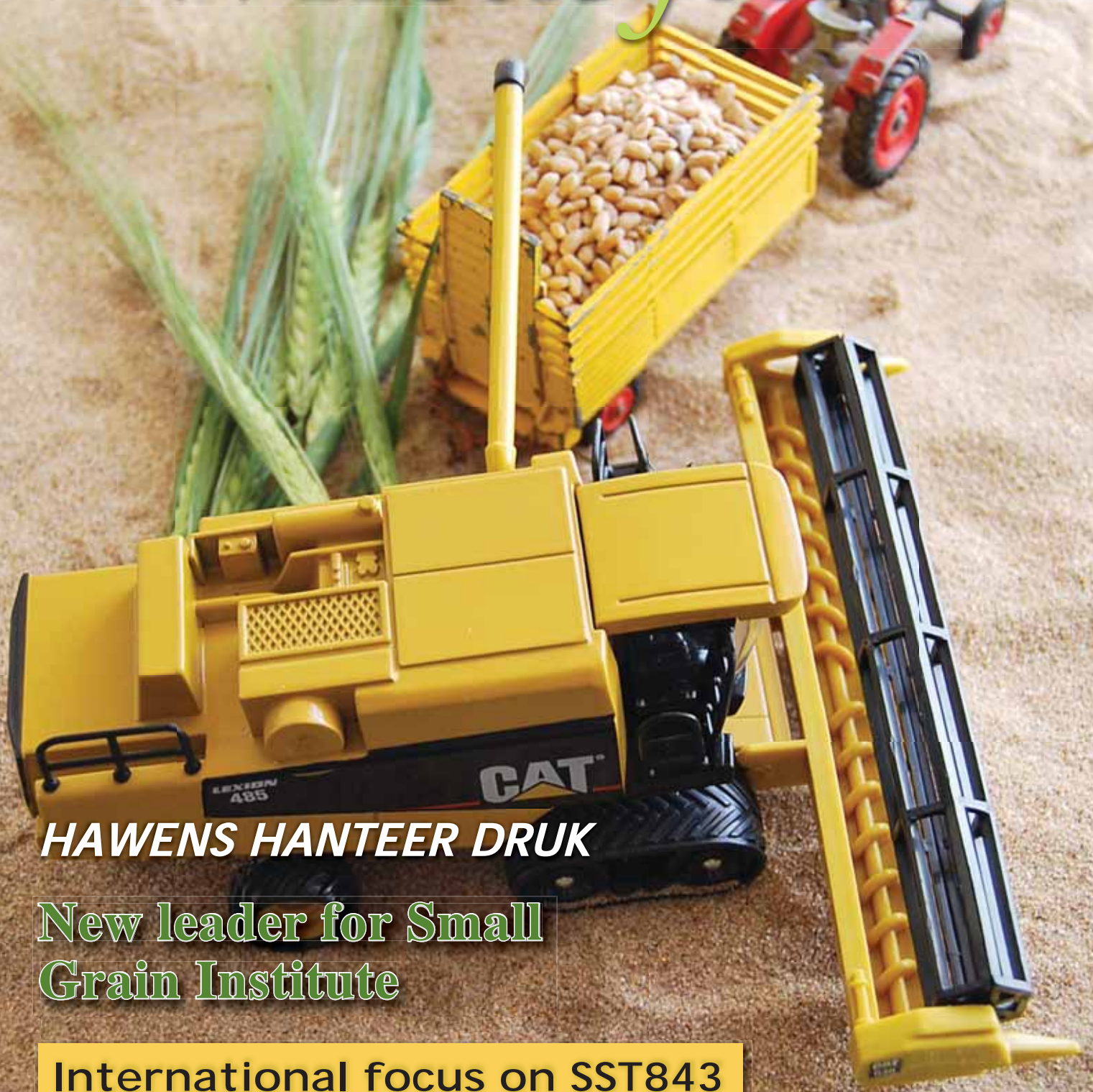


# Koringfokus

VOL 34.6

NOVEMBER • DECEMBER 2016

# Wheat focus



**HAWENS HANTEER DRUK**

**New leader for Small  
Grain Institute**

**International focus on SST843**

**Vals-kommandowurms se getalle**

# Canola

**agricol**  
aan die groei



## KULTIVARS

### Garnet

- **Groeiseisoenlengte:** Medium
- **Opbrengs:** Baie stabiel oor jare
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Goed
- **Planthoogte:** Gemiddeld
- **Weerstand teen omval:** Baie goed
- **Baie wyd aangepas:** Stabiele opbrengs

### Diamond

- **Groeiseisoen lengte:** Kort – Medium
- **Opbrengs:** Garnet + 18% in Australiese kultivarproewe
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Uitstekend
- **Planthoogte:** Medium
- **Weerstand teen omval:** Baie goed

*Alternatief vir Garnet*

### CB Atomic HT

- **Groeiseisoen lengte:** Medium – effe vinniger as CB Jardee HT
- **Opbrengs:** Verbetering op CB Jardee HT
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Ooreenstemmend met CB Jardee HT
- **Planthoogte:** Soos CB Jardee HT
- **Weerstand teen omval:** Uitstekend

*Nuwe generasie TT-Baster. Alternatief vir CB Jardee HT*

### Agamax

- **Groeiseisoenlengte:** Kort – Medium
- **Opbrengs:** Uitstekend – Wenner van opbrengskompetisie
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Uitstekend
- **Planthoogte:** Medium
- **Weerstand teen omval:** Uitstekend met bespuiting op 6-blaar stadium

*Droogtebestand – Stabiele opbrengs oor jare*

### CB Tango C

- **Groeiseisoen lengte:** Kort
- **Opbrengs:** Aangepas tot laer reënval areas
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Uitstekend
- **Planthoogte:** Medium
- **Weerstand teen omval:** Baie Goed. Kan direk gestroop word.

*Alternatief vir Garnet en Agamax in laer reënvalsones*

### ATR Gem

- **Groeiseisoen lengte:** Medium
- **Opbrengs:** Tawriffic + 35% in Australiese kultivarproewe
- **Swartstamweerstand:** Medium
- **Groeikragtigheid:** Verbetering op Tawriffic
- **Planthoogte:** Korter as Tawriffic
- **Weerstand teen omval:** Baie goed

*Alternatief vir Tawriffic en CB Jardee HT*

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# Koringfokus

## Wheat focus

VOL 34.6

NOVEMBER • DESEMBER 2016

REEDS 35 JAAR DIE ONAFHANKLIKE SPESIALIS-TYDSKRIF VIR DIE KLEINGRAANBEDRYF  
THE INDEPENDENT SPECIALIST MAGAZINE FOR THE SMALL GRAIN INDUSTRY  
FOR THE PAST 35 YEARS

### VOORBLAD

Die kleingraanseisoen verloop vanjaar goed, saadmaatskappye kan 'n finansiële hupstoot kry vir kultivarnavorsing en die Koringforum kon van verskeie positiewe ontwikkelinge verneem. Mag die feestyd ook speelyd vir ons boere wees.

*Koringfokus / Wheat Focus* verskyn ses keer per jaar en word in samewerking met die koringbedryf saamgestel, wat insluit: LNR-Kleingraaninstituut; SA Graaninligtingsdiens; Wintergraantrust & SA Graanlaboratorium.

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## AGRI-INFO

- 4 Koringforum speel belangrike bedryfsrol
- 5 Hawens hanteer druk van ingevoerde koring
- 6 New leader appointed for ARC-Small Grain Institute
- 6 Small Grain Institute moving forward
- 7 Gars en koring stig maatskappy om teling te bespoedig
- 9 Commercial wheat quality analysed
- 16 SA landbou floreer vóór die droogte
- 16 Gars se potensiaal in besproeiingsgebiede steeds goed
- 17 Nuwe verwickelinge met basterkoring
- 21 Uitblinkers kry beurse vir landboustudie
- 27 Kanola stoot weer sy bors uit
- 28 Skog: 'Versterk die landbousektore wat gedy'
- 30 Agrico en Dripco sien toekoms saam
- 30 Stop lightning from destroying the borehole pump

## KLEINGRAAN

- 10 Vals-kommandowurms se getalle wissel: Meer van een, minder van die ander
- 12 International focus on SST843's unique attributes
- 12 Preliminary results confirm performance
- 14 Long term objectives in SST843 research
- 20 The good, the bad and the ugly in agriculture – where do insects fit in?
- 22 Current status of wheat rusts in South Africa

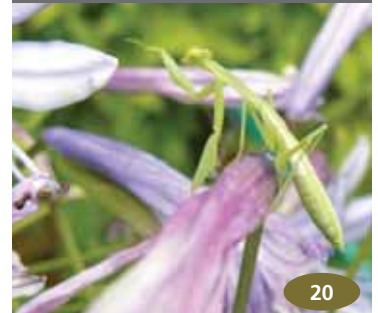
## MARKET-INFO

- 15 Produkte van koring
- 24 SAGIS: Koringmarksituasie
- 26 SAGIS: Gars, hawer en kanola se marksituasie



Vals-kommandowurms se motvlugte

10



Insects – the good, bad and ugly

20



Kanola stoot weer sy bors uit

27



SKOG se boeredag

28





Allan Bishop, voorsitter van die Koringforum, en Jannie de Villiers, uitvoerende hoof van Graan SA, het plaaslike graan-sake oor 'n koppie koffie bespreek.

# Koringforum speel belangrike bedryfsrol

Die Suid-Afrikaanse kleingraanbedryf het bepaald 'n gefokusde organisasie soos die Koringforum nodig om hom te rig, vir sy belange te veg en te verseker dat hy aan die voorpunt van die jongste bedryfs-ontwikkelinge staan.

## Johann van Zyl

**“DIE KLEINGRAANBEDRYF**, soos die meeste ander landboubedrywe, het met diepgaande veranderinge te make en elke nuwe jaar bied nuwe uitdagings,” sê Allan Bishop, voorsitter van die Koringforum. “Ek glo dat die Koringforum, 'n vrywillige organisasie, die gladde funksionering van die bedryf verseker deur sy betrokkenheid by navorsing, statutêre heffings, kleingraangehalte, bemaking en verbeterde verhoudinge met die regering.”

Bishop, een van die sprekers tydens die Koringforum-vergadering aan die einde van Oktober in Pretoria, het gemaak dat dié bedryf ook in die toekoms op sy tone sal moet bly. “Ons moet deurlopend daarvan bewus wees dat plaaslike produksie die afgelope jare geleidelik aan die daal was, onder meer omdat ander gewasse winsgewender verbou kon word. Daarom kry bedryfsake deurlopend die aandag en is dit die reëlingskomitee se strewende om die bedryfsgewing vir produsente deurlopend te verbeter.”

Hy is opgewonde dat daar in die afgelope seisoen goeie vordering gemaak is om die plaaslike bedryf weer vir boere 'n voorkeurbedryf te maak, het Bishop gesê.

Luan van der Walt, ekonoom van Graan SA, het bevestig dat daar die afgelope drie seisoene 'n welkome ommekeer was in die oppervlakte wat vir koringaanplantings benut is. “Dit was die geval ondanks die feit dat daar 'n oorvloed koring wêreldwyd beskikbaar is en pryse ongestadig is. Die uitwerking van die wisselkoers kan uiteraard ook nie buite rekening gelaat word nie. Dit

is egter nie net koring wat die slagoffer van dié onsekerhede is nie.”

Van der Walt het na stewige oppervlak- en produksie-toenames in die Vrystaat en Wes-Kaap in die huidige seisoen verwys en gesê dat, hoewel die klimaat koringaanplantings begunstig het, produksiegroei van meer as 130 000 ton in die Vrystaat en 200 000 ton in die Wes-Kaap aangename nuus vir die bedryf is. “Groter plaaslike oeste het laer invoer en 'n kleiner valuta-uitvloei tot gevolg en dit is goeie nuus vir die bedryf maar ook vir die land se finansies.”

## KORINGSTATISTIEKE

Nico Hawkins, hoofbestuurder van die SA Graaninligtingsdiens (Sagis), het gesê dat die 2016/17-vooruitskatting vir plaaslike koringproduksie op 'n toename tot 1,662 miljoen ton dui. Dit vergelyk met 'n landsoes van sowat 1,406 miljoen ton die vorige seisoen. “Dit kan daartoe lei dat die invoer van koring van sowat 2,06 miljoen ton tot 1,5 miljoen ton daal. Dit beteken 'n stewige daling in invoerkoste maar ook groter uitvoerverdienste vir die land.”

Volgens Hawkins neem die wêreldproduksie van koring egter steeds toe en dit inhibeer pryse. Die verwagting is dat die produksie van sowat 736 miljoen ton in die 2016/17-seisoen tot sowat 747 miljoen ton kan toeneem. “Dit kan die beraamde oordragvoorraad van sowat 218 miljoen ton tot 231 miljoen laat styg.”

Hawkins het heelwat ander insiggewende koringstatistieke met die teenwoordiges gedeel, insluitend die volgende:

- Suid-Afrika het in die tydperk van 1 Oktober verlede jaar tot einde Sep-

tember vanjaar verreweg die meeste van sy koring van Rusland ingevoer. Dié invoer het 963 141 ton beloop, wat byna die helfte (46,54%) van die totale invoer uitgemaak het. Die tweede grootste invoerdeel (283 451 ton, oftewel 13,7% van die totaal) het van Duitsland gekom, gevolg deur Amerika se 186 608 ton (9,02% van die totale invoer).

