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India 2015



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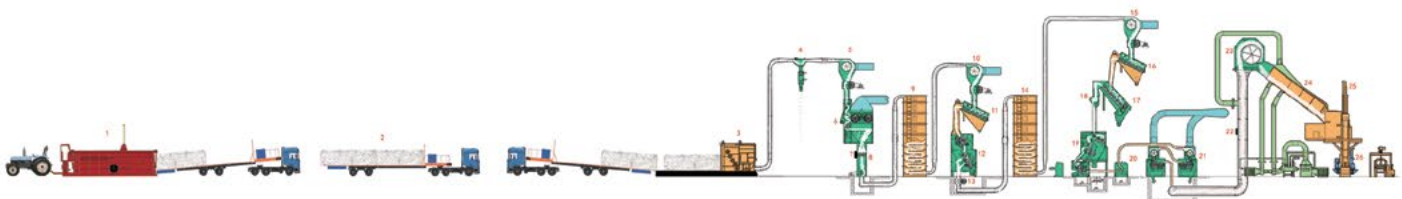
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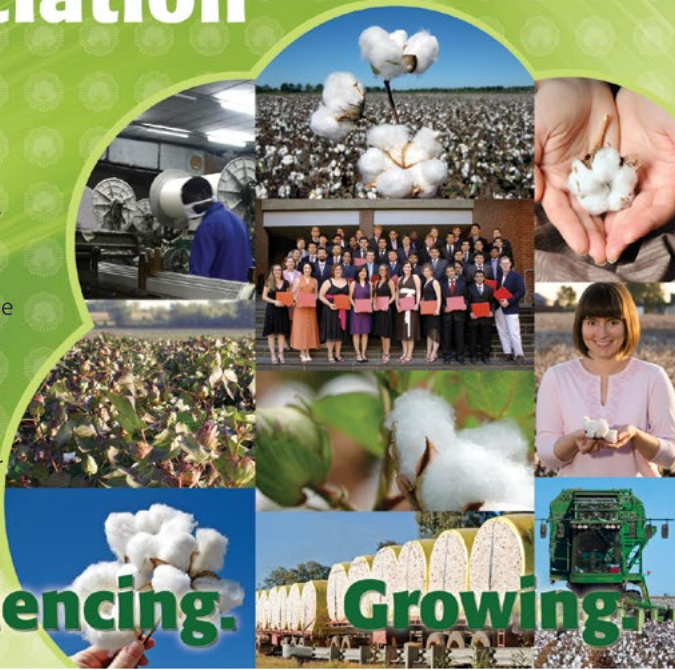


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ICAC returns to Mumbai



Mike Edwards,
Director, Cotton Outlook

In the eleven years since Mumbai last hosted the ICAC Plenary, the international cotton market has seen significant, and occasionally violent, price fluctuations, as well as fundamental shifts in the dynamics of supply and demand, and international trade.

At the time of the earlier Mumbai Plenary, in 2004, the Cotlook A Index was languishing below 50.00 cents per lb. In the period between the two events, it reached an unprecedented high of 243.65 cents per lb, in March 2011, the high point of the notorious 2010/11 season. At the time of writing, the Index is hovering just below 70.00 cents per lb, well over ten cents below the average for the period between the two Plenaries.

Intermittent spells of depressed prices over the past decade or so have of course created serious difficulties for major cotton-producing countries such as India. In two seasons, 2008/09 and 2014/15, the country's Minimum Support Price regime has brought the Cotton Corporation of India into the market, first as a buyer of last resort, then as a seller. In this publication, CCI's Chairman offers some valuable insights into the organisation's *raison d'être*, as well as the practical aspects of its operations.

In 2004, cotton production in India was in the early stages of a period of expansion that would see the country double its output in a decade, having displaced the United States as the world's second largest producer by the 2006/07 season, and supplanted China as the largest producer in 2014/15.

At the same time, China, then a recent member of the World Trade Organisation, was already making a substantial impact on the world cotton market: the country had imported over 1.9 million tonnes of raw cotton during the previous season, as the spectacular expansion of the spinning sector had begun to outstrip the capacity of the country's farmers to keep mills supplied with cotton from the domestic crop. The high watermark of Chinese imports would be reached during the 2011/12

season, when an astonishing 5.3 million tonnes were sourced from the international market. During the 2014/15 season, China's imports were similar in volume to those a decade earlier, but the trend today is unmistakably downward.

The theme of the 2004 Plenary – "Enhancing Cotton's Competitiveness" is no less relevant today. Cotton's endeavour to retain and recover market share in face of relentless competition from synthetic fibres remains an uphill struggle. In 2004, according to ICAC data, cotton's share of world fibre markets had just dipped below 40 percent. Today, that proportion is estimated at under 30 percent, and shows little sign of sustained recovery, despite a period of relatively low and stable raw cotton prices.

If the long-term battle against synthetics, shifting trade patterns and the unpredictable behaviour of prices remain perennial preoccupations of the cotton market, the increased emphasis on sustainability is arguably the most significant new development to have emerged since the 2004 gathering. The establishment of ICAC's expert panel on the Social Environmental and Economic Performance of cotton (SEEP), following deliberations at the 2006 Plenary in Goiânia, in Brazil, represents an important milestone in the cotton industry's efforts to confront the associated challenges, and thereby assert its credentials as a sustainable raw material. Not the least of those challenges is the task of data collection and analysis from a crop characterised by a huge diversity of production models. One can only applaud the work accomplished to date by the panel, which Allan Williams summarises in this publication.

The concept of the supply chain has figured ever more prominently over the past few years, and is embodied in the theme of this year's Plenary – "From Farm to Fabric". As always, the Plenary will allow ample discussion of cotton-related topics both old and new. Few cities, if any, are better qualified than Mumbai, with its long history and present-day importance as a vibrant cotton-trading hub, once again to provide the forum for those deliberations.



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Interview with Mr. B. K. Mishra,

**Chairman-cum-Managing Director,
The Cotton Corporation of India Ltd.
(CCI)**



Cotton Outlook: Particularly for the benefit of our international readership, could you tell us something of the guiding principles behind the Cotton Corporation of India's foundation. What is the principal role of the organisation that you head?

B. K. Mishra: At the time of Independence, most of the cotton growing areas departed from India to our neighbouring country, Pakistan, whereas cotton spinning mills and the textile industry remained in India. These events created a cotton deficit in the country. Further, owing to the successive failure of all agricultural crops, particularly cotton, in the year 1960 and onwards, the cotton-based industry was in jeopardy. Because of this shortage of raw material, the need was felt for a buffer stock of the commodity, to tide the industry over in periods of stress.

Taking into account the gravity of the situation, the Government of India appointed a Committee in December 1969 to consider all the relevant aspects, and submit a comprehensive report for further action.

Among the various recommendations of this Committee, one was the setting up of a full-fledged Independent Corporation for canalizing the import of cotton, and also for purchase and sale of domestic cotton. It was this recommendation which resulted in the birth of the Cotton Corporation of India (CCI), which was set up on 31st July, 1970, as the only public sector undertaking in the field of cotton marketing.

In the initial period of setting up as an Agency in the Public Sector, CCI was charged with the responsibility of equitable distribution of cotton among the different constituents of the industry, and to serve as a vehicle for the canalization of imports of cotton.

With the changing cotton scenario, the role and functions of the Corporation were also reviewed and revised from time to time. As per the policy directives from the Ministry of Textiles, Government of India in 1985, CCI is nominated as the Nodal Agency of Government of India, for undertaking Price Support Operations, whenever the prices of kapas (seed cotton) touch the support level.

Thus, the principal role of CCI is to take up Price Support Operations on behalf of Government of India, as and when the kapas price touches the level of the Support Price fixed by the Government of India, without any quantitative limit.

In the event of kapas prices ruling above MSP level, CCI undertakes commercial operations at its own cost for supply of cotton to mills in the state sector as well as the private sector. All these operations are dovetailed, to benefit the cotton growers on the one hand, and supply of quality cotton to the textile mills on the other hand.

CCI takes up its purchase and sales activities ensuring commercial viability, both in domestic and international operations.

CO: CCI procurements in 2014/15, at over 8.6 million bales were only just shy of those of the 2008/09 season. In the intervening years, the Corporation had intervened much less actively in the market. What have been the particular challenges in 'ramping up' the logistical and ginning capacity from one season to the next, in order to meet such a huge task?

BKM: Yes, it is true that in 2014/15, CCI procured around 8.7 million bales which are the highest purchases after 2008/09. When CCI procured over 8.9 million bales.

Regarding arrangements for logistical and ginning capacity, we would like to inform that every year, well before commencement of the season, CCI finalizes the rates with ginning and pressing factories for processing of stocks and with transporters/job contractors for handling logistics. Thus, CCI always remains in readiness to meet any eventuality of MSP operations with its available infrastructure.

During the occasions when CCI has to undertake massive MSP operations, like cotton seasons 2008/09 and 2014/15, the major share of kapas purchases fall to CCI, and to cope with the available infrastructural arrangements, CCI takes up the matter with the concerned State Governments: the regulation of kapas market arrivals, enhancement of godown facilities, hiring of extra ginning and pressing capacity, and so on.

CO: In 2014/15, intervention was much more active in some states (Andhra Pradesh, Telangana, for example) than in others (such as Gujarat). What factors explain this state-wise pattern of procurement?

BKM: The volume of purchases under MSP operations in any state depends on the infrastructure, namely, the number of mandis (local markets), other competitive crops, the financial health of farmers and land holdings etc. Industrial development in the form of spinning and textile mills also plays a pivotal role in the need for MSP operations in any particular state.

During the 2014/15 cotton season, due to huge inventories worldwide and the reduction of imports by China to a bare minimum level, demand for cotton from mills was very poor, and was limited to their sales of yarn and fabrics.

As a result, prices of raw cotton touched the level of MSP in all the cotton-growing states, in particular in the southern states, such as Andhra Pradesh, Telangana, as well as Orissa, followed by other major cotton producing states like Maharashtra, Gujarat, Madhya Pradesh.

Here we would like to inform that market rates of cotton seed (the by-product of cotton after lint recovery) also play a major role in the market rate for kapas. In southern states like Andhra Pradesh and Telangana, the cotton seed price realization remains lower by 20 to 25 percent in comparison to other central and northern states, due to quality and the heavy cost of transportation of these seeds to the northern states, which is where the bulk of seed consumption takes place in India. Thus, in case of a downward market trend, the kapas prices more easily touch the MSP level than in other states.

In other states, such as Gujarat, cotton quality is mostly proffered in export markets, and farmers obtain more remunerative prices

for their produce, while in northern states, kapas is directly procured by the state mills for their consumption. Hence, the necessity of MSP operations remains less in these states.

CO: CCI's role, we understand, is emphatically not to create a large state reserve or buffer stock of the kind that has been built in China. You have risen admirably to the challenge of reducing the end-of-season carryover to quite manageable proportions. Yet there were some who doubted that this would be possible, given the sometimes adverse market circumstances. Were there moments when you shared such doubts?

BKM: During the season, there were rumours regarding CCI's sales policy for liquidating its stocks. In this regard, we would like to state that CCI adopts a pragmatic approach for selling its stocks, looking to the commercial viability both in domestic and international markets.

In order to make the sales system more transparent and market-driven, CCI commenced the sale of fully pressed cotton bales through e-Auction. For liquidating its stock, CCI fixed the bidding quantity in different lots of cotton bales, each with their respective floor rates, depending upon market sentiment, influenced by the points of view of buyers and sellers, as well as supply and demand. With this strategy, CCI managed to liquidate 80% of its stocks within the season, through competitive bidding at e-auctions.

CO: In addition to its responsibility for price support, CCI can also engage in 'commercial' operations, which you touched on earlier. Can you tell us something more of the nature and scale of such operations?

BKM: On the occasions when kapas prices are ruling above the MSP level, CCI undertakes commercially viable operations at its own cost, in order to ensure competitive prices to cotton farmers and secure the supply to mills in the state as well as the private sector. This also helps the Corporation to recover its overhead expenses, rather than depending upon government support whenever there are no MSP operations.

As a control measure, no commercial purchase operation is carried out simultaneously in a branch where MSP operations are going on.

All the branches have been advised to carry out the commercial purchase operations on viable centres (profit-making centres) only.

Due care is taken to select a particular centre for purchase operations, having minimum infrastructure facilities, such as ginning and pressing factory, storage etc. so as to reduce the overhead expenditure to a bare minimum.



