## Cotton Outlook

### Special Feature

July 2014

# 0.69% Tokyo 1.53% 33 Hong Kong 1.41% 09% World Long Staple Market

Firm prices, slowing demand

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### Firm Prices Encounter Slowing Demand

By Mike Edwards, Cotton Outlook

#### 2013/14 season

Writing in our annual Long Staple Special Feature almost a year ago, we referred to the unambiguously bullish appearance of the global supply and demand outlook for the 2013/14 season. At that time, world production was forecast to fall short of consumption by a margin approaching 100,000 tonnes, hence the likelihood that long staple values would strengthen during the course of the season ahead.

During the early months of the season, the bullish case appeared well founded, and the anticipated upward movement duly materialised. Our benchmark American Pima quotation (Grade 2, 1-7/16", CFR Far East) had risen from 172.00 cents per lb at the start of the season, to 195.00 cents per lb by early November. The strong advance of prices coincided with a period of active export sales, much of which was destined for China.

A sharp reduction of China's long staple crop has been one of several unforeseen consequences of the state reserve policy introduced in 2011/12, and retained during the two subsequent seasons. Since no specific provision is made for such varieties, farmers have had little incentive to cultivate them, and a sharp fall in output has been evident in 2013/14.



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Buoyed by the surge in Chinese demand, the season's US export registrations rose by over 250,000 running bales during the first three months of the season and, by the end of October, were 32 percent ahead of the corresponding total a year earlier. The pace of export business slowed progressively, however, during the remainder of the marketing year. Although prices continued to strengthen, the increase became much more gradual: having advanced by 23 cents in the first three months of the season, seven months more were required to gain a further 10 cents.

During this later period, the pace of sales activity slowed to the extent that, by mid-June, the season's cumulative export commitments were more than 21 percent behind the volume committed at the same juncture of the 2012/13 season. The crop was by then well sold, however, and sentiment had increasingly been influenced by the expectation of a much-reduced Pima acreage in 2014/15. Current crop asking prices remained firm. By May 21, sufficient market evidence was available for the introduction of a forward Pima price quotation, at a premium of fully 10 cents over the current season's value.

Unlike their US counterparts, Egyptian exporters failed to share in the early-season strength of demand from China, and export business throughout the campaign proved a major disappointment, both in terms of the volume committed and the prices obtained. Mr. Ibrahim Abdel Moneam explains the background to this state of affairs in his article.

By early July, export commitments were modestly in excess of 39,000 tonnes, little more than half of the volume committed by the same point of the previous season. Moreover, about one third of this season's total has been destined for Egypt's own 'Free Zone', rather than overseas markets. India figured most prominently amongst the latter, accounting for nearly 18 percent of sales, followed by China with a modest 8.5 percent of commitments. The result of this very lacklustre marketing campaign will be a sharp rise in the country's carryover at the end of the season, which will comprise principally the long staple Giza 86 variety.



### Long staple premium

Not only in absolute terms, but also relative to the upland market, long staple prices have strengthened during the past twelve months or so. As illustrated in the accompanying chart, nearby Pima prices currently enjoy a premium of 125 percent in relation to upland values (as measured by the Cotlook A Index), well above the long-term average premium, just over 81 percent.



During the course of the season, as demand from various markets has slowed in face of the strength of prices, the dynamics of global long staple supply and demand have altered significantly. Most notably, our estimate of world consumption has been subject to a substantial downward revision – to such an extent that latest figures suggest that production and consumption of long staple cottons are now broadly in balance during the 2013/14 season. Both have fallen to levels that appear low by historical comparison.

#### Supply and demand in 2014/15

At slightly below 380,000 tonnes, our forecast of long staple production in 2014/15 is virtually unchanged from the figure for the current season, which marks the smallest output of recent times. In the context of relatively high prices, that state of affairs may seem surprising, but is explained by a range of quite disparate factors. In the United States, Pima output is forecast to decline to its lowest level since the 2009/10 season, principally as a result of the severe drought affecting California, a theme amplified in our contribution from the state's Cotton Ginners and Growers Associations.

California has received a fraction of normal precipitation in recent months, with the result that scarce water resources are being allocated with great care. Despite high world prices, cotton is not necessarily the first choice of producers who have a range of other, potentially more lucrative options. Mr. Menahem Yogev explains some of the innovations in water management that have allowed long staple cotton to remain a viable for producers in Israel.

The shortfall in the US is partially offset by recovery in Egypt, where cotton plantings are estimated to have risen by around 29 percent, to in excess of 150,000 hectares. That area would still be less than half that devoted to the crop ten years earlier. The fate of cotton cannot of course be divorced from the wider context of social and economic turmoil, characterised by high inflation and concern for food security, from which the country has yet fully to emerge.

Significantly, the season ahead will see a further decline in the proportion of Egypt's output



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represented by extra-long staple varieties, a decline that began in 2012/13 and continued this season. In 2014/15, ELS varieties are expected to account for less than three percent of output.



In many producing countries, the economic incentive for long staple production is much less clear-cut than a superficial price comparison with the upland market might imply. Thus, as Mr. Dhuria of Vardhman observes, India has struggled to move toward self-sufficiency in fine count cottons during a period in which rising upland yields have transformed the country from modest net importer to the world's second largest exporter to the world market.

A similar pattern is replicated on a smaller scale in other countries. In Australia, for example, advances in upland yields over recent seasons have outpaced those for Pima, with the result that, despite a strong world market, no land was apparently sown to the latter variety in 2013/14. Some modest plantings are not ruled out for 2014/15, if one or two producers decide to allocate scarce water to the higher value crop, but on current price relationships sustained recovery does not seem in prospect. In Central Asia, long staple production seems to be in terminal

decline in Uzbekistan and Tajikistan, but is maintained in Turkmenistan, largely at the behest of the government.