- Verreweg die meeste koring wat deur Suid-Afrika ingevoer word, kom deur die Durban-hawe. Dié hawe het in die afgelope seisoen 82,6% van die totale koring-invoer gehanteer, gevolg deur Kaapstad met 8,05%. Altesaam 73 skepe het koring na SA hawens vervoer – afkomstig van 10 verskillende uitvoerlande. Die meeste koring, 14 skepe vol, is in Oktober afgelaai.
- Plaaslike koringuitvoer van 53 974 ton het hoofsaaklik na Zimbabwe (47,9% daarvan), Namibië (24,98%) en Botswana (10,85%) gegaan.
- Suid-Afrikaners het in die jaar tot einde 31 Augustus vanjaar gemiddeld 58,48 kg koringprodukte per kop verbruik, waarvan pangebakte brood 38,5 kg per capita beloop het. Mielieverbruik per kop was 61,15 kg – dus nie veel meer per persoon nie.
- Die voorkeurbrood in Suid-Afrika is steeds witbrood. Verkope van witbrood het 49,7% van totale verkope uitgemaak, gevolg deur bruinbrood (48,6%). Volgraan- en ander brood het dus nie eens 'n volle 2% van die totaal beloop nie.
- Die broodprys het, volgens syfers van Statistieke SA, van gemiddeld R11,98 (vir 'n 700 gram-witbrood) in 2015 tot R13,34 in 2016 gestyg (+11,35%). ♣



# HAWENS HANTEER DRUK VAN INGEVOERDE KORING

## Sanet Flynn

SA GRAANINLICHTINGSDIENS

**A**S GEVOLG VAN die stremende droogte en swak oeste wat die Suid-Afrikaanse landbou die afgelope twee seisoene ernstig gekniehalter het, het onderwerpe soos voedselsekerheid dikwels na vore gekom. Daarbenewens was daar heelwat kommer of die land se hawens die verhoogde invoeraktiwiteit sal kan hanteer.

Gedurende Desember 2015 is werksessies tussen belangegroep gehou om die implikasies van verhoogde invoer op die verskillende hawens te bespreek en sekere logistieke reëlings te tref.

Sedertdien is 'n rekordtotaal van 2 346 721 ton koring vir die 2015/16-bemarkingseisoen deur Suid-Afrikaanse hawens gehanteer. Dit het invoer vir die plaaslike mark, asook deurvoer na ander lande ingesluit. 'n Totaal van 73 bote vanaf tien lande het by die vyf hawens aangedoen en in totaal is 197 keer by 'n kaai vasgemeer.

Die gemiddelde tonnemaat per skip was 32 147 ton. Die grootste skip, die JS Normada met 54 231 ton koring aan boord, was van die Russiese Federasie afkomstig. Die kleinste skip was die Yellowstone vanaf die VSA met 6 599 ton koring aan boord. Die meeste invoer het gedurende Oktober 2016 plaasgevind waartydens 14 skepe die vyf hawens besoek het (**Tabel 1**).

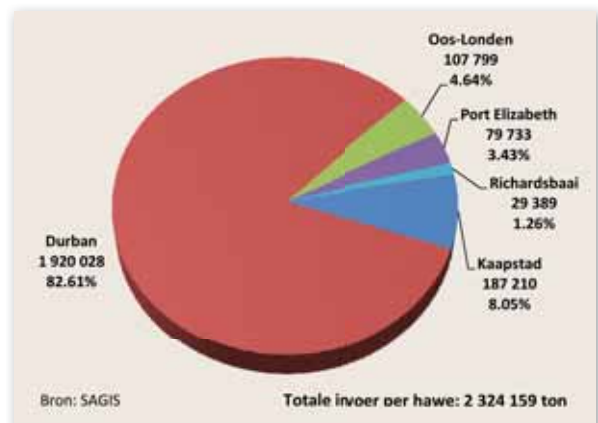
Durban se hawe het 82,6% van die totale 2,3 miljoen ton koring-invoer behartig. Kaapstad se hawe het die tweede meeste koring gehanteer (187 210 ton). Oos-Londen, Port Elizabeth en Richardsbaai het saam 216 921 ton van die totale hoeveelheid koring gehanteer (**Figuur 1**).

Met die verhoogde koringinvoer, asook ander gewasse soos sojabone, mielies en sorghum, blyk dit asof daar geen noemenswaardige probleme by hawens ondervind was om dié invoerdruk te hanteer nie. ♡

Tabel 1.

Totale invoer (RSA + ander)	2 346 721 ton
Getal skepe	73
Getal lande	10
Getal hawens afgelaai	5
Geriewe besoek	197
Gemiddeld per skip	32 147 ton
Grootste skip: JS Normada - Russiese Fed.	54 231 ton
Kleinste skip: Yellowstone - VSA	6 599 ton
Bedrywigste maand	Oktober - 14 skepe

Bron: SAGIS



Figuur 1. Weeklikse koringinvoer per hawe

5



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# New leader for ARC-Small Grain Institute

## Elri Burger

ARC-SMALL GRAIN INSTITUTE, BETHLEHEM

**D**R TOI JOHN TSILO was appointed as the Senior Manager Research: Small Grain Institute (SGI).

In January 2011, Dr Tsilo was initially appointed as a Senior Researcher/ Biotechnologist at the SGI. In 2013 he was promoted as a Research Team Manager for the Germplasm Development and Biotechnology Programme. Prior to his appointment at the ARC, from 2009 to 2011, Dr Tsilo was a Post-Doctoral Scientist/Research Associate in the Department of Agronomy and Plant Genetics at the University of Minnesota.

He also worked at the same University as a Research Assistant during 2004 to 2008, while studying. Earlier to that, he worked for the Free State Department of Agriculture as an Agricultural Scientist responsible for farming information in the Free State from 2003 to 2004.

Dr Tsilo holds a PhD in Plant Breeding/ Plant Molecular Genetics from the University of Minnesota, where he also obtained an MSc in Applied Plant Sciences. His junior degree studies were at the University of the North (now University of Limpopo) where he obtained a BSc Agric degree, *cum laud*.

Dr Tsilo serves in several editorial boards as a member and associate editor. He has international scientific stan-



Dr Toi Tsilo

ding with several research publications in top tier international journals. He is an adjunct professor and is affiliated with several universities in South Africa and advisor to MSc, PhD and post-doc candidates. His vision is to build research capacity and position Small Grain Institute as a leader in research and development.

Dr Tsilo grew up in Qwaqwa in the Free State. He is married to Tsepiso, a Research Technician at the SGI, and they have a son Learnmore. 🐾

## Gars en koring stig maatskappy om teling te bespoedig



Andries Theron

Andries Theron, ondervoorsitter van Graan SA, en Patrick Graham van Sensako is as voorsitter en ondervoorsitter aangewys van die nuwe maatskappy wat die eindpuntheffing op koring en gars gaan administreer.

**D**IE NIE-WINSGEWENDE maatskappy, SA Kultivar en Tegnologie-agentskap (SACTA), is gestig nadat Graan SA, Agbiz Grain, Sansor en die LNR-Kleingraaninstituut die minister van landbou, bosbou en visserie versoek om 'n statutêre heffing in te stel op koring en gars wat plaaslik geproduseer en verkoop word. Die doel van die heffing is om telers van koring- en garskultivars te vergoed vir hul bydrae tot die verkryging en benutting van verbeterde internasionale en plaaslike agri-verwante intellektuele eiendom tot voordeel van die plaaslike koring- en garsbedryf.

Aparte rekeninge sal vir die koring- en garsheffing geadministreer word en geen kruissubsidiëring gaan tussen die onderskeie kommoditeite plaasvind nie.

SACTA se direksie bestaan tans uit Andries

Theron en dr Marinda Visser van Graan SA, Patrick Graham en John Odendaal van Sansor en Mariana Purnell van Agbiz. Die departement van landbou, bosbou en visserie moet nog hul direkteur aanwys. Die direksie mag self ook drie direkteure benoem.

Volgens aanduidings stel bedryfsorganisasies van ander selfbestuierende gewasse soos sojabone ook belang om die model van eindpuntheffings toe te pas. Hulle sal moontlik ook by SACTA aansluit.

SACTA se kantoor is voorlopig gesetel in Graan SA se gebou, Blok C, Alenti Office Park, Witheriteweg 457, Die Wilgers, Pretoria-Oos met telefoonnommer 086 004 7246 en e-posadres [sacta.awie@graingrowers.co.za](mailto:sacta.awie@graingrowers.co.za). Awie Coetzee is voorlopig betrokke by die administrasie van SACTA en kan ook gekontak word by 082 818 9620. 🐾

# Small Grain Institute moving forward



ARC-Small Grain Institute (SGI), previously Small Grain Centre, was established in 1976 as a Research Centre and became an institute in 1995. During the early seventies, Dr Norman Borlaug, father of the Green Revolution and Nobel Peace Prize laureate, was invited to review the small grain research programme of South Africa. His recommendation was that fragmented efforts were combined into one organisation.

## Dr Toi Tsilo

SENIOR MANAGER – ARC-SMALL GRAIN INSTITUTE

**THE INSTITUTE HAS** a long standing relationship with the Winter Cereal Trust as the main stakeholder and industry role player. The main function of the Institute is to conduct research and development activities on small grains including wheat, barley, oats and triticale. As part of the ARC Field Crops Division it continues to contribute significantly to South Africa's food security. The SGI's vision was to enhance the quality of life of all South Africans through the provision of high-yielding cultivars with excellent end-use quality, sustainable production systems and related technological products. Over the years, South African small grain farmers have always had an opportunity to buy seeds or be supplied with seeds of our best performing cultivars. Millers and bakers have also had access to high quality grains and flour to keep the industry competitive.

As part of the mandate on small grains, researchers conduct research with partners (local and international) and also develop human capacity through training of students. As we move forward, the recommended strategy is along the same recommendation made by Norman Borlaug in the seventies. This time around, we are engaged in upscaling our outputs by partnering with universities. Efforts are underway to get several of ARC-SGI's researchers affiliated with universities to boost South Africa's research capacity and research outputs by re-positioning institutions and organisations for effective use of human capacity and even better funding opportunities. Through this engagement we are hoping to re-position the small grain research landscape and to provide an opportunity

to retain outstanding researchers.

On a need-driven basis, SGI researchers will be available to assist universities in offering specialised lectures on areas of co-operation. Research is undertaken on a need basis, covering both public good research and industry based research.

ARC-SGI researchers will continue to foster innovation. We are committed to using the cutting edge technologies of high throughput infield or greenhouse phenotyping, imaging and all other generations of new sequencing technologies in order to increase our prediction accuracy and to timeously provide stakeholders and clients with expected outputs. As we continue to assist South African farmers to apply rapid responses to secure their crop at an affordable production cost, the challenges that small grain farmers and our food security are facing, are dynamic, but they are constantly changing. This can be frustrating at times to affected groups. One of the effective action plans that ARC-SGI is putting in place, is partnerships, co-operation and multi-institutional and public or public-private partnerships.

As we move forward, we are even more committed in working together with our partners and role players to continue to develop solutions for the sector to benefit all small grain farmers, whether it is large commercial farmers or smallholder farmers, including emerging farmers. We also continue to function along the lines of CIMMYT to bring all national and international public and private partners on board.

The end-point levy system, as signed by the Minister of Agriculture, Forestry and Fisheries, will provide a new return on investment for breeding programmes. The system is envisaged to attract even more investments in research and development. More good news for

Under new leadership, the emphasis of ARC-SGI is *"to broaden and increase the research focus with a deep commitment to public good research, access for qualified researchers and excellence in research and development. Align the institute focuses with the needs of South African residents and its small grain industries."*

*"Aligned to the ARC Vision 2050, SGI is currently engaging its stakeholders in a consultative and highly inclusive strategic planning exercise that calls for a rejection of complacency and research culture change to meet the small grains' challenges."*

South Africa is that the requirements for releasing new cultivars have been relaxed to accommodate the long overdue need of releasing high-yielding cultivars.

At our annual Planning Committee meeting during July 2016, our researchers presented their annual progress reports and proposals for new projects. All role players and stakeholders made inputs on the research and development agenda. What we have learned is that people want ARC-SGI to be exceptional. There is genuine affection and grass roots support for the research conducted. We will continue to invite all role players, debate research challenges and get clarity, knowledge and scientific advice in the presence of all, for the benefit of the whole industry.

With more opportunities ahead of us, we are geared towards science based research picking up the pace as we strive to achieve a new level of excellence in research and development and reaching out to all South Africans. ♡

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# Commercial wheat quality analysed

The national whole wheat protein average of 12,8% in the 2015/'16 season was the best since the excellent 2004/'05 season. The Free State production regions had the highest average protein content of 13,2%.

## Johann van Zyl

**"THE HIGH PROTEIN** average can be attributed to the drought conditions during the season," Wiana Louw, manager of the Southern African Grain Laboratory (SAGL), said at the Wheat Forum meeting in October. "The percentage of samples having protein contents of more than 13% increased significantly from 16,4% and 18,3% the preceding two seasons to 43,2% this season."

Protein content is generally a function of soil and climatic conditions and fertiliser treatment.

Louw referred to the South African Wheat Crop Quality Report (2015/'16 recently published) and said that the country's average dryland yield decreased from 2,66 t/ha in 2014/'15 to 2,04 t/ha in 2015/'16. The irrigation yield also decreased from 6,36 t/ha to 5,94 t/ha. Wheat contributed 77% to the total winter cereal crop production in the country this season and was planted in 28 of South Africa's 36 crop production regions.

The six most popular wheat cultivars the past season, based on wheat seed sold by commercial grain silo owners to wheat producers in the 2015 planting season, were SST 056, SST 087, SST 0127, SST 015, SST 88 and SST 884. More than 40 cultivars were sold.

The most preferred cultivars in the different regions according to cultivar identification were:

- SST 88 and SST 087 in the Western Cape;
- SST 884 and PAN 3471 in the Vaal and Orange River areas;
- SST 843 and SST 884 in North West;
- SST 884 and SST 875 in regions 21-24 of the Free State;

- SST 884 and SST 835 in Gauteng, Mpumalanga, Limpopo and KwaZulu-Natal.

Louw said that South Africa has three major wheat-breeding programmes and that new or introduction cultivars can only be released for planting if it has better agronomical flour quality characteristics than the cultivars planted commercially in a specific area. Quality analysis is done on all first, second and third year trials of the wheat breeding programmes. Provisional classification is based on a minimum of two years' data over at least five localities.

Final classification is based on three years' cultivar and quality standard data from five localities. The report format allows comparison between a line and the standard for a region and the qualities of different lines. "We have 11 lines for final release, 16 lines for preliminary release and 39 lines for first year analysis at the moment," Louw said.

The classification of wheat cultivars has the provision of new cultivars in mind that perform well agronomically and possess suitable milling, rheological and baking characteristics. Wheat breeders, millers and bakers are involved to ensure market-directed and quality-driven wheat production. Classification norms and standards are given to breeders in an attempt to provide them with guidelines that should stand the test of time.