The preference is given to the opening of a centre that has better quality and minimum arrivals of 5,000 bales in the cotton season.

CO: Changes in China's cotton policy have of course proved a very major influence on the pattern of trading in recent seasons. The current policy has led to a sharp contraction of exports to that market. What are the consequences for CCI and for the Indian cotton sector more generally?

BKM: Yes, it is true that, due to the change of policy in China to lower imports, the Indian cotton sector is also affected, as China constitutes about 60% of India's cotton exports.

Due to the above China factor, as well as the cotton glut world-wide, there was subdued demand for textile products across the globe.

The fall in yarn prices and weak realization adversely affected the operating performance of spinning mills, which were carrying high cost cotton/cotton yarn inventories from last season. Due to the decline in yarn prices and exports, Indian spinners witnessed higher inventory levels which affected the capacity utilization of their mills.

In view of this situation, prices of raw cotton became adversely affected and touched the level of MSP in all cotton-growing states. CCI was under tremendous pressure to undertake massive MSP operations. As a result, CCI hard to procure 86.96 lakh* bales.

Financially sound mills generally build up one and a half to two months of inventory, while other mills that are facing a financial crunch keep stocks of 15 days, as they have assumed that CCI has a huge inventory to offer them at market prices. Therefore, despite the offer of sizeable quantities by CCI in e-auctions, mills are not coming forward aggressively to buy for their lean period requirement. Due to the lukewarm response from mills, CCI could not liquidate its whole stocks within the cotton season 2014/15.

CO: Late last year, you intimated in an interview with the BBC that the time had come to 'demotivate'

cotton farmers, encourage diversification of crops and put an end to the rapid growth in cotton production of recent years. Do you still hold to that view? If so, how might this best achieved?

BKM: Yes, there is a need to encourage farmers to diversify their crops, as India and the world have a cotton surplus, i.e. cotton production is more than demand, not only in India, but in the rest of the world too. In the case of India, though area under cotton cultivation is highest in the world, due to low cotton productivity (almost the lowest in the world), the cost of cultivation to farmers remains high. Thus, the thrust should be to enhance productivity rather than the area under cotton cultivation.

Productivity can be increased by adopting various scientific methods like inter-cropping systems, High Density Planting System, etc. The government of India is also making all-out efforts, and promoting High Density Planting System for the enhancement of yields in the country.

CO: What is the outlook for the 2015/16 season? Should we anticipate another season of active CCI intervention?

BKM: As per trade sources, the acreage under cotton and cotton production in the current season 2015/16 is expected to decrease by around 5 to 6 percent, due to switching over in the Northern and Central Zones to other crops such as guar in Haryana, groundnut in Gujarat, soybean and pulses in Maharashtra.

In the last cotton season, the contraction of domestic yarn production for exports, the unlikelihood of a recovery in cotton exports, and a fall in domestic cotton prices below MSP pushed domestic cotton stocks high. These factors are likely to keep domestic cotton prices under pressure in 2015/16 also, and there may be the occasion to effect MSP operations for cotton by CCI, particularly in the states of Telangana, Andhra Pradesh, Maharashtra and Orissa.

**one lakh = 100,000*

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Glory of Indian Cotton



I. J. Dhuria, Director (Materials),
Vardhman Textiles Limited

Role of India in global raw cotton

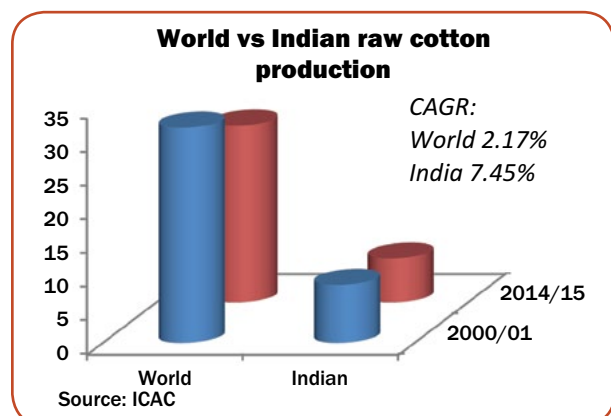
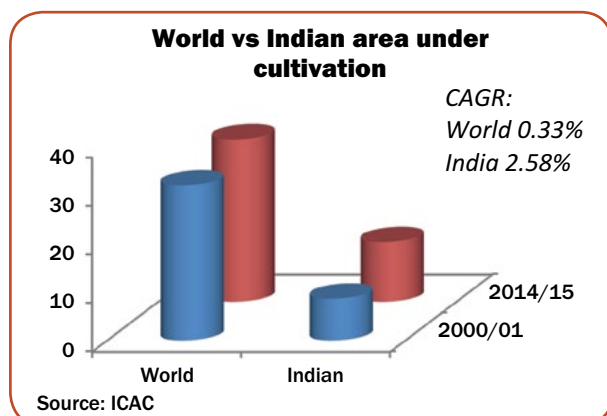
At present, India is the world's largest producer of cotton, as well as the second largest consumer and exporter of the fibre. Cotton is a crucial commodity in Indian agriculture and has played a major role throughout the country's history. India has about 37 percent of the world area under cotton cultivation, and a share of about 25 percent of global production. As per the production estimates of the International Cotton Advisory Committee, India became the largest cotton producer in the 2014/15 season, leaving behind China, where a reduction has taken place in the area under cotton cultivation outside Xinjiang.

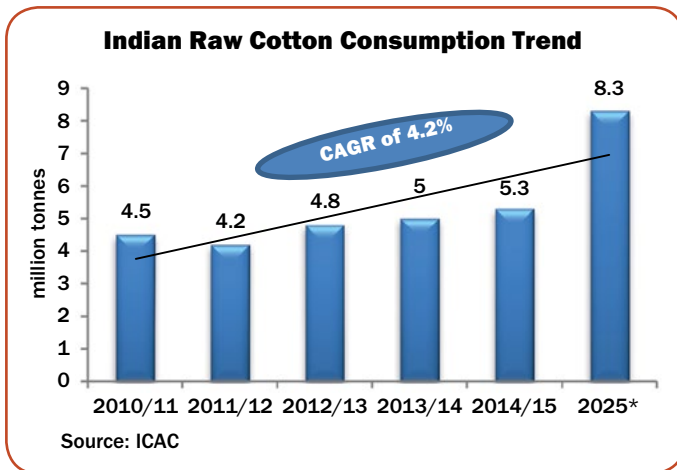
India is likely to remain the largest producer of raw cotton in the years to come. Cotton is not only meeting the country's own fibre requirement but also that of other cotton-consuming countries by way of cotton and cotton textile exports.

Indian area under cotton cultivation during the last 15 years has been expanding at a Compound Annual Growth Rate (CAGR) of 2.58% against a world CAGR of 0.33%. During this period, Indian raw cotton production has risen at a CAGR of 7.45% against the global CAGR of 2.17%. Indian raw cotton production increased about 2.73 times over this period, whereas world production grew 1.3 times. India's share has been about 60% in the increased world production of raw cotton during this period. Indian raw cotton yields have improved significantly over this period, from 278 kgs of lint per hectare in the 2000/01 season, to 531 kgs per hectare in 2014/15.

Trend of Indian raw cotton consumption

Almost 75 percent of world cotton consumption takes place in Asia. If we look at the consumption trend, it can be calculated that India's share has been about 18 to 20 percent during the past five years. Indian consumption of raw cotton has been increasing at a CAGR of 4.2% during this period.



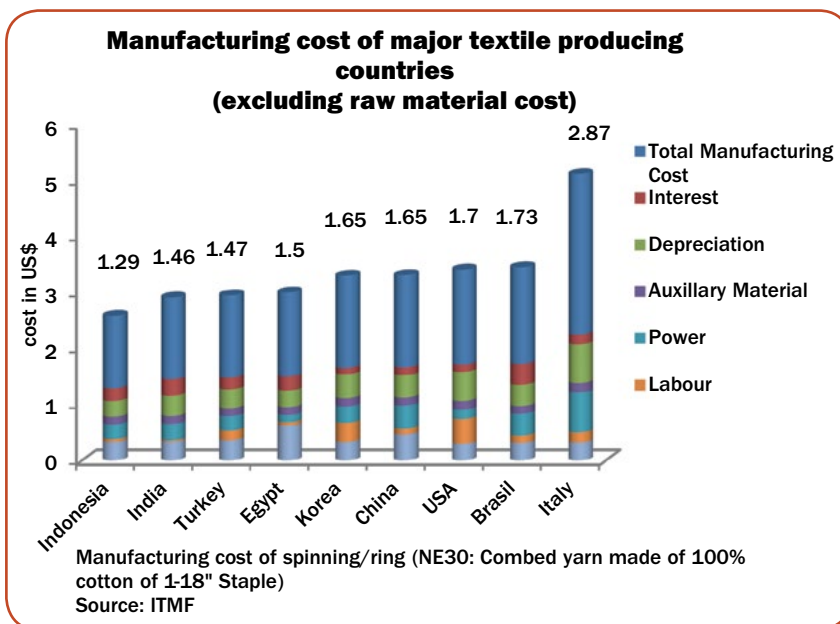


The Indian government is providing various incentives and subsidies to the textile industry for its expansion. The governments of cotton-producing states are also coming up with policies that are encouraging the installation of textiles and apparel machinery, by way of various capital and interest subsidies. Other schemes, such as concessional power tariffs, tax concessions and skill development, will encourage value addition through the entire textile value chain, rather than the supply of unprocessed raw cotton.

Competitive position of India in the world textile industry

India occupies a competitive position among other major textile producing countries:

- ✓ The country has availability, or rather surplus, of its own raw material.
- ✓ As per the survey conducted by the *International Cotton Advisory Committee* for the year 2012/13, the average cost of producing one kilo of lint cotton in India varies from US\$ 0.87 to 1.29 from region



to region, against the world average cost of US\$ 1.50/kg. In China, this cost is calculated at about US\$ 2.06/kg.

- ✓ As per the report of the consultant *Werner International Management* for 2014 (which compared *labour costs* in the primary textiles industry, covering over 85 percent of world production), the Indian labour cost is US\$ 1.12 per operator per hour, whereas in China it is US\$ 2.65. However, there are other countries, such as Bangladesh, Pakistan, Vietnam and Indonesia, in which lower labour costs have been noted.
- ✓ The *International Textile Manufacturers Federation* publishes *International Production Cost Comparisons*, covering nine major textile producing countries, namely Brazil, China, Egypt, India, Indonesia, Italy, Korea, Turkey and the United States. As per the data for the first quarter of 2014, the spinning cost for different countries can be seen from the graph at the bottom of this page.

Pre-eminence of Indian cotton

India is unique among the major cotton producing countries. Its broad range of agro-climatic and soil conditions permits cultivation of all kinds of varieties, and production of fibre whose staple length suits the demands of the product range of our textile industry. India produces short to extra-long staple cotton which satisfies spinners of a wide range of yarns.

Indian cotton has some distinct benefits:

Handpicked Indian cotton

Among the major cotton-producing countries, Indian, Chinese, African and Turkish cottons are mostly hand-picked, whereas in the United States, Australia and Brazil, the crop is harvested mechanically. Although mechanically-picked cotton has less contamination, it has a higher degree of trash content, leaf and extraneous plant matter. In hand-picking, seed cotton is gathered delicately so that it has lower trash content and extraneous plant matter. Hand-picked cotton has better spinning value, as it requires less mechanical treatment to clean the trash content in seed cotton at the ginning stage. Because of this, fibre properties are maintained.



In the Xinjiang region of China, where both hand-picked and mechanically-harvested cotton are available to spinners, the hand-picked cotton commands a premium of 800 to 1,000 yuan per tonne over mechanically-picked cotton, because of the former's better spinning value.

Roller-ginned Indian cotton

Most Indian cotton (more than 95% percent) is ginned on double roller gins, whereas in the other major cotton-producing countries, saw gins, which boast higher productivity, are more prevalent. However, roller-ginned cotton enjoys the following advantages over saw-ginned fibre:

- ✓ Roller ginning uses a rotary knife to separate the seed from the lint, and this separation process is gentle on the fibre that better retains the fibre length. Saw ginning is less gentle on cotton, since it uses a row of saw blades to pull cotton through the system. In saw ginning, there are more cuts on the fibre, with the result that fewer fibres are retained in the lint. Normally, if the same quality of seed cotton is saw ginned, it will yield fibre of shorter length than if it were roller ginned.
- ✓ As roller ginning is more fibre-friendly, it improves properties such as length, uniformity, fineness and also produces fewer short fibres.
- ✓ The generation of neps in the roller-ginning process is lower as compared to saw ginned cotton. This reduces spinners' need to make adjustments while processing cotton. The card is the first machine used to reduce neps. A spinner reduces the speed of the cards if the level of neps in the raw cotton is higher. Removal of neps in the spinning process is essential, otherwise imperfections (thick places) will not only result in the yarn but also have an impact on dyed fabrics, as they will dye differently from the rest of the fibres.