As for China, conflicting reports with regard to producers' planting intentions emanated from Xinjiang, before and during the spring sowing period. Some suggested that output would remain depressed in 2014/15, citing the absence of a specific policy initiative for long staples in Xinjiang (whereas the Autonomous Region's upland cotton is to benefit from a target price regime, details of which are awaited). Others expressed the view that the rise in local prices between September and November

of last year (since then substantially reversed) would prompt a renewal of enthusiasm. Our contributor from Xinjiang, Mme Liang Wenying estimates that lint production will rebound quite strongly from its low point of 35,000 tonnes in 2013/14, perhaps to around 60,000 tonnes, still a fraction of the quantity produced toward the end of the last decade.



### **Faltering demand**

On the demand side, fine count yarn production associated with Supima trademark and licensing agreements can be considered the stable core of world long staple consumption, virtually unaffected by price movement or the relationship between Pima and upland prices. Similarly, the approach of Albini, outlined in the contribution from Mr. Aldo Pienzi and Mr. Daniele Arioldi, prizes the creation of exceptional fabric quality as the paramount goal, and is far less preoccupied by the shifting relationship between raw cotton price and spinning characteristics. However, more generally, the pattern of world long staple consumption appears to have been influenced not only by the absolute level of prices, but also by the relationship between long staple and upland values illustrated by the chart on page 4.

	World LS Output						
	(tonnes)						
							2014/15
							v
		2010/11	2011/12	2012/13	2013/14	2014/15	2013/14
	<b>United States</b>	109,755	185,327	169,782	138,037	92,587	-33%
	Egypt	120,809	168,482	97,318	90,770	108,000	19%
	of which:						
	ELS	27,921	39,547	9,554	4,770	3,000	-37%
	Giza 86	92,888	128,935	87,764	86,000	105,000	22%
	Sudan	4,482	17,000	15,000	1,000	2,000	100%
	Uzbekistan	2,000	2,000	2,000	1,500	1,000	-33%
;	Tajikistan	180	850	1,000	700	500	-29%
	Turkmenistan	24,000	21,000	18,000	16,000	16,000	0%
	India	62,500	72,000	65,000	75,000	78,000	4%
	Peru	5,000	8,000	8,000	6,000	4,500	-25%
	China	120,000	130,000	60,000	35,000	60,000	71%
	Israel	7,000	15,500	14,500	11,000	12,000	9%
	Spain	2,250	3,100	1,370	1,820	4,500	147%
	Australia	500	990	600	-	200	-
	Total	458,476	624,249	452,569	376,827	379,287	1%

		World L	S Consur	nption		
			(tonnes)			
						2014/15
						v
	2010/11	2011/12	2012/13	2013/14	2014/15	2013/14
Americas						
<b>United States</b>	6,000	6,800	4,790	4,354	5,443	25%
Mexico	600	785	725	750	750	Unch
Peru	11,000	13,000	13,000	12,000	13,000	8%
Europe						
Italy	3,000	2,000	3,000	3,000	3,000	Unch
Switzerland	4,000	1,500	2,000	2,000	1,500	-25%
Germany	5,500	1,000	2,500	5,000	4,500	-10%
Turkey	7,000	10,000	15,000	12,000	13,000	8%
Portugal	600	400	400	500	550	10%
Asia						
China	165,000	205,000	155,000	125,000	120,000	-4%
India	95,000	95,000	120,000	130,000	130,000	Unch
Pakistan	30,000	40,000	45,000	25,000	22,000	-12%
Indonesia	9,000	6,200	7,000	7,200	6,500	-10%
Japan	9,500	3,500	4,000	3,800	3,800	Unch
South Korea	5,500	5,200	2,600	2,800	2,300	-18%
Bangladesh	6,000	12,000	12,000	11,500	12,000	4%
Thailand	5,000	8,000	9,000	5,200	5,000	-4%
Taiwan	3,000	2,000	1,500	800	700	-13%
Turkmenistan	2,000	3,500	3,500	3,500	4,000	14%
Africa						
Egypt	33,616	67,638	38,212	34,500	35,000	1%
Others	4,000	4,500	4,500	4,500	4,500	Unch
Total	405,316	488,023	443,727	393,404	387,543	-1%

A further consideration that may become more significant is the progressive lengthening of staple length obtainable from upland cotton, as breeding programmes have brought improved seed varieties into commercial production. In Central Africa, Chad and Cameroon produce a good volume of cotton stapling 1-5/32". US classing statistics indicate that over 50,000 tonnes of output from the 2013/14 crop stapled 1-7/32" or better, while data from Australia suggest that nearly 12 percent of output from the 2012/13 bumper crop comprised lint of 1-1/4" staple or better. Anecdotal reports from a range of markets over the past few months appear consistent with the notion that at least a portion of demand has become more elastic, as mills have adjusted their blends to spin finer count yarns from longer staple upland varieties. The resultant, longer-term consequence may be an erosion of consumption of long staple varieties, though premium ELS styles will no doubt retain their place and cachet in the market.

Note on definitions: we have generally used the generic term 'long staple' to denote any *barbadense* or hybrid cottons, unless a specific distinction is

being made between ELS and long staple cottons, as for example in Egypt. Cotton with a typical staple length shorter than 33 millimetres (for example Indian MCU-5) is disregarded for the purposes of our supply and demand analysis.





### **Pima Outlook for California**

By Roger A. Isom, President/CEO, California Cotton Ginners and Growers Associations

As I started to write this piece, I initially opened with "In the midst of a devastating, three-year drought..." but then realized that we are actually in the 7th year of a man-made drought, considering the imposition of the biological opinions for the Delta smelt and salmon in the San Joaquin Delta.<sup>1</sup> The imposition of these two biological opinions alone reduced the supply of surface water to the San Joaquin Valley by over 500,000 acre-feet. The combination of the man-made drought and the ongoing meteorological drought has devastated the cotton industry this year. Cotton acreage in California has dropped from a total of 270,000 acres in 2013 to an estimated total 188,000 acres, statewide, with 130,000 acres being Pima. This represents a 30 percent decrease in cotton acreage from 2013. Now, when you consider current lint prices of close to \$2.00 per lb for Pima and more than 90 cents for Acala, coupled with record cottonseed prices of over \$500 per ton for fuzzy seed, it is hard to imagine that



#### Rainfall (in)

cotton acreage would actually decline this year. This is especially troubling, given the fact that we are coming off of two consecutive years of record quality and record yields. This scenario is exactly when one would think growers would be planting wall-to-wall cotton. But, alas, if you don't have the water, you can't grow the crop. And that is exactly what is happening in 2014.