\* SAGL, an ISO 17025 accredited testing laboratory, was established in 1997 on request of the SA grain industry. It participates in 16 international and one local proficiency testing schemes as part of ongoing quality assurance procedures to ensure international comparability and technical competency. ♻️



Luan van der Walt (Grain SA), Ishmael Tshiame (Grain Farmer Development Association) and Nico Hawkins (South African Grain Information Service) in conversation at the recent Wheat Forum meeting in Pretoria.



Wiana Louw (Southern African Grain Laboratory) and Dirk Kok (Sacota) sharing views on the local wheat industry.

## TRUST BURSARIES BENEFIT INDUSTRY

The Winter Cereal Trust has spent millions of rands over a period of several years to ensure appropriate research and a constant stream of well informed newcomers to the industry.

"The Winter Cereal Trust Bursary Scheme has helped several students to do important research," Dr Simon Letsoalo, WCT administrator, told industry leaders at the recent Winter Forum meeting. "Selected MSc students now get R73 300 per annum each and PhD students get a valuable R89 590 per student."

Ten MSc students and two PhD students received bursaries to the value of R912 180 from the Trust this year.



foto: Jaracal.com



Vals-kommandowurm se mot.

# Vals-kommandowurms se getalle wissel: Meer van een, minder van die ander

Die vals-kommandowurm is steeds met ons en wissel in getalle net soos die weerstoestande kan wissel. In die afgelope paar jaar het hoë motgetalle by tye voorgekom maar dit kan nie altyd aan uitbrake gekoppel word nie. Vanjaar is daar minder motte as voorheen, maar dit wil voorkom asof daar meer larwes is en die situasie sal dopgehou moet word.

## Dr Goddy Prinsloo

LNR-KLEINGRAANINSTITUUT

## Dr Hannalene du Plessis

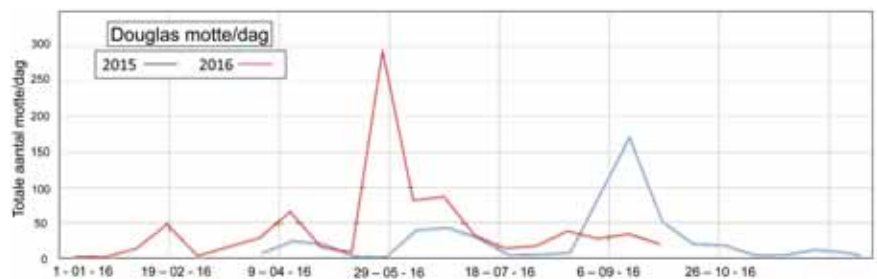
NOORDWES-UNIVERSITEIT

## Johnny Molomo

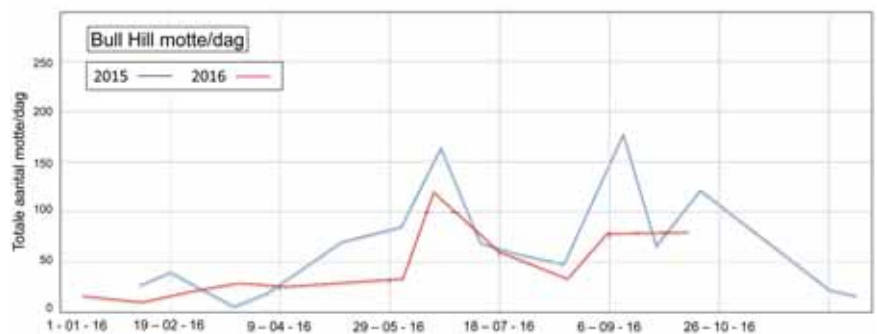
GWK, DOUGLAS

**V**ALS-KOMMANDOWURM IS reeds lank in Suid-Afrika teenwoordig. Voorheen het almal daarna verwys as die vals-bolwurm, aangesien hulle dikwels op die voerpunt van mieliekoppe gevind word waar hulle aan die blare en punt van die kop vreet. Die larwes het nooit noemenswaardige skade aangerig nie totdat dit onverwags en onopsigtelik gedurende 2010 op koring en gars in die besproeiingsgebiede van die Noord-Kaap en Noordwes uitgeslaan het. In 'n tydperk van drie weke het hierdie larwes ongeveer R8,5 miljoen skade op 2 000 ha gars aangerig. Sedert 2013 het die LNR-Kleingraaninstituut die plaag se motvlugte begin monitor om vas te stel of daar met behulp van die lokvalle 'n vroeë waarskuwingstelsel ontwikkel kan word. In hierdie stadium wil dit voorkom asof 2010 se uitbraak 'n eenmalige gebeurtenis kon wees, maar dit kan nie met sekerheid gesê word nie.

Reeds in September vanjaar is elders berig oor data van die aflope drie jaar. Tot vyf groot vlugpieke kan jaarliks voorkom. Die pieke kom dikwels in dieselfde tydperk voor, maar tussen jare kan hulle met tot 30 dae vorentoe of terugskuif. Dit is baie belangrik as in ag geneem word dat, indien pieke met 30 dae aangeskuif word, hulle 'n groot uitwerking aan die einde van die klein-



Figuur 1. Douglas motgetalle per dag vir 2015-2016.



Figuur 2. Bull Hill motgetalle per dag vir 2015-2016.

graan-groeienseisoen op veral gars net voor strooptyd kan hê. Deur vroeër in die groeienseisoen voor te kom, kan hulle egter ook 'n groter uitwerking op jonger koring hê. Gevolglik is dit steeds belangrik om die gebeure te monitor.

## Invloed van klimaatsverandering

Wanneer 2016 tot dusver ontleed word, kan die droër klimaat die plaag wesenlik beïnvloed. In Douglas was daar aan die einde van Mei vanjaar 'n redelike sterk motvlugpiek van net minder as 300 motte per dag. Dit het daarna afgeskaal

tot minder as 50 motte per dag waar dit steeds in Oktober was (Figuur 1). Hierdie patroon verskil heeltemal van 2015 se patroon toe 'n vlugpiek van meer as 150 motte per dag aan die einde van September aangeteken is (Figuur 1).

By Bull Hill aan die onderpunt van die Vaalharts-besproeiingsgebied is 'n vlugpiek van 120 motte per dag gedurende Junie 2016 aangeteken (Figuur 2). Daarna het die getalle afgeneem tot ongeveer 80 per dag, wat weer eens minder is as 175 per dag wat verlede jaar aangeteken is (Figuur 2).

By Hartswater het vanjaar net een

piek van ongeveer 80 motte per dag aan die begin van September voorgekom (Figuur 3). Dit het egter afgeneem tot die huidige 50 motte per dag (Figuur 3). Gedurende 2015, tussen Junie en Desember, het ongeveer vier vlugpieke van tussen 60 en 80 motte per dag voorgekom, wat aansienlik meer is as die huidige (Figuur 3).

By Viljoenskroon is gedurende die begin van Junie 'n piek van 50 motte per dag aangeteken wat daarna afgeneem het tot ongeveer 20 motte per dag, waar dit tans verkeer (Figuur 4). Dit is aansienlik minder as die ongeveer 170 motte per dag wat in Oktober 2015

aangeteken is (Figuur 4).

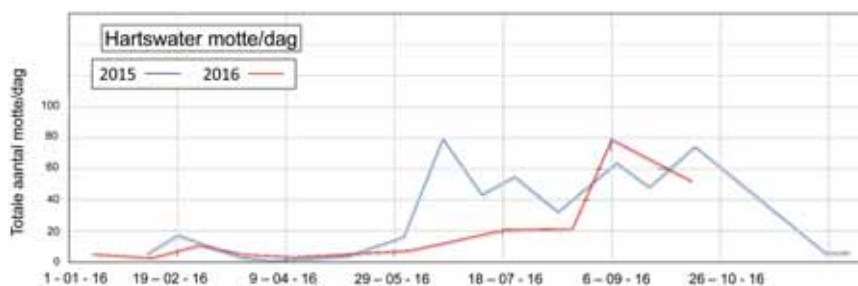
Die vier figure se inligting laat dit lyk asof of alles rustig en stil is en daar nie rede is vir kommer oor 'n uitbraak nie. Gedurende die tweede week van Oktober 2016 is die gebruikelike opname uitgevoer van vreetmerke en larwes wat in die graan in Vaalharts en Taung se gebiede teenwoordig kan wees. Agtien landerye uit die gebiede is ondersoek en by altesaam ses van hulle is larwes gevind, wat 30% van die landerye verteenwoordig. Dit is heelwat meer as die ongeveer 18% van landerye waar larwes verlede jaar gevind is. Vanjaar is drie tot vier larwes per 20 hale met 'n veenet gevind teenoor die

een tot twee larwes van verlede jaar.

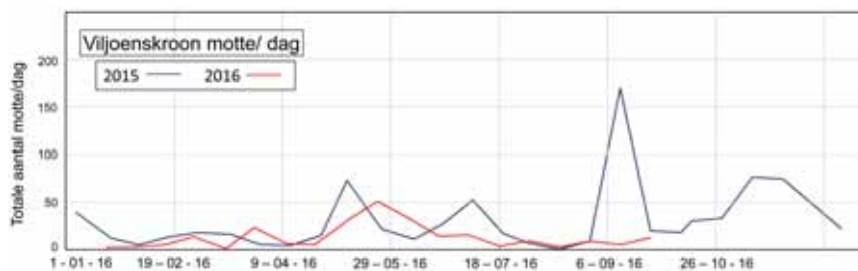
Afgesien van groot motvlugpieke wat gedurende September en Oktober 2015 voorgekom het, het groot uitbrake nog nie weer plaasgevind nie. Slegs 'n klein uitbraak het gedurende November 2015 op 'n plaas in die Sand-Vet-besproeiingskema op koring voorgekom wat wel skade veroorsaak het.

**Wat produsente te doen staan**

Die huidige toestand laat 'n mens aan die spreekwoord dink wat sê "stille waters, diepe grond, onder draai die duivel rond". Die onwaarskynlike blyk waar te wees, naamlik hoe minder motte, hoe meer larwes. Wanneer die meegaande grafieke ontleed word, was daar tot dusver een uitskieter-piek in elke gebied. Die invloed van die droogte het tot gevolg dat spilpunte die enigste groen gebied in die omgewing is en gevolglik as "voerplek" vir insekte dien, maar die "dood" vir die produsent kan beteken. Moet gevolglik nie té gerus wees nie en let op vir vreetmerke. 'n Verdere opmerkbare verskynsel is opslag-mielies wat redelik gevreet is. Dit stem in 'n mate ooreen met plante wat in 2010 tot 2012 gereeld om lande gevind is.



Figuur 3. Hartswater motgetalle per dag vir 2015-2016.



Figuur 4. Viljoenskroon motgetalle per dag vir 2015-2016.



Vreetmerke aan koringplante.

**Nawerking van chemiese beheer**

Hou egter in gedagte dat die middels wat vir die bespuiting van vals-kommandowurm gebruik word lang onthoudingstydperke het. Dit kan veroorsaak dat residue op die graan mag voorkom as dit kort voor strooptyd gespuit word. Let op dat gars veral nie te kort voor strooptyd bespuit mag word nie.

Vir meer inligting kan Goddy Prinsloo gekontak word by 082 875 3401 of [prinsloogj@arc.agric.za](mailto:prinsloogj@arc.agric.za).



Vreetmerke aan opslag-mielieplante.

# International focus on SST843's unique attributes



**UNUSUAL ATTRIBUTES OF** Sensako's wheat cultivar SST843 and its complex genetic background are studied with an international partner to identify key genes involved in its development and performance. The cultivar is known to have a very short growth period, normally does not adhere to the usual negative correlation between yield and grain protein content and does not show severe yield penalisation under mild drought conditions.

The Winter Cereal Trust's Technical Committee approved the combined application from Sensako and GrainSA during 2015 to study the phenomenon of SST843. It was the first time that a joint project with an international research institution – where most of the research was to be carried out by the international partner – was funded by the Trust. The latter

achievement will enable South Africa's wheat breeders to manipulate genes. The international partner is Flinders University in Adelaide, Australia.

The Australian Research Council (ARC) Industry Linkage grant programme was also approached to fund Sensako's project. This funding scheme from the Australian Government requires a cash and in-kind contribution from the industry partner(s). The project thus allowed the Winter Cereal Trust to get access to research capacity not available in South Africa, as well as access to substantial additional funding of projects that will improve the research outputs of South African breeding programmes. The total funding obtained from the WCT was in excess of R1 million and from Australia's ARC in excess of R3 million. ♡

## Preliminary results confirm performance

**Dr Francois Koekemoer**  
SENSAKO

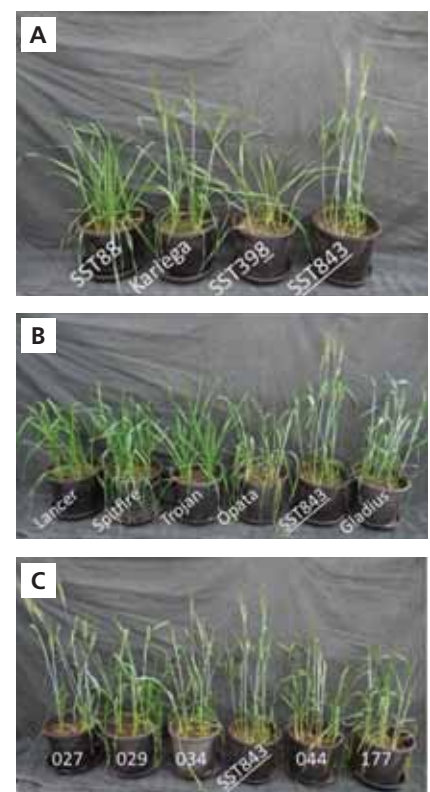
**BREAD WHEAT IN** South Africa represents an isolated gene-pool that has been selected, adapted and bred for specific local environments. The cultivar SST843 has a unique genotype which differs from Australian, Mexican (CYM-MIT) and other SA germplasm. Plants of SST843 have a significantly shorter period until flowering and maturation, regardless of day length and temperature. This unique early-flowering trait has a clear genetic background inherited by plants in the five studied breeding lines derived from SST843. No obvious penalty in seed yield has been observed in SST843 plants.

A gene cascade controlling the traits of flowering time and tillering were studied, where three major genes were shown to be highly expressed in the vegetative stage of development in SST843

plants and its five sibling lines, initiating the earlier start of tillering and flowering.