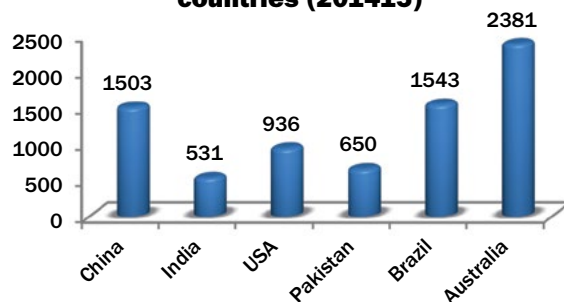
Indian cotton's quality parameters make its touch and feel very soft and smooth.

Areas for Improvement

There are certainly some areas in which the country needs to improve. There is a requirement for both quantitative and qualitative improvements in relation to cotton.



Yield level of major cotton producing countries (2014/15)



Source: ICAC

Quantitative areas of improvement:

Yields in India vis-à-vis those in other major cotton-producing countries

India has the largest area in the world under cotton cultivation. It is about three times larger than that cultivated in China, yet there is no significant difference between each country's cotton production. India's cotton area is roughly three times that of the United States, but its output is about double the US crop, owing to lower yields per hectare.

A comparison of Indian yields with those of other major cotton producing countries can be seen from the graph above.

If India could achieve yields equivalent to the present world average of 784 kgs per hectare, then the country would be producing about 9.6 million tonnes of cotton lint from its present cotton area of about 12.25 million hectares. This volume of cotton production would be equivalent to about 39 percent of present world cotton consumption of 24.35 million tonnes.

Qualitative areas of improvement:

- ✓ In India, grading of cotton is not properly done. Better grade cotton is mixed with

marginal grade cotton, then marketed at the same rate.

- ✓ There is no branding for Indian cotton such as that established by other countries, for example 'Supima' for ELS in the United States.
- ✓ The packing material used for Indian cotton is not standardized. Different ginnerers use different kinds of material for bale packing that are made of 100 percent polyester, or blended. Use of 100 percent cotton cloth for the packing of Indian cotton bales must be made mandatory. The Cotton Corporation of India ensures that packing of the cotton bales it gins should be 100 percent cotton fabric.
- ✓ The high level of contamination is a key factor that causes Indian cotton to be discounted, despite the excellence of its fibre properties.

High Density Planting System, Mechanical Picking

Over the past few years, several countries across the world have moved towards a **High Density Planting System** (HDPS), in order to optimise yields. This system is commonly followed to obtain higher yields from the standard varieties. HDPS is best suited to those countries with rainfed cotton areas and marginal or light soils. In this system, compact, non-branching varieties, with fewer bolls per plant, are sown with a large number of plants per hectare. Even if only a nominal 5-6 bolls are produced per plant, by sowing 220,000 plants per hectare, it is possible to obtain about 40 quintals of seed cotton per hectare, with fewer inputs. Compact varieties, with fewer leaves and branches, also reduce the cost of weed control and facilitate effective weed management.

As per the Indian census of 2011, the country's population was about 1.21 billion, and it is growing continuously. As a result, there will be a greater requirement for land to meet the needs of the increased population for food grains and shelter. Hence, cotton will be competing for land.

The adoption of **Mechanical Picking** could place India among the countries producing less contaminated cotton. Therefore, a reliable picking machine which is suitable for our small farm size is much needed. For mechanically-picked cotton, *pre-cleaners* are required before ginning, as mechanically-picked seed cotton has higher content of trash and leaf matter, as compared to hand-picked cotton. However, more mechanical treatment in

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order to clean the cotton would tend to reduce its spinning value. As we have seen, there would be more seed coat neps, trash content, lower staple length and higher short fibre content. Therefore, the country faces a dilemma between the merits of hand-picked and mechanically-harvested cotton.

Efforts made by the country

India is making sincere efforts to improve yields. The roadmap for improvement from the present level of about 500 kgs of lint per hectare to about 1,000 kgs per hectare is under development:

- ✓ *Technology and crop improvements:* use of biotechnology in cotton cultivation, seed improvement and a reduction in the use of insecticides, improvement of the quality of the crop, adoption of the high density planting system.
- ✓ *Better production practices:* improvement of production practices followed in cultivation of cotton. Promotion of mechanization, rehabilitation of irrigation systems, drip irrigation, integrated nutrient management and better harvesting practices.
- ✓ *Post-harvest processing:* upgrading ginning machines so as to develop quality standards and become more energy-efficient, improved cotton classification and grading for a better marketing of quality cotton.

Summary

The advantages of Indian cotton, and the growing international competitiveness of the country in cotton textile production, mean that, over the next ten years, India will remain a major cotton textiles hub, supplying more value added products to the entire cotton textile value chain.

Challenges Facing the Ginning Sector in India



By Mr. Lalit Kalantri,
Bajaj Steel Industries Ltd.,
Nagpur, India.

Preface

Cotton, the White Gold, is a unique crop, as its every item has multiple uses; the optimization of each component at the processing stage is a sure way to meet the current challenges facing the ginning sector in India. The retention of natural fibre parameters, higher outturn of cleaned cotton fibre, obtaining undamaged and cleaner cotton seed etc. by adopting improved processing technologies, have been a contributing factor in value addition to cotton. However, the Indian ginning industry is facing several challenges which affect quality parameters of fibre and cotton seed - finally resulting in lower realization.

Ideally, the quality of the constituents i.e. cotton fibre and cotton seed, before ginning and after ginning, should be more or less the same. However, it is seen that substantial damage is caused to quality parameters during processes in the ginning factories.

The selection of cotton fibre for spinning is made on the basis of fibre quality, and any damage in the same during the process of ginning reduces the value of the fibre and results in a lowering of value in the textile value chain.

The development of high speed spinning and weaving machinery has necessitated better cotton fibre parameters, and any damage in quality caused while ginning cannot be rectified later. The defect is carried forward to yarn and fabrics during the spinning and weaving processes.

The economics of the ginning operation are greatly affected by damage to the quality

of the constituents, i.e. cotton fibre and cotton seed. Lower realization due to the same affects the farmer down the line, as the pressure of lower realization by ginners results in a lower price for seed cotton being paid to him.

The major challenges being faced by the Indian Ginning Sector are stated below:

Extra Moisture/Water Content: The picking, transportation and sale of seed cotton are based on 'per kilo' considerations, hence every stage tries to increase the weight. For example, the picker wants to add some immature bolls or pick at a time when moisture content is higher. The transporter adds water so that he can remove some seed cotton and maintain the weight and get more profit by selling wet seed cotton in areas where the ginner is required to buy seed cotton, in order to meet his commitments and achieve volume to divide expenses. These practices increase the moisture content even above 25% in many areas and, in the absence of the use of dryers, seed cotton is fed to Double Roller Gins in a wet condition, finally resulting in higher trash content, cut seeds and a deterioration of colour value.

Efforts are being made to correct this scenario, and the first cotton pre-cleaning plant has been set up in the cotton yard of Cotton Mandi in Malout, Punjab. This plant will give farmers the value added service of getting their cotton crop cleaned, before putting it up for sale, thereby getting better returns for their produce. The clean cotton will create a win-win situation for the Indian cotton ginning industry as well as for farmers.

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Plant installed at Cotton Mandi in Malout, Punjab by BSIL involves Seed Cotton Drying and a Pre-Cleaning System for Machine Harvested Cotton, wherein the price for harvesting and cleaning may even be lower than that of manual picking.

improvement in the process of ginning and control of output parameters. Each and every bale should have its unique, centralized production number, with a predetermined sample size for independent/ Government-recommended quality labelling, wherein each bale will be certified for quality



Fig.1: Cotton Yard of Cotton Mandi in Malout, Punjab under construction

parameters. Ginners can obtain a better price for bales which have been certified to have better fibre parameters. Similarly, if the cotton seed samples are tested and certified for quality parameters by an independent/ Government agency like USDA, ginners will get a good price for quality, users will be sure to get optimum use. Sample cutters are available with each modern bale press.

Absence of Quality Control Institutions such as USDA: Good ginners may not be able to fetch a proper/higher price from mills for their product, as there is no centralized quality-control driven

Fire Control: Ginning units in India are prone to catch fire due to almost 1000 RPM Simple Harmonic Motion (SHM) of the fixed and moving knife, and some stone/iron particles present in seed cotton can get stuck in between its clearance. Sensor-based fire detection and diversion systems



Fig.2 : Bale sample cutter in use.



system in place in India. Bales of cotton are mostly purchased by mills through brokers, who just talk about the lowest price and do not want to involve themselves in quality issues. Thus, the better fibre parameters are not considered, and all cottons, whether with higher trash and moisture or with lower trash and moisture, are purchased at the same price for mills by brokers, which discourages the

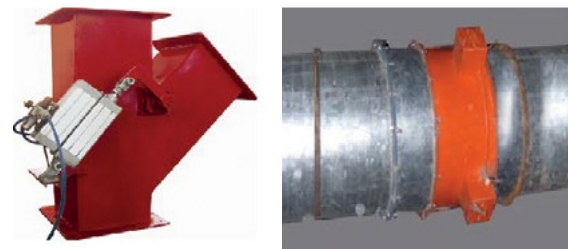


Fig.3 : Fire detection & diversion set-up for Ginning Industries.

in the line pneumatic conveying system have been introduced, which can effectively control the risk of fire hazards and can avoid fire losses to ginners.

Absence of Premium for Quality Cotton from Spinning Mills: Ginners are required to invest in better drying and cleaning equipment to produce quality fibre, which involve interest costs and weight loss. However, spinners prefer to install cleaning equipments in their mills themselves, at extremely high cost (almost 3 times or more). They also lose a higher quantity of cotton but due to the purchase mechanism they are not willing to pay a higher premium for quality cotton to ginners, which discourages ginners from producing clean cotton, and the name of Indian cotton deteriorates in the market. Spinners should evolve a mechanism to

assess quality parameters at ginning factories, and pay suitably for higher quality cotton, which in turn will provide a win-win situation for ginners and mills.

Absence of Bar Coding on Bales: Bar coding will establish a link between the ginner and the user to verify quality parameters. The absence of the same is depriving ginners of resultant benefits. The Textile Commissioner of India and other agencies are making efforts to implement bar coding, which in turn will provide an atmosphere of trust and result in better realization.

Efforts are in progress to minimize the effects of the above challenges at present faced by Indian ginners, and significant improvement should be seen in the near future.

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Recent developments in India's raw cotton market

A merchant's perspective



John Pestell, Managing Director
ECOM India

Having moved to India in January 2007 to set up a local cotton merchandising operation for ECOM, I have witnessed at first hand many changes within the Indian cotton supply chain during the past eight years, which have presented new and exciting challenges for both local and international cotton merchants alike.

This article will focus on four main areas: production, consumption, exports and imports - all of which represent key components of the cotton merchant's business, strategy and market analysis within India - and will finish with some general comments.

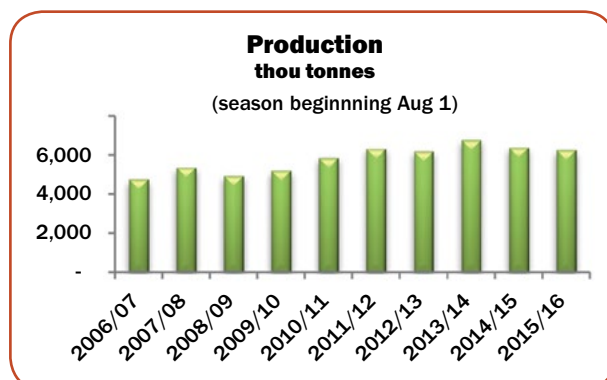
Production

Planted acreage started steadily increasing from the mid 2000's, reaching a peak of around 12.5 million hectares in 2013/14. In the coming years, we might expect India to retain its position as the country with the largest planted cotton acreage of between 11 and 12 million hectares. During the

same time period, thanks in part to various Indian Government initiatives, Indian farmers were able to embrace new Bt. seed varieties, and this has helped to increase nationwide average yields, from below 300 kgs per hectare to above 475 kgs per hectare - in the state of Gujarat we can now expect well above 500 kgs per hectare on a consistent basis. Whilst this obviously represents a significant increase, overall yields are still comparatively low versus other major cotton producing countries.

