



INTERNATIONAL TEXTILE MANUFACTURERS FEDERATION
FEDERATION INTERNATIONALE DES INDUSTRIES TEXTILES
INTERNATIONALE VEREINIGUNG DER TEXTILINDUSTRIE

Spinners Committee

Travel Report

India

October 17 – 23, 2008

From October 17 – 23, 2008 the ITMF Spinners Committee visited India on behalf of the ITMF. Time was spent in the cotton growing areas in the state of Gujarat, Haryana and Maharashtra as well as having formal visits with Government and Association officials in the cities of Delhi and Mumbai.

The Spinners Committee would like to express its gratitude to Mr. B.K. Patodia, Vice Chairman and Managing Director, GTN Group, the Indian member of the ITMF Spinners Committee, who organised this visit, together with Mr Gajaria and Mr Mahesh C. Thakker of Perfect Cotton. Our thanks are also extended to Mr. Suresh Kotak, who assisted with the arrangements. Throughout the visit the Committee received outstanding hospitality from everybody with whom the Committee came in contact, which was deeply appreciated.

The Committee also appreciated the time and energy of Mr Fritz Grobien who accompanied the Committee as a special guest throughout the visit as well as John Mitchell's company to Hissar (Haryana).

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Participants

Committee Members & Secretariat

Ziad Bashir	Pakistan	Gul Ahmed
Werner Bieri	USA	Buhler Quality Yarns
Andrew Macdonald	Brazil	Santista Textil (Committee Chairman)
B.K. Patodia	India	GTN Group
Christian Schindler	Switzerland	ITMF

Invited Guests

Fritz Grobien	Germany	Albrecht, Müller–Pearse
John Mitchell	USA	Cargill (on Oct. 21 only)



Objective of the visit

- To evaluate the situation of cotton growing and ginning in India as compared to 6 years ago when the ITMF Spinners Committee visited India in 2002.
- To evaluate the evolution and sustainability of BT cotton in India.
- To evaluate the handling and quality improvements.
- To evaluate the potential for increased production over the next years.
- To evaluate the comments of the textile industry and their vision on cotton in India.

EXECUTIVE SUMMARY

Overall Comments/Impressions

Cotton

The Committee could find no fault with the intrinsic quality of the cotton; clearly Shankar-6 in Gujarat continues to be superior to the J34 in Punjab, Haryana & Rajasthan despite the overall improvement in quality resulting from many improvements in the cotton chain including the introduction of BT Cotton.

Also the well known and accepted improvements in yields were very much in evidence not only from the many field visits but also accompanying the overall evolution from the road. Fields are more uniform and better cared for than was noted during the last visit. Clearly with improved returns to the farmers, principally thanks to the yields, they have had more resources to look after their crop.

Recently the micronaire has tended to be slightly coarser and the Committee recommends that the researchers do not overlook this important characteristic of cotton in their attempts to achieve improved yields through heavier bolls.

The Committee visited some spectacular fields where the production, growth and height of the plants showed the potential when using planned irrigation, soil preparation and heavy application of fertilizer. In theory these restricted fields were a clear demonstration of the further potential the new technology as well as good farming practices could achieve.

However the Committee must warn against the extravagance of plant height. Firstly, history has shown, in other countries, that the return of the investment in water and fertilizer is rarely compensated by tall plants, due to the known law of diminishing returns. Secondly, the quality of the cotton tends to suffer as large plants use their energy to grow tall, rather than direct their energy to producing full and heavy cotton bolls. Thirdly, hand picking is compromised by tall plants, increasing immaturity whilst dense leaf shade on the lower bolls tends to produce boll rot. Experience has shown that the ideal height is about 1.20 meters maximum without reducing yields; on the contrary such compact plants produce more cotton. Australia is an example of compact irrigated cotton.

The opinion of the Committee is that the current higher production is sustainable and can well increase, provided plant growth is controlled and, most important, that modifications in the genes in BT seeds are constantly introduced to the farmer, to avoid the bollworm becoming resistant to the current event. This is all the more important when it is quite clear that India will not be able to adopt a tight refuge system, (an area of conventional cotton encircling the BT crop), to avoid the inevitable build up of resistance.

