

# KATOEN COTTON



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## VOORWOORD / PREFACE

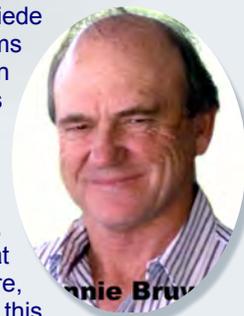
Waar ons aan die einde van nog 'n jaar staan en daar teruggekyk word oor wat die jaar opgelewer het, kan 'n mens nie anders as om die droogte as een van die opvallendste gebeure oor die tydperk uit te sonder nie. Hoe daar strategies in die toekoms beplan gaan word om die moontlikheid van 'n algehele watertekort die hoof te bied, bly nog 'n ope vraag. Die lesse wat wel uit die jongste gebeure geleer kon word is dat water 'n skaars hulpbron is waarmee daar met groot omsigtigheid omgegaan moet word.

Landbou is verantwoordelik vir 70 - 75% van die globale waterverbruik in die wêreld vandag. Katoenverbouing is in die verlede verkeerdelik uitgesonder as 'n waterintensiewe gewas terwyl dit in werklikheid eintlik 'n baie droogteverdraagsame gewas is. Katoen se globale watervoetspoor is gelyk aan omtrent 3% van die wêreld se landbouwaterverbruik wat laer is as meeste ander kommoditeite en in verhouding is tot katoen se 2 - 3% grondbenutting van die wêreld se totale bewerkbare grond.

Teen bostaande agtergrond is dit dan nie vreemd dat katoen kop en skouers bo ander somergewasse in terme van inkomste gegeneer tot waterverbruik uitstaan nie! Dit is die afgelope seisoen weer bewys dat katoen met baie minder water as meeste ander gewasse 'n goeie oes kon lewer.

Vroeë opnames tov die nuwe plantseisoen (2016/17) dui daarop dat droëland aanplantings meer as gaan verdubbel en dat nuwe besproeiingshektare in Kwazulu-Natal in produksie gaan kom wat kan bydra tot 'n verdubbeling van die huidige oesgrootte.

Dit is ons hoop dat die goeie reënval oor meeste produksiegebiede sal voortduur en daar ook vir die droër areas binnekort uitkoms sal wees. Ons wens u as leser 'n geseënde feesseisoen toe en mag u 'n genotvolle tyd saam met u familie en geliefdes gedurende die tyd ervaar.



With the end of the year fast approaching and looking back, the drought is probably the one noticeable occurrence that can be singled out. To avoid a total water shortage in future, strategic planning is essential. One of the lessons learnt from this drought is that water is a scarce commodity that must be treated with great circumspection.

Globally, agriculture is responsible for 70 - 75% of all water usage. In the past cotton was falsely accused of being a water intensive crop whilst it is in fact a drought tolerant crop. Cotton's global water footprint is more or less equal to 3% of the world's agricultural water usage which is lower than most other commodities and is in line with cotton's utilisation of total global arable land of between 2 - 3%.

Against this background it is not surprising that cotton stands out compared to other crops as far as income generated per unit of water used! During the past season it was again proved that cotton could with much less water deliver a better yield compared to most other crops.

Early indications are that dryland hectares planted to cotton could more than double in the new planting season (2016/17) and with new irrigation hectares coming into play in KwaZulu-Natal, a doubling of the current crop is possible.

It is our belief that the good rains which fell in most production regions will continue and that dry regions would also experience relief soon. We wish you the reader all the best for the festive season and may you enjoy a wonderful time with your family and loved ones over the holidays.

# DIE KATOENOEES PRESTEER NIE NA VERWAGTING NIE!

Die katoenoes vir die 2015/16 produksieseisoen het heelwat meer laer grade as in vorige jare opgelewer.

**D**ie afgelope seisoen het weereens sy eiesoortige probleme opgelewer wat in sekere katoenstreke grootliks bygedra het tot 'n aansienlike verlaging in die veselgrade wanneer dit vergelyk word met die prestasie van die vorige jaar se katoenoes.

Dit is so dat elke katoenseisoen sy eie verhaal vertel en word die produsent gedurig met nuwe uitdagings gekonfronteer.

In sommige gevalle kan die gepaardgaande probleme waarmee die produsent worstel, deur innoverende bestuurspraktyke aangespreek word soos bv. deur

meer doeltreffende waterbenutting in veral onder die droogtetoestande wat ons tans in die land ervaar.

Daar is egter gevalle waar broodnodige bestuurspraktyke soos ontblaring net eenvoudig vanweë weersomstandighede nie ten volle suksesvol was nie. Laat ryp het ook bygedra tot laer grade in gevalle waar boere nie ontblaar het nie.

Reën tydens die meganiese oes van die katoen het die prestasie van die katoenoes in die Noord-Kaap tydens die pluisproses ook aansienlik nadelig beïnvloed wat

tot laer grade aanleiding gegee het.

Die droër weersomstandighede wat in die Limpopogebied ervaar was, het weer net die teenoorgestelde resultate in die voorkoms van die katoen gelever, met ander woorde hierdie gebied het uitstekende veselgrade gelever.

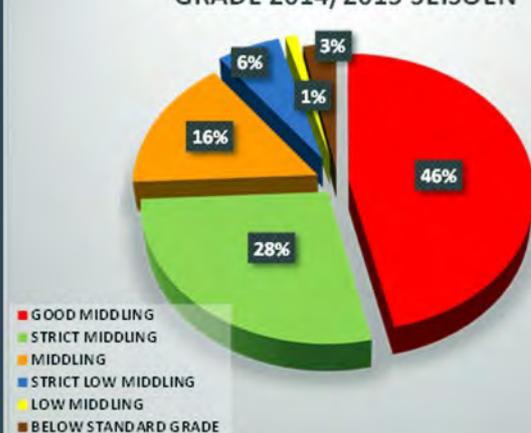
Die kleiner persentasie blarereste en ander vreemde materiaal wat in die pluksel voorgekom het, het grootliks bygedra tot die beter grade wat na die pluisaksie behaal was.

*Hein Schroder - Katoen SA*

GRADE 2015/2016 SEISOEN

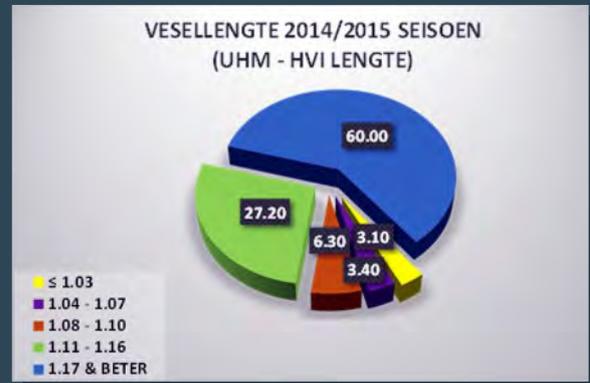
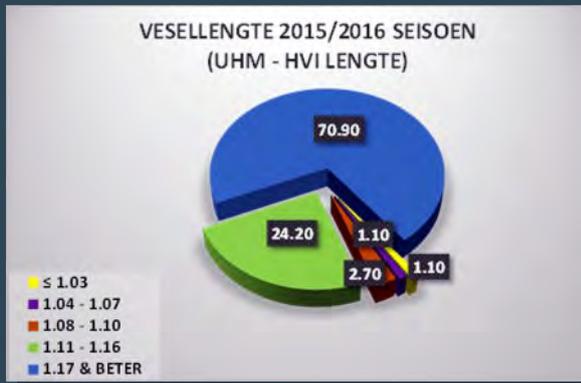


GRADE 2014/2015 SEISOEN

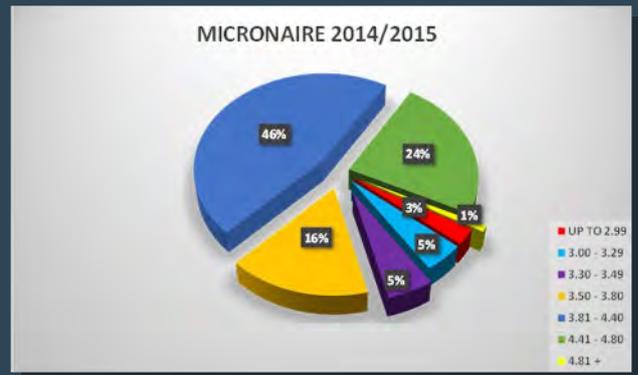
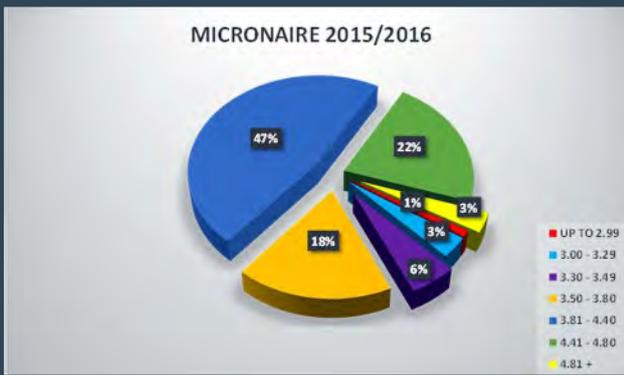


Een van die meer verblydende en positiewe aspekte van die afgelope twee seisoene was die besondere goeie kwaliteite en uitstekende vesellengtes wat behaal was! Katoen in die Noord-Kaap asook in die ander katoenproduserende streke het hierdeur die bemarking ten spyte van die laer grade soveel vergemaklik, in so 'n mate dat in sekere gevalle selfs premies beding was.