On that note, there are many ongoing important field projects being undertaken and sponsored by Indian spinning mills, BCI, local and foreign Non-Governmental Organisations, cotton merchants, retailers, pharmaceutical and seed companies alike, to assist producers to continue to improve farming practices, increase yields and ultimately create a better and more sustainable livelihood and environment. All of these commendable projects are extremely important towards supporting and improving the overall Indian cotton supply chain, from field through to fabric.

As a consequence of the above developments, cotton production started significantly increasing, from below 30 million bales (170 kgs) in the early to mid-2000's to a peak of 39 million bales (170 kgs) in 2013/14. For the foreseeable future, we can probably expect India to continue to produce anywhere between 35 and 38 million bales (170 kgs). The monsoon season has a significant impact on cotton production in India and this is obviously something nobody can control. However, if all stakeholders, including the cotton merchants, continue diligently to help farmers further increase





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yields, then production levels can conceivably take the next leap to well above 40 million bales. India has already overtaken China as the world's number one cotton producer, so any further increase in production would help to consolidate that position.

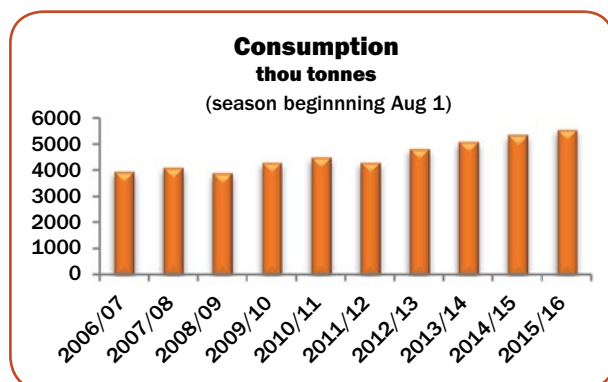
The Technology Mission on Cotton programme (TMC) was launched by the Government of India in February 2000 to improve production, productivity and the quality of cotton. In conjunction with increased acreage, yields and production, ginning practices have also noticeably improved and there are now many certified TMC approved gins. New seed varieties, alongside better practices adopted at both farm and gin level, have helped to improve the overall quality of Indian cotton, especially that of the J-34 variety grown in North India. Contamination remains an issue but efforts are steadily being made to improve this aspect of Indian cotton.

The merchant community has joined forces with other stakeholders to play a key role in promoting better quality cotton, and has also been instrumental in monitoring and controlling weights and bale packaging. As we will see later in this article, all this has helped to elevate Indian cotton to hold a prominent position in export markets.

From time to time, the Indian Government Minimum Support Price (MSP) operation, which is executed by Cotton Corporation of India, provides an important safety net for farmers during times of low prices. It can have a very significant impact on the make-up of the overall supply and demand balance sheet, as well as on price discovery. Merchants have to be very aware of all the implications and be able to adapt their strategy accordingly.

Consumption

In recent years, cotton consumption in India has been on a similar upward trajectory to that of cotton production, although perhaps not quite as steep. Consumption has been steadily increasing year-on-year since the early to mid-2000's, from around 22 to 23 million bales (170 kgs), to as high as 31 million bales in 2014/15. Despite the prevailing



textile business conditions being difficult, Indian cotton consumption is still expected to continue growing at 2% to 3% for the next few years, and this rate of growth may increase further should overall business conditions improve. For example, due to the local state government incentives offered in Gujarat, at least one million new spindles are expected to come into operation within the state during the next twelve to eighteen months.

On a macro level, due to various Chinese government policies, cotton consumption has been migrating away from China towards the Indian sub-continent and particularly India itself. One of the main drivers has been a dramatic increase in yarn import demand from China, which has helped to push average monthly Indian yarn exports from 60 million kgs five years ago to well above 100 million kgs today. Consequently, during the past few years, there has been a lot of investment across India in both the installation of new spindles and the upgrading of old spindles.

However, it remains to be seen how sustainable is the continued growth in yarn exports to China and the next natural step for Indian mills will be to focus more on greater value addition. The recently-signed Trans-Pacific Partnership (TPP), which is a trade agreement encompassing the textile sector as just one part, and which includes 12 Pacific rim countries, but which does not obviously include India, will ultimately present new market challenges, especially for the export-orientated Indian spinning mills to remain efficient and competitive. It is currently cited that Vietnam is likely to be the biggest winner within the textile sector under the new TPP agreement.

On this note, international merchants with local operations have been focusing more and more on supplying and servicing the local textile industry. Newly-defined relationships have been created with local Indian spinning mills, with the merchants providing risk management services, vendor-managed inventory models, and cash and carry operations via their own regional warehouses. Via all of these mechanisms, the merchant is able to facilitate the efficient management of the Indian cotton supply chain by being able to buy when the Indian producer wants to sell, and by being able to sell when the Indian consumer wants to buy. We expect the trend for domestic-orientated business by international merchants to continue to flourish.

Exports

In view of the increase in production mentioned above, we saw a tremendous surge in exports during the last eight years, from less than five million bales to as high as twelve million bales (170 kgs) in 2013/14 - this was primarily led by a dramatic increase in demand for Indian cotton by China,



which regularly accounted for more than 65% of India's annual cotton exports in recent years.

Both local and international merchants played a key role in facilitating this export business. Although the most recent trend has been for a significant drop in cotton exports, falling to only 5.5 million bales (170 kgs) in 2014/15, driven by China importing much less cotton and much more yarn, exports are still expected to stabilize at around 5 to 6 million bales for the next few years. Merchants and all stakeholders have to remain very cognizant of the government policies in China towards both cotton and yarn, since these have a significant impact both in India and elsewhere.

The growing domestic market and other export markets such as Pakistan, Bangladesh and Vietnam have picked up some of the slack created by China's sudden reduction in cotton imports from India. Merchants have been instrumental in opening up cross-border land routes via Wagah to Pakistan and Benapole to Bangladesh, managing complex trucking logistics in the process, and thereby providing just-in-time deliveries for the spinning industries in both neighbouring countries.

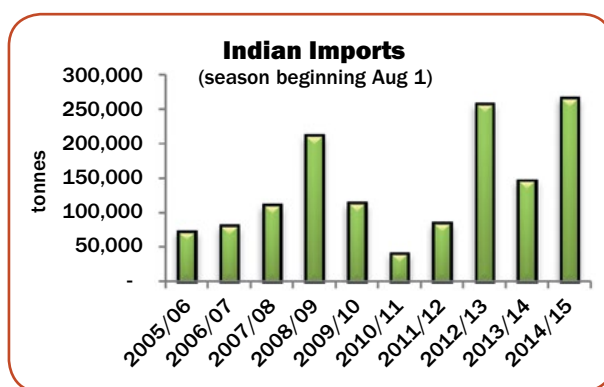
International as well as the top Indian merchants have contributed significantly to improving the quality, weights, logistics and contract performance in relation to Indian cotton exports. However, due to volatile prices and market dynamics in recent years, merchants have had to steer their way through the minefield of ever-changing government policies and unpredictable counterparty risk. This has not always been easy and, as a consequence, exports have become a fiercely competitive, low margin business with the price discount for Indian cotton ever widening versus other cotton origins.

The challenge going forward will be for the merchants to help to restore confidence in export markets for the consistent and efficient supply of Indian raw cotton. This should help to improve the pricing for Indian cotton vis-a-vis alternative growths, and ultimately this can only be beneficial for the Indian farmer.

Imports

Despite India becoming the world's largest producer and second largest exporter of cotton in the world in recent years, the country also continues to maintain a healthy level of imports. Imports have averaged about 1.2 million bales (170 kg equivalent) during the past 6 years, with the focus mainly on West African, East African and ELS varieties, particularly US Pima.

International merchants, in particular, have been the primary source of this cotton, with most of the demand coming from the South Indian mills during the 'off' season, when the availability of local Indian supplies tends to become more tight. The increase in logistics costs, trucking Shankar-6 cotton from Gujarat to South Indian mills, has at times prompted greater demand for competitively-priced imports, especially from East Africa considering the short voyage time.



International merchants have also been able to offer just-in-time deliveries to South Indian mills from stocks that are either held in consignment in nearby Malaysia, or which are even still afloat. Furthermore, they have been able to use their own local operations to consign imports to the South Indian ports. All of this has allowed merchants to reduce delivery times to the mills, which can be a very attractive service, especially when passing through periods of volatility in the Foreign Exchange market. It is almost akin to converting the import business into a domestic style business.

If, as mentioned earlier, consumption locally in Gujarat continues to expand, then the South Indian mills may become more reliant on sourcing imports from merchants, and taking advantage of the logistical and risk-management services that they can provide. For now at least, cotton imports are free from any Government restrictions.

General Comments

The introduction of a cotton futures contract on the local MCX exchange in Mumbai has been a welcome addition to risk management tools - it allows merchants and all stakeholders to hedge their cotton price risk locally. Merchants in particular are becoming more and more active but, in comparison to the international exchanges, the open interest and liquidity are still very small. After three years, we might still consider the contract to be in its nascent stage, but each year the exchange has been making important changes which make for a more accountable delivery process, and which in turn should provide the confidence for more stakeholders in the cotton supply chain to use it as a viable, local hedging mechanism.

Although India still remains largely a spot market, merchants continue to develop price risk management services for both buyers and sellers, including 'on-call' and Guaranteed Maximum/Minimum Price products. Managing foreign exchange risk exposure is also a key component. Forward business still tends to be restricted to intra-trade transactions, but the aforementioned products have been utilized widely within that arena as well, especially between international merchants with local operations and Indian merchants.

Since the international merchants first set up operations locally, regional brokers have been playing a larger role, with new trade relationships being formed. This is important for managing counterparty risk, which remains a major issue in India, especially on forward business. In conjunction with both the Cotton Association of India and International Cotton Association, merchants have been working very hard to educate all stakeholders in relation to trade rules, good working practices and arbitration.

To conclude, India is one of the few countries that experience everything in terms of significant production, consumption, exports and imports, and one can easily see that in recent years the entire Indian cotton supply chain has been in a constant state of flux. Despite all the recent changes and improvements, it is still a very fragmented supply chain even today, but will continue to adapt and evolve for the foreseeable future. Merchants will continue to play a key role in shaping the future dynamics of the Indian cotton industry and, whilst they and all stakeholders will continue to be faced with many challenges on the road ahead, there should also be exciting new opportunities along the way.



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A Soft Landing?



José Sette,
Executive Director, ICAC

As we approach the 74th Plenary Meeting in the history of the ICAC, this is an appropriate moment to reflect on the changes that are occurring in the world cotton market. Twelve months ago, I wrote in this same space that we were entering a period of transition that brought with it great uncertainty. After all, the Chinese government had recently announced that it would no longer maintain its policy of supporting farmers by purchases of cotton lint for its strategic reserve.

Over the preceding five years, the build-up of a massive stockpile of cotton in China was the single most influential factor in the market. The effects of this policy were manifold: production during the period exceeded consumption by more than 13 million tonnes; imports soared; and prices were substantially higher than their long-term average. In some ways, these developments can be seen as positive: the incomes of farmers rose; traders benefited from increased export and import volumes; and price volatility subsided after the extreme variability, the highest on record, experienced in 2010/11.

The costs of these benefits, however, were great. High prices caused consumption to fall and then stagnate. In 2013/14, world mill use was 23.6 million tonnes, about three million tonnes less than the amount consumed in 2007/08. Even more important, world cotton stocks reached 20.3 million tonnes, equivalent to just over ten months of consumption. The stock-to-use ratio stood at 0.86, the highest since records began to be kept immediately after the end of the Second

World War. Cotton was losing consumers and damaging its long-term growth prospects.

In this context, the decision by the Chinese government to radically change its strategy was a source of great uncertainty, especially since no clear signals were provided as to the new policies that would be installed. Some analysts feared the cotton market would be in for a “hard landing”, as large volumes from the reserve stocks were likely to be released. One year later, we are in a better position to evaluate the changes in our operating environment.