Mixing of seed varieties and cotton from different farmers does not seem to pose a serious problem for Indian cotton, since it is clear that the region, soil and climate, where the cotton is grown seems to have the greater impact. Therefore the Committee offers no criticism of the mixing at the market yards, and separation of quality at the gin yard, rather than separation by farmer and/or by variety, but does warn about mixing cottons from different growing regions; i.e. the transfer of seed cotton from one area or state to another, in an attempt to obtain "the better area" premium, should be avoided at all cost. Mixing poorer characteristics cotton together with better characteristics only downgrades the final result as far as the spinner is concerned.

So overall the impression was very positive. Clearly BT is well known and accepted by the farmers and textile industry alike and many people in India are to be congratulated on this achievement.

Ginning

Officially the Ministry of Textiles has set a target of 1,000 ginning & pressing (G & P) factories for modernization under Technology Mission on Cotton. (TMC)

Against this, 992 projects have already been approved for modernization, and of this, 748 factories have already completed their projects and the balance is under implementation.

Despite this the Committee was somewhat disappointed with the evidence presented compared to 6 years ago, as the progress seemed more limited than had been anticipated. There was no evidence of a standard approved level since the Committee visited TMC approved gins which were quite different in terms of mechanization, cleanliness and cotton handling, indicating that there is still a long way to go as regards a standard scale for TMC gins. For example the Committee visited a gin where the gin stands were still being fed by hand, (or feet), mostly were very dirty, with the workers dressed in multicolor dresses, uncovered heads, and some without proper shoes, all of which leads to a conclusion of poor housekeeping. The Committee also noticed an apparent disregard for fire and safety precautions.

The “patios” for receiving cotton at the gins have definitely improved, though still very labor intensive with the workers not using white cotton uniforms, thereby encouraging contamination of the cotton. However the Committee was pleased to note the introduction of pre-cleaning machines which were successfully taking out the immature lobes. This pre-cleaning is definitely preferred to the system of lint cleaning which was noticed in various gins, since these tend to damage the cotton and increase the neps and short fiber content.

Most of the gins still have separate baling presses which involves workers transporting the cotton by hand and pushing it in to the hydraulic pre-press, by sheer human man power. Apart from the contamination aspect this process involves safety procedures were not in evidence.

One of the gins visited was in the process of installing a modern press and automated transporting system, including an electronic contamination detector, making a total investment of USD 600,000.

The Committee therefore would like to recommend perhaps a scale or rating for TMC approval, with a target set for rating AA being a fully automatic feeding, handling and baling of the cotton. There could perhaps be five scale levels, with a target for each level.

However, in general, the Committee commends the system of roller ginning, despite the old machinery which with good maintenance is without doubt helping to preserve the quality of the cotton and preserve the excellent fiber characteristics. Systematic preventive maintenance of the roller gin is very important and though the operators have an excellent feeling for the machines, the Committee would like to suggest the use of a simple laser thermometer to detect the temperature of the roll along the entire length to ensure even ginning at the moment of separation of the fiber from the seed.

The Committee visited a number of the organized market yards (Mundis), where the growers can deliver their cotton for auction. This is indeed an excellent system to ensure the farmers obtain a fair market price. The yards visited were extremely well organized, some under cover. The cotton lots are sold in plies on the ground, clean concrete or directly from the farmers transport. Ideally this cotton should arrive at the stations without being covered with plastic fibrous sheeting.

Finally the Committee would like to recommend that there is introduced a universal bale tag showing the origin of the cotton and where it was ginned. This might go along way to avoid the falsifications of the cotton's origin. Falsification is a serious problem for the marketing of India Cotton.

Organic Cotton

Organic Cotton is a niche market and the Committee is of the opinion that "pure" organic cotton is not financially sustainable over the long run. In time the consumer will not be prepared to pay a premium which shows no benefit to them or the farmer.

The Committee recommends that India mounts a campaign, perhaps even with the assistance of the Government, to convince the public that BT cotton should be regarded as the closest step towards organic cotton, since it does not change the characteristics of the cotton, but reduces applications of toxic insecticides, and gives a better return to the farmer (fair trade), instead of treating BT cotton as unsafe and unhealthy, as retailers and some press reports are suggesting.

Contamination

Contamination continues to be one of India's major problems, though it is evident that there are positive developments, and reports indicate that the quantity has been reduced.

Still today Indian cotton is discounted from its true cotton value and in India, certain mills are buying from only selected gins at a premium.

Some members of the Committee felt that there is a lack of communication between farmers, ginners and scientists and therefore more communication and education is needed for the farmers. Others believe that contamination can be reduced only if there is a strong financial premium paid. Education will always help but will not be the solution as by its very nature hand picked cotton will always be contaminated.