Plants from SST843 and five pedigree-related breeding lines showed greater tolerance to drought, based on the phenotypic observation of a reduced susceptibility to leaf wilt compared to other studied genotypes. Molecular examination of candidate genes involved in drought tolerance in SST843 is scheduled for future study. See the reaction of SST843 in **Figure 1**.

Based on experiments in hydroponics, the SST843 genotype can be deemed the most salt tolerant compared to all other studied wheat accessions in regard to relative plant growth. Plants of SST843 did not produce the highest root and shoot biomass in favourable non-stressed (control) conditions, but their loss of biomass (percentage of reduction)



**Figure 1. Images of representative plants from studied lines under mild drought conditions. (A) Non-pedigree related genotypes from Sensako; (B) Non-pedigree related genotypes from other companies; (C) Breeding lines originated from SST843. The cultivar SST843 is underlined.**

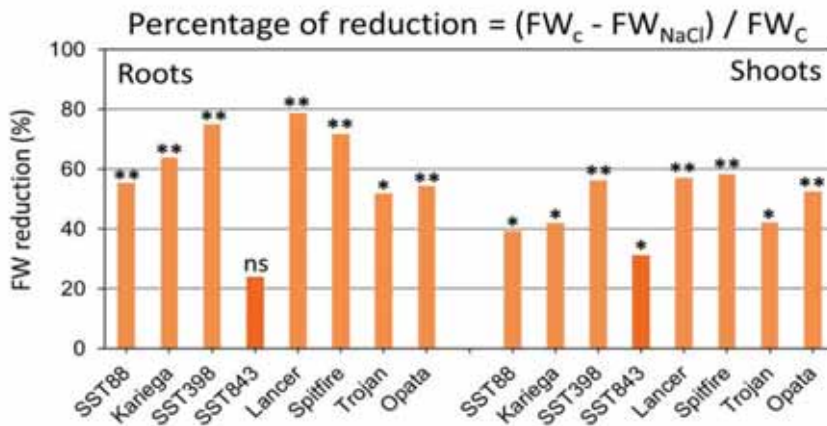


Figure 2. Salinity tolerance estimated as the percentage of biomass reduction in plants grown in salt stress, compared to control conditions. Data for roots and shoots are presented separately. Bars for SST843 are shown in a darker colour. Data for salt stress statistically differ from control.

\*  $P < 0.05$ ; \*\*  $P < 0.01$ ; ns = not significant, using Student's t-test ( $n = 6$ , for each genotype, in each experiment).

in salt-stressed conditions was minimal compared to the other wheat studied. See **Figure 2** for the preliminary results.

Expression of Aox1 gene in leaves, but not in roots, was strongly associated with the growth of the different genotypes. The highest level of Aox1 expression in the leaves of SST843 under salt stressed conditions compared to control (10.6-fold) was associated with the smallest shoot biomass reduction in the same conditions (31%). The alternative oxidase gene Aox1 is involved in the oxidative stress response that serves to detoxify aggressive radicals of Reactive oxygen species, which appear consistently under NaCl application. ♡

# VERHOOG JOU GRONDSTANDAARD

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# Long term objectives in SST843 research

ANALYSIS OF MECHANISMS FOR ULTRA-SHORT VEGETATION HABIT AND EFFECTIVE NUE IN SST843

Dr Francois Koekemoer

**Dr Francois Koekemoer**  
SENSAKO

**B**ESIDES TRADITIONAL GROWING plants in pots and containers, the robotic conveyor system of the Plant Accelerator in Adelaide, Australia, will be used for phenotyping plants in this project. The exact differences between the growth habits of SST843 plants and standards will be determined, because in the Plant Accelerator everything can be controlled which influence the growth of a wheat plant, such as temperature, sunlight intensity and water. Further, a robotic system handles the measurements and can be done almost on a per minute basis for 24 hours. For genotyping, candidate genes in SST843 controlling the phenomenon of the cultivar will be analysed.

For the determination of the ultra-short vegetation habit and to get interpretable results, an appropriate control line (another line with normal vegetation length) must be included. Further it is suggested to have a double set of controls: the first line should be a direct parent or close pedigree of SST843, while the second control line should be non-related genotype. The researchers expect to receive results indicating on which stage of ontogenesis the plants start to grow differentially. It may be on germination, at a very early growth stage of the young seedling, young plants, matured vegetative stage, tillering, anthesis/post-flowering or seed-set/maturing stage.

## Nitrogen, irrigation and genetics

The excellent performance of SST843 in grain yield and quality can possibly be related to Nitrogen Use Efficiency (NUE), but solid proof for this is necessary. It is suggested to have three treatments with nitrogen: low (or minimal) nitrogen, average (standard) nitrogen and high supplementary of nitrogen to plants of

SST843 and both controls.

The idea of the experiment is to compare how growing curves of SST843 plants are different, depending levels of nitrogen in soil compared to the control lines. Additionally, sources of the nitrogen have to be checked carefully.

Reduced irrigation can significantly affect yield when compared to well-watered conditions, which is related to drought tolerance and its effect to seed yield and quality. All experiments described above are supposed to carry out in well-watered conditions. The researchers are intending to carry out one more experiment with drought.

At least three rounds of ICP-analysis (Inductively coupled plasma mass spectrometry – ICP-MS) of elements (including nitrogen) are needed to see how nitrogen and other elements are accumulated in plants. This will indicate the differences in element accumulation and NUE in SST843 and control lines in different stages of the ontogenesis.

Regarding the molecular-genetic study of ST843 compared to control lines, all experiments described above would only tell half of the story, if researchers cannot identify key-gene(s) controlling the superior

phenomenon of SST843.

For example, genes controlling ultra-short growth cycle (USGC) and NUE can be related to each other but might be expressed co-incidentally. Drought experiments represent independent study, which again maybe, but maybe not related to USGC and NUE. Excellent and stable performance of SST843 during several years indicates for strong genetic control of the trait. There are many structural genes, well-studied and expressed in response to abiotic stresses, such as aquaporins for drought and ion channels for salinity. However, regulatory genes can play a much more important role in the response of plants to the stresses.

Once most suitable candidate gene has been identified, the researchers can plan to prepare genetic construct and make a genetic transformation in other wheat, as well as barley, rice and/or model plant Arabidopsis for testing of the working hypothesis. But expression analysis of the transgene and performance of the transgenic plants could give the researchers very solid results to confirm a role of the candidate gene(s) responsible for USGC and NUE phenomenon in the superior cultivar, SST843. ♣



# PRODUKTE VAN KORING

**Sanet Flynn en Nico Hawkins**  
SA GRAANINLICHTINGSDIENS

**STATISTIEK VAN DIE SA** Graaninligtingsdiens toon dat bykans 40 miljoen brode weekliks van 1 September 2015 tot 31 Augustus 2016 gebak is. Daarvan was bykans ewe veel wit- en bruinbrode gebak.

SAGIS se ontleding van die tydperk 1 September 2015 tot 31 Augustus 2016 toon die volgende:

## Koringmeel

- 3 151 986 ton heelgraan is gemaal.
- Hieruit is 3 137 080 ton koringmeel, semolina en afvalprodukte (semels) vervaardig (**Tabel 1**).
- Witbroodmeel het 35,5% (1 113 522 ton) van die totale meelproduksie uitgemaak, koekmeel 26,1% (819 800 ton) en bruinbroodmeel 12,7% (399 615 ton) (**Figuur 1**).
- Semels, waarvan die meeste weer vir bruinbroodproduksie ingemeng word, beloop 20,0% (627 587 ton) van die totaal.
- Heelgraanmeel, semolina en bruinmeel verteenwoordig saam sowat

1,1% van die totale koringmeelprodukte wat geproduseer is.

- Gedurende die tydperk van twaalf maande is 302 ton koringprodukte ingevoer en 572 ton uitgevoer.

## Panbrood

- 2 059 272 604 panbrode is gedurende die tydperk gebak. Dit is sowat 172 miljoen brode per maand of 39,6 miljoen brode per week (**Tabel 2**).
- Witbrood het 49,7% (1 023 679 565) van die totale aantal gebakte brode verteenwoordig, gevolg deur bruinbrood 48,6% en heelgraanbrood 1,6%.
- Die eenhede van 700 g is die gewildste grootte by beide wit- en bruinbrood. Die ongespesifiseerde gewigte ("ander") is by volkoringbrood (heelgraan) die gewildste (**Figuur 2**).
- Volgens Statistieke SA was 'n witbrood van 700 g in September 2016 sowat 11,35% duurder as in die vorige jaar. 'n Bruinbrood van 700 g was sowat 15,10% duurder as 'n jaar gelede.

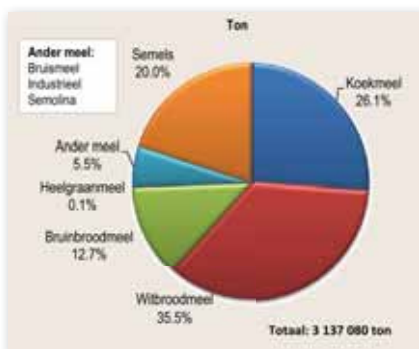
Meer inligting kan op SAGIS se webtuiste [www.sagis.org.za](http://www.sagis.org.za) verkry word. 🍞

**Tabel 1. Koringprodukte per maand vervaardig.**

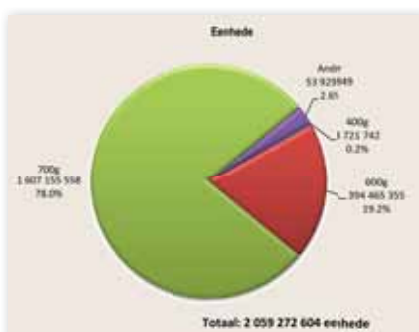
	Maand Aug '16	Totaal Sep '15 - Aug '16 vervaardig	% van totaal
Ton			
Koekmeel	76 702	819 800	26.1
Bruisemeel	1 920	16 141	0.5
Witbroodmeel	98 203	1 113 522	35.5
Bruinbroodmeel	38 597	399 615	12.7
Ander meel (Industrieel)	12 793	141 390	4.5
Heelgraanmeel	159	3 120	0.1
Semels	57 961	627 587	20.0
Semolina	1 228	15 905	0.5
Totaal	287 563	3 137 080	100.0

**Tabel 2. Pangebakte brode.**

	Totaal Aug 2016	% van maand totaal	Progressief	% van totaal
	Eenhede	Eenhede	Sep '15 - Aug '16	Eenhede
<b>Witbrood</b>				
400 g	247 194	0.1	2 466 219	0.1
600 g	15 296 115	8.5	183 725 224	8.9
700 g	72 690 412	40.5	828 492 561	40.2
Ander	884 867	0.5	8 995 561	0.4
Totaal: Witbrood	89 118 588	49.6	1 023 679 565	49.7
<b>Bruinbrood</b>				
400 g	87 179	0.0	1 135 997	0.1
600 g	18 634 352	10.4	209 868 508	10.2
700 g	66 881 847	37.2	769 414 723	37.4
Ander	1 719 886	1.0	20 047 535	1.0
Totaal: Bruinbrood	87 323 264	48.6	1 000 466 763	48.6
<b>Heelgraan</b>				
400 g	2 097	0.0	28 730	0.0
600 g	42 256	0.0	502 760	0.0
700 g	786 910	0.4	8 662 134	0.4
Ander	1 996 654	1.1	22 790 115	1.1
Totaal: Heelgraan	2 827 917	1.6	31 983 739	1.6
<b>Ander</b>				
400 g	8 899	0.0	90 796	0.0
600 g	34 399	0.0	368 863	0.0
700 g	42 804	0.0	586 140	0.0
Ander	262 915	0.1	2 096 738	0.1
Totaal: Ander	349 017	0.2	3 142 537	0.2
Totaal	179 618 786	100	2 059 272 604	100



**Figuur 1. Koringprodukte - Jul '15 tot Jul '16**



**Figuur 2. Pangebakte brood per gewig - Jul '15 - Jun '16**



# SA landbou floreer vóór die droogte

Suid-Afrikaanse landbou was in die dekade tot voor 2015 se droogte een van die wêreld se groei-presteerders en het beter as lande soos die VSA en Australië se landboubedrywe gedoen.

**IN DIE DEKADE** van 2004 tot 2014 het Suid-Afrikaanse landbou die vinnigste naas landbou in China en Chili gegroei, sê prof Ferdi Meyer, direkteur van die Buro vir Voedsel- en Landboubeleid (BFAP).

Hy was 'n spreker by die Atlanta Boerevereniging van Beestekraal in Noordwes se kleingraandag waar koring- en garsverbouing in die kollig was. Onder die plaaslike landboubedrywe was produksietoename by lewendehawe die grootste, gevolg deur intensiewe boerderygewasse soos groente en laastens deur graangewasse.

Met 'n uiteensetting van die bevolkingsgroei en inkomstegroeperings se besteding, het prof Meyer gesê die BFAP se navorsing toon dat kleinboere nie die toenemende stedelike bevolking kan voed nie. Hierdie voedingsbehoefte moet deur kommersiële boerderye gevul word. Die middel-inkomstegroep, wat uit sowat 52% van die Suid-Afrikaanse bevolking bestaan, vorm 'n groot koopkrag van landbouprodukte. Hulle be-

staan uit sowat 20 miljoen volwassenes en verdien naastenby 27% van die totale inkomste.

Onder die graangewasse was kanolase produksiegroei in die afgelope vyf jaar die vinnigste, gars het met minder as 1% toegeneem en koring, suikerriet, witmielies en grondbone is onder die graangewasse wat nie toegeneem het nie.

By gars word 'n sterk aanvraag en hoër verbruik voorsien asook 'n geringe toename van ingevoerde gars. Gars se produksie neem ook toe weens hoër opbrengs van beter kultivars. Weens die vraag na koring wat sterk kan bly, sal invoer toeneem omdat plaaslike aanplantings afneem en meer koringhektare na gars kan skuif.

Uit die oogpunt van die Nasionale Ontwikkelingsplan se doelwitte was dit volgens prof Meyer bemoedigend dat die meeste landboubedrywe wat besproeiing gebruik, arbeidsintensief is en produkte met hoë waarde produseer, toegeneem het.