Pima has been grown in California since 1941, but Pima production really began in earnest in the late 1980s. Then, in 2007, Pima acreage exceeded upland acreage for the first time, and hasn't looked back since. Over the last 10 years, Pima acreage in California has hovered around 200,000 acres, bouncing between 120,000 and 270,000 acres, with water the single biggest factor, as evidenced by the drought years of 2007-2009 and 2012-2014. Crop rotation and other commodity prices have also played a role, but water has dictated the acreage in recent years. There

<sup>1</sup> Federal legal rulings and protections for salmon and the Delta smelt fish have impacted water pumping and delivery from the upper San Joaquin Estuary, which has historically been made available for agricultural uses in the Central San Joaquin Valley region. has also been a very significant movement towards permanent crops such as tree nuts and vines. Almonds and pistachios especially have taken a toll of cotton acreage, with the promise of much higher returns, given the current prices received by tree nut growers. As an example, almond acreage has increased from 400,000 acres to over 800,000 acres in just 10 years. Similarly, pistachio and walnut acreage has increased. However, with some areas unable to grow those permanent crops, there remains a significant amount of land that will continue to grow cotton, as long as it remains a competitive crop.





Once Pima took hold in California in the late 1980s, average lint yields were around 1,000 pounds per acre or above. However, in the mid-2000s lint yields for Pima increased to three bales to the acre (1,500 pounds). Since that time, there has been a slight but steady increase in lint yield for Pima, with 2012 and 2013 being record years at over 1,600 pounds to the acre on average. There is an obvious trend upwards in lint yield and that is a positive sign for the continued growing of Pima in California.

Pima lint prices have been trending upwards for several years. This increase can be attributed to many factors, but none is more important than limitation



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on supply. The 2014 season is no exception. With Pima acreage in California reduced by more than 50,000 acres due to the drought, this could amount to a 150,000 bale production swing in one year, given recent yields. As a result, prices in 2014 are close to \$2.00, making Pima very attractive to growers. This is clearly a function of supply, and it won't increase this year.

On a related note is the price of cottonseed, which at this moment is extraordinarily high, with fuzzy cottonseed as high as \$525 per ton, and Pima seed as much as \$475 per ton or more. Higher animal feed prices are being driven by increased costs for other commodities used for feed by the dairy industry in California. Drought has limited water availability for feed crops, and cottonseed supplies have been short in California, as acreage has declined in recent years. How long this holds is anyone's guess. These increasing prices have been trending higher for some period of time, and with little in the way of gin expenditures, returns to the grower have exceeded \$100 per bale in some cases. This means that growers are seeing as much as \$200 to \$300 per acre back just from the sale of the seed. While this alone will not drive growers to plant more Pima, or cotton in general, it certainly does not hurt. The combination of these two factors makes Pima very attractive.



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As water supplies continue to be reduced and other higher value crops take hold, several cotton gins have closed. Overall, the number of cotton gins in California has been reduced from over 120 in 1992 to just 34 operating cotton gins in 2013. A question that gets asked quite often is: "what about capacity?" Have any roller gins shut down? Is there enough capacity left to handle the Pima that is out there? What if acreage were to rebound? In California, there are currently seventeen (17) strictly roller gins and seven (7) combination roller/saw gins or combo gins. Based upon surveys conducted by the California Cotton Ginners and Growers Associations, it is estimated that these 24 cotton gins contain over 400 roller gin stands,

> with more than 150 of those stands being the high speed roller gin stand or of the modified high speed variety. With that kind of capacity, CCGGA has estimated that roller gins in California could gin over 700,000 bales of Pima cotton within an 80day period without issue. Assuming that all the roller gins stay intact and in operation, there should not be any issue with capacity in the foreseeable future.

> In conclusion, the growing of Pima cotton in California will continue as long as we have water. Pima grows exceptionally well in the San Joaquin Valley of California, thereby producing a very high quality lint fiber that demands a high price. High quality, high yield and high returns in recent years have kept Pima cotton in the forefront for California producers. Without significant competition from other states or countries, California Pima has a very strong future ahead.



## Mr. Zhang isn't one for surprises

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### Egyptian Supply and Demand 2013/14 season

By Ray Butler, Cotton Outlook

According to the *Egyptian Cotton Gazette's* April 2014 edition, the carryover on September 1, 2013 was around 10,000 tonnes – very low in comparison to the historical record - comprising, predominantly, roughly equal quantities of Giza 88 and Giza 86. The balance consisted of small amounts of the other extra-long staple and Upper Egypt varieties.

Production in the 2013/14 season was estimated at 97,700 tonnes, including almost 86,000 tonnes of Giza 86, the remainder comprising 4,770 tonnes of extra-long staples (Giza 88 and 92) and 7,155 tonnes of Upper Egypt varieties (mainly Giza 90).

The season's total availability of Giza 86 and ELS would appear thus to have been in the region of 100,000 tonnes.

By May 14, according to data from the *Cotton Arbitration and Testing General Organisation* (CATGO), mills had taken delivery of over 14,600 tonnes of domestic cotton. A government subsidy has been introduced, backdated to the beginning of the season, but by late May applications had been made for merely one fifth of the funds made available, so the impact of the subsidy on mill domestic cotton consumption rates remains in question.

Cotton Outlook's current prediction is that the season's consumption of Giza 86 and ELS varieties might prove to be about 34,500 tonnes, including mills in the 'Free Zone'. This would imply an increased pace of mill use, with the benefit of the subsidy, during the final five months of the season.