Research

The Committee was immensely impressed with the research being carried out in cotton in India. More details will be found in reports of visits below.

The question of drought resistant seeds was discussed and the Committee felt that this should not be restricted to only dry areas but also adapted in water affluent regions in order to reduce the amount of water as a contribution to the environment.

Social and Environmental Compliance

This should be seen as an opportunity rather than a threat. Full compliance with the consumers preference for social and ecological assurance will guarantee Indian cotton and the textile industry to maintain their presence in the Western markets.

General

The Committee was pleased to note the farmers' organizations and cooperatives appear to be better informed and more aware of the needs of the spinning industries. Perhaps as they are now more in touch with the export market more emphasis is being placed on performance in all senses of the word. This is an excellent development which we trust together with some of the Committee's suggestions will help the Technology Mission on Cotton (TMC) II (Transfer of Technology) achieve the aims of making Indian cotton to be justly proud of.

INDIVIDUAL VISITS

October 17, 2008

Meeting with Cotton Corporation of India (CCI), Mumbai – Mr S.C Grover Chairman cum Managing Director



In essence the CCI is a trading company which purchases seed cotton, contracts the ginning and sells the cotton lint at the market price, directly to spinners domestically and for export on the basis of FOB. The selling prices are totally transparent being available on their web site; however preference is always given to the local industry.

With a staff of 1,200, the CCI is active in 14 states, responsible for 275 collecting centres but does not own any ginning facilities, instead they oversee the plants which have been contracted. They supply the cotton cloth for packing.

CCI is financially independent from the government. However the Corporation does have the mandate with respect to protecting the Minimum Support Price (MSP) set by the "Committee on Agricultural Costs and Prices" by buying cotton at the MSP whenever the market declines below this level. The MSP was increased in 2008 from USD 0.51/lb to almost USD 0.62/lb (Rupee 2,600 per quintal) being set considerably higher this season, so as to include the theoretical family labour cost.

In view of the current collapse of the cotton prices the CCI expects to be very active this year undertaking the task of ensuring that the grower receives the MSP. The difference between the MSP and the market price, at which CCI is forced to sell, will be covered by the government. So they are expecting to handle between 5 - 15 million bales this season, against 170,000 last year.

As regards recent developments in India overall they stated 800 gins had been modernised, each with producing an average of 25,000 bales, and 250 market centres have also been improved. The BT cotton in their opinion is excellent, the staple has been maintained, though the micronaire is slightly coarser. About 70% of all cotton grown in India is now BT and yields have improved. Today there are rarely more than three pickings due to the much shorter fruiting period as the plants do not have to battle against the bollworm.

October 17, 2008

**Meeting with the Central Institute for Research in Cotton Technology (CIRCOT),
Mumbai – Dr S. Sreenivasan Director**



CIRCOT was established in 1924 with the mission to develop new technologies and machines to improve the utilization of cotton in textiles and other applications.

As a highlight during this visit Dr S. Sreenivasan advised that CIRCOT was developing an improved type of roller ginning, the so called “Variable Speed Double Roller Gin”. With this type of ginning it is possible to adjust the speed of the roller and beater independently at no additional power cost. According to CIRCOT the speed ratios of 150:1,000 for roller to beater is found to be suitable for long staple cottons while 125:1,000 for medium staple. The advantages are: higher productivity, preserving the intrinsic characteristics of the cotton staple, fewer seed coat fragments and neps. Apparently 50 - 60 gins have already been modified with this new concept. Large scale ginning trials have shown that lint out-turn and ginning rate increased by 70% to 140% over conventional machines. Instead of approx. 45 kg lint out-turn per hour between 65 kg and 80 kg/h can be achieved depending on the type of cotton.

CIRCOT produces its own calibration cotton for HVI instruments which are partially also used outside India.

Additionally CIRCOT is also working on projects not associated with the cotton fibre and as an example discussed the use of cotton plant stalk for the production of hard board (fibre board) in the furniture industry.

October 17, 2008

Meeting with Textile Commissioner, Government of India, Mumbai (Mr. B.A. Patel)

The visit to India took place in a period where the world economy was facing the worst financial crisis since more than 70 years which clearly was starting to affect the domestic economy. The Indian textile industry – just like the rest of the global textile industry – finds itself in a very difficult situation for various reasons: high energy costs, appreciation of the

Indian Rupee, power shortage in some states as well as decreasing textile exports plus sluggish domestic demand. The difficulties of the Indian textile industry become obvious when looking at its exports compared to other countries in the region. Bangladesh and Vietnam have been exporting more apparel to the US in the first 8 months of 2008 than India.