Oor koring se invoertarief en die styging van broodpryse het prof Meyer beklemtoon dat daar 'n klein ooreenkoms tussen die koringprys en die broodprys bestaan. Volgens die BFAP se berekening styg 'n standaardbrood van 700 g se prys met 0,23% wanneer die Safex-koringprys met 10% styg.

Die koringtarief is ingestel om plaaslike produsente te ondersteun sodat hulle met goedkoper ingevoerde koring kan meeding en die oppervlakte onder koring dieselfde kan bly. Dit is veral in die Wes-Kaap belangrik waar die verbouing van alternatiewe gewasse minder is. In ander lande beskerm regerings hulle koringprodusente met byvoorbeeld versekeringspremies en met navorsing en ontwikkeling.

Koring se plaaslike waardeketting is volgens prof Meyer lank en ingewikkeld en lei daartoe dat koring se koste in die finale kleinhandelsprys van brood sowat 20% is. 'n Verandering in koring se invoertarief het gevolglik 'n geringe uitwerking op die broodprys. ♡

## Gars se potensiaal in besproeiingsgebiede steeds goed

**GARSVERBOUING SE POTENSIAAL** in noordelike besproeiingsgebiede is steeds goed en die SA Brouerye bewys hulle ondersteuning van plaaslike produksie deur uitbreidings soos die Alrode-vermoutingsaanleg, sê Gerhard Greeff, bestuurder van SAB Miller se landboudienste in Afrika.

Met die internasionale biermaatskappy AB InBev se oorname van SA Brouery is aan die SA regering bevestig dat

grondstowwe soos gars steeds plaaslik benut sal word. 'n Deel van die ooreenkoms bepaal dat produkte by kommersiële en kleinboere gekoop sal word en dat SA Brouery se ontwikkelingsplanne sal voortgaan.

Die gemiddelde garsopbrengs in nuwe verbouingsgebiede soos by Beestekraal is volgens Gerhard bykans op dieselfde vlak as by Koedoeskop en produksie sal gevolglik aangemoedig word.

### Koringtarief 'byt' SAB

Koring se invoertarief skep 'n ongunstige pryssituasie tussen die enigste aankoper, SA Brouery, en die plaaslike garsprodusente. Thinus van Schoor, hoof van SAB Miller se landbou- en vermoutingsbedrywe in Afrika, sê SA Brouery het verkies om die garsprys aan die koringprys te koppel, maar "nou byt die prys ons, redelik hard".

'n Nuwe prysriglyn vir die 2017-sei-



## KLEINGRAANDAG, ATLANTA BOEREVERENIGING, BEESTEKRAAL, NOORDWES

soen is aan produsente voorsien sodat hulle produksiebesluite kan neem. Indien die koringtarief drasties verander kan die garsprys heroorweeg word, sê Thinus.

Al mag en kan SA Brouerye gars invoer, verkies hulle om plaaslike landbou te ondersteun en slegs die minimum gars wat nie plaaslik voorsien kan word nie, in te voer. Gars is nie soos koring aan 'n invoertarief onderworpe nie.

“Ons ondersteun plaaslike produsente heelhartig teen buitelandse produsente wat gesubsidieer word, maar die ko-

ringtarief help ons nie veel daarmee nie. Koring se tariefinkomste gaan na die regering se sak en na die Suider-Afrikaanse Ontwikkelingsgemeenskap. Dit behoort eerder vir ontwikkeling aangewend te word sodat garshektare kan toeneem,” sê Thinus.

### 'n Klein maar dinamiese bedryf

'n Groot voordeel van die Suid-Afrikaanse garsbedryf is dat dit klein maar dinamies is en deur goeie produsente bedien word,

sê Francois Smit, die kultivarontwikkelingsbestuurder van SAB Miller in Afrika.

Die Suid-Afrikaanse Garstelingsinstituut SABBI het reeds 17 kultivars in die Suid-Kaap vrygestel en tien in die Noord-Kaapse produksiegebied. Hulle streef na agronomiese kenmerke in kultivars en om sekere brou- en vermoutings-eienskappe vas te lê. Weens kultivars se verskillende dormansie-kenmerke kan dit nie met opberging saamgevoeg of gemeng word nie. ♡

## Nuwe verwikkelinge met basterkoring

**NAVORSING OOR BASTERKORINGKULTIVARS** kan verdere momentum kry danksy nuwe tegnologie met genetiese keuring en produksiestelsels wat van globale posisionering (GPS) gebruik maak. Die Suid-Afrikaanse saadmaatskappy Sensako het projekte in samewerking met multinasionale navorsers wat die werk aan basterkoring op 'n nuwe vlak plaas, sê dr Francois Koekemoer.

Hy het by die Atlanta Boerevereniging se kleingraandag naby Beestekraal gesê hierdie ontwikkeling in koringteling kan selfs lei tot die voorsiening van Roundup Ready-kultivars.

Sensako se visie is steeds om die grootste plaaslike rolspeler in die koringbedryf te wees, maar hulle brei ook na ander gewasse uit en doen byvoorbeeld navorsing oor gars, sojabone, mielies en sonneblom. Die maatskappy het onlangs 'n nuwe saadverwerkingsaanleg van 2 600 m<sup>2</sup> by Bethlehem in gebruik geneem waar die eerste sonneblomsaad verwerk is.

Dr Koekemoer is positief oor die verloop van die seisoen vir koringproduksie tot dusver en sê dit gaan beter as in die vorige seisoen. Met Sensako se strookproewe in die GWK-gebied word op meer as net opbrengs gefokus. Hulle poog om kultivars te teel wat gouer stroopgereed is sodat produsente op die aangewese tyd mielies kan plant. ♡



'n Deel van Sensako se proewe van koring onder besproeiing by Jaco Steenkamp.



Stephan de Groot (regs), hoof van Sensako se kultivarontwikkeling in besproeiingskoring, verduidelik hulle proefresultate met kultivars by Beestekraal.



Onder die garskultivars van die garstelingsinstituut SABBI word Cristalia (regs) en Overture die suksesvolste by Beestekraal in Noordwes verbou.



# Improved early season nutrition with new micronutrient fertilisers

Wolf Trax DDP® nutrients provide the nutrition South African farmers need for their crops



**T**HE INNOVATIVE PORTFOLIO of Wolf Trax DDP (Dry Dispersible Powder) Nutrients by Compass Minerals is now available for South African crop farmers. Wolf Trax DDP Nutrients are micronutrient and secondary nutrient fertilisers designed with unique technologies that make sure farmers get the most from their fertiliser investment.

### Better coating technology for easy use

Featuring patented EvenCoat™ technology, Wolf Trax DDP Nutrients are coated onto N-P-K fertiliser blends via electrostatic adhesion. This means binders and liquids are not added to the blend. With this unique feature, farmers can achieve even micronutrient distribution throughout a field with improved flowability through application equipment.

### Quick-acting, long-lasting nutrition

Formulated for Dual Action™ Availability, Wolf Trax DDP Nutrients provide plants the nutrition they need, when it's needed. Each Wolf Trax DDP Nutrient product has at least two sources of the mineral:

- One form is quickly available and
- the other form releases slowly over time.

"Early and prolonged uptake is something other micronutrient fertilisers haven't been able to offer," says Andre Kondonis, Compass Minerals representative for southern Africa. "Other products provide either quick uptake or delayed uptake – but not both."

Kondonis stresses the importance of early season micronutrients to optimise yield. "The crop needs micronutrients within the first 14 days of growth to achieve its full yield potential. In most cases, the yield difference won't be tons per hectare. But on a large scale, increasing yield by several kilograms per hectare over all the hectares of a farm – that can be significant," Kondonis explains.

Because Wolf Trax DDP Nutrients coat onto the outside of N-P-K-S granules, farmers can order customised micronutrient blends using any combination of DDP Nutrients.

### Customised blends for each field's need

Because each field is unique, any combination of Wolf Trax DDP Nutrients can be added to a fertiliser blend. Based on their soil test results, farmers can choose one or more of the Wolf Trax products to create customised blends:

- Zinc DDP
- Magnesium DDP
- Iron DDP
- Boron DDP
- Manganese DDP
- Copper DDP
- Calcium DDP

### High-quality, safe fertilisers

Only high-purity, feed-grade ingredients are used in the manufacturing of Wolf Trax DDP Nutrients, to ensure few contaminants and safe handling.

### Research-tested, field-proven products

Wolf Trax Nutrients have a history of proven field performance around the world – ranging from the maize fields of the United States, to potato farms in Europe and soybean fields in Brazil.

"We are currently running independent trials in South Africa and have conducted field trials in Zimbabwe," Kondonis says. "We will continue to evaluate best fertiliser practices using Wolf Trax DDP Nutrients – the ideal micronutrients for South African farmers."

For more information about Wolf Trax Nutrients, please contact [WolfTraxAfrica@compassminerals.com](mailto:WolfTraxAfrica@compassminerals.com), and they'll put you in touch with your nearest Wolf Trax Nutrient supplier. ♻





# GET THE RIGHT MICRONUTRIENTS FOR THE JOB

Reach for Wolf Trax Innovative Nutrients, the field-proven tools that do a better job of delivering important micronutrient fertilisers, like zinc and boron, when and where they are needed most.



## EvenCoat™ Technology

Formulated as dry dispersible powders, Wolf Trax DDP® Nutrients thoroughly and evenly coat each prill of dry fertiliser in a blend without binders or liquid coatings. This ensures nutrients are distributed throughout the root zone for easier and earlier access by plants, and that the coated fertiliser blends flow easily through equipment.



## DUAL ACTION™ Availability

Each Wolf Trax DDP Nutrient is formulated with at least two forms of the mineral, providing immediate nutrient uptake by the plants, as well as extended feeding into the growing season.



## CUSTOM FIT Advantage

One or more Wolf Trax DDP Nutrients can be added to any dry fertiliser blend to ensure you are feeding your crops the nutrients they need. The full product line-up includes: Zinc DDP, Boron DDP, Copper DDP, Iron DDP, Magnesium DDP, Manganese DDP, Calcium DDP and CropMix DDP.

wolftrax.com + 27 82 5684238 + 263 772 235536

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 **Compass**  
Minerals

# The good, the bad and the ugly in agriculture

– WHERE DO INSECTS FIT IN?



The good, the bad and the ugly.

## Dr Astrid Jankielsohn

ARC-SMALL GRAIN INSTITUTE,  
BETHLEHEM – AN INSTITUTE OF  
THE FIELD CROPS DIVISION

**I**NSECTS ARE THE most numerous group of organisms on earth, making up around 75% of all animal species (Figure 1). There are over 950 000 known species of insects on earth and many species are not yet identified. Insects form an important part of every ecosystem and are vital within our food supply chains. If all insects were to die, human beings would run out of food in

just four years. Insects are therefore particularly important in the life of a farmer. Only a small fraction of insects – less than 0,1% – are considered damaging agricultural pests. These insects can have serious economic effects. The bigger part of the insect population, however, provides important ecosystem services such as pollination, decomposition and pest control.

## Pollinators

A large proportion of our food is pollinated by arthropods and insects are the main pollinators of flowering plants. These

insects include the honey bee, butterflies, certain species of flies and beetles. The honey bee is the major pollinator making up 80% of the pollinators.

## Insects in the soil

Arthropods make up 85% of the total soil fauna. These insects include springtails, bristletails, cockroaches, termites, ants and beetles. They increase soil aeration, soil porosity and generally improve the structure of the soil. Insects that preserve their food in the soil like termites, ants and dung beetles, also help increase the organic content of the soil. Their faeces and excreta and their body masses when they die, form humus. As they feed they also transform the organic litter in the soil into simpler particles that are easily decomposed. All these activities therefore contribute to soil fertility, which enable farmers to grow quality food.

## Pest control

Insects also provide a pest control service in the ecosystem. These are the predators and parasites that prey and feed on other insects. They include preying mantis, ladybird beetles, larvae of hover flies, dragonflies, ants and wasps. Each predator generally kills a large number of pest insects during its lifetime. On average a ladybird will eat more than 5 000 aphids and other soft bodied insects during their one-year life.

If agricultural pests are in the minority, why do they dominate agricultural

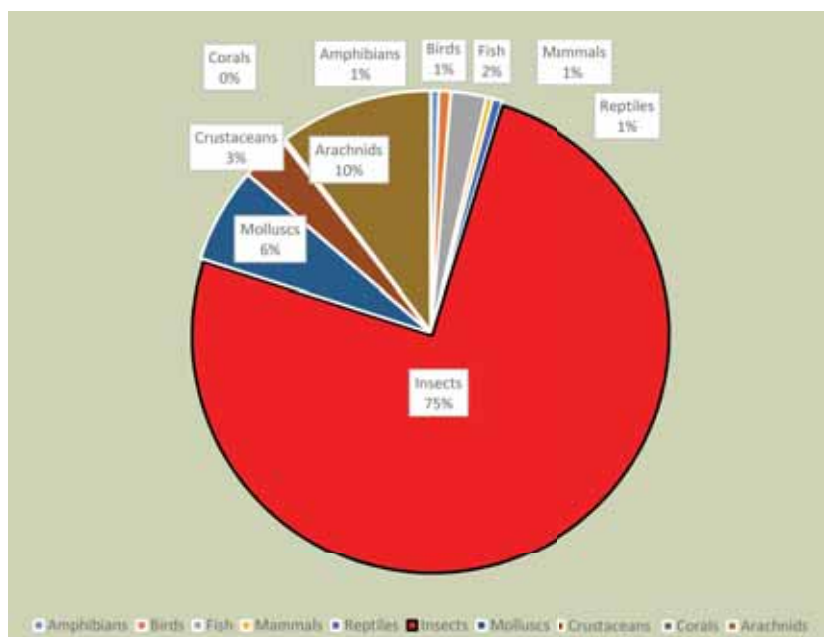


Figure 1. Estimated number of animal species on earth.

ecosystems? There are several explanations for this:

- Most agricultural crops are planted in monocultures. Many pest insects find their preferred host plants through visual cues and by detecting plant odours. In a monoculture, certain pest populations tend to be higher because their food resource, the cash crop, is abundant and easy to find.
- Less predators of pest insects and pollinators are found in monocultures because these systems do not provide an environment favourable to their survival and reproduction. There are no alternative food sources, refugia and microhabitats for predators and pollinators in a monocultural system.
- The use of chemical insecticides not only kill the target agricultural pests, but also all the other insects in the ecosystem. The predators and pollinators are often more sensitive to these insecticides and disappear from the system while many pest insects survive and are able to reproduce and increase their populations in the ab-

sence of predators.