Export registration data showed commitments outside the 'Free Zone' by late June of close to 26,000 tonnes, according to *Alcotexa* (the exporters' association) and reports then suggested that demand had turned very dull.



Hence, the total disappearance of Giza 86 and ELS styles for domestic use and export as at the end of June could be calculated as around 60,000 tonnes, leaving a balance of some 40,000 tonnes available to be delivered to domestic mills, registered for export or carried forward into next season.

Import data are not published in an up-to-date manner but our total cotton consumption estimate for Egypt of 91,000 tonnes presumes that some 50,000 tonnes of foreign cotton will be used. By mid-May, the season's running total consumption of imported cotton was 27,650 tonnes, according to the *Cotton and Textiles Holding Company*.

Exports from Greece to Egypt by the end of February were reported as 39,891 tonnes. The balance of Egypt's imports comes from West Africa, Sudan, US and Central Asia.

### 2014/15 production outlook

By late June, reports indicated that planted area was greater by some 29 percent than that sown last year, with the gain attributable to Giza 86.

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Final plantings in Upper Egypt, where Giza 90 is cultivated, proved to be significantly lower than last season. More strikingly, very little area had been sown to extra-long staple styles. The figure was given as merely 10,294 feddan (roughly 4,300 hectares), some 84 percent of which was under Giza 92, which signals the phasing out of the Giza 88 variety.

### Egypt's planted area by June 22, 2014

	- / -	
	feddan	hectares
Giza 88	1,539	646
Giza 92	8,678	3,645
Giza 93	77	32
Giza 86	334,629	140,569
Lower Egypt total	344,923	144,893
Giza 80	396	166
Giza 90	30,030	12,615
Upper Egypt total	30,426	12,781
Grand total	375,349	157,674

Expectations that the overall area devoted to cotton would recover from last year's depressed level (which only marginally exceeded the historically low figure of 287,976 feddan – less than 121,000 hectares - sown in 2009/10) have thus been confirmed.



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However, this season's plantings are still merely around half the customary level attained a few years ago. Political events and social upheaval have been primary contributors to cotton's decline, particularly as high inflation has rendered food crop production an attractive proposition and an economic priority.

Lint production in 2014/15 is forecast at 120,000 tonnes, on the presumption that yields will at least reach the recent three-year average. The composition of the cotton produced will be predominantly Giza 86 and variants thereof (some new strains are being

tested commercially). In the extra-long staples, as implied above, more Giza 92 will be produced than Giza 88.

### **Export prices**

Export (FOB) prices rose strongly from April through July last year, owing to tightening stocks, and advanced afresh during the first few months of the 2013/14 season, under bullish international supply and demand influences. The upward tendency for Giza 86 was subsequently constrained by the comparison with upland cotton values. Nevertheless, the premium for Giza 86 on the prevailing Cotlook A Index value has this season averaged 82 percent, versus 55 percent in 2012/13. Comparable values for Giza 88 are 110 percent and 68 percent, respectively.



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### Egyptian Market Misplaced Expectations and their Consequences

By Ibrahim Abdel Moneam, Chairman, United Company for Ginning and Cotton Export

"You can avoid losing money, but nobody can avoid losing time". This was the lesson of the current 2013/14 season, which has been a very special season in all respects.

Misplaced expectations were influenced by the perceived tightness of supply at the beginning of season, with zero beginning stocks, the prospect of one of the smallest crops on record, and strong demand, especially in the local market, during the previous season.

Accordingly, some people concluded that the current season would offer the opportunity to achieve very high selling prices, and good profitability. This led to aggressive purchasing of seed cotton, the cost of which was later reflected in selling prices for lint.

There is no doubt that this vision was mistaken, since it took no account of conditions on the international market. It also failed to grasp the exceptional nature of the previous, 2012/13 season, which was due to:

The import ban and total dependence on Egyptian cotton, which were not to be expected at all this season.

The governmental subsidy for local spinning mills, which also was not expected, due to the tight supply. This measure was introduced at a late stage as a solution to the problem of weak demand, but has had no noteworthy effect.

Failure to grasp that 2012/13 price levels had been exceptional. Prices for Giza 86 during that season did move upward, but gradually, from 120.00 cents per lb, to 147.00 cents per lb or more, FOB, by the end of the season, even though higher prices met with some resistance from buyers.

So it was logical for prices not to be far from such levels, at least at the beginning of the current season, and that any further price increase would be driven by market forces. In the event, this did not occur.

#### Consequences

Those holding cotton stuck stubbornly to their market vision, convinced that their situation would improve, either as a result of acceptance of firm prices by the international market, or owing to governmental intervention in the form of a subsidy. Although such a subsidy was eventually released, unfortunately it did more harm than good, since it was declared so late as to have no effect on demand, whereas additional losses had been incurred, owing to increased carrying costs.

It is very important to mention that the situation described was not only very bad for those buyers left with huge quantities, but also for those who had stopped purchasing at an early stage. Companies not involved in any kind of purchase meanwhile lost time and market share.

Amongst those who did buy, some lacked the technical expertise to obtain the required levels of quality or even to maintain the good parameters of the crop. (From our point of view, this was the main reason for lower parameters, especially In Giza 86, in addition to the natural deterioration of Giza 88, which has been allowed to occur, without an alternative readily available).

### Will the Coming Season be Better?

As a normal result of the above, very big ending stocks are expected this season (perhaps 30,000/34,000 tonnes), assuming no new government intervention, and none is anticipated. In addition to the carryover, next season's (2014/15) production is likely to rise by over 30 percent. That is to say that the new season's supply may be some 60,000 tonnes or more greater than that of the current season. This should lead to a reduction in next season's prices, to more acceptable, or perhaps competitive levels, which is expected to boost demand for Egyptian cotton, especially Giza 86. Some resistance to lower prices is to be anticipated both from farmers, who will have planted more on the basis of last season's high seed cotton prices, and from those holding stocks carried over from last season, who will aim to avoid making huge losses.