Die volgehoue pogings om nuwer kultivars bekend te stel asook die positiewe bydrae van die saadverskaffers het uiteraard 'n groot rol gespeel met die goeie opbrengste en kwaliteite wat ons land tans lewer. SA behoort dan ook met die kundigheid van ons produsente en ondersteuning van al die ander rolspelers, binne die afsienbare toekoms ook die te volumes produseer wat ons so broodnodig het.



Die mikronêrverdeling vir die afgelope twee seisoene waarvan die grootste gedeelte van die oes in die premie groepering van 3.80 - 4.40 inskakel, is net 'n verdere bevestiging van die goeie kwaliteit vesel wat verbou was. 'n Verdere bonus was die laer mikronêrgroepering wat daarop dui dat die afgelope twee jare se katoenoeste volgroeide vesel was.



# Biotech crops impact economy positively

**THE DEPARTMENT OF SCIENCE AND TECHNOLOGY DIRECTOR GENERAL, DR PHIL MJWARA, SAYS BIOTECHNOLOGY OR GENETICALLY MODIFIED (GM) CROPS HAVE HAD A POSITIVE ECONOMIC IMPACT ON SOUTH AFRICA.**

He said this when he briefed journalists upon releasing the second survey on the Public Perceptions of Biotechnology in South Africa earlier in November. The survey was conducted by the Human Sciences Research Council (HSRC).

"It is estimated that the economic gains from biotech crops for South Africa for the period 1998 to 2013 was US\$1.6 billion and US\$313 million for 2013 alone. In 2014, South Africa was growing more than 2.7 million hectares of GM crops. About 86% and 90% of maize and soya produced, respectively, are GM. Cotton is 100% genetically modified," he said.

Dr Michael Gastrow, from the HSRC, said the survey was conducted amongst 2 900 adults in 500 areas across the country. He says when looking at attitudes towards biotechnology in terms of health, safety, environment and economic contribution, there are significant proportions that are in favour of a particular attitude, a significant proportion against, and a significant third... that just doesn't know enough about biotechnology," he said.

He said the survey revealed that 48% were aware that they were eating genetically modified organisms, while 49% believed it was safe to do so.

The first survey conducted in 2004 revealed that public familiarity with the term 'biotechnology', stood at only 21%, while public awareness of GM consumption was at 13%. The latest survey commissioned by the department last year showed that the figures have tripled, to 53% and 48% respectively.

Dr Gastrow said there had also been a major increase in attitudes that favour the purchasing of GM foods. The proportion of the public that would purchase GM foods on basis of health considerations increased from 59% to 77%, while that of cost considerations increased from 51% to 73%, and environmental considerations from 50% to 68%.

# GS1 in support of the Sustainable Cotton Cluster of South Africa

Dr Hennie Ras - IQLogistica

**Business is easier when you speak the same language as your customers, suppliers and partners. We all do things our own way. But although these differences help define an organisation's identity, they can cause problems when we work together.**

That's where GS1 can help. No matter what success looks like for you, being able to identify, capture and share information is vital to achieving it. The GS1 global traceability standards provide a common language through which your organisation or business can do this. The GS1 set of standards works in enterprises of all types and every imaginable size.

In the Sustainable Cotton Cluster (SCC) the GS1 standard is the key enabler of the instance level traceability audit trail that runs through the entire cotton industry, from the farmers to the retailers, for each cotton bale and each cotton-based item that is produced for a programme of the participating retailers.

This story started in the 1970's when industry leaders in the US selected a single standard for product identification. Still used today, it's known as the GS1 barcode. Since then wide area networks made an impact on supply chains, and GS1 created their first international standard for electronic data interchange of traceability information in 1983. With Radio Frequency Identification (RFID) Chips becoming more common, GS1 created a standard for RFID implementation and use in 2003.

GS1 ID keys enable organisations to assign standard identifiers to products, documents, physical locations, containers, assets and more. Because

GS1 ID keys are globally unique, they can be shared between organisations, thereby increasing supply chain visibility for trading partners. To build a GS1 ID key, your organisation must become a member of GS1 and obtain a GS1 company prefix. This will form the basis of your ID keys. There are 11 GS1 ID keys, allowing organisations to connect physical events and related information (see Figure 1).

We all know the modern management mantra that states that we can only manage what we measure. The globally registered GS1 ID numbers, together with its standards for barcodes and RFID tags provide the perfect basis to electronically measure the handling



of such marked items globally. The GS1 standard also assists in capturing the business context of item handling events for example grade, colour, style, size, and weight of items; address, type and description of locations; name and organisation role of a person, programme, contract and order to which an item handling event responds; and describing the type of item handling event that is being executed, for example production, packing, inspection, picking, dispatch, receiving, warehousing, etc. The GS1 standard is therefore an indispensable part of standardising an integrated supply chain such as the Sustainable Cotton Cluster of South Africa.

All organisations participating in the

Sustainable Cotton Cluster are registered as a member of the GS1 organisation and have a GLN number that identifies each organisation globally. Some organisations also bought a code block of GTIN numbers from GS1. A GTIN identifies a product line uniquely. Within each product line the GS1 standard allows the use of an additional code string to identify each item instance within a product line. The SCC system generates such item instance level serial code strings, called UID's (unique ID's), which are allocated to item instances that are products of the transformation processes that occur throughout the cotton value chain.

A full GS1 ID code string therefore consists of a country code, a company

code, a product category code and an item instance code. Seen together it therefore renders the item ID globally unique. A scan anywhere in the world will identify the item based on the information that appears in each of the fields in the ID code string. This is the most efficient and cost-effective way of handling items in a global supply chain enabling all parties to use the same mark/barcode/RFID tag and read it as part of business logistics data sharing and item handling protocols and standard operating procedures.

It would be fair to say that the support that the SCC system provides to the members of the SCC would not have been possible without the GS1 global traceability standard.

ID Key	Used to Identify	Example
Global Trade Item Number (GTIN)	Products and services	Lint cotton bale, pallet of yarn, bale of greige, can of soup, chocolate bar, music album
Global Location Number (GLN)	Parties and locations	Companies, warehouses, factories, stores
Serial Shipping Container Code (SSCC)	Logistics units	Unit loads on pallets, roll cages, parcels
Global Returnable Asset Identifier (GRAI)	Returnable assets	Pallet cases, crates, totes
Global Individual Asset Identifier (GIAI)	Assets	Medical, manufacturing, transport and IT equipment
Global Service Relation Number (GSRN)	Service provider & recipient relationships	Loyalty scheme members, doctors at a hospital, library members
Global Document Type Identifier (GDTI)	Documents	Tax demands, shipment forms, driving licences
Global Identification Number for Consignment (GINC)	Consignments	Logistics units transported together in an ocean container
Global Shipment Identification Number (GSIN)	Shipments	Logistics units delivered to a customer together
Global Coupon Number (GCN)	Coupons	Digital coupons
Component/Part Identifier (CPID)	Components and parts	Automobile part

**Figure 1:** This table lists the current GS1 ID keys. The ID keys are identification types used for different types of items or events. The current version of the Sustainable Cotton Cluster system uses GTIN's and GLN's.



# Demim & Jeans

Jeans are made from an all-cotton material called denim. The name "denim" comes from the name of a sturdy fabric called "Serge de Nîmes", initially made in Nîmes, France, hence "de Nîmes" - "denim".

In the 1500's weavers of Nîmes tried to reproduce the cotton corduroy that was famously made in the Italian port city of Genoa, in Italy, but with little success. With trial and error however, they developed another cotton twill fabric that became known as denim. Sailors from Genoa then began to wear trousers made from denim and it is thought that the word "jeans" is derived from Gênes, the French word for Genoa.

Denim is commonly made with a blue cotton warp yarn and a white cotton filling yarn. The pattern is referred to as "twill weave" because of its finely-interwoven yarns. The white cotton filling yarns run the width of the fabric and interlace at 90-degree angles with the blue cotton warp yarns, which also run the length of the fabric, and therefore produce the fine lines you see on your denim. The most common denim is indigo denim, in which the warp thread is dyed, while the weft thread is left white. Indigo is an organic dye with a distinctive blue colour made from the plant *Indigofera tinctoria* since ancient times in India, where it got its name. As a result of the warp-faced twill weaving, one side of the textile is dominated by the blue warp threads and the other side is dominated by the white weft threads. This causes blue jeans to be white on the inside. The indigo dyeing process, in which the core of the warp threads

remains white, creates denim's signature fading characteristics.