The use of chemical fertilisers and ploughing the soil decrease the diversity of soil insects through poisoning and the destruction of the habitat of these insects.

### How to support insects that provide valuable ecosystem services

There are different ways in which farmers can support the insects that provide valuable ecosystem services in an agricultural system:

- It is well known that promoting biodiversity and building habitat for natural enemies are strategies that can lead to reduced pest populations. Plant diversity on the farm can be increased by increasing natural vegetation around crop fields, within-field polycultures or intercropping systems and crop rotation. This will create a habitat that will attract and retain predators and pollinators.
- By eliminating or limiting the use of chemical pesticides, the predators

and pollinators will survive and will be able to build up their population in the ecosystem and effectively suppress pest populations and pollinate crops.

- By eliminating or limiting chemical fertilisers and ploughing the soil, insects will survive and improve the soil.

Biodiversity is a valuable tool to improve agricultural ecosystems. Biodiversity in agriculture refers to all plant and animal life found in and around farms. Crops, weeds, pollinators, predators, soil fauna and a wealth of other organisms contribute to biodiversity. The more diverse the plants, animals and soil-borne organisms that inhabit a farming system, the more diverse the community of pest-fighting beneficial organisms. It is important not to destroy the good with the bad and to realise that even the ugly provide important services in an ecosystem.

Producers with queries or comments can contact Astrid Jankielsohn at the ARC-Small Grain Institute: 058 307 3431; [jankielsohna@arc.agric.za](mailto:jankielsohna@arc.agric.za).

## Uitblinkers kry beurse vir landboustudie

Twee uitblinker-leerders van landboukole in die Wes-Kaap het beurse ontvang om aan die Universiteit Stellenbosch se Fakulteit AgriWetenskappe te studeer.

**MATTHYS BASSON VAN** Hoër Landboukool Boland buite die Paarl en Nicolaas Basson van Hoër Landboukool Oakdale by Riversdal is hul skole se topstudente en gaan in 2017 'n landbouerwante kursus aan die US volg. Matthys, wat ook Boland Landboukool se topstudent in Landbouwetenskappe is, het op Vanrhynsdorp grootgeword, terwyl Nicolaas van Viliersdorp af kom.

Die beurse ter waarde van sowat R40 000 elk sal hul klaskas dek. Matthys beplan om BSc Agric in Plant- en Grondwetenskappe te studeer, terwyl Nicolaas 'n BSc Agric-graadprogram gaan volg. Nog 'n wortel voor hul neuse is dat die beurs jaarliks hernu sal word vir die normale duur van hul studietydperk, mits hulle al hul modules slaag en dit enduit voltooi.

"Ons wens hulle alle sterkte met hul studies toe en hoop hulle gaan in die toekoms ook binne die Suid-Afrikaanse landbougemeenskap uitblink," sê prof Danie Brink, waarnemende dekaan van die US se Fakulteit AgriWetenskappe.

Dit is die eerste jaar dat die Fakulteit AgriWetenskappe hierdie beurse beskikbaar stel aan akademiese uitblinkers van landboukole in die Wes-Kaap. Die beurse is moontlik gemaak danksy die dekaansfonds, wat sowat sewe jaar gelede op die been gebring is om ekstra finansiële ondersteuning aan studente en voornemende studente te gee. Die fonds word onder meer deur die fakulteit se oud-studente en bedryfsvennote ondersteun, asook met 'n jaarlikse gholfdag.

Volgens Monika Basson van studentewerwing in die Fakulteit AgriWetenskappe, dien die beurse as beloning én aansporing vir die leerders se toewyding gedurende hul skoolloopbane. "Dit erken ook die harde werk wat in ons landboukole gedoen word om kundigheid in die plaaslike bedryf te ontwikkel." 🐾



Die waarnemende dekaan van die Fakulteit AgriWetenskappe aan die Universiteit van Stellenbosch, prof Danie Brink (regs), het 'n studiebeurs aan Matthys Basson van Hoër Landboukool Boland oorhandig. Saam met hulle is die skoolhoof, Chris Fourie.



Nicolaas Basson van Hoër Landboukool Oakdale op Riversdal se skoolhoof, André Latsky, wens hom geluk met sy beurs.

# Current status of wheat rusts in South Africa

The three rusts present in South Africa, stem rust, leaf rust and yellow rust, can cause more than 50% yield losses under favourable weather conditions on susceptible cultivars. The most common methods of control are growing resistant cultivars and the application of fungicides. The ARC-Small Grain Institute conducts annual rust surveys to timely detect potentially dangerous rust races.

## Dr Tarekegn Terefe

ARC-SMALL GRAIN INSTITUTE, BETHLEHEM – AN INSTITUTE OF THE FIELD CROPS DIVISION

**W**HEAT RUSTS ARE caused by small micro-organisms known as fungi. There are three kinds of rusts which commonly infect wheat: Stem rust (black rust), leaf rust (brown rust) and yellow rust (stripe rust).

The three rusts differ in the colour and shape of the pustules (powdery spore masses) they produce on infected wheat. These different signs are useful in the identification of the three rusts. Stripe rust appears as yellow spore masses arranged in stripes on the leaves (**Photo 1**). Stem rust produces dark-red, elliptical masses of spores on the stem, leaf and sometimes on the head of wheat (**Photo 2**). Leaf rust develops on leaves as circular and orange-red pustules (**Photo 3**). Pustules of leaf rust are more circular and smaller than those of stem rust.

All three rusts are present in South Africa, but their severity and importance in a specific area is largely affected by climatic factors. Stem and leaf rust are favoured by warm temperatures of 20oC, but yellow rust infection commonly occurs under cool weather conditions (<15°C). Therefore, yellow rust is more important in the cooler wheat production areas (e.g., Eastern Free State) whereas stem rust and leaf rust are more prevalent in wheat growing regions with mild winter temperature (e.g., Western Cape).

Wheat rusts can cause extensive yield and quality losses by damaging the leaves and stems of wheat. Under favourable weather conditions, any of the three rusts can cause more than 50% yield losses on susceptible cultivars.

## CONTROL METHODS

The most common methods of wheat rust control are growing resistant cultivars and application of fungicides.

## Resistant cultivars

Resistant cultivars provide an effective and environmentally friendly method of rust control. Therefore, rust resistance has been an important component of wheat breeding objectives at the ARC-Small Grain Institute (ARC-SGI). Several resistant cultivars have been developed over the past years. The resistance status of commercially available cultivars is annually updated by testing them with relevant rust races through an ongoing collaboration between the ARC-SGI and University of the Free State. The results are regularly published by the ARC-SGI in the *Small Grain Production Guideline*. Such information is useful



**Stripe rust appears as yellow spore masses arranged in stripes on the leaves.**

to farmers in making decisions as to which cultivar to grow in a specific production area.

There are some challenges in using genetic resistance (resistant cultivars) to control wheat rusts. One of the major limitations of resistant cultivars is that their resistance is often short-lived. Rust causing fungi frequently acquire new virulence to overcome the resistance in existing cultivars. Virulent races mostly develop locally through genetic mutation in existing rust populations. Sometimes new rust races can be introduced into South Africa from other countries, via windborne spores or probably by sticking to travellers clothes.

It is therefore important to regularly monitor wheat rust growing areas to timeously detect and control new races before they multiply and cause epidemics and economic loss. For this reason, the ARC-SGI has been conducting annual rust surveys to timely detect potentially dangerous rust races. Through such rust surveillance conducted by the ARC-SGI during the past three decades, more than 25 leaf and stem rust races and four yellow rust races have been detected. The results are used to continually improve wheat rust resistance in the cultivars that have been regularly released.

To minimise the effect of migrating new races on wheat production in South Africa, breeders and pathologists from the ARC-SGI are proactively identifying germplasm with broad spectrum of resistance in East Africa where a number of dif-



**Above: Leaf rust develops on leaves as circular and orange-red pustules.**

**Left: Stem rust produces dark-red, elliptical masses of spores on the stem, leaf and sometimes on the head of wheat.**

entries in a few localities in the Western Cape, but most localities had less than 5% infection. Stem rust was not observed in any of the farmers' fields surveyed in the Western Cape, Free State or KwaZulu-Natal.

Trace to 5% yellow rust severity was observed on a few trap entries in Eastern Free State. The remaining trap localities (nearly 70%) and almost all the farmers' fields surveyed in 2015 were free of yellow rust.

Generally, the level of wheat rust infection was lower in 2015 than in the previous season. No new rust races were detected from hundreds of samples processed. The last new race identified in South Africa was leaf race 3SA115, which was detected in 2012 in the Eastern Cape and later also spread to the Western Cape. Although this race has become predominant in the Western Cape, virulence tests on current cultivars and breeding lines indicate that this race will not be a threat to wheat production as it was found to be less virulent than previous races.

ferent rust races are present. The ARC-SGI's breeding materials are annually tested at the international rust screening nursery in Kenya. This has allowed identification of resistance sources which are being used to develop new cultivars which will be resistant not only to South African rust races, but also to virulent East African races which are not yet detected in South Africa.

As rust pathogens continue to evolve and develop new races, researchers should also continue monitoring rusts, identifying new resistant sources and incorporating resistant genes into new cultivars. Breeding for rust resistance is a nonstop and continuous research activity.

## Fungicides

When resistant cultivars are not available or when resistance in existing cultivars breaks down due to the emergence of new races, fungicides can be used to control wheat rusts. However, excessive use of fungicides is harmful to the environment and it could also present a health risk to farmers and farmworkers. It can also increase the chance for the emergence of fungicide resistant rust strains which will lead to the ineffectiveness of the chemicals. Therefore, the use of fungicides should be considered only on susceptible cultivars where rusts are likely to cause significant yield loss. Wheat producers should avoid applying fungicides on resistant cultivars.

## RUST SURVEILLANCE 2015

Surveys were conducted on trap nurseries planted across the major wheat growing regions (Free State, KwaZulu-Natal and Western Cape) and on commercial wheat fields to determine occurrence and distribution of wheat rust races in South Africa during the 2015 season.

Leaf rust was observed mainly on trap nurseries in the Western Cape with a severity of mostly less than 5%. Although leaf rust was detected in more than 50% of farmers' fields surveyed in the Western Cape, its severity in the majority of these fields was not significant. The Free State experienced severe drought in 2015 and this prevented leaf rust development in almost all localities surveyed.

A moderate amount of stem rust was observed on trap

## UG99 UPDATES

Ug99 is a highly virulent stem rust race which was discovered in 1999 in Uganda, East Africa. Ug99 overcame a resistance gene *Sr31* which had been effective for more than 30 years. This rust race is considered as a serious threat to global wheat production, as most breeding lines and wheat cultivars grown around the world are susceptible to this race.

During the past 15 years, Ug99 has evolved to different races, some of which have overcome important resistance genes other than *Sr31*. Ug99 variants have also spread to different wheat growing countries. To date, 13 Ug99 variants have been identified and one or more of these variants have been confirmed in 13 countries (Uganda, Kenya, Ethiopia, Eritrea, Sudan, Egypt, Tanzania, Zimbabwe, Mozambique, South Africa, Rwanda, Yemen and Iran). Two of the 13 Ug99 variants were detected in 2015 in Kenya.

Four of the 13 Ug99 variants have been confirmed in South Africa. However, only one (race 2SA88) was detected in 2015. The remaining three have been rarely found since 2010. South African wheat breeding materials are being screened and selected against the four Ug99 variants. Most of the current breeding lines in the ARC-SGI are therefore expected to be resistant to these races.

Most wheat cultivars become susceptible to new races mainly when their resistance is based on a single gene. To mitigate such problems, efforts are under way in the ARC-SGI to develop lines with multiple resistance genes. This may help in increasing the durability of resistant cultivars. In these rust resistance breeding processes, the conventional breeding methods are being supported by molecular techniques. ♣

# KORINGMARKSITUASIE

**Nico Hawkins en Sanet Flynn**  
SA GRAANINLICHTINGSDIENS

## Internasionale vraag en aanbod

2016/17-seisoen (Tabel 1)  
(Vergelyking met dieselfde tydperk van vorige seisoen tussen hakies)

- 'n Oes van 747,0 miljoen ton (736,3 miljoen ton) word verwag, waarvan die grootste produsente, die EU, Sjina en Indië, gesamentlik 47,9% van die totale produksie lewer. Hierdie skatting dui op 'n rekordoes.
- Totale wêreldverbruik word op 734,1 miljoen ton (720,8 miljoen ton) geraam.

- Wêreld-eindvoorrade word op 231,3 miljoen ton (218,3 miljoen ton) geraam.

## Plaaslike vraag en aanbod

2015/16-seisoen – 1 Oktober 2015 tot 30 September 2016 asook 2016/17-seisoen (Tabel 1 en Grafiek 1)

Die Oesskattingskomitee skat:

- Finale oesgrootte van die 2015/16-seisoen op 1 440 000 ton, geplant op 482 150 ha met 'n opbrengs van 2,9 ton per hektaar.
- Aanplantings vir die 2016/17-seisoen op 508 150 ha.
- Die oesgrootte vir dië seisoen op 1 700 390 ton met 'n geskatte op-

brengrs van 3,3 ton per hektaar.

Die Vraag- en Aanbodkomitee beraam:

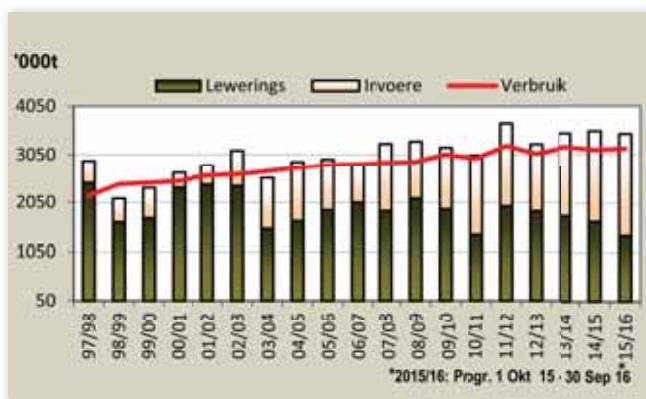
- Produsentelewerings vir die 2016/17-seisoen op 1 662 390 ton (1406 100 ton).
- Dat die totale aanwending (plaaslik en uitvoer) 3 177 300 ton gaan wees.
- Produkte-uitvoer op 20 000 ton en heelgraan-uitvoer op 150 000 ton.
- Dat 'n gemiddeld van 262 750 ton per maand verwerk gaan word.
- Die oordragvoorraad vir die 2016/17-seisoen op 641 713 ton (835 623 ton).
- Dat 'n gemiddelde beskikbare voorraad vir 2,4 maande of 74 dae aan die einde van die seisoen oor gaan wees.