We expect that next season will represent a transition between one of the worst seasons for Egyptian cotton and the start of a new and better future.

In 2014/15, competitive and attractive prices should help to bridge the short gap in time, before the

advent of better seasons, in which new ELS and Long Staple varieties will be offered in commercial volume at reasonable levels. The new varieties boast technical parameters, such as:

Giza 87 with 35.50 mm average & 43.00 GPT and more Giza 93 with 35.50 mm average & 44.20 GPT and more Giza 92 with 33.50 mm average & 46.00 GPT and more The new variety 10229/G.86 with 33.30 mm & 42 GPT as the new replacement for G.86

There is no doubt that more technical efforts are needed for the improvement of Egyptian cotton quality, especially as regards contamination, a goal that we believe will shortly be achieved. Until then, there is no need to worry as a consumer of Egyptian cotton: follow the practice of the larger users, by carefully selecting your supplier, which should at least ensure that your needs are met in a good manner.

See you next season!



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### Current Developments and Outlook for China's Long Staple Cotton Market

By Liang Wenying, Chairwoman, Xinjiang Yinlong International Agricultural Corporation Co., Ltd

### I. An Overview of Long Staple Cotton Cultivation in China over Recent Years

In recent years, since the introduction and popularization of a high-density cultivation pattern, focusing on "shorter plants, high density and early cultivation", the average yield of long staple cotton in Xinjiang has been enhanced to around 100 kgs of lint per mu (1,500 kgs per hectare).

In 2007, the area sown to long staple cotton in Xinjiang was 2.138 million mu (142,500 hectares). Total output of lint was 250,000 tonnes, which marked a historical high. However, since then, both the sown area and the output volume have decreased year by year. In 2011, the long staple area was 1.258 million mu (84,000 has), and lint production was 121,600 tonnes. In 2012, the sown area was 580,000 mu (38,500 has), 670,000 mu below the figure for the previous year. Output of lint was less than 60,000 tonnes, 70,000 tonnes lower. By 2013, area sown to long staple cotton had fallen to only 400,000 mu (less than 27,000 has), and lint production was only 35,000 tonnes. This situation has aroused widespread concern in China's cotton industry.

The downward trend described above resulted from two main factors:

Firstly, long staple cotton has not been included in China's national cotton reserve programme during the past three years. The market structure could be described as a perfectly competitive market. Consequently, the price ratio of long staple to upland cotton has been lowered from 1.33 : 1 to 1.1 : 1, and the long staple cotton industry has continued to shrink.

Secondly, as textile technology advances, highgrade upland cotton and chemical fibres with a higher price-performance ratio have tended to replace long staple cotton to a certain degree, to produce high count yarn with similar performance. The advantages of long staple cotton have thus decreased further.

### II. Production in Aksu Prefecture, Xinjiang, in the 2014/15 Season

1. Awat County: In 2014, the planned area for long staple cotton in Awat County is 600,000 mu (40,000 hectares). This figure is 200,000 mu higher than the area cultivated in 2013. The forecast of lint output is 60,000 tonnes.

Currently, the actual planted area in Awat County is shown as follows.

The actual planted area in the former 3rd Fengshou Farm is 120,000 mu. All long staple cotton varieties are those cultivated by the farm itself.

The combined planted area in the former 1st Fengshou Farm and the former 2nd Fengshou Farm is 260,000 mu. These farms use "Xinhai 21", a major long staple cotton variety in China that was developed by Tahe Seed Industry. The planted area in other regions is 20,000 mu. It is therefore estimated that the total area in Awat County is 400,000 mu and the total lint output is less than 40,000 tonnes.

2. Aksu City: The area sown to long staple cotton in Haratale Town, Aksu City, is estimated at 120,000 mu (8,000 has) in 2014. Plantings in the urban districts and in privately-owned farms on both sides of Atta Highway represent about 75,000, and less than 10,000 mu, respectively. Therefore, the planted area is placed at approximately 205,000 mu and output at 20,000 tonnes, for Aksu City as a whole.

3. Division 1 of the Xinjiang Production and Construction Corps is expected to cultivate 2,000 mu, to produce 250 tonnes of long staple cotton. All cotton will be grown in the fields of Regiment 2 of Division 1. The purpose is to preserve and multiply good quality, long staple planting seed.

### **Xinjiang Autonomous Region**



4. No other areas in Aksu Prefecture have been planted to long staple cotton, besides the regions mentioned above.

From the above, we can conclude that, in 2014, the actual cultivated area of long staple cotton in Aksu Prefecture will be 607,000 mu (nearly 40,600 hectares), and the expected lint yield will be 60,000 tonnes. The most important long staple cotton varieties include Xinhai 21, Xinhai 17, and Xinhai 14, which is an improved variety cultivated by local cotton farmers.

### III. The Current Crop Situation in Aksu Prefecture, Xinjiang

By June 5, 2014, long staple cotton seedlings were reported to have been growing well in Awat County. The most advanced seedlings were 6-12 centimetres in height and had 6-8 main leaves. All cotton seedlings were growing in a regular manner, and presented a similar appearance to those at the corresponding stage of last year. Young plants were also growing well in privately-owned farms on both sides of Atta Highway. However, the long staple cotton seedlings in Karat Town of Aksu City were developing less well than last year. Each seedling was only 8 centimetres in height (2 centimetres shorter than at the same point last year), and had only 5-6 main leaves.

#### **IV. Inventory in Xinjiang**

At present, most cotton ginning mills in Xinjiang do not have stocks of long staple cotton. Some ginners who had stocks were obliged to sell their lint at low prices, because they were under pressure to repay loans.

Division 1 of the Xinjiang Production and Construction Corps had completed the sale of nearly 10,000 tonnes of its long staple stocks by August 2013, when the price was rising. Later, the group sold another 1,000 tonnes produced in 2013.