Denim is highly durable, and that is why it was used by people that needed clothes that would last long. That is also why it was used by Levi Strauss and Jacob W. Davis for material for jeans pants. Levi Strauss came from Germany to New York in 1851 to join his older brother who had a dry goods store. In 1853 he heard about the Gold Rush in the West so moved to San Francisco to establish the Western Branch of the family's dry goods business. There he sold, among other things, cotton cloth. One of his customers was Jacob W. Davis, a tailor from Reno, Nevada. Davis made functional items such as tents, horse blankets, and wagon covers. One day, a customer ordered a pair of sturdy pants that could withstand hard work. He made them from denim that he bought from Levi Strauss & Co and made them stronger by placing copper rivets at the places pants rip the most: pockets and flies. When he wanted to patent them, he wrote to Levi Strauss, and they became partners. They opened a bigger factory, and that is how today's jeans were born. In the 1940's denim's popularity became more widespread as its image shifted

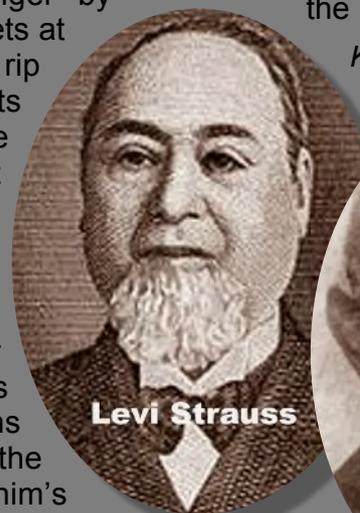


**Recently Levi Strauss & Co acquired this 1880 pair of jeans found in Nevada. This may be one of the oldest pairs in existence (Photo: Levi Strauss & Co.)**

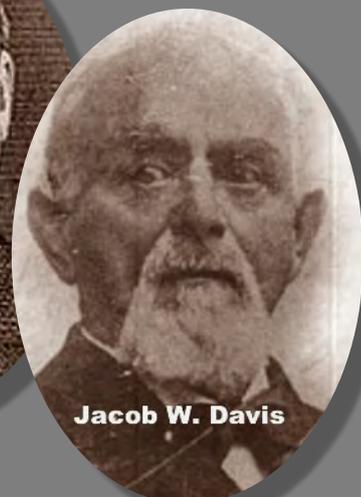
from durable clothing for blue-collar workers towards everyday apparel for the general public and youth in particular.

A total of 1.2 billion pairs of denim jeans are sold worldwide annually and the size of the global market by sales is about \$56 billion. The estimated share of denim jeans purchased by region is: North America: 39%, Western Europe: 20%, Japan and Korea: 10% and 31% for the rest of the world.

*Koot Louw - Cotton SA*



**Levi Strauss**



**Jacob W. Davis**

# ICAC 75<sup>th</sup> Plenary Meeting



The International Cotton Advisory Committee (ICAC) met in Islamabad, Pakistan, from October 30 to November 4, 2016 for its 75th Plenary Meeting since the establishment of the Committee in 1939. The meeting was attended by 378 persons, including representatives from 14 Members, 4 international organizations and 4 non-member countries. Below is a summary of some of the topics discussed at the meeting.

## ***Competition from polyester is cotton's greatest competitive threat.***

Presentations made during a session on inter-fiber competition highlighted the increasing share of the world fiber market occupied by polyester. This trend is due to cheaper polyester prices caused by current oil prices and underutilized industrial capacity in the polyester industry. The Committee approved a recommendation of the Private Sector Advisory Panel to broaden the terms of reference of the Secretariat's ongoing studies of the polyester market to include government support measures that have stimulated overcapacity in the polyester industry.

## ***Overcoming textile industry challenges.***

Under this title, the representative of the International Textile Manufacturers Federation demonstrated, with examples, how the textile industry was confronting three basic challenges that also face the cotton industry, namely water, energy and the need for creative new ideas. The cotton industry was urged to take steps, by developing cotton varieties that use less water, by concentrating on reducing energy consumption in cotton gins and transportation, and by creating and applying new ideas, especially for increasing efficiency and reducing costs. One example would be to use High Volume Instrument cotton classing systems throughout the industry to replace the ancient practice of visual classing. Cotton-producing countries were also encouraged to convert cotton into value-added products that would create employment and other economic activity.

## ***Biotech cotton is under development.***

The cultivation of biotech cotton has changed the pest complex in many countries, so changes in pest control methods are required. The pink bollworm in some countries has developed resistance to the earlier insect-resistant biotech technologies. The pink bollworm and the whitefly caused huge losses in yield in India and Pakistan during 2015, demanding a reversion to traditional varieties of cotton and traditional methods of insect control in some countries. The dusky cotton bug and the cotton mealybug have also emerged as major pests; the whitefly and leaf curl virus in particular is becoming of greater concern. Biotech cotton resistant to the whitefly is at advanced stages of development. When commercialized, these new varieties will bring a big relief to growers. Experts reported similar progress on transgenic cotton resistant to the leaf curl disease.

## ***Reducing the water footprint of cotton and increasing farmers' income go hand in hand.***

The Committee received presentations from researchers and sustainability experts on ways in which to reduce the water footprint of cotton. These include application of critical assessments of the performance of irrigation systems; reduction of conveyance losses; implementation of precision agriculture; deficit irrigation; use of irrigation scheduling models; maximization of yield per unit of water used; innovative methods of irrigation, such as short furrows and laser leveling of furrows; and breeding for high-yielding drought-resistant varieties through conventional breeding and genetic engineering.



APP33-31  
ISLAMABAD: October 31 - Finance Minister Ishaq Dar addressing the opening session of the 75th Plenary Meeting of the International Cotton Advisory Committee (ICAC). APP

## ***Testing of SEEP sustainability indicators continues.***

The SEEP (Expert Panel on the Social, Environmental and Economic Performance of Cotton) reported that twelve countries are already testing in the field the sustainability indicators designed by the Panel. The SEEP aims to produce a report in 2017 to systematically capture the lessons learned from all the pilot tests. This "lessons" report will be invaluable in informing the need for refinements and improvements to the current SEEP framework for measuring sustainability. The report will constitute a solid basis for more effective testing of the application of sustainability indicators.

## ***Government support to the cotton sector falls from record levels but remains high.***

ICAC's annual report on government measures supporting the cotton sector shows that these reached US\$7.2 billion in 2015/16, down 30% from a record of US\$10.7 billion in 2014/15.

Koot Louw - Cotton SA  
Summary of a report by the ICAC

# Outlook on Textiles & Clothing

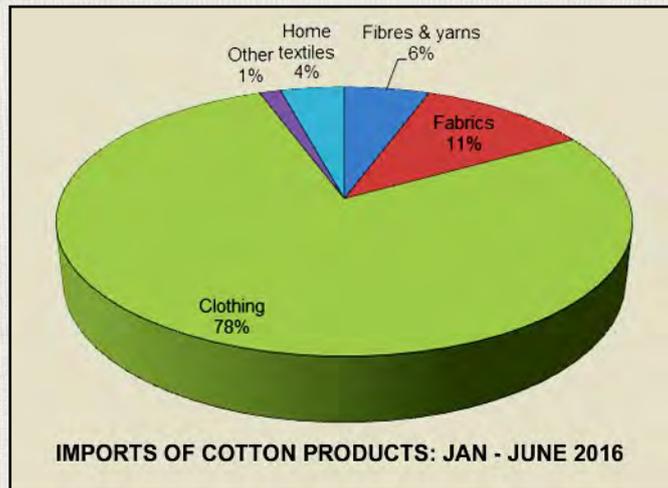
Facts and figures can sometimes be very daunting. Anything more than a million is too big to wrap my brain around. However, there are times when it is necessary to look at these figures to set things in perspective.

The global textile and clothing industry is huge in terms of value and is estimated to be about US\$970 billion for 2016 (approximately R15 trillion). The market value for global textile mills (yarns and fabrics) for 2016 is estimated to be US\$791 billion (approximately R12 trillion). The global retail value for clothing is estimated to be about US\$1440 billion (approximately R22 trillion).

How big is the South African textile and clothing industry and how does it compare to the global textile and clothing industry? Locally it represents about 6% of manufacturing employment and 2% in terms of total ex-factory sales. The total value for the South African textile and clothing industry for 2016 is estimated to be approximately R68 billion, about 0.5% of the global figure. The value of yarns and textiles from South African textile mills is estimated to be around R14.5 billion for

2016, which is a minute fraction of the global sector.

The local market for clothing during 2016 is estimated at R35 billion. During the first half of 2016 clothing to the value of R12.4 billion have been imported, of which R5.5 billion represents cotton clothing.



During 2015 South Africa imported a total of 115.1 million t-shirts and vests at a total free-on-board value of R1.9 billion. During the first half of 2016 we imported 44 million units of which 63% was cotton. The South African population for 2016 is set at 55.9 million people. Due to disparity in income and buying power, some will probably own only one t-shirt, but there are a number of people, who I'm sure, has a couple of t-shirts and vests in their cupboards.

There is a huge potential for the expansion of cotton production and the revival of the cotton

textile and clothing pipeline in South Africa. We just need to convince consumers that local cotton is the best.

Helena Claassens - Cotton SA

## COTTON'S DECLINING SHARE OF THE GLOBAL FIBRE MARKET

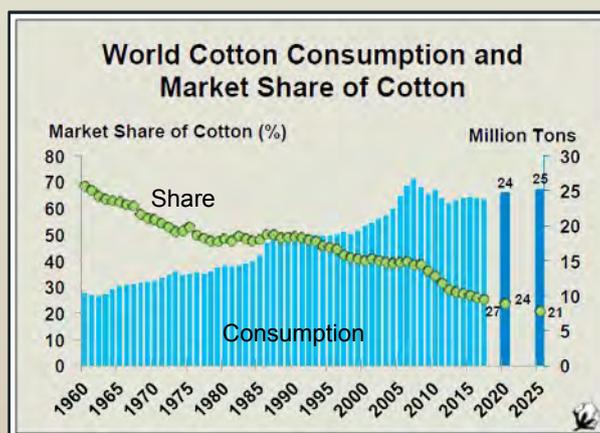
Humans have been enjoying the comforts of cotton for more than seven thousand years. However, since the middle of the 20th century, cotton has been challenged by strong competition from man-made fibres.