With regard to production, the Chinese opted to subsidize their own farmers directly, instead of indirectly supporting prices for farmers all over the world through stock purchases. In response, world prices, as measured by the Cotlook A Index, fell by just over 20%, from 91 cts/lb in 2013/14 to 71 cts/lb in 2014/15. The fall in prices did not have an immediate effect on production, since planting decisions are largely determined by prices in the preceding season, which had still been high. In 2014/15, production was 26.1 million tonnes, a drop of almost 1% in relation to the previous year and the lowest level since 2010/11.

World cotton trade continued to adjust. As a result of the reserve policy, Chinese imports had soared from 1.5 million tonnes in 2008/09 to 5.3 million tonnes in 2011/12, a season in which China accounted for 55% of world imports. In 2014/15, this figure fell considerably: China imported just 1.8 million tonnes and world trade fell to 7.6 million tonnes, the lowest figure since 2010/11.

Demand, which had been negatively affected by high prices in preceding years, was spurred by the drop in prices. World mill use increased from 23.6 million tonnes in 2013/14 to 24.5 million tonnes in 2014/15, a healthy growth rate of 3.5%.

However, 2014/15 was still marked by a production surplus. Consequently, stocks rose by 1.5 million tonnes and the stock-to-use ratio reached 0.89, equivalent to almost eleven months of mill use. However, unlike previous seasons when China held most of the surplus stocks, many other producing countries also saw their stocks increase. At a record of 12.7 million tonnes in 2014/15, China's ending cotton stocks rose 5%, while stocks in the rest of the world increased by 11% to 9.2 million tonnes.

Overall, 2014/15 presented a mixed picture. Prices fell and demand rose, but production and stocks had not yet begun to adjust. Although the 2015/16 season is still in its early stages, one can already see that this process of adjustment is likely to strengthen.

Production is forecast to drop to 23.9 million tonnes, a fall of 9% in comparison with 2014/15, as lower prices begin to have a more marked effect on growers' decisions to plant cotton. The reduction in output has been widespread, although the brunt of the adjustment has been borne by China and, due to unfavorable climatic conditions, Australia. World trade is expected to show further declines, as Chinese imports continue to contract. Meanwhile, consumption, which was the one bright spot in 2014/15, is expected to continue growing, albeit at a lower rate since the increased competitiveness brought on by the fall in cotton prices has been partially offset by lower prices of man-made fibers. Indeed, polyester prices have fallen considerably as a result of lower raw material, i.e. petroleum, costs. Cotton is consequently less attractive in comparison. Even so, ICAC estimates that cotton consumption will rise by 2% in 2015/16. Overall, for the first time in five seasons, demand will be greater than production. In consequence, stocks are expected to fall by 1.1 million tonnes and the stock-to-use ratio will show a modest reduction, to 0.86.

The question remains as to whether current conditions will persist into the future. Can we plan ahead based on a scenario of a relative balance between production and mill use, and the maintenance of prices at their current levels of just over 70 cts/lb?

The answer to this question will largely be determined by the disposal of Chinese official reserve stocks. At the end of 2014/15, these were estimated at 11 million tonnes, accounting for 145% of annual mill use by China. This level is far higher than the one necessary for China to achieve its goal of assuring supplies to its large textile industry. Beginning in July, the government started to hold regular auctions of stocks. Although more than one million tonnes were placed on the market, prices and other conditions have not proved attractive to buyers and sales have amounted to less than 60,000 tonnes. So, the overall size of the official reserve remains largely unchanged. As yet, there seems to be no overwhelming pressure to reduce these stocks more expeditiously. However, the recent turbulence in the stock market and devaluation of the currency bring new elements of uncertainty to the macroeconomic environment in which Chinese cotton policy is determined. If this step-by-step approach to the reduction in stocks continues to be applied, the cotton market will be able to adjust gradually. However, several years will be necessary to absorb these record stocks without depressing prices. In other words, a "soft landing" will require a very long runway.

Meanwhile, the 74th Plenary Meeting of the ICAC provides a valuable opportunity to reflect on a wide variety of themes, from farm to fabric, that are relevant to the future of cotton. Among the many topics that will be discussed are: innovations in mechanical picking; ways to reduce the use of insecticides; the empowerment of women; exchanges of cotton germplasm; and how retailers view cotton. I welcome all participants and wish you a fruitful week of discussions.



Thessaloniki to Mumbai

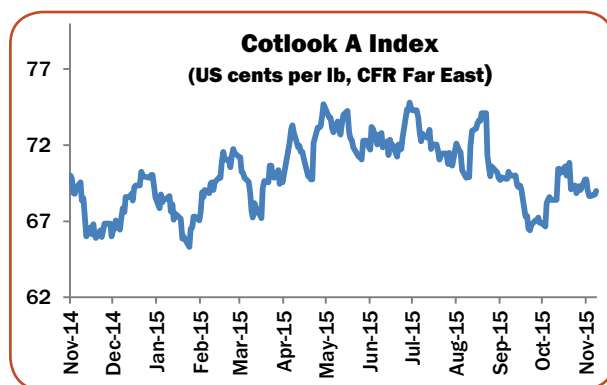
World cotton market in the doldrums



Mike Edwards,
Director, Cotton Outlook

The period since ICAC last met in Plenary session (in Thessaloniki in early November 2014) has been characterised by relatively stable international cotton prices, at least in comparison to the previous few seasons, and if one considers the market solely in terms of the US dollar.

The lack of a clear direction is demonstrated by the behaviour of the Cotlook A Index since the Plenary in Greece. At the time of writing (in early



November), the average of the Index since the last Plenary is almost exactly 70.00 cents per lb. The high and low points during the period are 4.80 and 4.70 cents, respectively, above and below that average – an indication of the range-bound nature of the market over the past year or so. To put that recent price range in context, one should not forget that, as recently as March 2014, the A Index was within touching distance of one dollar per lb.

How has the recent behaviour of prices affected the dynamics of world

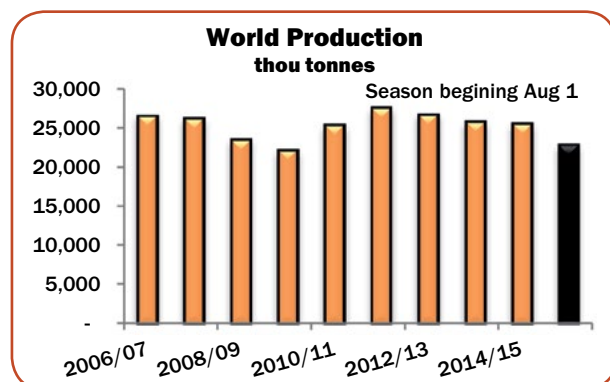
supply and demand, and vice-versa?

In a well-functioning market, one might expect the aforementioned fall in world prices during 2014 and the subsequent period of stability to have taken some land out of cotton cultivation, and to have provided a boost to mill consumption.

World production

A superficial glance at world supply and demand statistics would seem to corroborate the first of those two assumptions. According to Cotton Outlook's latest forecasts, for the first time since the 2009/10 season, world production in 2015/16 will dip below 23,000,000 tonnes, a reduction of over ten percent in comparison to the previous campaign.

However, closer examination reveals that two countries, the United States and China, respectively the world's largest exporter and importer of raw cotton, account for around 65 percent of the estimated fall in output. If one takes account of



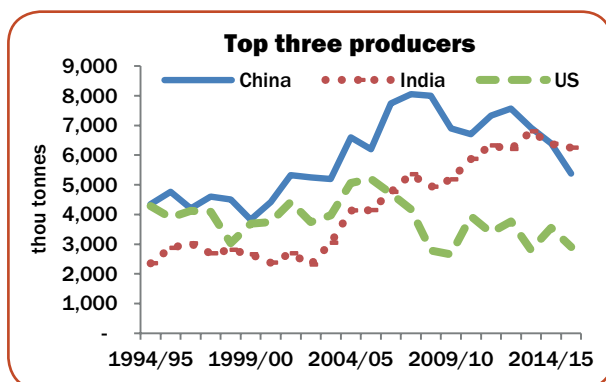
this season's smaller crop in Pakistan, where insect pressures rather than market forces have been most influential, the proportion approaches 80 percent.

In the US, by contrast, the better returns promised by some other crops cotton saw plantings reduced in the spring of this year by over 22 percent, according to the Department of Agriculture. The expectation had been that ample rainfall in the key West Texas growing region might boost yields, and limit abandonment, thereby offsetting partially the fall in area. However, USDA's August report surprised the market, with a relatively pessimistic view of both yields and abandonment (though the decline in forecast *harvested* acreage from last season is well below that of plantings, at around 13 percent). By early November, attention had shifted to the impact of heavy and prolonged October rainfall on yields and quality across the belt.

As for China, the sharp fall in cotton plantings has occurred both in the major producing region of Xinjiang, where area has fallen by about ten percent, but more particularly in the country's two other main producing regions. Outside Xinjiang, a downward trend has been apparent for several seasons, but has become more pronounced as the latest shifts in government policy have been absorbed in erstwhile major cotton producing provinces. Shandong has seen a reduction of cotton plantings in 2015/16 of 22 percent, Hebei a fall of 31 percent and Hubei a decrease of 41 percent. Unlike their counterparts in the Xinjiang Autonomous Region, farmers in eastern cotton-producing provinces no longer (post the state procurement policy that ended in 2013/14) enjoy generous state support. The longer-term sustainability of cotton cultivation in those areas thus appears in some considerable doubt.

Despite a moderate decline in planted area (down some eight percent), production in India is expected to fall only modestly (as a result of higher yields), with the result that, in 2015/16, the country will decisively supplant China, where output is on a clear downward trajectory, as the world's largest cotton producer.

The scale of any reduction in output promises to be modest in most other major



producing countries, and in some cases can be attributed to weather-related factors, or pest attacks, as in Pakistan, rather than a response to price signals from the world market.

The bulk of Central Asian output is cultivated at the behest of governments. Few comparable cash crops are available to producers in Africa's Franc Zone, which accounts for roughly 70 percent of the continent's output. The weakness of the euro (to which the CFA franc is linked at a fixed parity) has served to support prices in local currency terms. In several other parts of Africa, where little or no government support is available, the viability of cotton production at current world prices would seem to be in question.

Currency factors have had a major impact on the economics of cotton production in other parts of the world. Our earlier observation that cotton prices have shown relative stability over the past year or so is valid if one considers dollar values. The spectacular the movement in the currencies of some major exporting countries has far outweighed the modest fluctuation of the dollar-denominated A Index.

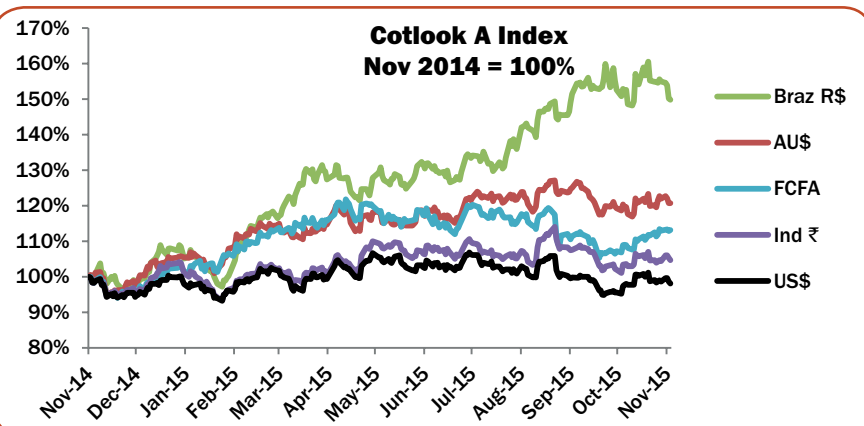
During the past twelve months or so, the US dollar has risen in value by some 7 percent against the Indian rupee, and by 15 percent against the euro-linked CFA franc (though in the latter case the figure reached a peak of 25 percent in March of this year, before the euro regained some ground). One US dollar is worth 23 percent more Australian dollars than in early November 2014, while in the case of Brazil, the corresponding figure is an astonishing 53 percent. During the same period, the dollar-denominated Cotlook A Index has declined by about two percent.

The accompanying chart illustrates the fluctuation of the A Index since the last Plenary, in US dollars, Indian rupees, Australian dollars, CFA francs and Brazilian reals.