Currently, there is a total of 1,200 tonnes of stocks in cotton and linen stations in Aksu Prefecture. A cotton ginning enterprise from Shandong Province located in Xinjiang has 1,500 tonnes of long staple cotton stocks produced by the company.

In conclusion, the actual inventory balance of long staple cotton in Xinjiang amounts to about 3,000 tonnes.

### V. Forecast of China's Long Staple Market during the 2014/15 Season

Due to the expectation of rising cotton stocks in China during the 2014/15 season, the market price of upland cotton is predicted to decrease progressively. The weakness of upland cotton values should in turn result in a further downturn of long staple prices in the new season.

On the one hand, as the textile industry continues to be upgraded in China and more high-quality textile products are developed, consumption of, and demand for, long staple cotton should rebound, and show sustained growth. On the other hand, since with effect from the new season the Central Government will cancel the state reserve policy for upland cotton that has lasted for three years, the price ratio between long staple and upland cotton will recover to a normal and rational level. The price of long staple cotton will also gradually return to a value decided by the market. It is believed that, as a high-quality natural fibre, it will regain its popularity in the marketplace.

Although both domestic and international consumption have remained subdued in recent years, from a strategic perspective, for the safe development of the long staple cotton industry in China, the Central Government will definitely ensure the largescale and stable development of its cultivation in Aksu Prefecture, Xinjiang. To achieve this goal will require not only the special support of the Central Government, as well as local policies that support the





Photographs showing the current status of long staple cotton growth in Aksu Prefecture: All photographs were taken on local planting sites on June 5, 2014.

production of long staple cotton, but also, more importantly, that every department along the whole industrial value chain has the confidence and willingness to share responsibility for invigorating the sector in China. Aksu Prefecture is an ideal place for planting such varieties, because of the unique natural conditions, suitable soil and climate. Local farmers have developed the necessary expertise for cultivating long staple cotton. This region will play an irreplaceable and paramount role in the safe, stable and sustainable development of the long staple cotton industry in China.

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### Extra Long Staples in India A Growing Market

By J. J. Dhuria, Corporate General Manager, Raw Materials, Vardhman Group

In the global trend toward economic, financial, trade and communications integration, we are in the era in which focus is on the East. The same is true for the textile business. Today, more than 75% of fiber consumption is in major producing countries, like China and India and 75% of cotton consumption is in Asian countries. India's demographic profile has shifted to one of youth, with high aspirations, brand awareness and elevated life-styles. Apparel and clothing are not untouched by this change.

In 1947-48, India had cotton production of merely 0.4 million tonnes, whereas, in the present scenario, the country is producing 6.3 million tonnes, or 25% of world output. India has witnessed huge investments in textile machinery. It has today an installed capacity of 49 million spindles, representing a share of the world total of 21%, a proportion that is matched by India's share of world cotton consumption.

The Indian cotton crop is the most varied in the world in terms of fiber quality, ranging from short to extra-long. At present, however, 99 percent of output consists of upland cotton.

ELS cotton is high in value, well known for its superior quality, 'spin-ability' and texture. ELS cottons have staple length of 1-7/16" (33.6 mm) or longer and have excellent fiber strength, which is required for the manufacturing of fine count yarns.

### **History and Growth of ELS in India**

In sharp contrast to India's increasing area under cotton cultivation and production in general, ELS is facing a declining trend. During the post-globalization era to early 2000, ELS accounted for around 8% of the country's cotton production, but the Introduction of Bt. seeds has brought a significant increase in yield and production of upland cotton, together with some shift in land use in cotton's favour. Hence, the share of ELS cotton has declined to 1.2% (4.5 lakh bales of 170 kgs).

**ELS contribution to India's Cotton** 



A major breakthrough took place in 1974, with the introduction of the SUVIN variety (a name derived from the first letters of the parent strains, Sujata and Vincent), which had a staple length of over 1-1/2" inch, and strength of 40 GPT. This, by any standard, was the finest cotton ever produced in India. Counts up to 180s and above were spun from this cotton. In the seventies, India was a net importer of ELS but from the mid-eighties became an exporter. In 1990, the country had a SUVIN crop of 14,000 bales (12,000 bales in Tamil Nadu and 2,000 in Andhra Pradesh). Today, output of this variety is limited to 1,500-2,000 bales only in Tamil Nadu.

Another variety - DCH - which currently takes a major share of India's ELS output, derived its name from DHARWAR centre, which has been known for major varieties like DCH, and Varalakshmi. These were cottons with staple lengths of 1-5/16" to 1-7/16". DCH is over 20 years old, has been successful in the state of Karnataka and Madhya Pradesh, and is best suited for spinning NE 80s-NE100s.

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Another variety that could be considered in the ELS bracket is MCU-5, grown in the northern part of the east coast, in the state of Andhra Pradesh, principally for the reason that a small proportion will give a staple length of 33mm. It can therefore be mixed with ELS types for production of yarns up to 60s count.

Indian ELS production declined from 141 thousand tons in 1991 to 65 thousand tons in 2012, though a modest revival, to 75 thousand tons, took place in 2013. In terms of world production shares, those figures equated to 16%, 14% in 2012 and 19%, respectively.

### **Root - Cause Analysis**

2013/14 witnessed a fall in world ELS production, whereas India saw an increase of 15%, owing mainly to cultivation of such varieties in Maharashtra.

### State wise Production in India under ELS cultivation

State wise Production of ELS cotton in India (in 000 tones)						
	2012/13	2013/14	2014-15*			
Madhya Pradesh	29.75	30.60	30.60			
Maharashtra	0.85	10.20	11.90			
Karnataka	16.15	17.00	18.70			
Tamil Nadu	18.70	17.00	17.00			
	65.45	74.80	78.20			

In 2014/15, India seems set to be the world's largest cotton producer country, thanks to increased area and productivity, resulting from improved seeds and better returns available to farmers. However, the increase foreseen in ELS production is minimal.