October 17, 2008

Cotton Association of India (CAI)



The Cotton Association of India led by their President kindly hosted a dinner in honour of the Committee which allowed for a very interesting exchange of views, as well as the pleasure of meeting many old friends.

October 18, 2008

Visit of Alok Industries, Silvassa (Union Territory)

Alok Industries is a totally integrated textile company – from spinning to garment making. The company has installed 300,000 spindles with another 300,000 planned. Its yarn production covers 50% of the company's yarn consumption. The company consumes mainly Indian cotton but also cotton of other regions in the world (USA, Egypt, etc.) as well as organic and fair traded cotton. Yarn production reaches 190 ton per day. The average count is Ne 34 and the range between Ne 6 to Ne 120. This was a very exciting visit and the hosts went out of their way to make the long journey to the factory useful and worthwhile. The Committee was undoubtedly impressed by the scope, size, cleanliness and organisation to be found all over the complex which continues to be expanding.



Alok's Training Facility

Perhaps the most remarkable experience was to visit the training sector where local inhabitants, absolutely raw recruits are taught the skills of the textile industry from spinning to sowing. The quality of their products fully supported the extraordinary performance of this group.

October 19, 2008

Field and gin visits in the Narmada Canal Area, Gujarat

The Committee travelled to Gujarat and visited two cotton farms. The first, a BT cotton field (Monsanto) the plants were very tall (around 160 cm). The fields were irrigated with water from the Narmada Canal which flows through the region and is in fact 458 km long. Some of the plants were carrying over 120 bolls, though the lower bolls which were just opening were rather small. This field clearly showed the potential of BT as there were few bugs, and the crop had only been sprayed against sucking pests, as the BT seed gives protection against the bollworm. They carry out only 3 - 4 picking and achieve a yield of approx. 700-800 kg/hectare in the specific field visited, the average being around 650 kg/hectare in the area.



Field Narmada Canal Area

The first gin visited worked with the traditional double roller gins. The quality of both the seed cotton, as well as of the cotton lint was excellent. Unfortunately, the seed cotton is stored on the ground, rather than on a paved yard which is not appropriate in terms of contamination with foreign matter. The cotton was transported in the traditional manner, manually from the ground to the conveyor belt to the upstairs storage and finally fed by hand to the gins. All this increases the danger of additional contamination. The pressing system was also traditional and very labour-intensive, adding to the problem of contamination.



Cotton in the Patio

October 19, 2008

Agricultural Produce Marketing Committee, Bodeli, Gujarat



Agricultural Produce Marketing Committee of Bodeli

The Committee was received by the Agricultural Produce Marketing Committee of Bodeli, where there was an extremely interesting exchange of views and information.

The second gin visited was TMC-certified (TMC = Technology Mission on Cotton). B J Cotton Industries Bodeli The seed cotton was stored on paved ground and transported on the heads of the workers in baskets to the pre-cleaner. From there it was transported on a conveyer and then mechanically fed to the roller gins. After the cotton was ginned it was transported through air tubes to a storage room from where after regaining normal moisture content, the workers eventually transported the cotton in baskets to the traditional press located in a different building.



B J Cotton Industries Bodeli

A visit to more typical cotton fields showed up the use of different varieties and different farming methods. The plants were traditional in height, but with a good carriage of bolls for this type of farm. The absence of insects and insect damage was noted, and the regularity of the plant height showed a healthy crop. Rather too many weeds were present which may reduce the output of the field and increase the risk of vegetable contamination in the cotton.



BT Cotton Field

October 20, 2007

Field, market yard and gin visits in Kadi, Gujarat

The visit to a BT cotton field (Kaveri Seeds; licensed from Monsanto) showed that the plants were "over-weight" with an average of 120 bolls per plant mainly as a result of overwatering, and the application of too much fertilizer. Hence many of the plants had fallen over collapsing on the weight of the bolls which will make the picking very difficult and the bolls loss will be high. The cotton had been sprayed to combat the sucking pest called "Zecide".



BT Cotton Field

In Kadi the Committee visited a market yard where farmers sold their seed cotton to ginner and/or brokers in a free auction system. This is really an impressive system to ensure the farmers receive the true market price, however the transportation of the seed cotton, utilizing fibrous plastic should really not be allowed.