World consumption

Currency weakness, typically reflecting the uncertain outlook faced by several 'emerging market' economies, has also been influential in some major raw cotton import markets (Turkey and Indonesia, most notably) and is one of several factors that have contributed to a period of generally poor international demand for raw cotton. From the mill side, the response to lower and more stable raw cotton replacement costs has been profoundly disappointing.

Almost everywhere, spinners have been loathe to depart from a hand-to-mouth buying policy, and shown strong resistance to any rise in prices. The cotton yarn market has remained unresponsive, and competition from polyester,



However, since China is at present 'semi-detached' from the world market, for reasons discussed below, many analysts believe that a separate consideration of the balance sheet in China and Rest of the World balance sheet is warranted. Our latest numbers suggest a modest decline in stocks outside China by the end of July 2016.

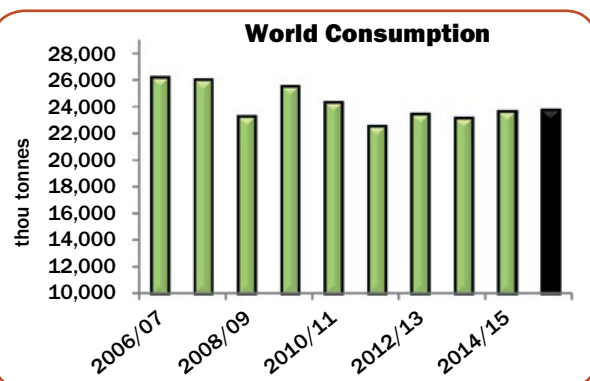
the cost of which has also declined sharply, has remained intense. Spinners are by all accounts obtaining better returns from synthetic or blended yarns than from pure cotton types.

Mill use of raw cotton, far from forging ahead under the stimulus of lower prices, has therefore stagnated. Cotton Outlook's latest forecasts, which are more pessimistic than those of other forecasting agencies (including ICAC), suggest that world consumption will actually show a marginal decline during the 2015/16 season.

That being the case, if one puts to one side the size of China's accumulated stocks, global cotton fundamentals in 2015/16 do not send a particularly bearish signal. However, neither does market sentiment, and in particular the tenor of mill demand, for the time being offer much support for the bull side.

Chinese developments

Chinese import demand for raw cotton has remained on the same downward trajectory in evidence for several seasons now. There has been no indication that the government will relax its policy, announced in September of last year, that imports will be confined to the Tariff-rated quota of 894,000 tonnes that represents a commitment under the terms of accession to the WTO, plus a few hundred thousand tonnes more that are customarily imported 'outside quota' (either to free trade zones, or on payment of 40 percent import tariffs).



Based on our latest estimate, world consumption in 2015/16 will remain well over two million tonnes below the peak (just over 26 million tonnes) attained immediately prior to the global financial crisis that erupted in 2008, and the subsequent period of exceptionally high and volatile raw cotton prices. Mill use rebounded quite swiftly after the first of these shocks, but the events of the 2010/11 season appear still to cast a long shadow.

As a result, in marked contrast to most of the period since the turn of the century, China appears partially disengaged from the world market. A shift in that state of affairs would seem unlikely for as long as the country's stocks (accumulated between 2011/12 and 2013/14 under the state reserve procurement policy) remain so huge. It is estimated that over eleven million tonnes currently reside in the state reserve – sufficient in theory to supply mills for roughly eighteen months, though the quality composition of the government-held stocks has long been a source of uncertainty.

World stocks

Cotton Outlook's world statistics in early November indicated that world stocks at the end of the 2015/16 season would decline by roughly 900,000 tonnes – the first such decline for several seasons. That decline is forecast to take place essentially in China, the size of whose stocks will barely be dented as a result.

Such concerns were cited as a partial explanation for spinners' apathetic response to the government's series of daily auctions of state reserve cotton, held prior to the movement of the domestic 2015/16 crop. During July and August, one million tonnes of state reserve stocks earmarked for sale were offered to domestic mills, but by the end of that period, less than 64,000 had been sold. Quite how, and over what time period, China's policymakers will dispose of, or at least substantially reduce, these stocks remains an unanswered question.

Cotton spinning activity in eastern parts of China has appeared a distinctly unrewarding enterprise – hence the relocation by some major mill groups of spinning capacity overseas. Vietnam has been the major beneficiary of that trend.

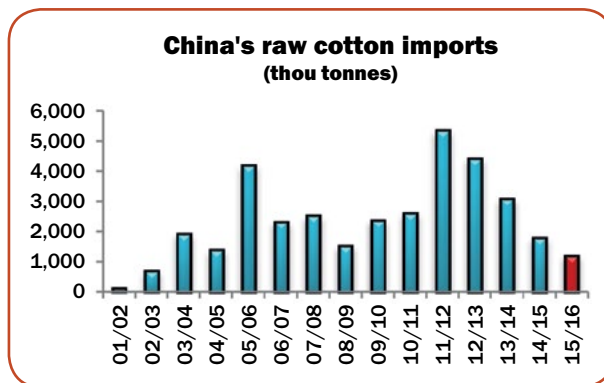
At the same time, government efforts have been directed to the development of textile capacity, including cotton spinning, in Xinjiang. Generous incentives have resulted in inward investment valued at over one billion US dollars during the first nine months of this year.

Nowhere has the above-mentioned competition from polyester appeared more intense than in China. With the exception of a brief period in April (when polyester rallied following an explosion at a paraxylene plant in Fujian province) the ratio of polyester to cotton prices has remained in the low 50s (percent).

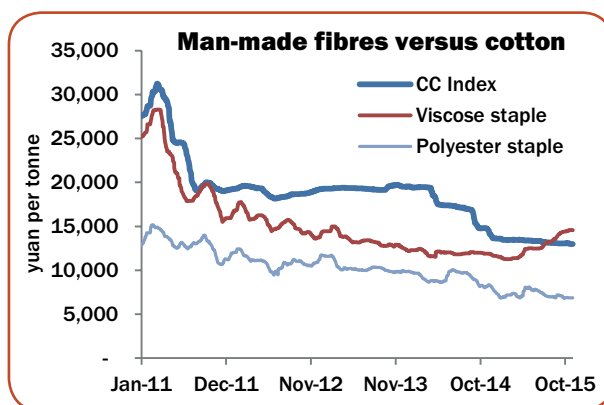
Bucking the trend in both raw cotton and polyester has been the market for viscose, which has shown a strong and sustained rise since March 2014. By July of this year, relative price movements had rendered the cellulosic fibre dearer than cotton (as measured by the China Cotton Index).

The persistent influence of competitively-priced polyester, however, appears, thus far, largely to have negated any positive influence on domestic cotton spinning activity that might have resulted from the progressive convergence of domestic and international raw cotton replacement costs.

For some time, there has been an expectation that, should local prices continue to fall, domestic output may begin to displace cotton yarn imports, at

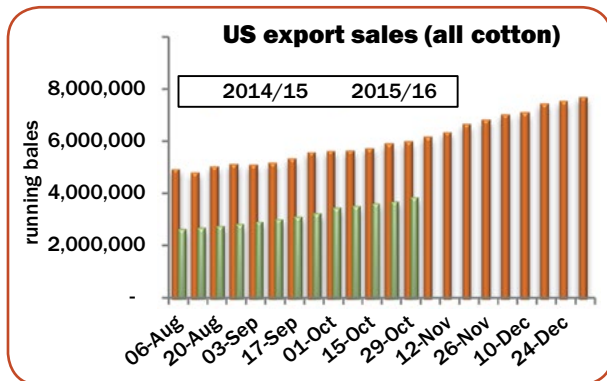


least to some extent. Available trade data, however, do not yet confirm any such trend. During the first nine months of the year, cotton yarn imports remained well ahead of those a year earlier, and (in all but one month) were greater in volume than those of raw cotton. The September import figure was the second highest on record, at over 200,000 tonnes, roughly four times the volume of raw cotton imports during the same month.



Major exporters

What then of the situation and outlook for the major exporters to the world market? Symptomatic of the weakness of Chinese and global demand more generally has been the slow pace at which US export sales for shipment in 2015/16 have been accumulated. By late October, cumulative export sales (including those already shipped) were around 3.82 million running bales – well below the 5.97 million committed by the same point a year earlier.



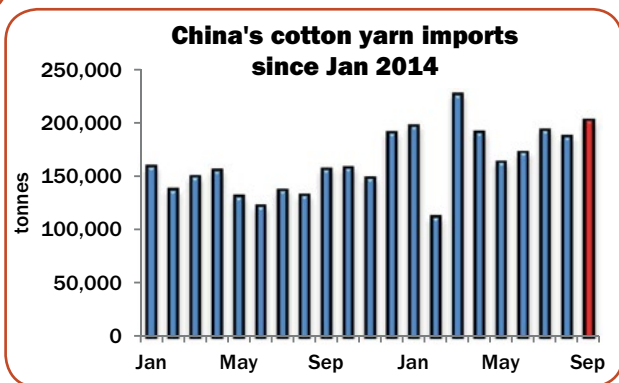
Sales to all major markets were lagging behind the pace of last season, but the shortfall in evidence for the two single largest destinations for US cotton last season is striking.

Upland commitments to Turkey amounted to just 37 percent of those a year earlier, while those to China represented less than 13 percent of the quantity sold by the same point of the 2014/15 season.

For India, the 2014/15 cotton season was characterised by declining exports, and active intervention on the part of Cotton Corporation of India in defence of the Minimum Support Prices for seed cotton. The Corporation has been credited with procurements equivalent to 8.67 million bales, roughly on a par with the quantity acquired during the 2008/09 season, and far above the volume purchased during the intervening period.

For most of the season, Indian prices, influenced by the MSP, and CCI procurement, lacked their customary international competitiveness, remaining above international parities for a protracted period. Slowing demand from China, which absorbed over one million tonnes of Indian exports during the 2013/14 season, was of course also a major influence. For its part, CCI had been clear that its intention was not to build a reserve stock of the kind that has been allowed to accumulate in China.

After the turn of the year, the organisation shifted the focus of its efforts from buying to

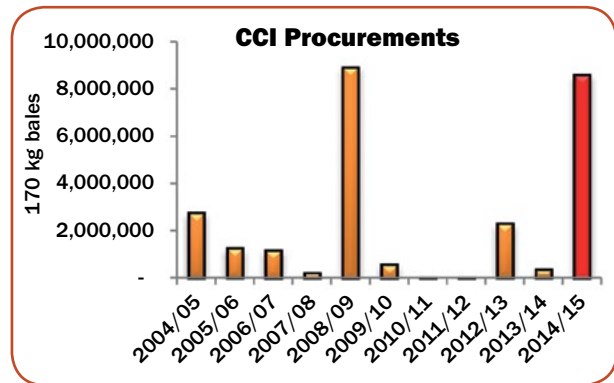


selling. Initial progress was slow, leading some to doubt whether stocks could be reduced to manageable proportions by the notional end of the Indian cotton season on September 30.

In the event, the marketing process proceeded more successfully than many had feared, and was assisted on two occasions (first in late June then in mid-August), when spikes in New York futures proved the trigger for active trade buying to complement the hitherto largely routine purchasing by local spinners. By early November, unsold stocks had been reduced to well below one million bales.

Whether another season of active CCI intervention lies ahead remains to be seen. In June of this year, the government announced nominal increases (just over one percent) to the seed cotton Minimum Support Prices that will prevail during the 2015/16 season. The relationship between those prices, and local and international lint values, in which the exchange rate may also play a role, will be closely scrutinised during the coming months.

India, like other major raw cotton exporters, faces an uncertain outlook during the remainder of the 2015/16 season and beyond. The precipitate decline in China's import demand might be easier to accommodate, were it not for the failure of world raw cotton consumption to show more convincing signs of expansion.