ELS varieties require more water, and the seeds currently commercialized in Madhya Pradesh, Karnataka and Tamil Nadu suffer the following deficiencies:

- Low productivity in comparison to upland seeds available.
- ✓ Higher input cost.
- ✓ Lower pest resistance.
- ✓ Smaller lint outturn (31%-32%).

Two Bt. hybrid seeds have been introduced in the ELS category: 7918-Bahubali and MRC 6918. These have been commercialized mainly in Maharashtra, some areas of Karnataka and in Madhya Pradesh. Over one lakh seed packets (450 gm each) were sold to farmers in 2013/14. The varieties' attributes are as follows:

- ✓ Staple of 36-36.5 mm.
- Cost of production/Input cost equivalent to upland varieties.
- Productivity equivalent to upland varieties owing to heavier bolls (3.5-4 gm).
- Strong resistance to pest attacks like whitefly, jassid and sucking pests.
- Higher lint outturn (34%-35%).

Better returns have been brought to farmers. The characteristics of the fibre produced are equivalent to DCH-32 and it has been sold as such this season. Hence, the area under ELS in Maharashtra may increase further in 2014/15 and in the following season.

### **Scarcity in ELS Cotton**

Traditionally, Indian ELS cotton has been used with other high value-added fibers like silk to make fabric like DHAKA-MUSLIN, which meets the requirement of the country's traditional dress code. The fabric is so fine that it can be passed through a finger ring. Today, however, fine count yarn is required to meet both domestic and export needs, hence a deficit of ELS cotton supply has arisen. To remedy that, India at present makes use of two options:

 Relying upon Imports, particularly US for 'Tagdriven' business like SUPIMA, or customerbased requirements for contamination-free, white yarn, and on Egyptian for fabrics that require lustre. Total imports provide about 25% to 30% of the industry's requirements. 2. Spinners have to 'over spin' their cotton.

India's production of fine count yarn (defined as count 61s and above) was 165 million kg in 2011 and increased by 6% to 175 million kg in 2012. However, its share of total output decreased from 5.5% to less than 5%, owing to the overall increase in Indian yarn production, driven by export demand for coarser counts. The requirement for cotton suited to spinning counts above 60s has nonetheless increased commensurately and that requirement is set to expand in the coming years.

### **A Difficult Road**

The implication is that there is a need for India to become more self-sufficient in ELS cotton supplies, but there are a number of challenges to be faced.

Extensive research work is required in developing new, higher-yielding seed varieties (current Indian strains have average productivity of 400 kg/ha, in comparison to Pima at around 1,700 kg/ha and Giza at 760 kg/ha). As it is a long duration crop, a special subsidy package could be developed and farm insurance schemes introduced, to support growers and keep their interest alive.

Contamination is of immense concern, especially for the finer count markets. Indian cotton is handpicked and is thus higher in contaminants in comparison to its machine-harvested competitors. This issue could be addressed by paying a premium for non-contaminated seed cotton and by careful separation at the ginning phase.

We are living in an age where marketing makes a huge difference to any product. Other ELS producing countries are branding their cotton, but such marketing for Indian is missing.

### Conclusion

Despite a supply side deficit, there is a sustained and growing market in India, and a prospect of continued dependency by Indian spinners on imported varieties like Pima and Giza for their fine count yarn requirements.





### ELS in Israel 2014

By Menahem Yogev, Classing Institute Director, Israel Cotton Board Ltd

For the last decade, virtually all cotton fields in Israel have been planted with Extra-Long and Long Staple varieties. During these years, farmers have improved fibre qualities and, at the same time, achieved consistent yield growth. For such achievements, superior varieties are needed, as well as the ability to manage plant progress. One of the main parameters is control of the water supply to the field. The "secret" is a dry growing season – which enables the farmer to decide when and how much water the plant needs and receives.

Israel is located within a semi-arid region. Average annual precipitation, within the agricultural regions, is about 450 mm. The rainy season lasts from October until February. During the cotton growing season between March and September - usually there is no rain.

Two eminent developments occurred in the mid 1970s that resulted in substantial changes regarding water and agriculture in Israel.

### **1. Drip Irrigation**

The drip irrigation system was first developed in the country in the 1960s. However, not until the late 1970s did an Israeli company develop the integrated dripping pipe system that is still in use today in field crops (picture 1.)

This dripping pipe is a continuous pipe with a dripper molded in every 60-100 cm which comes on rolls – about 5 km each. Farmers lay the pipes in the field at the beginning of the irrigation period and collect them before harvesting. Farmers can use the same pipe for about 20 seasons, thus the yearly cost of the system is reasonable. Water saving is 20% to 30% in comparison to other methods.



Picture 1. Drip irrigation cotton field

Lately, farmers have been using a different method to save even more water, by burying the pipe at a depth of 40 cm, thus providing water directly to the root zone, while leaving the soil surface dry and avoiding water loss through evaporation.

### 2. Recycled water

The first commercial technologies for preliminary purification of recycled water for agricultural use were developed in Israel in the late 1970s. Multiple benefits



Picture 2. Purification Enterprises provide 200 M Cubic Meters a year

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3 Netivot St. P.O.Box: 384, Herzlia B', 46103 ISRAEL Tel: 972-9-9604003, Fax: 972-9-9604010 www.cotton.co.il are achieved: one meets an environmentally friendly goal by reducing discharge of polluted water to the environment and the sea; secondly, one provides additional water – a resource in severe shortage – for farming. This process received priority and substantial funding throughout the 1980s, during which time increasing amounts of purification enterprises (picture 2) and reservoirs were established and the water transferred to agricultural areas.

Today, about 75% of water used in Israel is purified and recycled on farms. Water is at a high level of purification. The majority of water used in agriculture for approved crops is recycled.

### **Cotton growth control**

As a result of the water supply constraints experienced in Israel, every drop is metered and water application is controlled and optimized.