Kadi Market Yard

The Committee visited a ginning and pressing factory in Kadi which was TMC approved. The seed cotton was kept under a roof on a paved yard and was pre-cleaned before being ginned. On its way to the press the cotton passed through a lint cleaner and moisture was being added to replace the losses during the ginning. The cotton was then pressed in the traditional labour-intensive press. However in this gin the cotton bale was wrapped in a light cotton cloth followed by a blue plastic wrapping, which helps to maintain the cotton clean but also retains the moisture content.



Kadi Gin

The second gin visited, Raja Industries, also TMC approved, had a similar structure as previous gins, somewhat cleaner but that unfortunately in this case the roller gins were fed overhead manually, by hand, or rather by feet pushing the cotton into the roller gin hopper, which was a disappointment.



Raja Industries

October 20, 2008

Meeting with All India Co-operative Cotton Federation Ltd. (Gujcot), Ahmedabad Cotton Merchants' Association and Ahmedabad Textile and Industry's Research Association (ATIRA), Ahmedabad, Gujarat

At ATIRA the Committee was introduced in the various activities of the association with regard to research in the area of cotton and textile with the objective of improving the competitiveness of the cotton and textile industry as a whole. At ATIRA about 5'000 instruments are calibrated for around 350 customers. Its research activities cover the cotton industry and the textile industry (i.e. yarn clearers) including technical textiles. With regard to ginning ATIRA promotes the use of pre- (removal of immature fibres) and post-ginning cleaners (removal of broken seeds), pneumatic cotton conveyer systems, automatic balling systems (reduction of workforce and therefore of source of contamination) as well as an online system for adding moisture to the cotton lint.

October 21, 2008

Field, market yard and gin visits in the area of Hissar, Haryana

The first gin the Committee visited in the area was equipped with the traditional roller gin machinery and very labour-intensive. The yard for the seed cotton was paved with stone but without a roof. After ginning the cotton lint was transported in baskets to the warehouse where female workers were picking through the cotton looking for contamination before it was transported again in baskets to the traditional labour-intensive baling press.



Decontamination after Ginning

Later on the Committee visited an open air marketing yard where the farmers' cotton is auctioned along with many other crops. Certainly less well organised than the previous marketing yard the Committee had visited, being in the open air rather than a platform. The cotton was brought by the farmers with all sorts of vehicles, unfortunately very often not in the best manner to prevent contamination.



Market Yard

The Committee was then taken to visit the local research and seed breeding area and were shown many of the current and new varieties, conventional and BT. It was interesting to see the progress being made in this direction with some excellent plants with a good carriage and stand, whilst other developments were for drought resistant species.

On the return to Delhi the Committee visited some more typical cotton fields, where despite the large spacing and plants with a normal appearance the yields had proven to be extremely satisfactory.



BT Cotton Field

October 21, 2008 New Delhi

The Committee was honoured to be invited to a dinner offered by the Confederation of Indian Textile Industry (CITI) on returning to New Delhi. There was a lively discussion as regards the Committee's impression on this visit to India and the Committee was given an overview of the textile industry in India today.

October 22, 2008**Meeting with Ministry of Textiles, Delhi – Mr A K Singh (Secretary (Textile) and Dr J N Singh Joint Secretary**

The Committee was honoured to be received by the high ranking officers in the Indian Government in the textile area. The Committee had a very interesting exchange of views and took the opportunity to congratulate the government on the large number of initiatives that had been undertaken in favour of cotton. We also expect Indian cotton to expand further in the domestic and export market and trust that the set back caused by the world financial crisis will not affect the long-term program of expansion.

October 22, 2008**Meeting with Dr. C.D. Mayee, Agricultural Scientists Recruitment Board, India Council of Agriculture Research, Delhi**

Dr. Mayee recounted the history of BT cotton in India for the Committee to better understand its role and importance. In the 90's Indian cotton production was very poor and sometimes the bollworm destroyed the crop by as much as 70-80%. Unfortunately the introduction of new pesticides only improved the situation to a limited degree, but subsequent crops due to the misuse of these insecticides, (there were cases of over-application by as much as 25-30 sprays in 4 months) the pest developed resistance to these insecticides. To complicate the situation even further new pests appeared like the white fly.

BT cotton was first released in 1996/97 by Monsanto and in 2000/1 the BT cotton was introduced in India for the first time.