Cotton is the world's most widely used natural fibre, accounting for 27% of the global end-use consumption of fibres and 78% of all natural fibres produced in the world. World demand for textile fibres has expanded at an impressive pace over the last five decades. From 15 million tons in 1960, textile fibre consumption increased to nearly 90 million tons in 2015. Similarly, annual world consumption of textile fibres per capita more than doubled over the same period, from 5 kg to 12 kg.

While world cotton consumption also increased in absolute terms, from 10.4 million tons in 1960 to 24 million tons in

2015, its share of the market for fibres has declined drastically.

particularly polyester, cotton's most important competitor.



Although cotton maintained the largest share of the world textile market until 1995, its portion has fallen significantly since then, dropping below 30% from 2012 onwards. The primary cause that explains this decrease is the growth in consumption of other textile fibres,

One of the most important factors eroding the competitiveness of cotton in the recent past has been the build-up in world inventories.

The increasing difference between cotton and polyester prices has also contributed to a reduction in competitiveness on the part of cotton. The competition from man-made fibres is made even more formidable by some of the latest fashion trends. In recent years, the market share of man-made fibres has grown significantly as a result of the growing popularity of so-called "athleisure" products, which are designed for use while exercising and also for casual, everyday wear.

Koot Louw - Cotton SA  
Summary of a report by the ICAC



# COTTON SA MARKET REPORT AS AT 1 NOVEMBER 2016

**World ending cotton stocks for 2016/17 are forecast by the ICAC to decrease by 19% from the record levels of two years ago.**

	<b>A INDEX</b> <i>Avg: US c/lb</i>	<b>DERIVED RSA "PRICE"</b> <i>Avg: SA c/kg</i>
Last week (24/10 - 28/10/16)	78.46	2423.02
October 2016	78.48	2442.52
<b>Today (01/11/16)</b>	<b>77.75</b>	<b>2415.22</b>
September 2016	77.86	2435.96
Today a year ago	69.75	2154.04
Today two years ago	70.00	1732.77

The **COTLOOK A INDEX** is a daily indicator of international cotton lint prices and is the average of the cheapest 5 quotations (cost & freight) from a selection of the principal upland cottons traded internationally, destination Far East.

(million metric tons)	2014/15	2015/16	2016/17
Beginning stocks	20.5	22.3	19.3
Production	26.2	21.0	22.4
Consumption	24.2	23.8	23.8
Exports	7.7	7.5	7.4
Imports	7.6	7.2	7.4
Ending stocks	22.3	19.3	18.0
Ending stocks/use <small>(China excluded)</small>	56%	49%	49%
<b>A Index (US c/lb)</b>	<b>71</b>	<b>70</b>	<b>62-88</b>

The International Cotton Advisory Committee (ICAC) expects world cotton production to increase by about 7% in 2016/17 mainly due to an expected 9% increase in average yields.

Southern Hemisphere. A cotton crop of about 0.8 million tons bales is forecast for Australia in 2016/17, up 46% from the previous season. In Brazil a cotton crop of about 1.4 million tons is expected, up 7% from the previous year.

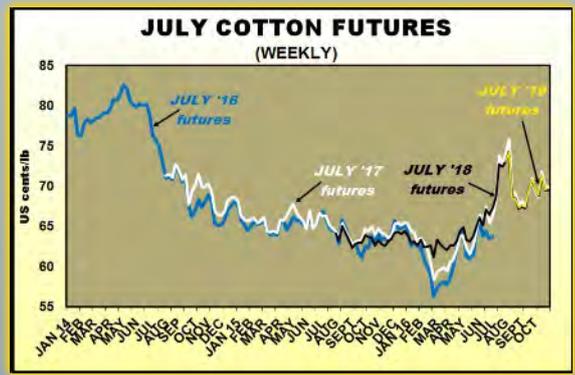
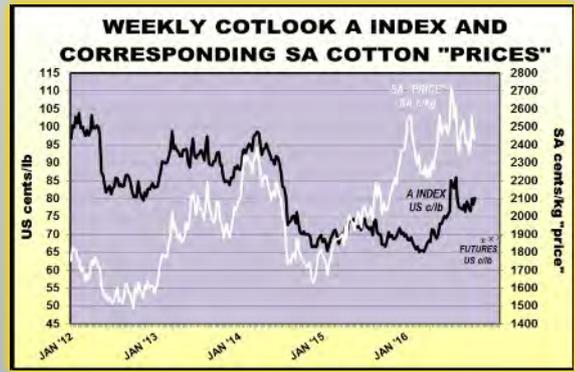
Cotton production is expected to rise in three of the four top cotton producing countries, with China being the exception, with its cotton production projected to decrease by about 4% to 4.6 million tons; the lowest crop in 16 years. Rising production costs, lower cotton subsidies and greater profitability from other crops are among the main factors that have discouraged farmers from planting cotton in China in recent years according to the ICAC.

The ICAC expects world cotton consumption to remain more or less unchanged in 2016/17 at 23.8 million tons, but it will still exceed production by about 1.3 million tons. Although little to no growth is expected from the 4 top cotton consuming countries (China, India, Pakistan and Turkey), cotton consumption increases of between 9 to 10% is expected in the world's 5th and 6th biggest cotton consuming countries namely Bangladesh and Vietnam.

Cotton production in India is projected at 5.8 million tons, up marginally from 2015/16. The ICAC estimates that the US cotton crop will increase by 5% to 3.5 million tons in 2016/17, while Pakistan's cotton crop is estimated to expand by 26% to nearly 2 million tons. Cotton production is also forecast by the ICAC to rise in the two top cotton producing countries in the

World ending cotton stocks for 2016/17 are forecast by the ICAC to decrease by 19% from the record levels of two years ago (an expected decrease of 26% in Chinese cotton stocks and a 10% decrease in stocks for the rest of the world).

*Koot Louw - Cotton SA*



As far as the local outlook is concerned, the 10th estimate for the 2015/16 production year indicates a total crop of 50 821 lint bales, down 46% from the previous season and 5% down from last month's estimate. About 50 721 lint bales are estimated to be produced from RSA grown seed cotton, down 45% from the previous season. The balance of 100 lint bales relates to Swaziland produced cotton ginned by the Swaziland gin.

# COTTON

## INSECT CONTROL COSTS CONTINUE TO DECLINE

The latest edition of the ICAC survey on cost of production shows that insect control costs continue to decline. According to the most recent data, farmers on average spent only 12 US cents per kilogram of lint produced in 2015/16, which represents 10% of the net cost of lint production. The previous edition of this tri-annual study, published in 2013, showed that a farmer spent 16 US cents to produce a kilogram of lint in 2012/13. The 25% reduction of insecticide costs per unit of lint produced is entirely due to more cautious use of insecticides by farmers. Lower spending on insecticides is one of the main factors responsible for lowering the net cost of production to US\$1.16/kg in 2015/16.

The survey shows that insecticides comprise almost half of the spending on weed control, fertilizer costs

and picking of cotton. In 2000/01, expenditures on insect control accounted for 21% of the net cost of cotton production. Insect control costs constituted an even larger share of the production costs in the 1980s and 1990s. The declining trend in insect control costs indicates that, in general, problems associated with insect control in cotton are being reduced around the world. Integrated pest management strategies, including reduced chemical use, use of chemicals with reduced toxicity and persistence, use of chemicals more precisely targeted at specific pests and more efficient application methods are all contributing to a reduction in insecticide costs as a share of total expenses. A surge in the use of insect-resistant biotech cotton has also lowered insecticide use; about three-fourths of world cotton is now produced with varieties having insect-resistant trait.

## DNA Testing Could Put an End to Fake Egyptian Cotton

It's been an open secret among experts in the cotton industry that products often labeled as 100 percent Egyptian or Pima cotton are made in part or entirely of cheaper cotton.

Cotton production in Egypt has tumbled in recent years because of poor management of the seed supply, and in California, drought conditions over the past few years have slashed output of Pima cotton, a premium U.S.-grown plant similar to Egyptian cotton. But demand from consumers for goods made from the expensive fibres (a set of Egyptian cotton sheets can retail for three times the price of those made of common cotton) and the desire for ever-lower prices have remained.

To keep up, some suppliers have been substituting or blending in cheaper cotton. That's why manufacturers are trying new ways to ascertain that the premium-priced cottons they purchase actually go into the products that reach retailers' shelves.

This year, a handful of retailers started selling cotton that had been marked with a DNA tagging system. The technology uses tiny genetic markers that are sprayed on the cotton at the gin just before being packaged and sent to be turned into yarn. The markers bind to the plant's fibres and act as a microscopic bar code that can be tracked throughout the production process.

## US - CHINA FUTURE COTTON TRADE RELATIONSHIP

China will continue to be a key player in the cotton market following the recent U.S. Presidential election, says Marci Rossell, former CNBC chief economist, but the new U.S. administration's policy on China trade will significantly impact the U.S. agricultural export trade. One of Rossell's scenarios shows a 25% chance that the U.S. may impose a 35% tariff on Chinese goods, resulting in varying consequences to the U.S. economy – and, in particular, to the agricultural export sector. China's continuing role as a valued customer of U.S. cotton may well depend on how any new trade relationship will proceed. If the tariff scenario happens, then cotton may be in a rough spot.