Synthetic Fibre Trends... Slower Growth



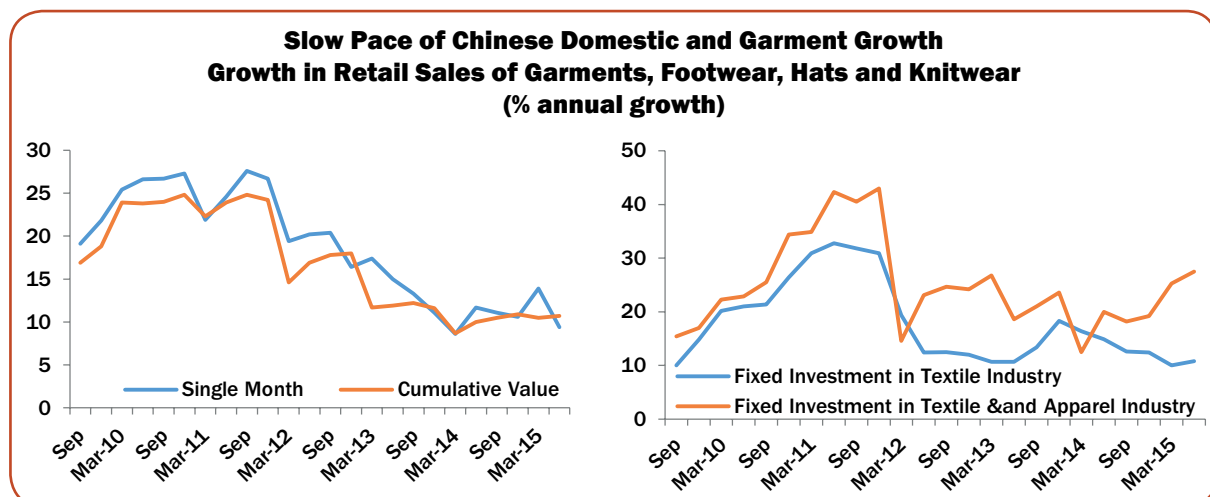
Darrel Collier
Business Manager - Synthetic Fibres & Intermediates
Tecnon Orbichem

Slowing growth was a principal theme over the last year for global synthetic fibre markets. Because synthetic fibre production is dominated by China in terms of spinning, fabrication and final article manufacture, any weakness in China quickly translates into the rate of global synthetic fibre growth. *Tecnon Orbichem* estimates that primary synthetic fibre (polyester, polyamide and acrylic) global production growth was only 1.5 percent in 2014.

For polyester, the principal synthetic fibre in apparel and home furnishing textiles, 2014 global production growth was estimated at only 2.1 percent, below global GDP levels. China's polyester production growth for 2014 fell to 3 percent (4% for polyester filament and 1% for

polyester staple). Because China accounts for slightly over 70 percent of the world's polyester production and 67 percent of all synthetic fibre production, it is critical to understand events in China, in order to explain the slowest year-on-year synthetic fibre growth since 2008/09, when global synthetic fibre production was negative during the height of the global financial crisis.

Most knowledgeable in the global textile trade understand that China is an exporter of textiles and apparel to the developed world. It is the principal source of apparel items exported to the United States and Europe. It also supplies textile semi-finished products to other garment-producing countries in the region, for eventual export to the developed world. Although recent retail sales,





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particularly for textile items, have been tepid in those consuming regions, Chinese apparel, both cotton and synthetic, continues to gain share of total imports by those destinations, registering growth of 4-5 percent in both the US and EU28 in 2014.

Because export growth was above total Chinese production growth, slowing Chinese synthetic fibre production growth must be primarily attributed to weaker domestic consumption in 2014. Despite China's importance as an exporter of textiles and apparel, years of double-digit growth have pushed domestic apparel consumption to the forefront, driving local fibre production.

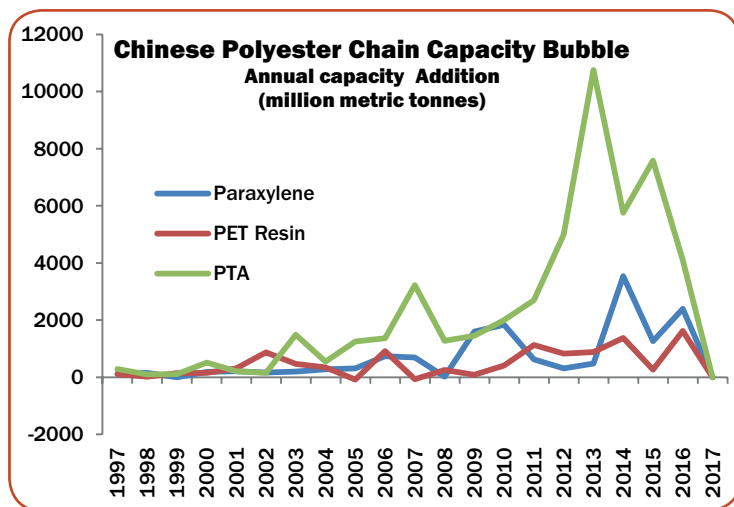
China's slowing domestic textile economy is illustrated in the chart on page 32. In less than five years, growth in retail sales of garments and footwear has fallen by nearly a third. Fixed investment in textile and apparel industries has weakened sharply during the same period.

China's overall growth in GDP has declined during the same period, with 2014's 7.4 percent the weakest since 1990. Over the past 30 years, *Tecnon Orbichem* has compared GDP with fibre production and found an excellent (0.99) correlation between these variables. Although global trade has required interpretation on an individual country basis, China has become such a substantial portion of global synthetic fibre production that we can apply the GDP to fibre production correlation with reasonable confidence. In other words, as China's GDP weakens, we would expect fibre production growth to slow.

Despite experiencing its weakest growth since the global financial crisis, polyester fibre continues to gain share in global fibre markets. As stated earlier, polyester fibre (both staple and filament) grew by 2.1 percent in 2014, reaching 45.5 million tonnes. Cotton Outlook's most recent estimate for

cotton consumption in the 2014/15 season was 23.6 million tonnes, an increase of 1.7 percent, as compared to 23.2 million tonnes in the 2013/14 season. Other principal synthetic fibres experienced declines in production during 2014, with the exception of modest gains for cellulosic fibres.

In 2015, *Tecnon Orbichem* estimates that polyester fibre production will increase by 5 percent, to 47.9 million tons. Although this growth rate is substantially above that recorded in 2014, it is below the 6 percent average for the the last five years. Cotton Outlook expects global cotton consumption to decline marginally for the 2015/16 season to 23.4 million tonnes. Production growth prospects for other principal synthetic fibres range from flat to less than one percent in 2015.

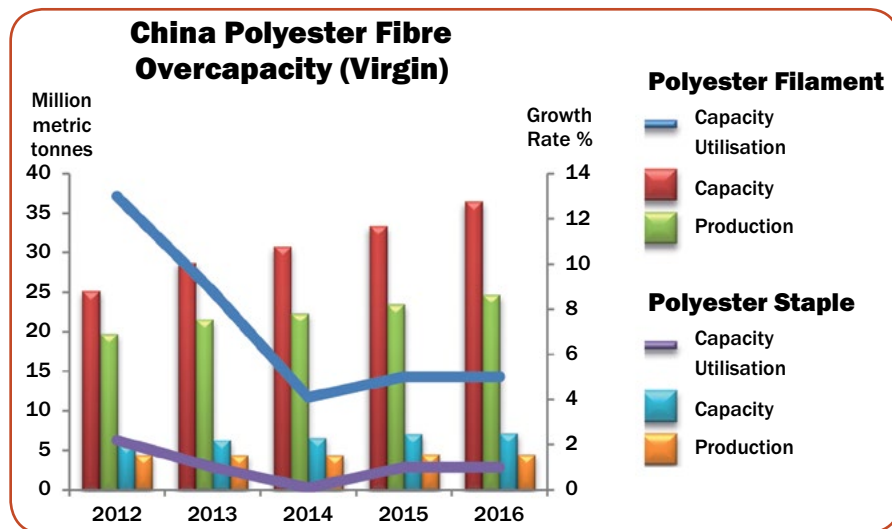


Prior to slower than historical growth in 2014 and expectations for 2015, overcapacity dominated global polyester markets, particularly in China. Recent slower growth is exaggerating the problem for fibre producers.

Slower fibre production is also backing up into overcapacity already existing in polyester ingredients.

Overcapacity effectively ensures that polyester pricing will be principally dictated by crude oil price movements. Other market forces, including demand fluctuations, will likely have little influence on pricing during the next 3-5 years.

Outside China and other Southeast Asian countries, including India and Vietnam, there is only one other polyester growth market. Polyester production, after nearly two decades of rationalisation, is growing



once again in the United States. Polyester bulked continuous filament (BCF) has been increasing its share in US carpet markets for the last 5-7 years. Although BCF growth is slowing to the mid-single digits, it remains the principal growth fibre for carpet producers. Carpet producers have been able to compensate for polyester's quality differences with nylon by tufting and finishing techniques, allowing polyester to expand into markets such as commercial hospitality sectors, once reserved only for nylon.

In addition to polyester BCF, polyester staple production is expanding in the US. Eight new yarn spinning facilities have been announced for the US in the last 2-3 years. This significant new investment, mostly from foreign investors, is principally for cotton yarns. Foreign investors are attracted by low cost energy as well as growing opportunities in NAFTA/CAFTA regions. Chinese investors are planning on spinning cotton in the US for shipment back to China instead of sourcing just US raw cotton.

However, polyester blends yarns are an increasing mix in US spinning. Brand houses, still sensitive to cotton price spikes three years

ago, are enriching polyester content in garments traditionally reserved for only 100% cotton, including men's underwear. In addition to spinning applications, nonwovens' markets are growing in the US, requiring more polyester staple.

As a result, only two years after closure of Dak's Cape Fear, North Carolina polyester staple capacity (110 ktpa), there have been multiple announcements to expand polyester staple capacity for both virgin and recycled polymer, including Dak's recent announcement to convert a PET resin line at its Pearl River, Mississippi facility to staple (105 ktpa) and Nan Ya's debottlenecking (20 ktpa) at its Lake City, South Carolina plant. In the past three years, there have been three different companies adding nearly 40 ktpa of recycled polyester staple capacity to the US market.

In summary, 2014 represented a dramatic slowing in global synthetic fibre production, as well as cotton consumption, driven primarily by weaker Chinese growth. Although expectations are for better growth in 2015, *Tecnon Orbichem* is projecting growth below recent historical trends.





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Measuring Sustainability



Allan Williams, Chair,
ICAC Expert Panel on the Social,
Environmental and Economic Performance of Cotton

The focus of ICAC's Expert Panel on the Social, Environmental and Economic Performance (SEEP) for the last few years has been on the issue of 'how do we best measure the sustainability of cotton farming' and, particularly, what sustainability indicators should we collect data for and report on?

The primary impetus behind the work was a desire to help the cotton industry better understand its current environmental, social and economic 'performance', and – critically – provide a framework for improving on (and reporting) its performance. As will be highlighted in this article, the issue of the performance (especially environmental) of raw materials used in the textile supply chain is broader than just identifying areas for improvement. A range of metrics-based supply chain initiatives are developing Life Cycle Assessment (LCA)-based tools that are being used to compare and contrast performance across different raw materials. How these tools operate, and how they might be used, are critical issues for the cotton industry to understand.

Before looking more closely at one of these LCA-based tools, it is important to recap the current work of SEEP. The approach taken to answer the question of how to best measure performance was to review the literature on the environmental, social and economic impacts of cotton, as well as a number of sustainability initiatives that have developed indicators relevant to monitoring and measuring those impacts. These sustainability initiatives included both cotton-specific and more general agriculturally-focused programs. Cotton-focused initiatives reviewed were the

Better Cotton Initiative, Cotton made in Africa, Fairtrade cotton, organic cotton and myBMP, while the generic agriculture initiatives reviewed included Field to Market and Sustainability Assessment of Food and Agriculture Systems.

Following an extensive consultation process, the framework was finalised in the joint ICAC/FAO publication "Measuring sustainability in cotton farming systems: Towards a Guidance Framework"; it is currently available in English and French, and a Spanish version will soon be published. As well as detailing 68 priority indicators, the report provides an overview of the main sustainability themes associated with cotton farming, the relevant literature, and each of the sustainability initiatives reviewed to identify potential indicators.

As SEEP has been keen to stress, the 68 recommended indicators are not a mandatory, global list that every cotton-growing country should use to measure its performance. Rather, they are intended to be a starting point for anyone working with cotton farmers – governments, industry organisations, development agencies, funders and voluntary standards initiatives – for the basis of their reporting.

Nevertheless, it is hoped that the list can support a degree of 'commonality' in how progress towards becoming more sustainable is assessed. Such commonality would help to identify whether some efforts are more effective in specific regions or applied within specific production systems, as well as helping to answer the question - How is the sustainability of the global cotton sector performing over time?



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Bearing this in mind, two key pieces of feedback were that a national approach to considering the relevance and applicability of the 68 indicators should be adopted, and that appropriate national organisations should consider pilot-testing the framework.