Tabel 1. Plaaslike en internasionale vraag en aanbod.

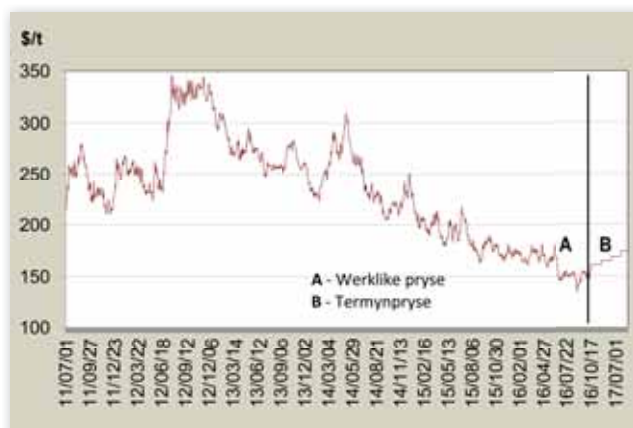
	Vooruitsigte 2016/17	% Vergelyking A & B	Skatting 2015/16	Vooruitsigte 2016/17	Progressief 2015/16	% Vergelyking C & D	Finaal 2014/15
	A		B	C			D
<b>Internasionaal (mil. ton)</b>				<b>Plaaslik ('000 Ton)</b>			
Oesskatting		Geen		1 700.4	1 440.0	-2.8	1 750.0
Beginvoorraad	218.3	7.6	202.8	835.6	596.8	71.1	488.5
Produksie	747.0	1.5	736.3	1 662.4	1 406.4	-2.2	1 699.5
Invoer	164.0	-0.4	164.6	1 500.0	2 066.9	-18.1	1 832.4
Totaal: Verwerk (a)	<b>734.1</b>	1.8	<b>720.8</b>	<b>3 177.3</b>	<b>3 166.4</b>	1.2	<b>3 139.5</b>
- Menslik	493.4	1.3	487.0	3 150.0	3 141.5	1.3	3 109.0
- Voer	150.5	3.7	145.1	3.0	2.4	-18.9	3.7
- Industriël	22.0	0.9	21.8	0.0	0.0		0.0
Uitvoer (b)	164.0	-0.4	164.6	170.0	68.5	-41.7	291.8
Eindvoorraad	231.3	6.0	218.3	641.7	832.1	7.5	596.8

(a) Ingesluit produsente-ontrekkings, saad en eindverbruikers  
Bron: Internasionale Graanraad, NLBR Vraag- en aanbodkomitee, SAGIS

(b) Ingesluit heelgraan en produkte



Figuur 1. RSA koringproduksie, -invoer en -verbruik 1997/98 – 2015/16.



Figuur 2. VSA HRW koringpryse.



SAGIS rapporteer:

- Lewerings tot 30 September 2016 is 1 406 368 ton (1 699 546 ton).
- Invoer vir dieselfde tyd is 2 066 906 ton (1 832 441 ton).
- Totale verbruik vir die 2015/16-seisoen vanaf 1 Oktober tot 30 September 2016 is 3 166 397 ton.
- Onaangewende voorraad is 832 101 ton (596 823) op 30 September 2016.

**Internasionale en plaaslike pryse**

18 Oktober 2016 se pryse toon: (Tabel 2 en Grafiek 2)

- Internasionale koringpryse (KCBT: VSA HRW#2) vir lewering in Desember 2016, \$154,91 (\$173,50) en Maart 2017, \$161,16 (\$179,09).
- Plaaslike pryse (Safex) vir die Desember 2016 -kontrak was R4 179 (R4 172) en vir die Maart 2017 -kontrak was R4 255,00 (R4 252).
- Dit het \$17 (\$24) per ton gekos om koring vanaf Argentinië na Suid-Afrika te verskeep en vanaf die Golf van Meksiko (VSA koring) het dit \$20 (\$33) per ton gekos.
- **Tabel 3** toon die invoerpariteitspryse van VSA HRW en DNS, Argentynse en Duitse koring in vergelyking met 'n maand en 'n jaar gelede.

**Invoer / Uitvoer**

- In die 2015/16-bemarkingseisoen is 'n totaal van 2 069 377 ton koring ingevoer en 53 974 ton uitgeoer.

**Grafieke 3 en 4** toon die lande waarvandaan en waarheen koring in- en uitgeoer is.

- Vir die nuwe bemarkingseisoen vanaf 1 Oktober 2016 tot 14 Oktober 2016 is 34 047 ton koring ingevoer en 622 ton koring uitgeoer.

**Bronne**

SAGIS (SMD 25/10/2016), IGR (GMR 29/09/2016), Safex, NOK (27/09/2016), USDA (21/10/2016), NLBR (30/09/2016). ♣

**Tabel 2. Jongste koringpryse teenoor vorige pryse.**

SAFEX	2016/10/18	% Maand op maand	2016/09/19	% Jaar op jaar	2015/10/19
	Prys R		Prys R		Prys R
Des '16	4 179.00	4.50	3 999.00	0.17	4 172.00
Mrt '16	4 255.00	4.52	4 071.00	0.07	4 252.00

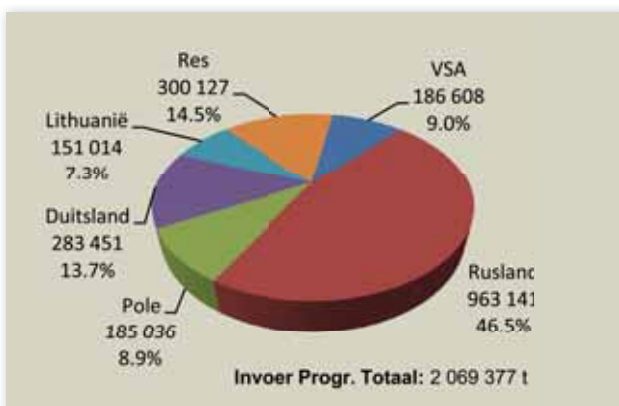
KCBT	2016/10/18	% Maand op maand	2016/09/19	% Jaar op jaar	2015/10/19
	Prys \$		Prys \$		Prys \$
Des '16	154.91	1.25	153.00	-10.72	173.50
Mrt '16	161.16	1.29	159.10	-10.01	179.09

Bron: SAFEX & KCBT

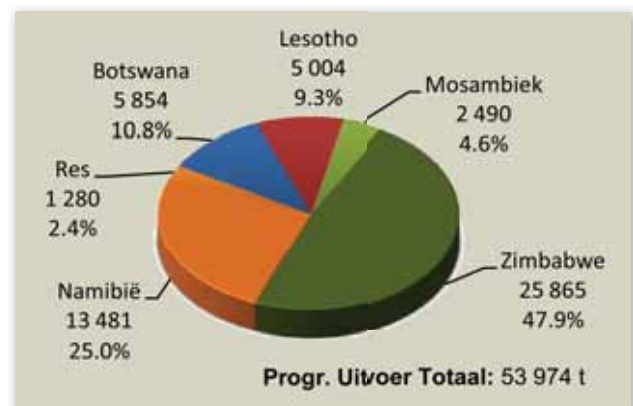
**Tabel 3. Koring se invoerpariteitspryse op 18 Oktober 2016.**

Pryse gelewer in Randfontein	2016/10/18	% Maand op maand	2016/09/20	% Jaar op jaar	2015/10/20
	Prys R/t		Prys R/t		Prys R/t
VSA Golf	5 081.26	-0.01	5 081.95	5.74	4 805.35
VSA DNS	5 848.06	3.34	5 658.96	12.88	5 180.86
Arg. Trigo Pan	4 868.46	-3.13	5 025.82	1.02	4 819.11
EU Duitsland	4 896.78	-0.33	4 913.15	6.04	4 617.80

Bron: Internasionale Graanraad



**Figuur 3. RSA koringinvoer per oorsprong – 1 Okt 2015 – 30 September 2016.**



**Figuur 4. Koringuitvoer na Afrika – 1 Okt 2015 – 30 September 2016.**

# GARS, HAWER & KANOLA SE MARKSITUASIE

**Nico Hawkins en Sanet Flynn**  
SA GRAANINLICHTINGSDIENS

## GARS

(Vergelyking met dieselfde tydperk van vorige seisoen tussen hakies)

### Internasionale vraag en aanbod 2016/17 seisoen (Tabel 1)

- Produksie word op 144,5 miljoen ton (147,7 miljoen ton) geraam, waarvan die EU – die grootste produsent – 40,8% van die totaal verteenwoordig.
- Totale verbruik word op 144,7 miljoen ton geraam.
- Wêreld-eindvoorrade word effens laer op 28,9 miljoen ton (29,1 miljoen ton) geraam.

### Plaaslike vraag en aanbod

2015/16-seisoen – 1 Oktober 2015 tot 30 September 2016 en 2016/17-seisoen (Tabel 1)

Die Oesskattingskomitee skat:

- Finale oesgrootte vir die 2015/16-seisoen op 332 000 ton, geplant op 93 730 ha met 'n opbrengs van 3,5 ton per hektaar.

- Aanplantings vir die 2016/17-seisoen op 88 695 ha.
- Die oesgrootte vir die 2016/17-seisoen op 291 595 ton met 'n geskatte 3,3 ton per hektaar.

SAGIS rapporteer:

- Lewerings tot op 30 September 2016 as 329 845 ton (291 017 ton).
- Invoer vir dieselfde tyd as 18 238 ton (91 410 ton).
- Die totale aanwending vanaf 1 Oktober tot 30 September 2016 as 385 744 ton (315 798 ton).
- Onaangewende voorraad op 30 September 2016 as 170 099 ton (210 704 ton).

## HAWER

### Internasionale vraag en aanbod 2016/17-seisoen (Tabel 1)

- Produksie vir die 2016/17-seisoen word op 22,9 miljoen ton (22,6 miljoen ton) geraam.
- Totale verbruik word op 22,7 miljoen

ton geraam.

- Wêreld-eindvoorrade word op 4,6 miljoen ton (4,4 miljoen ton) geraam.

### Plaaslike vraag en aanbod

2015/16-seisoen – 1 Oktober 2015 tot 30 September 2016, asook 2016/17-seisoen

- Lewerings tot op 30 September 2016 was 38 463 ton (23 856 ton).
- Invoer vir dieselfde tyd was 30 232 ton (45 307 ton).
- Die totale verbruik was 70 886 ton (60 381 ton).
- Onaangewende voorraad op 30 September 2016 was 15 246 (18 288 ton).

## KANOLA

### Internasionale vraag en aanbod 2016/17-seisoen (Tabel 1)

- Produksie word op 67,6 miljoen ton (69,6 miljoen ton) geraam.
- Totale verbruik word op 68,6 miljoen ton geraam (70,5 miljoen ton).
- Wêreld-eindvoorrade word op 5,3 miljoen ton geraam (6,3 miljoen ton).

### Plaaslike vraag en aanbod

2015/16-seisoen – 1 Oktober 2015 tot 30 September 2016, asook 2016/17-seisoen

Die Oesskattingskomitee skat:

- Finale oesgrootte vir die 2015/16 seisoen op 93 000 ton, geplant op 78 050 ha met 'n opbrengs van 1,2 ton per hektaar.
- Aanplantings vir die seisoen op 68 075 ha.
- Die oesgrootte vir die 2016/17 seisoen op 102 060 ton met 'n geskatte opbrengs van 1,5 ton per hektaar.

SAGIS rapporteer:

- Lewerings tot op 30 September 2016 was 93 543 ton (120 974 ton).
- Totale verbruik vir dieselfde periode was 127 930 (102 974 ton).
- Onaangewende voorraad op 30 September 2016 was 16 386 (50 313 ton).

## Bronne

SAGIS (SMD 25/10/2016),  
IGR (GMR 29/09/2016),  
Safex,  
NOK (27/09/2016),  
USDA (21/10/2016),  
NLBR (30/09/16). ♡

Tabel 1. Gars, hawer en kanola se vraag en aanbod.

Bemerkingsjaar Okt - Sep	Internasionaal Vooruitsigte 2016/17			RSA (SAGIS) Progressief 2015/16		
	Gars Mil ton	Hawer Mil ton	Kanola Mil ton	Gars '000t	Hawer '000t	Kanola '000t
Beginvoorraad	29.1	4.4	6.3	210.7	18.3	50.3
Lewerings/Produksie	144.5	22.9	67.6	329.8	38.5	93.5
Invoer	25.7	2.2	14.1	18.2	30.2	0.0
Aanwending <sup>(a)</sup>	144.7	22.7	68.6	385.7	70.9	127.9
- Menslik	7.4	5.0	0.7	361.4	49.3	0.0
- Voer	96.6	15.0	2.5	9.4	12.7	3.2
- Industrieel	30.2	0.1	65.4	0.0	0.0	124.6
Uitvoer <sup>(b)</sup>	25.7	2.2	14.0	6.8	0.1	0.0
Eindvoorraad	28.9	4.6	5.4	170.1	15.2	16.4

(a) Ingesluit produsente-onttrekkings, saad en eindverbruikers  
Bronne: SAGIS, Internasionale Graanraad, USDA

(b) Ingesluit heelgraan en produkte



Figuur 1. RSA garsproduksie, invoer en verbruik 1997/98 – 2015/16.

# Kanola stoot weer sy bors uit

Pryse, droogte en plaag-beheerkoste het onder meer veroorsaak dat die verwagte kerf van 100 000 ha se kanola in die afgelope seisoene vervaag het. Vanjaar lyk sake egter weer positief. Dirk Hanekom van Agricol verduidelik die situasie.