Dr Mayee explained that the implanted gene had been extracted from the a bacteria that allows the plant to produce a toxic substance which restricts the bollworm's ability to breath as soon as it starts eating any part of the plant.

It is important to note that fibre characteristics of BT cotton do not differ from the original conventional cotton. The only difference is that BT cotton being resistant to the bollworm. The yields and quantity have improved. However the long term success of BT cotton depends also on correct management. The principle role of good management requires that the farmer applies the refuge system which requires that he plants at least 20% of the area sown with seeds that are non-BT seeds, thereby allowing the bollworm to survive on those plants so that they do not build up resistance through future generations. The alternative is to plant other crops which could be grown in the cotton field on which the bollworm can feed without causing substantial damage.

Well managed BT cotton could maintain its current defense mechanism for about 10 to 15 years since even with the refuge program these pests, like any other organism will eventually develop a resistance against the current toxins, as the bollworm reproduces itself 10 times during one season (6 months). Therefore, BT cotton will need constant modification with the introduction of new and additional genes to maintain the current success.

Dr Mayee advised that there are other pests like the milli bug or the leaf curl which can be eventually controlled by genetic engineering. There are also efforts to develop drought resistant BT cotton seeds. Also the development of BT cotton that requires less fertilizer would be welcome, since 60% of all applied fertilizer is washed out during the rains. It was also confirmed by Dr Mayee that scientifically there is no reason to exclude BT cotton from the definition of organic cotton. The problem lies in education and explanation about the use and benefits of GM cotton. "Taking Science to Society" is the challenge for the cotton industry today.

October 23, 2008

Visit of Morarjee Mills, Nagpur, Maharashtra

In Nagpur the Committee visited Morarjee Mills

which produces fabrics for shirting (Europe and USA) and voile (Middle East). Approx. 32'000 spindles produce an average count of Ne 100 (range of 80-120). Mainly Egyptian (Giza 88) and US cotton (Pima) is consumed.



Fabric Production at Morarjee Textile Mill

The mill also consumes organic cotton as demand for it has been increasing in the past few years constantly. Morarjee Textile Mill is an excellent mill, which is well run – a real pleasure for the Committee to visit.

October 23, 2008

Visit of cotton fields, Nagpur, Maharashtra

In Nagpur 60% of the cotton fields are irrigated and 40% rain-fed. Around 500'000 bales are produced in the area of Nagpur. The main varieties are MECH and BUNNY BRAHMA. The yield of MECH is around 400-500 kg seed cotton per acre or 300 kg cotton lint per hectare. All of the cotton grown in this area is BT cotton.

The fields visit by the Committee were visually average, clearly somewhat inferior compared to Gujarat with plants carrying about 40-50 bolls. However the quality was good, the fields generally clean and well maintained with an equal height.

The yield of the BUNNY BRAHMA is slightly higher with 170 kg cotton lint per acre.

The cotton fields visited did vary depending of the variety, and it was interesting to see that other crops (yellow lentils) were planted in the field as the refuge.



BT Cotton Field in Nagpur

October 23, 2008

Visit of a gin, Nagpur, Maharashtra

The Committee visited a gin in Nagpur which was clearly differently managed than those visited previously.

The gin has invested around USD 600'000 this season to introduce a mechanical processing from the pre-cleaner to the bale press. This will be a highly efficient gin that reduces significantly the risk of adding foreign matter to the cotton during the process of ginning and pressing. They are even including an optic scan system developed for gins in the conveyor system from the gins to the press where a total of around 22'000 bales will be pressed, using an Indian made very modern hydraulic press reaching up to 20 bales per hour or 440 bales per day. It was interesting to note that extra care is taken so that the varieties MECH and BUNNY BRAHMA are not mixed in the gin since their characteristics are somewhat different.

The Committee congratulates the initiative of the owners of this gin.



Modernised Gin in Nagpur

October 23, 2008**Meeting with the Central Institute of Cotton Research (CICR), Nagpur, Maharashtra**

The main question discussed at CICR was the question to what extent BT cotton has contributed to the increase of yields in India. The scientists at CICR are not sure whether this increase should be credited alone to the introduction of BT cotton. Since 2000 an effective insecticide was developed which was also responsible for higher yields. In general there are reasons to believe that BT cotton was not alone responsible for the increase in Indian cotton production. Neither the US nor China saw such an increase after the introduction. The assumption made by CICR is that newly introduced hybrids might have also contributed to the increase of India's cotton production.