**PARTICIPANTS FROM THE COTTON ASSOCIATION OF ZAMBIA AND THE MUMBWA FARMERS GINNING & PRESSING CO. IN ZAMBIA WHO ATTENDED COTTON SA'S COTTON GRADING & CLASSIFICATION COURSE PRESENTED FROM 17 - 21 OCTOBER 2016 BY MR. HEIN SCHRODER AND HIS TEAM.**



## **Bayer Adds TwinLink Plus Pest Protection in US for 2017**

US growers will get a pest protection upgrade in 2017 when TwinLink Plus is added to Bayer's cottonseed trait package choices. With three distinct modes of action, TwinLink Plus cotton technology provides season-long Bt protection against worm pests and upgrades a grower's resistance management program. "TwinLink Plus offers three modes of action for greater technology sustainability and improved insect resistance management," says Bayer Cotton Trait Manager Ben Von Kanel. "The enhanced activity of TwinLink Plus against bollworm and armyworm decreases the likelihood growers will need to make supplemental applications to control worm pests, which helps manage input costs and cotton growers' bottom line."

## **MERGERS COULD INCREASE COTTON SEED PRICES**

Mergers by the world's leading biotechnology firms would result in steep increases in the price farmers pay for cotton seed and small increases in corn and soybean seed, potentially leading to increased consumer prices for food and fibre, according to a study by the Agricultural and Food Policy Centre at Texas A&M University. Both the Texas Corn Producers Association and Southwest Council of Agribusiness requested the study after the announcements of proposed mergers between DuPont and Dow as well as Monsanto and Bayer.

## **India stops selling cotton to Pakistan**

Cotton trade between Pakistan and India has been hit by a rise in border tension. The Pakistan government has not asked importers to stop buying cotton from India but many of them are not buying on their own as a gesture of national solidarity and Indian exporters are refusing to sell at their government's behest. Pakistani spinners are the biggest buyers of Indian cotton and fewer imports by Pakistan this year could hurt Indian exports, raise their prices and help rival cotton exporters like Brazil, the United States and some African countries. Cotton trade between the two countries is worth \$822m a year.

# VIND DIE REGTE KULTIVAR OM TE PLANT VIR 'N BEPAALDE PLANTDATUM

**G**edurende die 2015/16 katoen groeiseisoen is 'n katoenproef vir die derde keer by die LNR - Loskop Proefplaas, Groblersdal, geplant. Verskillende katoenkultivars is oor 'n tydperk van agt weke geplant om vas te stel watter kultivar die mees geskikte kultivar vir 'n spesifieke plantdatum sal wees. Ses katoenkultivars is geselekteer vir die

proef: drie standaard (Candia B2RF, Delta12BRF en DP210BRF) en drie nuwe kultivars (DP1531B2RF, DP1541B2RF en Delta1240B2RF). 'n Totaal van 8 aanplantings vir elke kultivar is weekliks geplant vanaf 7 Oktober 2015 tot 25 November 2015. Die proef is onder normale katoenproduksiepraktyke en besproeiing gedoen. Die effek van

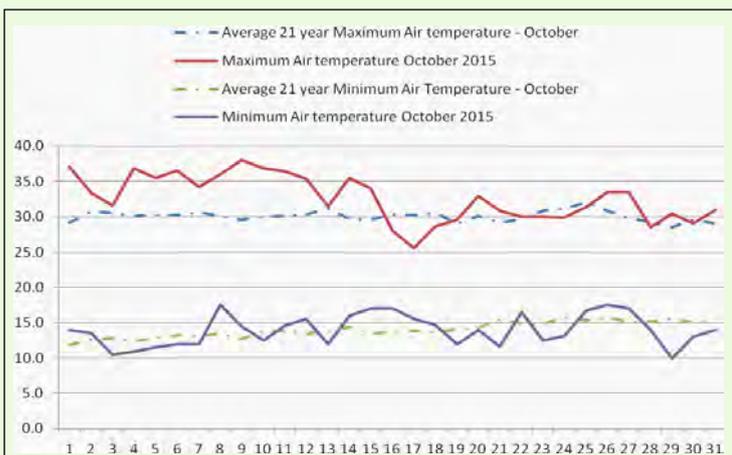
planttyd, plantontwikkeling, opbrengs, veselkwaliteit en witheidsgraad vir elke kultivar is bepaal. Lug- en grondtemperatuur is daagliks gemeet. 'n Grondtermometer is op 30 September geïnstalleer om grondtemperatuur gedurende die groeiseisoen van die agt plantdatums te meet. Lugtemperatuur is van die plaaslike weerstasie verkry.

## KULTIVARAANPASSING EN PRODUKSIE WORD BEINVLOED DEUR KLIMAAT-OMSTANDIGHEDDE, VERAL TEMPERATUUR GEDURENDE SPESIFIEKE GROEISTADIUMS

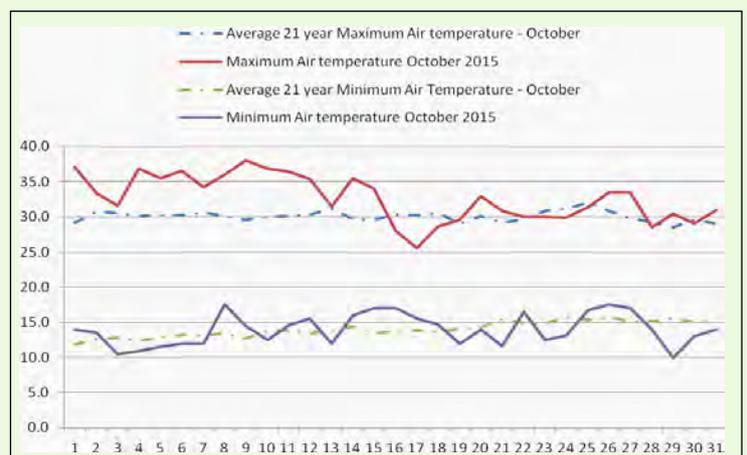
### LUGTEMPERATURE

Die grafieke hieronder dui die minimum en maksimum daaglikse lugtemperatuur vir Oktober en November 2015 by die LNR - Loskop Proefplaas aan. Laer minimumtemperatuur as die gemiddeld is vir Oktober en begin November 2015 gemeet. In kontras was maksimumtemperatuur wat gemeet is by die plaaslike weerstasie abnormaal hoog, bokant 35 °C.

Lugtemperatuur (°C) – Oktober 2015



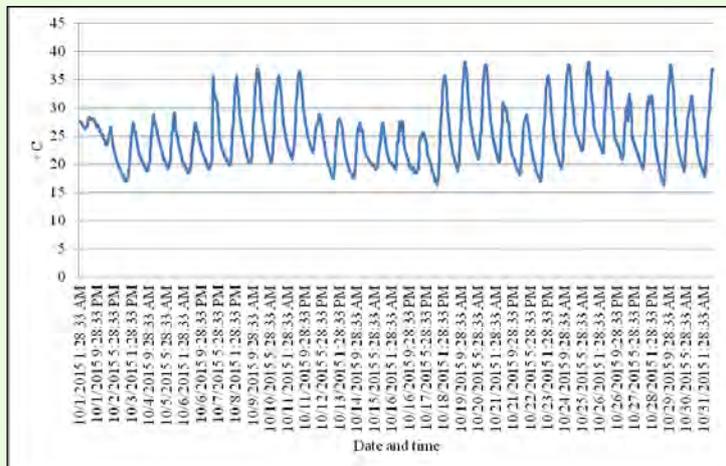
Lugtemperatuur (°C) – November 2015



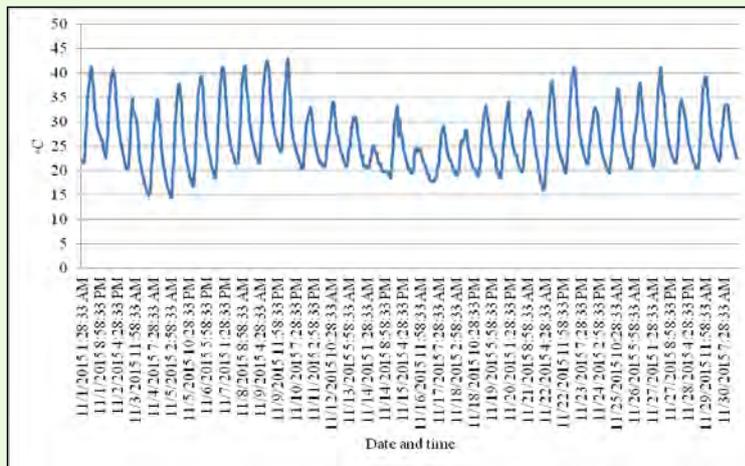
## GRONDTEMPERATURE

Die grafieke hieronder dui die daaglikse grondtemperatuur vir Oktober en November 2015 by die LNR - Loskop Proefplaas aan. Ontkieming van katoen word maklik benadeel deur lae grondtemperatuur en aanplanting moet nie geskied voordat die boonste 30mm van die grond 'n temperatuur van 16 tot 18°C of hoër gehandhaaf het nie. Grondtemperatuur vir Oktober en November 2015 was normaal vir katoen plant.