Farmers have adopted tools that assist them to optimize the amounts of water applied to plants. Under the drip irrigation system, the plant receives a water ration once every 2-3 days. The water quantity is determined according to different parameters used by farmers throughout the season, as follows:

### **Evaporation**

Evaporation is measured on a daily basis using a Class "A" evaporation pan. At each stage of the growth, irrigation amounts are calculated as a percentage of the evaporated loss, considering the water amount that the plant requires, based on coefficients developed for the crop in the research process. In order to verify and monitor the plant water requirement, farmers use additional tools.

### **Plant height development rate**

In every field, farmers choose a number of individual plants which characterize the whole field. Plant height is measured once every 3-4 days (picture 3) and daily growth rates are calculated. Results are then compared to an optimal growth chart (fig. 1), which enables the farmer to correct the amount of water that will be applied during the upcoming irrigation.



Picture 3. Cotton plant height measured

Comparison to a weekly irrigation schedule provides the farmer with the opportunity to decide whether to increase or reduce the planned irrigation water amount. The plant growth rate parameter is useful as long as the daily development is over 0.5 cm/ day; below that rate, farmers turn to other tools.

#### Fig. 1. An optimal growth chart



#### **Pressure chamber**

The pressure chamber is a device that determines the leaf water potential of a plant (picture 4), thus quantifying its level of thirst.



Picture 4. Pressure Chamber

A farmer collects 5-10 leaves, one per plant – the youngest full size leaf (usually 4-5 leaves from the top). The leaf is entered into the sealed chamber and the operator applies continuous pressure up to the point at which he can observe a water drop emerging from the leaf stem (picture 5). The pressure reading



Picture 5. Drop emerging from leaf stem

represents the leaf water potential – a measure of plant thirst. Results are compared to an optimal chart (fig. 2) to learn whether the plant is in stress, at normal moisture status, or over watered. According to the results, the farmer can take irrigation decisions.

#### Fig. 2. An optimal water pressure chart



#### **Pressure chamber - bars**

### **High-Tech tools**

Farmers have 2 high-tech tools in use

<u>Phytech sensors for irrigation control</u> - a tool that measures changes of cotton stem diameter and transmits data online to a Smartphone, along with data about the water situation in the soil.

<u>Remote sensing.</u> Thermo image showing the different areas in the field.

#### **Results**

Pima lint yield in Israel, between 1980 and 2013, increased from 1,200 kgs per hectare to 1,800 kgs/ hectare – a 50% improvement.

#### Fig 3. PIMA lint yield development 1980-2013



Water use per hectare was reduced from 6,000 cubic metres to 4,000 cubic metres – a saving of 30%. The cost of production – in water terms – was reduced from 2.3 cubic metres for 1 pound of cotton lint in 1980, to 1.0 cubic metre in 2013.

Israeli cotton is now exclusively and successfully marketed by Otto Stadtlander GmbH, Germany and consumed by the best and leading spinning mills all over the world; in Europe as well as in the East, Far East and South America.

The Israel Cotton Board Ltd. continues its tradition to be acclaimed for its top quality cottons, maintaining the highest standards of growing, eminent reliability of shipments and contractual performance, leading to an excellent reputation for a world class product and service.



### ELS Cotton: the Change from Q...uantity to Q...uality



By Aldo Pienzi and Daniele Arioldi



The ELS cotton situation has changed a lot in the last ten years.

Production is more or less half of the average level from 2001-2007. (see graph nr. 1)



But this change has not affected so much the demand for ELS in the world.

#### Why?

First of all, we have to consider that, 10 years ago, a yarn of Ne 140 was considered a very fine count. Today we have spun the Ne 320 (of course with a special and selected cotton) and therefore also the consumption of ELS has been positively affected.

Nowadays, we can find on the market cotton like Acalpi, Hazera Pima, Ultima etc. that can substitute ELS for counts up to Ne 100.

On the other side, and this is the key point for us, the finer yarn count needs more controlled and quality cotton with characteristics not easy to find in all ELS cotton. The experience that we have had the opportunity to have with the Albini group has taught us the importance of some particular data covering Micronaire, strength and neps, and how the right use of them can allow you to spin a special yarn.

New equipment such as the compact ring frame has helped a lot in this new field of fine yarn counts but the choice of a lower speed in preparation has been a winning point.

Of course, you can argue that low speed means a loss of money or major costs, but does it really matter, if compared to the possible destruction of special ELS fibers, such as Giza 45, Giza 87 or Sea Island Cotton?

Yes, this is the cotton we are speaking of and the graph shows you how this cotton is different. (see graph nr. 2-3-4).

We believe that all producers of ELS cotton, as well as potential new producers, have to keep in mind that quality has to be the priority, in order to maintain the power and the special nature of this cotton, in relation to upland or medium staple cotton.







We (as Albini group) are really convinced of this new era of ELS cotton, and we are spending all our efforts to restart production of old seed, such as Sea Island Cotton, in order to regain the real and fantastic features for which this cotton was well known in the past.

Today, the main ELS quality cottons are Giza 45, Giza 87, Sea Island and some selected Supima, but it is possible that in the future some new country will start a similar production.

We know that the development of a seed is a long process and takes a few years, but only the confidence that there will be a change from quantity to quality will make it possible.

The other main point is that the cooperation between the producer of cotton and the final user, as well as the feedback between the two, is the most important support to reach the goal.

In a world where a lot of new fibers are coming out, cotton needs to be rediscovered and only new, precious fabrics can be competitive. This is the policy that Mr Albini has followed and, thanks to the abovementioned cottons and the selection from them, he has been able to be in the market with a kind of fabric impossible to imagine in the past.

The continuous research of new ELS quality cotton is in full activity and we expect that the world will respond to this request and bet on it.

Just to summarize, we think that not only ELS could be a specification for this selected cotton but other important characteristics have to be considered as represented in graph nr. 5. What we call the "spirit of cotton" is also very important because it represents the value inside the cotton that we cannot test but that we can transfer from the raw material to the finished product.

#### ELS Cotton must be evaluated on multiple parameters, such as....

### 5.







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