They drew to the Committee attention that BT cotton leads to fewer pickings which in return leads to lower contamination, as previously the cotton was picked 5 - 7 times, today with BT cotton it has declined to 2 - 3 pickings.

CICR agrees that BT cotton should be regarded as organic cotton. The difference between BT cotton and cotton hybrids is that the later is a result of conventional breeding whereas in the former a gene is introduced into the cultivated genotype.

The Committee was also advised that it is possible to test even finished fabrics or garments for the presence of BT cotton. This could have far reaching effects on the retail business for products claiming to be organic.

The development of a drought resistant BT cotton seed should therefore be considered in order to reduce the consumption of water. This is not only interesting for rain-fed areas, but also for irrigated areas since water is and will become even more important in the future.

November 2008

STATISTICAL APPENDIX

State-wise Area, Production and Yield of Cotton in India, 2007-08

	State	Area (in 100'000 ha)	Production (in 100'000 bales of 170kg)	Yield (kg lint/ha)
1	Punjab	6.41	22.00	583.46
2	Haryana	4.83	16.00	563.00
3	Rajasthan	3.68	9.00	415.76
	North Total	14.92	47.00	535.52
4	Gujarat	25.16	112.00	756.75
5	Maharashtra	31.91	62.00	330.30
6	Madhya Pradesh	6.62	21.00	539.27
	Central Total	63.69	195.00	520.48
7	Andhra Pradesh	10.96	46.00	713.50
8	Karnataka	3.88	8.00	350.51
9	Tamil Nadu	1.30	5.00	653.85
	South Total	16.14	59.00	621.43
10	Others	0.80	2.00	
	Total	95.55	303.00	539.08
11	Loose Lint		12.00	
	All India	95.55	315.00	560.43

State-wise Area, Production and Yield of Cotton in India, 2008-09 (estimated)

	State	Area (in 100'000 ha)	Production (in 100'000 bales of 170kg)	Yield (kg lint/ha)
1	Punjab	5.60	20.00	607.14
2	Haryana	4.18	15.00	610.04
3	Rajasthan	2.17	8.00	626.72
	North Total	11.95	43.00	611.71
4	Gujarat	24.17	110.00	773.68
5	Maharashtra	31.33	62.00	336.41
6	Madhya Pradesh	6.43	20.00	528.77
	Central Total	61.93	192.00	527.04
7	Andhra Pradesh	13.19	58.00	747.53
8	Karnataka	3.35	10.00	507.46
9	Tamil Nadu	1.20	5.00	708.33
	South Total	17.74	73.00	699.54
10	Others	0.98	2.00	
	Total	92.60	310.00	569.11
11	Loose Lint		12.00	
	All India	92.60	322.00	591.14

Cotton Balance Sheet from 1999/00 to 2008/09 (Season from Oct.-Sept.)

	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08*	08/09*
Supply										
Opening Stock	36.50	40.50	29.00	40.00	24.00	21.00	72.00	52.00	47.50	43.00
Crop	156.00	140.00	158.00	136.00	179.00	243.00	241.00	280.00	315.00	322.00
Import	22.01	22.13	25.26	17.67	7.21	12.17	5.00	5.53	6.50	5.00
Total Supply	214.51	202.63	212.26	193.67	210.21	276.17	318.00	337.53	369.00	370.00
Demand										
Mill Cons.	150.60	149.36	147.00	142.42	150.39	163.98	180.00	194.89	203.00	203.00
S.S.I. Cons.	8.37	10.97	11.70	11.63	13.00	16.57	19.00	21.26	23.00	23.00
Non-mill Cons.	14.39	12.70	13.06	14.78	13.71	14.48	20.00	15.88	15.00	15.00
Export	0.65	0.60	0.50	0.84	12.11	9.14	47.00	58.00	85.00	75.00
Total Demand	174.01	173.63	172.26	169.67	189.21	204.17	266.00	290.03	326.00	316.00
Closing Stock	40.50	29.00	40.00	24.00	21.00	72.00	52.00	47.50	43.00	54.00
* provisional as estimated by the Cotton Advisory Board (CAB) on Oct. 16, 2008										

Data on Area, Production, Yield and Consumption of Cotton in India for the Period from 1991-92 Season onwards