Grondtemperatuur (°C) – Oktober 2015

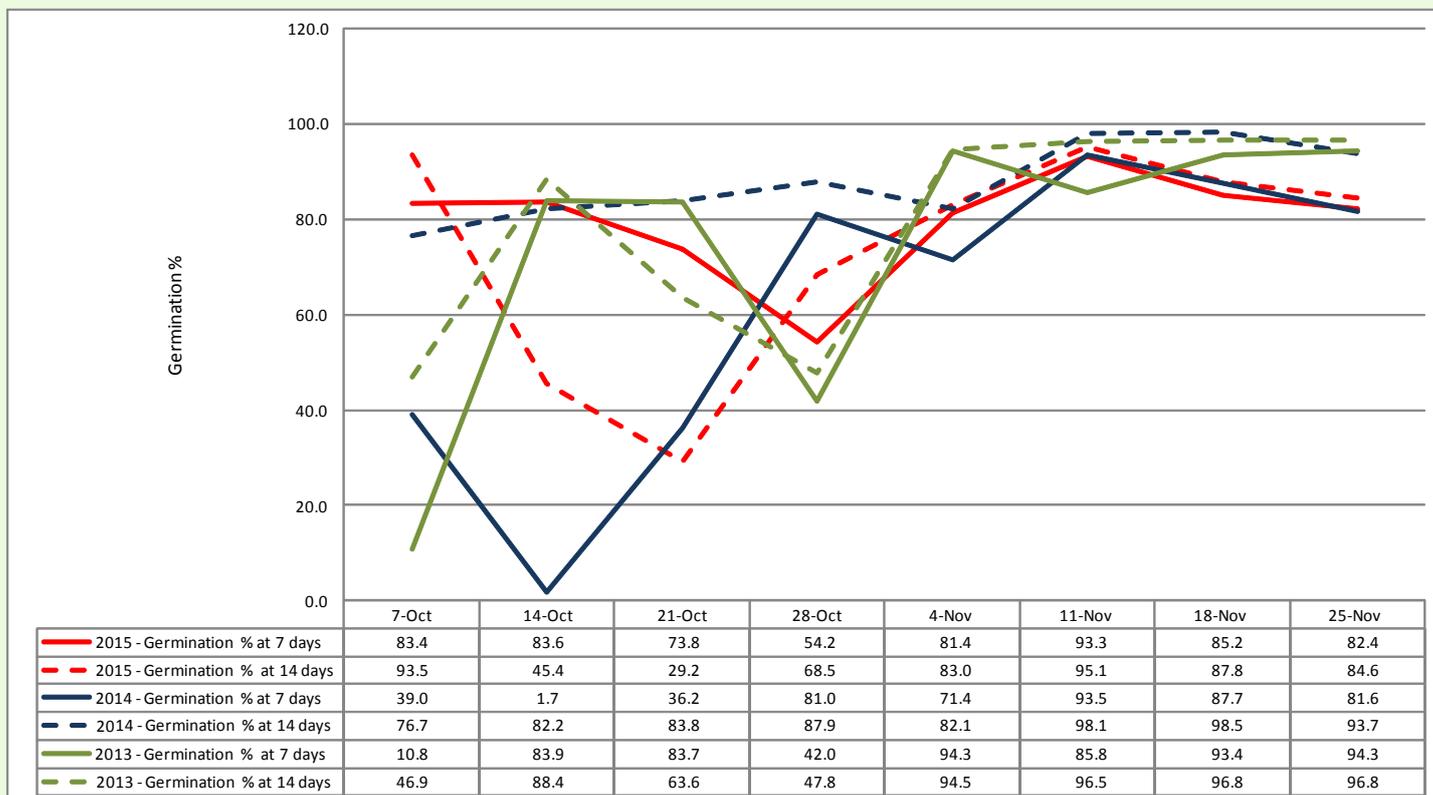


Grondtemperatuur (°C) – November 2015



## ONTKIEMINGSPERSENTASIE

Die grafiek hieronder toon ontkiemingsdata wat verkry is die afgelope 3 jaar op 7 en 14 dae na plant vir die verskillende plantdatums. Daar kan gesien word dat die ontkieming vir Oktober meer varieer as vir November. Grondtemperatuur is egter nie die enigste faktor wat 'n invloed op ontkieming het nie. Onvoorspelbare weersomstandighede soos stortreën wat erosie van die bogrond veroorsaak, hoë temperatuur wat die grondoppervlak vinnig uitdroog en veroorsaak dat saad stik, sowel as hael en wind kan ook ontkieming beïnvloed.



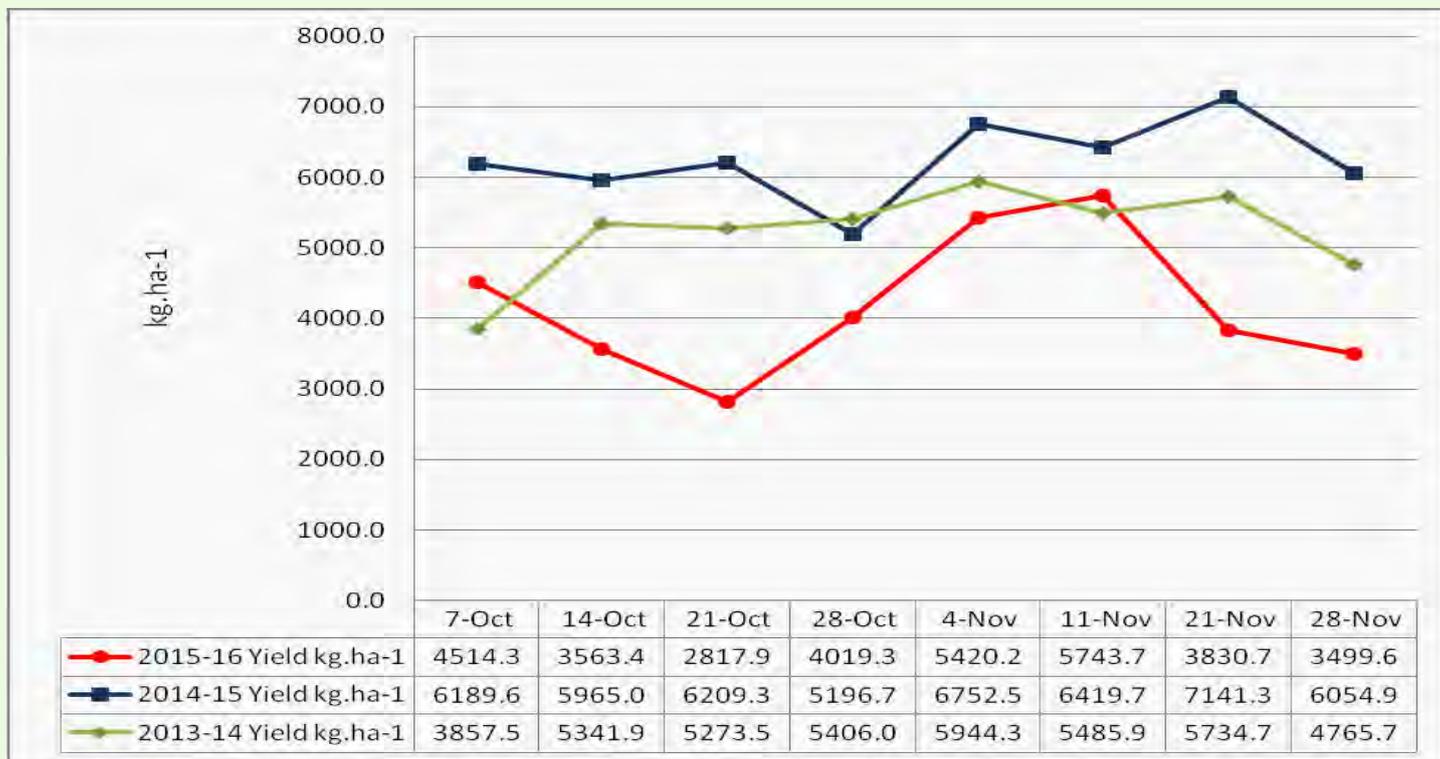
vervolg op bladsy 16

## DIE REGTE HULTIVAR OM TE PLANT VIR ELKE PLANTDATUM

vervolg vanaf bladsy 15

### OPBRENGS - kg/ha

Die grafiek hieronder toon die effek van plantdatums op die gemiddelde opbrengs vir katoenpluksel. Daar kan gesien word dat die 4e en 11e November gemiddeld die hoogste opbrengste oor die 3-jaar studie gelewer het.



### DIE VRAAG ONTSTAAN NOU:

### "WANNEER IS DIE BESTE TYD OM KATOEN IN DIE LOSKOPGEBIED TE PLANT?"

Elke aanplanting vir die verskillende plantdatums is handgepluk wanneer die katoen gereed was vir oes. Die katoen was dus nie lank bloot gestel aan omgewingsverwering nie. Die graad van refleksie ( $R_d \geq 75$ ) en vergeling ( $+b < 9$ ) was binne die vasgestelde norme. Veselkwaliteit het gewissel tussen die verskillende plantdatums, maar weereens was dit binne die vasgestelde norme. Geeneen van die kultivars het betekenisvol beter veselkwaliteite gelewer vir 'n spesifieke plantdatum nie.



Die gevolgtrekking wat sover gemaak kan word uit die 3-jaar studie is dat die aanplanting van katoen vir die Loskopgebied vanaf die 1e week tot die 3e week in November, die beste resultaat sal lewer.

Die studie word in die 2016-17 seisoen weer herhaal by die LNR-Loskop Proefplaas, Groblersdal, om 'n definitiewe gevolgtrekking te maak. Katoen SA se finansiële bydrae vir die studie word met dank erken.

