*

(2) Loose figures are taken for Telangana and Andhra Pradesh separately as proportionate to the crop for the purpose of accuracy

The Balance Sheet drawn by the Association for 2016-17 and 2015-16 is reproduced below:-

(in lakh bales)

Details	2016-17	2015-16
Opening Stock	44.00	67.25
Production	336.00	337.75
Imports	18.00	16.00
Total Supply	**398.00**	**421.00**
Mill Consumption	275.00	275.00
Consumption by SSI Units	24.00	24.00
Non-Mill Use	10.00	10.00
Exports		68.00
Total Demand	**309.00**	**377.00**
Available Surplus	89.00	
Closing Stock		44.00

Glimpses of Ganeshotsav

(From 5th September to 15th September 2016)

Cottoncha Raja

Shri. Nayan Mirani, Vice President CAI and Smt. Mirani perform the aarti

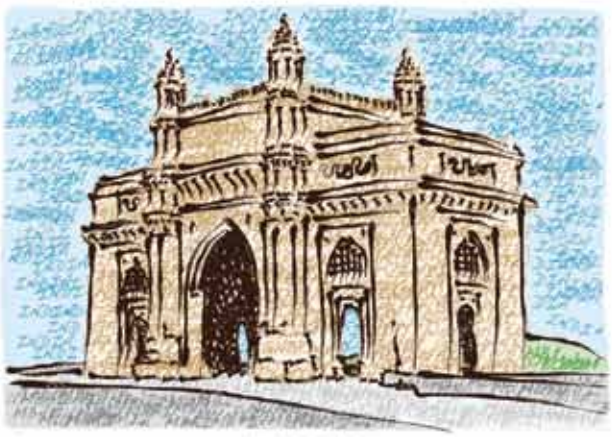
Devotees in large numbers attend the maha aarti

Shri. Makharia and family pay their respects

Devotees partake of the prasad

Cottoncha Raja is taken in a grand procession for the visarjan.

COTTON
ASSOCIATION
OF INDIA
Established 1921



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.

SAVE THE DATES
REGISTRATION OPENING SOON

UPCOUNTRY SPOT RATES (Rs./Qtl)

Sr. No.	Growth	Grade Standard	Grade	Staple	Micronaire	Strength /GPT	Spot Rate (Upcountry) 2015-16 Crop SEPTEMBER 2016 19th	20th	21st	22nd	23rd	24th
	Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [By law 66 (A) (a) (4)]											
1	P/H/R	ICS-101	Fine	Below 22mm	5.0-7.0	15	8380 (29800)	8520 (30300)	8520 (30300)	8239 (29300)	8239 (29300)	8099 (28800)
2	P/H/R	ICS-201	Fine	Below 22mm	5.0-7.0	15	8520 (30300)	8661 (30800)	8661 (30800)	8380 (29800)	8380 (29800)	8239 (29300)
3	GUJ	ICS-102	Fine	22mm	4.0-6.0	20	7564 (26900)	7649 (27200)	7649 (27200)	7649 (27200)	7649 (27200)	7649 (27200)
4	KAR	ICS-103	Fine	23mm	4.0-5.5	21	9308 (33100)	9392 (33400)	9392 (33400)	9392 (33400)	9392 (33400)	9392 (33400)
5	M/M	ICS-104	Fine	24mm	4.0-5.0	23	10545 (37500)	10629 (37800)	10629 (37800)	10629 (37800)	10629 (37800)	10629 (37800)
6	P/H/R	ICS-202	Fine	26mm	3.5-4.9	26	12148 (43200)	12204 (43400)	12063 (42900)	12007 (42700)	11867 (42200)	11642 (41400)
7	M/M/A	ICS-105	Fine	26mm	3.0-3.4	25	11248 (40000)	11473 (40800)	11614 (41300)	11670 (41500)	11670 (41500)	11529 (41000)
8	M/M/A	ICS-105	Fine	26mm	3.5-4.9	25	11698 (41600)	12120 (43100)	12260 (43600)	12429 (44200)	12429 (44200)	12288 (43700)
9	P/H/R	ICS-105	Fine	27mm	3.5.4.9	26	12317 (43800)	12373 (44000)	12232 (43500)	12176 (43300)	12035 (42800)	11810 (42000)
10	M/M/A	ICS-105	Fine	27mm	3.0-3.4	26	11473 (40800)	11642 (41400)	11782 (41900)	11838 (42100)	11838 (42100)	11698 (41600)
11	M/M/A	ICS-105	Fine	27mm	3.5-4.9	26	12063 (42900)	12485 (44400)	12766 (45400)	12935 (46000)	12935 (46000)	12795 (45500)
12	P/H/R	ICS-105	Fine	28mm	3.5-4.9	27	12401 (44100)	12457 (44300)	12317 (43800)	12260 (43600)	12120 (43100)	11895 (42300)
13	M/M/A	ICS-105	Fine	28mm	3.5-4.9	27	12626 (44900)	13048 (46400)	13244 (47100)	13385 (47600)	13385 (47600)	13244 (47100)
14	GUJ	ICS-105	Fine	28mm	3.5-4.9	27	12541 (44600)	12879 (45800)	13020 (46300)	13104 (46600)	13104 (46600)	12935 (46000)
15	M/M/A/K	ICS-105	Fine	29mm	3.5-4.9	28	13076 (46500)	13413 (47700)	13694 (48700)	13779 (49000)	13779 (49000)	13582 (48300)
16	GUJ	ICS-105	Fine	29mm	3.5-4.9	28	12935 (46000)	13216 (47000)	13498 (48000)	13498 (48000)	13498 (48000)	13329 (47400)
17	M/M/A/K	ICS-105	Fine	30mm	3.5-4.9	29	13188 (46900)	13610 (48400)	13891 (49400)	13976 (49700)	13976 (49700)	13779 (49000)
18	M/M/A/K/T/O	ICS-105	Fine	31mm	3.5-4.9	30	13582 (48300)	13863 (49300)	14144 (50300)	14201 (50500)	14201 (50500)	14060 (50000)
19	A/K/T/O	ICS-106	Fine	32mm	3.5-4.9	31	13835 (49200)	14060 (50000)	14341 (51000)	14397 (51200)	14622 (52000)	14482 (51500)
20	M(P)/K/T	ICS-107	Fine	34mm	3.0-3.8	33	15747 (56000)	16028 (57000)	16028 (57000)	16028 (57000)	15888 (56500)	15747 (56000)

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