Pleasingly, a number of 'pilot-testing activities' have been undertaken in the last six months, in Africa, South America, the United States and Australia, which will be reported on in more detail at the ICAC Plenary meeting in Mumbai. In the meantime, it is clear that the report is as much a framework for industry collaboration on the issue of sustainability, as it is a framework for measuring sustainability. It provides a focus for gathering together a range of perspectives - industry, government and non-governmental organisations – to discuss issues of common concern. Importantly, rather than simply focusing on the question of 'which indicators should we use', one approach that worked well in Zambia was to first identify and agree what the most relevant sustainability issues were, which current practices most threatened the sustainability of the cotton sector, and the potential solutions. Once consensus was reached on what practices were the priority to change, the Measuring Sustainability report provided a range of options for monitoring progress.

Another potential advantage of gathering together a diverse range of perspectives is that, while no individual organisations are collecting data across a significant number of priority indicators, collectively there is likely to be far better coverage.

What is on the horizon?

The development of a framework for measuring sustainability in cotton farming – i.e. the identification of a suite of indicators that could be used to benchmark cotton production sustainability and support continuous improvement, has coincided with the rise of initiatives driven by the downstream supply chain that are also interested in assessing the sustainability of the raw materials used in the textile industry. While some initiatives assess a range of materials, both natural and man-made, cotton seems to be the focus more often than not.

One such initiative that includes a focus on cotton is the European Union's Product Environmental Footprint Category Rules (PEFCR) initiative, which is running a pilot program for a range of products, including a cotton T-shirt. PEFCR are based on a Life Cycle Assessment



(LCA) approach to calculating the footprint or impact of products, and the pilot program was launched in 2013 as part of the EU's policy on 'Building the Single Market for Green Products'.

One of the main rationales for the PEFCR initiative was that existing LCA approaches, when used to promote the sustainability credentials of a product, did not 'provide enough specificity to ensure that the same assumptions, measurements and calculations were used to support comparable claims across products delivering the same function' (*European Commission's Environmental Footprint Pilot Guidance document, v4, 2014*). In other words, it was felt that it was not possible for consumers to assess the merits of different claims being made, say, about the sustainability performance of two different brands of a similar product: for example, if the scores were dissimilar, were they different because one actually had better performance, or did they differ because they used different assumptions or data to calculate the final 'score'?

PEFCR are being developed for a range of products, both agricultural in origin (T-shirts, beer, coffee, wine, pasta etc.) and industrial (batteries,



paint, metal sheets, detergents etc.), and the implicit assumption is that an LCA-based approach is an appropriate methodology for both types of production system. Of course, agriculture is far more diverse and the processes far more 'uncontrollable'. The critical data required to assess the footprint of agricultural production will be influenced by very localised and highly variable factors such as soil type, climate and choice of inputs, all of which will vary greatly from region to region, and from country to country. Further, the data may also very likely vary from season to season in the one location depending on seasonal weather conditions, choice of crop rotations, insect pressure etc. Therefore, it is perhaps a dangerous assumption to make that an LCA-based methodology – derived originally for use in assessing the overall energy balance of new energy generation technologies - can be simply ported across to an agricultural production system.



While the main impetus behind the sustainability indicators framework developed by SEEP was to help the cotton industry to understand, report on, and improve its social, environmental and economic performance, the focus of the market-based initiatives is broader, and includes a focus on comparing the environmental impact of different raw materials. While the 'primary objective of a PEFCR is to fix a consistent set of rules to calculate and communicate the relevant environmental information of products within the same category', an equally important objective is to **'enable comparisons and comparative assertions in all cases when this is considered feasible, relevant and appropriate'** (emphasis added). In other words, the PEFCR initiative envisages direct comparisons being made between products, based on their different production systems, environmental impacts or footprints. It seems that this could include comparing cotton from different countries, as raw cotton production

has already been identified by the PEFCR T-shirt pilot as one of the most significant contributors to the overall impact (footprint) of a T-shirt. Leaving aside questions of how to efficiently identify the origin of cotton in T-shirts, the availability (or not) of the relevant data and its quality, the more fundamental question is whether – especially in light of the diversity and variability of agricultural production - comparing products based on LCA methodology is appropriate. Further, can such an approach help cotton growers to improve their farming practices and contribute to the continuous improvement in the sustainability of cotton farming?

This critical issue, as well as other challenges posed by the rise of metrics-based supply chain initiatives, will be discussed during the Plenary meeting in Mumbai. How can the cotton industry best participate in these initiatives? What are the implications for cotton of environmental footprint labels? Can the objectives of these initiatives also support the interests of the cotton industry, especially the farmers? How does the industry ensure that any additional 'workload' regarding the collecting and reporting of information on cotton production is recognised and taken into account by the supply chain?

The SEEP report is available at <https://www.icac.org/getattachment/Home-International-Cotton-Advisory-Committee-ICAC/measuring-sustainability-cotton-farming-full-english.pdf>

Allan Williams is a R&D Manager with the Australian Cotton Research & Development Corporation and has been working to help cotton growers become more sustainable since 1995.



The Current State of Cotton Research



M. Rafiq Chaudhry
Head Technical Information Section
International Cotton Advisory Committee

For any agricultural country, expenditure on research is the most secure investment: it pays off gradually but consistently. If you do not invest, do not expect that the *status quo* will change on its own, or that achievements can always be borrowed from somewhere else, if the focus of research is not one of your own prime objectives. Consequently, there will be no results and progress will slow down. Investment in agriculture in countries that rely on domestic output and exports of agricultural goods is slowing down. The requirement for a visible research result that is often the outcome of fundamental research is overriding the need to invest in that fundamental research. Such a dubious approach is harmful for the future of agricultural research and sustainable results. Governments must continue to invest in public sector research, even if the commercial aspect of a technology thereby developed can be utilized and commercialized by the private sector. If the areas of the mandate for each sector are defined and well understood, such an approach can be in the interests of all parties.

The author read in a book published in the United States in the mid-1950s, wherein the authors were crediting the achievements of researchers, that the technology of the day was described as 'modern technology.' If the mid-1950s technologies were modern, what are the technologies of today? The developments made in the mid-1950s were no doubt modern then, but not by current criteria. So the modern technologies of today will become obsolete tomorrow and we may wish that modern technologies would become obsolete rather faster. As far as cotton

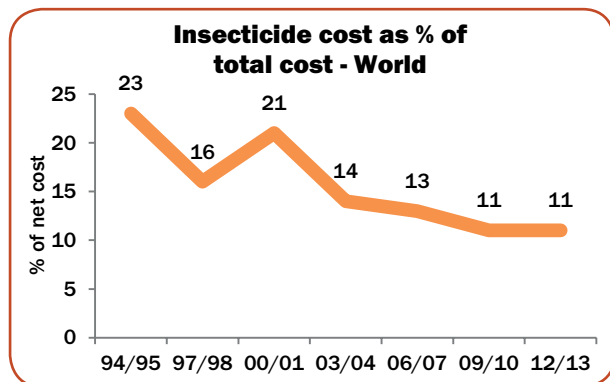
is concerned, the inflow of newer technologies seems to have entered a sluggish phase. Worldwide, cotton yields have remained stagnant for many years now. Are they going to be pegged at the current level forever? No, this is certainly not the case. Yields have to improve, but that will occur only if research produces technologies that equip farmers with 'newer' options to make use of.

What is the technology that farmers are awaiting? They do not know. The research sector has to deliver it to them. Farmers' constraints are known and they are waiting for solutions. Cotton yields are the highest in the Mediterranean region and the lowest in Southern and East African producing countries. Perhaps the Mediterranean and Southern and East African countries are too far apart to compare. The ICAC statistics show that the average yield for 2014/15 in Mexico was 1,668 kg/ha as compared to 939 kg/ha in the US. It is known that Mexico borrows cotton production technology from the US, which it then applies after some 'fine-tuning'. It is possible that Mexico discards some components of the technology and applies the best elements, but this alone cannot explain yields that are almost two times greater. The Mediterranean region and Mexico enjoy the inherent benefits of a growing environment that cannot be acquired merely through fixes in technology. However, science can modify the cotton plant to best suit its growing conditions. This has been done and continues to be achieved, within limitations both natural and technical.

A situation can be turned around, and one recent, continuing and measurable success concerns

the use of insecticides. Over the past two decades or so, the cost of insecticides in US dollar terms used to produce a kilogram of lint has declined continuously, whereas the net cost of production has been going up, which means that the cost of other inputs, particularly those for weed control and fertilizers, is rising. A decline of a few cents in real costs may not seem that huge, but if measured in terms of the share of insecticides in the net cost of production, it is clear that that proportion has halved in less than 20 years. Net cost is total cost, less value of seed after ginning, and assuming that land is owned by the farmer. The net cost per kilogram of lint produced in the world was US\$1.50 in 2012/13. Data are collected every three years and the next report will be published after the 2015/16 season is over.

Still on the theme of insect control, the advent of 'biotech' cotton has provided the only alternative means of controlling insects but has not enhanced the ability of the plant to produce more fruit. The inherent ability of the plant to produce a specific number of fruiting points is not affected; rather the fruit on the plant is protected (against bollworms) through the *Bacillus thuringiensis* (Bt) toxin in the plant. The current insect-resistant biotech feature, which is widespread in varieties cultivated across the world, has nothing to do with the physiological



processes of the plant through early fruit bearing. The position of bolls on the plant is impacted but only indirectly. The physiological aspirations that have a direct bearing on the plant's performance, either in terms of higher yield or better quality, have yet to materialize. The biggest loss in yield comes from fruit shedding, whether it be a tiny invisible bud, or a more visible fruit form. Reasons for fruit shedding are many, including meteorological, physiological, entomological and nutritional factors. Research has done something in the meteorological, entomological and nutritional aspects but not much with regard to physiological shedding, which is the main cause of fruit-shedding and, in particular, bud-shedding.

The two main theories about bud-shedding allude to an imbalance between hormones, and the supply of carbohydrates. The imbalance between auxin and growth-retarding anti-auxin hormones prevents the plant from producing flower buds. The carbohydrate supply to the existing fruiting load impedes formation of more fruiting forms. There are yet other avenues via which physiological research can improve yields. Learning from the Chinese 'plant training' commercial practice, wherein the plant is directed to enhance physiological processes by eliminating older/inefficient leaves, biotechnology can induce a characteristic or characteristics, whereby the active life of the leaves is extended, or the leaves are made to carry out photosynthesis more efficiently. There could be more physiological ways to handle or minimize fruitless fruiting points on the plant. Other innovative approaches have to be explored to save physiological losses in terms of empty nodal points on the plant.

The world's systems for the transfer of technology have failed to keep pace with research developments, and information technology has certainly been underutilized in disseminating the





message to farmers. African farmers, whose cotton yields are the lowest in the world, are amongst the most extensive users of mobile phones, which, in the hands of those farmers, could have more than merely routine uses. CABI (Centre for Agriculture and Biosciences International) of the United Kingdom has tried some newer ways of reaching out to farmers. A programme, called by CABI 'Plantwise', supports local grassroots organizations that set up and run plant clinics in their local areas. The plant clinic answers farmers' individual questions and, when the national diagnostic laboratories need additional support, samples can be sent to CABI in the UK for an expert diagnosis. There are two challenges in technology transfer that need attention: to reach out to all cotton growers; and to reach out in a more convincing way. Developments in technology oblige us to review and restructure existing cotton extension systems.

A common/shared solution to common problems in cotton should be valid for all agricultural commodities. While we push forward to achieve our objectives, it is necessary that resources be utilized wisely and efficiently. Common sense tells us that problems that have similar origins and similar characteristics will have common solutions. Consequently, shared efforts to address such problems will save resources. Cotton research has many more common issues today than in the past. Biotech cotton is just one example of a common issue that could be tackled efficiently with a higher level of research that would benefit many countries at the same time.



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At various times, ICAC member governments have acknowledged the need for increased cooperation in cotton production research. The process of expanding international cooperation on cotton research must continue, and the time has come to create an international centre for cotton research, just like the agricultural research centres of the Consultative Group on International Agricultural Research (CGIAR). Breakthroughs in cotton technology developed at an international research centre could provide benefits to the world with a value many times the costs associated with the establishment of such a centre. The real question is not who will pay to establish an international research centre for cotton, but is there a need for such a centre, and what mandate should it have? The international research centre could work on broad issues that benefit the cotton industry as a whole, by pooling resources through collaboration, and by helping to coordinate and ensure coherence in cotton production research.





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