Coleen Fourie, LNR Instituut vir Industriële Gewasse

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# Nasionale Katoen Kultivarproewe 2015/2016 seisoen

NAVORSING

Tilla van der Westhuizen en Frikkie Calitz (Biometrie Afdeling, LNR)

Die afgelope seisoen was tien cultivars naamlik Jassid (A3; LNR), Candia B2RF (Bayer), CandiaBG2D (Bayer), Delta12, DP1240, DP210 BRF, DP1531, DP1541(Delta Pine Monsanto), Arkot 9704 ('n Amerikaanse cultivar) en VH260 ('n Pakistani cultivar) ge-evalueer op vyf lokaliteite naamlik Loskop, Makhathini, Upington, Vaalharts and Weipe. Vier ander cultivars, naamlik PM3225 B2RF en DP1652 (Monsanto) en GariepVT1 en GariepVT2 (LNR) was net op een of twee van die lokaliteite getoets. Droëlandproewe op Roedtan en Stella is afgeskryf weens erge droogte.

Tabel 1: Opsomming van veselpersentasieresultate

Kultivar	Loskop	Makhathini	Vaalharts	Weipe	Upington
DP210 BRF	42.9	40.5	40.3	42.0	38.3
Delta 12 BRF	40.8	39.6	37.1	40.9	36.5
<b>DP1531 B2RF</b>	<b>45.0</b>	44.3	42.8	<b>45.1</b>	40.0
<b>DP1541 B2RF</b>	44.9	44.2	<b>44.0</b>	45.0	41.7
DP1240 B2RF	42.2	40.2	39.2	42.3	39.0
<b>Candia B2RF</b>	44.3	<b>45.1</b>	43.6	44.2	41.6
Candia BG2D	44.2	44.0	42.6	43.9	41.5
Jassid	39.8	40.2	38.2	40.1	36.5
Arkot 9704	43.3	44.7	40.7	43.2	40.5
<b>VH260</b>	44.6	42.7	42.4	44.5	<b>41.9</b>
PM3225 B2RF		42.4			
DP1652 B2RF		41.4			
Gariep VT1			40.1		39.7
Gariep VT2			40.7		39.0

## Veselpersentasie (Tabel 1)

In die Loskop-, Vaalharts- en Weipebesproeiingsgebiede het die cultivars DP 1531 B2RF, DP 1541 B2RF en Candia B2RF onderskeidelik die hoogste veselpersentasie gelever

Op Makhathini (droëland) het Candia B2RF die hoogste veselpersentasie met 45.1% gelever, gevolg deur Arkot 9704 met 44.7%. Die seisoen op Makhathini was baie droog en warm.

Op Upington het die cultivar VH 260 die hoogste veselpersentasie gelever met 41,9%. Hierdie cultivar is bekend vir hitte verdraagsaamheid.

Die volledige verslag van die LNR-IIG kan afgelaai word vanaf Katoen SA se webblad: [www.cottonsa.org.za](http://www.cottonsa.org.za)

## Veseleienskappe

Op Loskop, het DP210 BRF die langste vesel van 30.7 mm gelewer. VH260 het onaanvaarbare lengtes van 27.2 mm gehad. DP1240 B2RF het die sterkste vesel van 31.6 g tex-1 gelewer. Candia B2RF en Candia BG2D het die laagste mikronêrwaardes van 3.3 en 3.4 gelewer en Jassid die hoogste waarde van 5.0. (Tabel 2).

Op Makhathini het DP 210 B2RF die langste vesel gelewer van 28.5 mm. DP1240 B2RF het die sterkste vesel gelewer.

Mikronêrwaardes van al die kultivars was binne die aanvaarbare grense.

Op Vaalharts het DP210 BRF en Candia B2RF albei die langste vesel gelewer van 30.6 mm. DP1240 B2RF het die sterkste vesel van 30.8 g tex-1 gelewer. Mikronêrwaardes van alle kultivars het binne die aanvaarbare grense van 3.5 tot 4.9 geval.

Op Weipe het Candia BG2D die langste vesel van 28.2 mm gelewer. Candia B2RF het die

sterkste vesel van 29.0 g tex-1 gelewer. Mikronêrwaardes van kultivars was binne die aanvaarbare reeks behalwe DP1531 B2RF en DP 1541 met waardes van 5.0 and 5.2.

Op Upington het DP210 BRF die langste vesel gelewer van 31.8 mm. DP1240 B2RF het die sterkste vesel van 32.2 g tex-1 gelewer. Mikronêrwaardes van die kultivars was binne die aanvaarbare grense behalwe DP1240 B2RF en Gariep VT2 wat albei mikronêrwaardes van 5.0 gehad het.

**Tabel 2: Opsomming van mikronêrwaardes**

Kultivar	Loskop	Makhathini	Vaalharts	Weipe	Upington
DP210 BRF	4.4	4.6	4.1	4.7	4.2
Delta 12 BRF	4.1	4.4	4.4	4.9	4.1
DP1531 B2RF	4.9	4.8	4.3	5.0	4.4
DP1541 B2RF	4.9	4.8	4.9	5.2	4.6
DP1240 B2RF	4.5	4.8	4.6	4.0	5.0
Candia B2RF	3.3	3.9	3.8	4.5	3.9
Candia BG2D	3.4	3.7	4.1	4.5	3.9
Jassid	5.0	4.5	4.6	4.1	4.5
Arkot 9704	4.8	4.9	4.7	4.7	4.8
VH260	4.6	4.4	4.6	4.8	4.6
PM3225 B2RF		4.3			
DP1652 B2RF		4.7			
Gariep VT1			4.5		4.9
Gariep VT2			4.6		5.0



# EFFECT OF NITROGEN FERTILIZER ON MINIMUM INPUT

NAVORSING



The Makhathini Flats area of the Northern KwaZulu Natal is very dry with an annual rainfall of 450 mm. The rainfall pattern is also very varied and erratic. Cotton is the only crop which can be grown successfully under these conditions without irrigation assistance.

*H.J. Steyn, ARC Institute for Industrial Crops*

Research was done to determine which cultivation practice will be suitable for dryland cotton smallholder farmers in this area. It was determined that the most profitable production method under these climatic conditions is the “double skip row/rip-on-the-row” method. In this production method no ploughing or discing is done but only a shallow 25 to 30 cm deep ripping action on the plant row. Two rows are ripped one meter apart and two rows skipped. This allows for roots to penetrate deep on the planting line as well as utilize moisture sideways in the open spaces. This method results in more moisture being available to the crop and results in higher yields.

It also reduces the input cost drastically. Ploughing and discing are very costly practices. Planting double skip row also uses only half the quantity of seed used in planting inter row spacing of 1 meter resulting in a further reducing of

input costs. The fact that there was only half the usual amount of planted lines, also results in spraying only half the amount of pesticides.

The question arose, that seeing that there is now more moisture available to the plants, will a nitrogen top dressing result in a further economic benefit to the farmer and if so, at what quantity must it be applied. The objective of this dryland cotton, “double skip row/rip on the row” nitrogen trial was to determine if nitrogen applied as a top dressing would have an economical benefit to the farmer.

The trial was planted on the ripped furrows on 18 December 2015. The herbicide, Gramoxone, was sprayed directly after plant to control all weeds present. No rains were received between 18 December 2015 and 7 January 2016. Thirty millimetres of irrigation was applied from 22 to 24

December 2015 to assist uniform germination for effective trial purposes. Only 3,2 mm of rain was received on 7 January 2016 and to prevent the seedlings from dying, another 30 mm of irrigation was applied on 11-13 January 2016. No irrigation was applied after this.

Six different nitrogen levels were applied in form of LAN (28) on the 10 February 2016 at: 0 kg N/ha, 10 kg N/ha, 20 kg N/ha, 30 kg N/ha, 40 kg N/ha and 50 kg N/ha. The cotton variety PM 3225 B2RF from Monsanto/Deltapine was used. Two sprays of Roundup Power Max were applied on 19 January and 4 March 2016. Scouting for pests was done on a regular basis and chemicals applied as necessary. The trial was badly affected by drought as it rained only 239,7 mm from November 2015 till 30 June 2016. Together with the 50 mm of irrigation for cultivation and the two irrigations after planting, the trial received a total 349,7 mm of water. The 4 picks were harvested on 21 April, 5 May, 6 June and 4 July 2016, respectively.

In spite of the abnormal dry season, the average trial yield was still fairly good for dryland produced cotton showing the higher yield potential of the applied production method. The fact that the treatment of 30 kg N/ha gave an average of 250 kg seed cotton per hectare more than the 0 kg N/ha treatment shows promise and at a price of R5-00 per kg of seed cotton it means the farmer gets an extra income of R1250-00 per hectare. The cost of 30 kg of N in the form of LAN (28%) is R535-00/ha and when deducted, results in a higher income of R 715-00 per hectare. As a result of the drought no real conclusions can be made. There are, however, interesting observations that need to be investigated in another season. The trial will be repeated on the exact same location but on the skipped rows.

# RESULTS

**Table 1** – Average values for yield, plant height and bolls during the 2015/2016 season.

Treatment	Yield (kg/ha)	Plant height(cm)	Bolls (avg for 7 plants)
0	787,3	67	10
10	878,0	72	10
20	856,3	71	10
30	*1038,0	71	11
40	865,0	65	11
50	828,0	71	10
<b>Average</b>	<b>865.8</b>	<b>69.6</b>	<b>10.6</b>
<b>CV</b>	<b>9.09</b>	<b>7.24</b>	<b>13.58</b>

\*Significantly higher than the other treatments

The 2015/2016 cotton season was very dry. However, very interesting observations were made. The average yield (*Table 1*) for the trial was 865,8 kg of seed cotton per hectare with the highest treatment yield average coming from 30 kg of nitrogen applied per hectare, giving 1038 kg of seed cotton per hectare. This was significantly higher than the other treatments. There were no differences in plant height and boll counts.