Cotton year	Ara (in 100'00 hectares)	Production (in 100'000 bales of 170kg each)	Production (in 1'000 tons)	Yield (in kg/hectare)	Consumption (in 100'000 bales of 170 kg each (mil+non- mill+small spinning)
91/92	76.01	119.00	2023.00	266.14	111.09
92/93	75.41	138.00	2346.00	311.00	125.01
93/94	74040	121.50	2065.00	278.00	127.00
94/95	78.61	138.50	2354.50	300.00	135.00
95/96	90.63	170.70	2901.90	320.00	154.29
96/97	91.66	177.90	3004.30	330.00	170.16
97/98	88.29	158.00	2686.00	307.00	159.01
98/99	92.87	165.00	2805.00	302.00	165.36
99/00	87.31	156.00	2652.00	304.00	173.36
00/01	85.76	140.00	2380.00	277.52	173.03
01/02	87.30	158.00	2686.00	307.67	171.76
02/03	76.67	136.00	2312.00	301.55	168.83
03/04	76.30	179.00	3043.00	398.82	177.10
04/05	87.86	243.00	4131.00	470.11	195.03
05/06	86.77	241.00	4097.00	472.17	217.00
06/07 (as per CAB 17.5.08)	91.44	280.00	4760.00	520.56	232.03
07/08 (as per CAB 17.5.08)	95.55	315.00	5355.00	560.44	241.00

Production of Spun Yarn (Non-SSI & SSI Units) in Million Kg

Year	Cotton Yarn	Blended Yarn	100% Non-Cotton Yarn	Total Yarn
91/92	1'450	234	122	1'806
92/93	1'569	247	125	1'941
93/94	1'697	305	140	2'142
94/95	1'696	346	158	2'200
95/96	1'894	395	196	2'485
96/97	2'148	484	162	2'794
97/98	2'213	583	177	2'973
98/99	2'022	595	191	2'808
99/00	2'204	621	221	3'046
00/01	2'267	646	247	3'160
01/02	2'212	609	280	3'101
02/03	2'177	585	319	3'081
03/04	2'121	589	342	3'052
04/05	2'272	585	366	3'223
05/06	2'521	588	349	3'458
06/07	2'824	635	354	3'813
07/08 (P)	2'948	677	378	4'003
April-July 08/09 (P)	987	224	318	1'529
April/July 07/08	978	218	125	1'321

P = Provisional

Production of Fabric in Different Sectors (in Million Square Meters)

	01/02	02/03	03/04	04/05	05/06	06/07	07/08 (P)	April- July 08/09	April- July 07/08
Mill Sector									
Cotton	1'036	1'019	969	1'072	1'192	1'305	1'249	398	413
Blended	296	263	253	243	252	330	422	168	134
100% Non- Cotton	214	214	212	211	212	111	110	32	36
Total	1'546	1'496	1'434	1'526	1'656	1'746	1'781	598	583
Handloom Sector									
Cotton	6'698	5'098	4'519	4'792	5'236	5'717	6'076	1'966	2'005
Blended	95	118	117	146	145	99	123	33	34
100% Non- Cotton	792	764	857	784	727	720	804	251	259
Total	7'585	5'980	5'493	5'722	6'108	6'536	7'003	2'250	2'298
Decentralised Powerloom Sector									
Cotton	6'473	6'761	6'370	7'361	8'821	9'647	9'932	3'302	3'304
Blended	5'025	4'695	4'688	4'526	4'632	5'025	4'918	1'796	1'618
100% Non- Cotton	13'694	14'498	15'889	16'438	17'173	18'207	19'886	6'598	6'336
Total	25'192	25'954	26'947	28'325	30'626	32'879	34'736	11'696	11'258
Decentralised Hosiery Sector									
Cotton	5'562	6'422	6'182	7'430	8'624	9'569	9'948	3'450	3'314
Blended	871	800	1'010	1'117	1'269	1'428	1'425	460	487
100% Non- Cotton	634	659	655	565	525	507	431	150	136
Total	7'067	7'881	7'847	9'112	10'418	11'504	11'804	4'060	3'937
All Sectors									
Cotton	19'769	19'300	18'040	20'655	23'873	26'238	27'205	9'116	9'036
Blended	6'287	5'876	6'068	6'032	6'298	6'882	6'888	2'457	2'273
100% Non- Cotton	15'334	16'135	17'613	17'998	18'637	19'545	21'231	7'031	6'767
Total	41'390	41'311	41'721	44'685	48'808	52'665	55'324	18'604	18'076
Khadi, Wool & Silk	644	662	662	693	769	724	763	254	254
Grand Total	42'034	41'973	42'383	45'378	49'577	53'389	56'087	18'858	18'330