## Length

The average length (*Table 2*) was 27.93mm which is on the low side with the longest fibre coming from the treatment of 50 kg N/ha that measured 28.4 mm.

## Strength

The average strength measured was 33.94 g/tex with the treatment of 20 kg N/ha as the highest at 34.20g/tex (*Table 2*). No significant differences were observed.

## Micronaire

The average Micronaire measured was 4.42 (*Table 2*). The treatment of 50 kg N/ha gave the highest Micronaire value of all the treatments at 4.5.

**Table 2** – Average values for fibre qualities, 2015/2016 season.

Treatment	Length (mm)	Strength(g/tex)	Micronaire
0	27.7	33.62	4.40
10	27.8	34.08	4.43
20	*27.5	34.20	4.43
30	27.9	33.78	4.41
40	28.2	34.12	4.35
50	*28.4	33.84	4.50
<b>Average</b>	<b>27.93</b>	<b>33.94</b>	<b>4.42</b>
<b>CV</b>	<b>3.05</b>	<b>5.39</b>	<b>4.87</b>

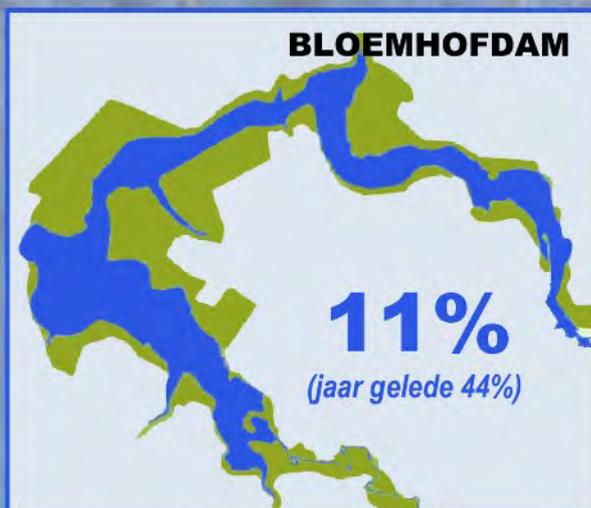
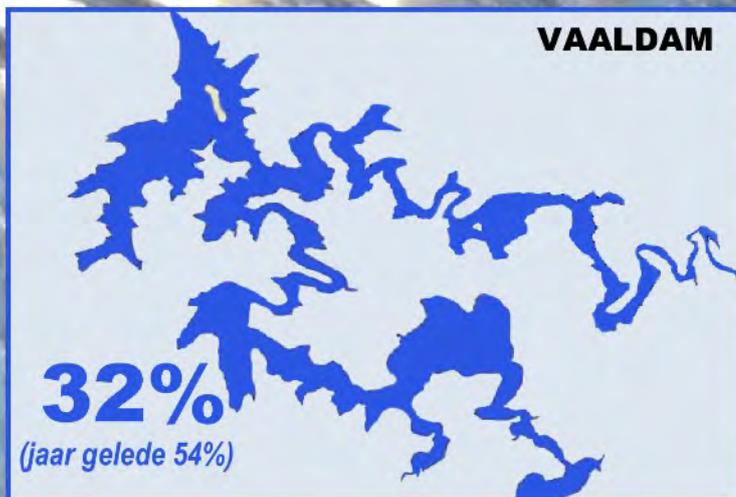
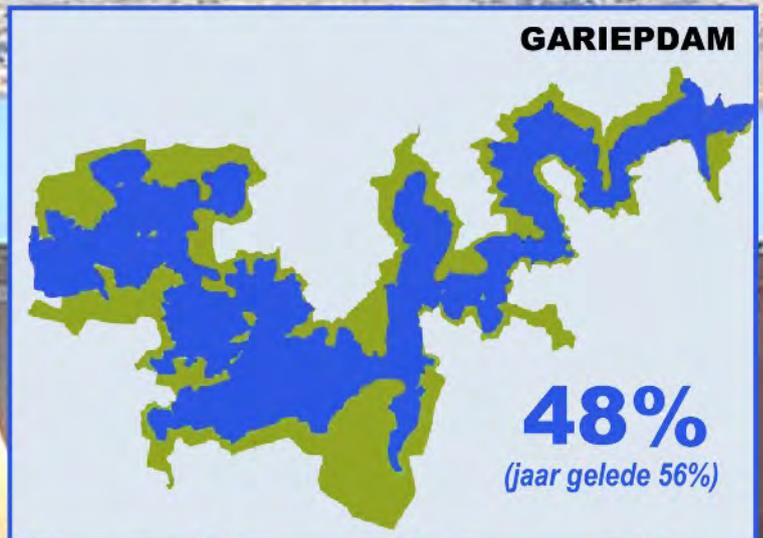
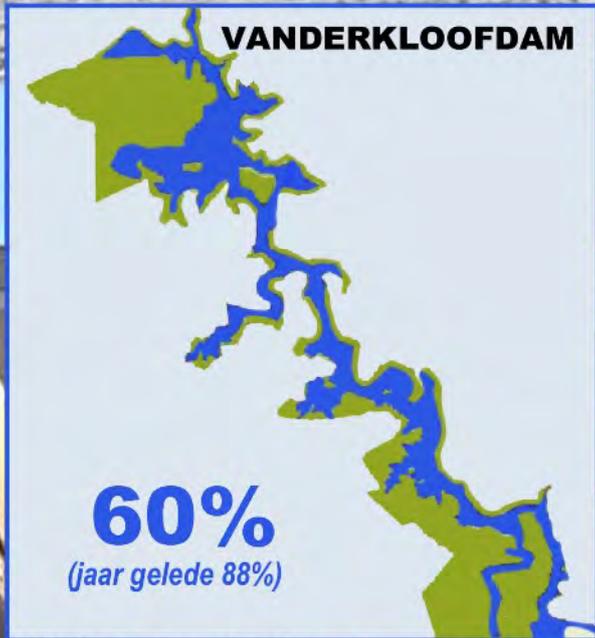
\*Significantly different than the other treatments



**The “double-skip/rip-on-the-row” planting method**

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## A completely new concept of cotton picking in South Africa!

### Ugly, but very effective!

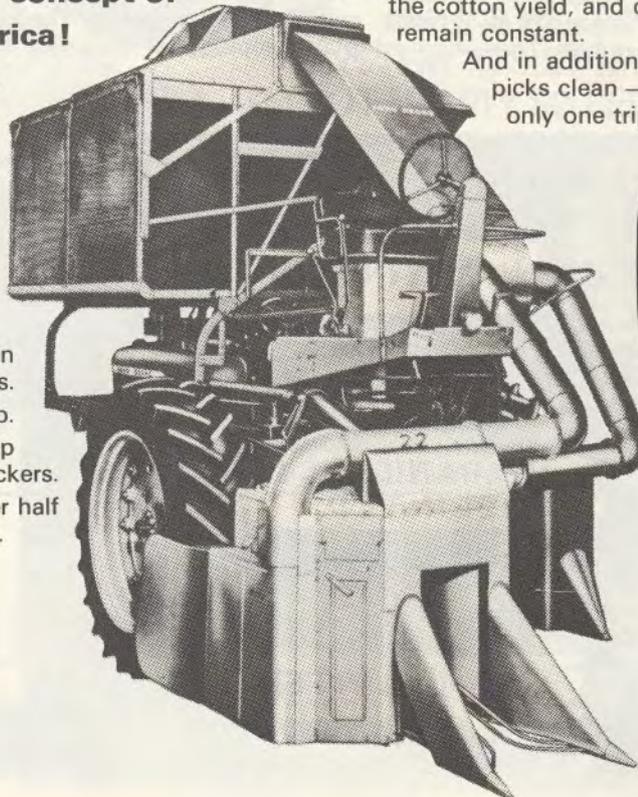
The John Deere 22 High-drum Mechanical Cotton Picker is a one-row, tractor mounted, spindle type picker, specially designed for the medium sized cotton farmer.

- Picks short cotton or cotton up to 7' high.
- Picks approximately 6 acres in 10 hours.
- Spindles will not damage crop.
- Will pick cotton better than a group of experienced hand-pickers.
- Total cost per acre is just over half of that for hand-pickers.

The cost for hand-picking rises proportionately as cotton yield increases – pickers move slower . . . the 22 does not!

Its picking speed remains constant irrespective of the cotton yield, and costs, therefore, also remain constant.

And in addition, the John Deere 22 picks clean – you need only one trip per row.



Kirby E8164/1



*"IN MY PERSONAL  
EXPERIENCE THE  
FINEST SHIRTS  
ALL BEAR THE  
COTTON MARK."*

*P*eople who know believe in the Cotton Mark.

When the Cotton Mark guarantees that the shirt, the sheet, the towel or anything else you're buying is quality-tested, 100% pure cotton, you can be sure it is.

The Mark also assures you that the cotton item you're about to buy

will hold its shape, hold its colour and resist shrinking.

To be sure you're getting quality, look first for the Cotton Mark.



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AND THAT'S A PROMISE.*