**DIE HEKTARE ONDER** kanola-produksie het gedurende die 2014-seisoen 'n hoogtepunt van sowat 94 000 ha bereik. Die opwinding was groot en almal in die bedryf was dit eens dat die kerf van 100 000 ha verseker binnekort bereik sou word. Maar, toe daal dit in 2015 tot sowat 72 000 ha en vir vanjaar tot 'n geskatte oppervlakte van slegs rondom 64 000 ha se aanplantings.

Kanola se kommoditeitsprys wat sywaarts beweeg het, teleurstellende opbrengste, die toenemende probleem van siektes soos Sclerotinia en die gepaardgaande hoë spuitkoste het die eens positiewe sentiment jeens kanola laat vervaag. 'n Wesenlike verbetering in kleingraanpryse het verder bygedra tot 'n drastiese afname in die kanola-hektare.

Die erge droogte gedurende die 2015-seisoen in veral die Swartland het produsente se skuldvas verder verhoog en heelwat van hulle het besluit om eerder "veilig te speel" en koring te plant. Die groot tekort aan dierevoer en die astronomiese styging in hooi en selfs kaf se prys verlede jaar het baie produsente ook laat besluit om vanjaar meer hawer as normaalweg te plant. Dit ten koste van kanola-hektare.

Vanjaar lyk die prentjie effe anders.

Kleingraanpryse is onder druk, daar is 'n oorproduksie van hooi in die mark en kanola se opbrengste sinspeel op die spreekwoordelike terugvegpoging.

Wat was vanjaar anders wat die beter opbrengste van kanola meegebring het?

Kanola se opbrengs word deur verskeie faktore beïnvloed, waarvan heelwat op die meeste landbougewasse van toepassing is. Daaronder tel grondvogtoestande, grondvrugbaarheid, pes- en plaagbeheer – om enkeles te noem. Die een omgewingstoestand wat seker een van die bepalendste faktore is en die opbrengs van kanola beïnvloed, is temperature tydens blomtyd. Hoewel die natuur nie beheer kan word nie, kan produsente warm temperature tydens blom vermy deur die regte kultivars op die regte tydstip te plant.

Navorsing oor jare toon dat vroeë kanola-aanplantings oor die algemeen tot beter opbrengste lei. Die rede hiervoor is dat ongunstige temperature tydens blomtyd vermy word, wat tot beter vrugset lei en natuurlik meer saadproduksie tot gevolg het.

Hoewel die 2016-seisoen nie die beste wegspring gehad het nie – 'n baie droë Mei met die eerste werklike reën eers op 7 Junie – toon gerapporteerde opbrengste dat vanjaar 'n goeie kanolajaar gaan wees. Heelwat produsente dui opbrengste van gemiddeld meer as 2 ton/ha aan. Goeie reënverspreiding en 'n matige winter wat nie te koud was nie, is sommige van die redes wat vir die beter opbrengste aangevoer word. Die belangrikste rede is egter dat temperature tydens September/Okttober baie matig was en dat kanola aanhou blomme produseer het, wat wel tot gevulde peule ontwikkel het.

## Baie goeie oesverslae

Agricol se reeks kultivars het vanjaar weer eens hul staal gewys en uit verskeie oorde word van uitstekende oeste verneem. Atomic, wat die bobaaas TT-kultivar in die Agricol-pakket is, het by verskeie produsente uitstekende oeste gelewer. By Jannie Louw in die Hermongebied het Atomic gemiddeld 2,4 ton/ha gelewer en die stropermonitor het dikwels meer as 3 ton/ha aangedui. Willem Smuts in die Porterville-gebied het gemiddeld 2,6 ton/ha met sy Atomic afgehaal.

Wat die konvensionele kultivars betref, het Agamax weer nie teleurgestel nie. By Stoffel du Plessis in die Porterville-gebied het die kultivar 'n gemiddelde opbrengs van 2,5 ton/ha gegee terwyl Diamond 2,8 ton/ha gegee het.

In die Suid-Kaap het Deon Malherbe in die Heidelberg-gebied gemiddeld 2,2 ton/ha met Garnet gestroop, terwyl Pieter Crous van Swellendam 1,96 ton/ha met Garnet behaal het. Ook hier het Agamax goed presteer met heelwat produsente wat opbrengste rondom 2 ton/ha gerapporteer het. 'n Interessante waarneming by produsente was dat Agamax 'n opmerklike kort blomtyd van begin tot einde gehad het en dat Sclerotinia nie 'n probleem was nie.

Atomic het ook goeie opbrengste in die Caledon-gebied gelewer. Jaco Rossouw van die plaas Uitkyk in die Caledon-distrik het gemiddeld 2,1 ton/ha gestroop, terwyl Josias le Roux van die plaas Langhoogte in die Botrivier-gebied sowat 1,8 ton/ha afgehaal het. Volgens Josias het die reën effens vroeg opgehou, maar hy is steeds beïndruk met sy opbrengs, asook hoe skoon sy lande deur die seisoen was. ♣

# 'Versterk die landbousektore wat gedy'

In Suid-Afrikaanse landbou is dit die kommersiële sektor wat gedy, sê Christo van der Rheede, adjunk uitvoerende direkteur van Agri SA. Hy was 'n spreker by die Skog-boeredag wat op die Langgewens-proefplaas buite Moorroesburg gehou is. Van der Rheede het onder meer uitgebrei oor die veranderende regulatoriese omgewing en die uitwerking daarvan op landbou en voedselsekerheid.

## Charlotte Lesch

**V**OLGENS VAN DER RHEEDE het die bruto toegevoegde waarde deur die kommersiële sektor sedert 2005 met meer as 15% toegeneem. Kanola, sitrus en sojabone het veral goed presteer. Hoëwaarde- en arbeidsintensiewe bedrywe onder besproeiing het sterk groei oor die afgelope vyf jaar getoon, maar algehele groei is 1% tot 2% per jaar. Ongeveer 860 000 mense is in diens van die primêre formele sektor waarvan salarisse in 2015 ongeveer R16 miljard beloop het.

Met die sektor se uitvoer het dit tussen die sestiger- en tagtigerjare goed gegaan, maar vanaf 1983 is dit erg deur apartheid en sanksies gestuit. Die bedryf het weer vanaf 1991 en veral ná 1994 se verkiesing vinnig ontwikkel. Danksy deregulering in die landboubedryf en die ontsluiting van markte, toon die bedryf sedert 2009 'n opwaartse kurwe. "Nou moet ons seker maak ons hou aan opwaarts beweeg," sê Van der Rheede.

Die landboubedryf het egter sy uitdagings én is siklies. As gevolg van die droogte is die droëlandgewasproduksie van veral wit- en geelmielies negatief geraak en nasionale beeskuddes met soveel as 15% verminder. Hoë pryse het nog nie voorgekom nie, maar is op pad, sê Van der Rheede. Ander uitdagings is beleidsonsekerheid en stadige vordering met grondhervorming, asook lae vlakke van nuwe beleggings in vaste bates, grondontwikkeling en -uitbreidings. Hy voeg by dat negatiewe fases altyd deur tydperke van positiewe groei gevolg word. Van der Rheede maak dit duidelik dat beleid nie op die bedryf afgedwing kan word nie.

Hy sê dit gaan ook goed met die informele landbouhandelsektor. Suid-Afrika se redding lê volgens Van der Rheede by dié twee sektore – informeel en kommersieel. "Die meeste werkseleenthede in Suid-Afrika word tans in die informele handelsektor geskep. Ons eie mense sien nie watter potensiaal hier vir hulle is nie. Volgens navorsers groei indiensname in die informele sektor met sowat 100 000 mense per jaar en volgens statistiek SA werk sowat 2,1 miljoen mense in die informele sektor. Dié sektor dra 7% tot 12% tot die totale ekonomie by."

Volgens die vereniging van plaaslike owerhede (SALGA) word die jaarlikse ekonomiese omset van die informele sektor op R160 miljoen geskat. "Ons mense is vasgevang in 'n kultuur van staatsafhanklikheid. Ons moet wegbeweeg van daardie kultuur. Daarom vra ek dat ons moet kyk waar ons hande kan vat."

Sektore in landbou wat stagneer, is staatsgedrewe landbouhandel. Van der Rheede sê kleinskaalse of ontwikkelende landbou in Suid-Afrika het baie aandag van beleidmakers ontvang maar dit het nie tot verhoogde produksie en werkskepping



**Willie van Rensburg, Stoffel en André du Plessis van Porterville en Jannico Kotze van Riebeeck-Wes.**

Foto's: Cor Cronjé



**Francois Brink en Nico Olivier van Delmas en Herman Walters van Agricol.**



**Ricus Coetzee van Piketberg saam met sy pa Truter en Jan-Hendrik Visser, ook van Piketberg.**



Dirk Lesch van Malmesbury, Andries Louw van Durbanville en Johan Smuts, ook van Malmesbury.



Jacques Smith en Corneli Smit van Worcester, Ivan Fourie van Malmesbury en Francois Human van Caledon.



Jaco Geldenhuys van Nexus, Johan Truter en Jacobus Truter, altwee van Riebeeck-Kasteel.



Andries Theron van Graan SA, Christo van der Rheede, adjunk uitvoerende direkteur van Agri SA en Gert Conradie, SKOG-bestuurder van die Wes-Kaapse departement van landbou.



Annelene Swanepoel en Marliné Burger van die Wes-Kaapse departement van landbou.



Dr. Johann Strauss (naaslinks) van die Wes-Kaapse departement van landbou het nuwe stelselnavorsing, insluitende dek- en alternatiewe gewasse, tydens proefbesigtiging op Langgewens verduidelik.

gelei nie. In sommige gevalle het dit tot groter armoede en verval gelei. "Korrupsie, wanbesteding van staatsfondse en gebrekkige hulpverlening is aan die orde van die dag." Huurooreenkomste tussen die staat en ontwikkelende boere bly egter 'n uitdaging, want niemand kan binne vyf jaar 'n suksesvolle boerdery ontwikkel nie. Van der Rheede sê daar is genoeg mense wat wil boer en 'n sukses daarvan kan maak. Vir hom is georganiseerde landbou se kernfokus kapitaal, arbeid, hulpbronne en entrepreneurskap.

Volgens Van der Rheede is die boodskap eenvoudig: herstel omstandighede met 'n staat wat funksioneer, rompslomp en ondoeltreffende prosesse wat verwyder word en pas dan verskeie modelle toe vir grondoordrag aan begunstigdes. Die begunstigdes moet doeltreffende ondersteuning ontvang en politieke begunstiging in grondhervorming en landbouprogramme moet uitgeskakel word.

Hy sê doeltreffende koördinasie tussen die departement van landelike ontwikkeling en grondhervorming en van landbou, vissery en bosbou en die provinsiale departemente is nodig. Die kommersiële landbousektor en informele landbouhandelsektor kan versterk word om volhoubare groei in die landbousektor teweeg te bring. ♡



Andries Theron en Christo van der Rheede in proewe.



Louis Coetzee, ekonoom by Kaap Agri, en Kobus Duminy tydens die proefbesigtiging.



# Agrico en Dripco sien toekoms saam

Dripco (Edms) Bpk het sy Wellingtonse besproeiingsonderneming as 'n lopende saak aan Agrico (Edms) Bpk verkoop. Die verkryging stel Agrico in staat om 'n beter diens aan boere in die Wes-Kaap te lewer, sê Walter Andrag, Agrico se uitvoerende hoof.

**D RIPC**O IS 34 JAAR gelede gestig en oor tyd uitgebrei tot 'n leier in kleinhandelbesproeiing in Wellington en omliggende gebiede. Die onderneming bemark 'n volledige reeks besproeiings-oplossings aan produsente in die Wes-Kaap en Karoo.

Agrico is 'n gevestigde, internasionale besproeiingsfirma. Die maatskappy vervaardig onder meer spilpunte, PVC pyp, poli-etileenpyp, goukoppelpype, kleppe, pompstelle en passtukke in fabriek in Bellville en Lichtenburg. Die res van die komponente om 'n besproeiingstelsel volledig te maak word ingevoer of direk by plaaslike fabriek gekoop. Agrico se kliente word ondersteun deur 26 strategies geleë takke in Suidelike Afrika vanwaar kliente met oplossings en alle vorme van

besproeiingsprodukte bedien word.

Lodie Willemse van Dripco en sy drie ontwerpers sien daarna uit om hulle onderneming met Agrico se ondersteuning uit te bou. Hulle glo kliente sal baat vind by die wye produkreeks, sterk logistiek en mededingende pryse wat Agrico aanbied. Finansiering gaan voortaan op sekere produkreeks, insluitende Agrico-spilpunte, aangebied word.

Walter Andrag van Agrico sê Dripco se fokus op uitstekende klantediens en tegniese vaardigheid pas baie goed by Agrico se strategie om die standaard te stel vir kundige water-oplossings. Daar sal geen afleggings wees nie en die fokus bly voortgesette groei. 🌱

## Stop lightning from destroying the borehole pump

**T**HE CONSEQUENCES OF a blown borehole pump are catastrophic and far-reaching. Added to the initial financial outlay of up to R60 000 to replace a pump are the effects of not being able to water crops and livestock.

"A scenario like this can be easily avoided through the purchasing and correct installation of quality surge arresters," states Paul van As, Low Voltage Divisional Manager at Surgetek. The costs of a typical surge protection installation for a borehole pump is about R3 000.

Borehole pumps that do not have surge protection and proper earthing are often destroyed by induced lightning travelling through the earth. "The energy from a bolt of lightning that has struck the ground spreads into it and travels through it, in concentric circles in the form of magnetic force," explains Van As.

Boreholes are often sleeved with steel to maintain well integrity and prevent fall of ground. These steel sleeves act like an earth rod. Once the energy from a lightning strike makes contact with the

sleeve, the energy runs down the pump power cable to the pump unit. Research indicates this energy measures hundreds of thousands of volts. Pump motors operate on voltages between 230 V and 400 V and their circuit boards operate on 5 V. When struck by lightning these stand no chance against the level of energy in the induced lightning.

Van As advises that surge arresters should be installed as close to a borehole as possible. Arresters should be installed on either side of the power transformer in the surface junction box as well as the pump controller. "In addition, it is important that the electrical earth, the surge arrester earthing and the borehole sleeve (if metallic) are all interconnected to ensure potential equalisation. Surge arresters in any application should be checked on regular basis – particularly after thunderstorms.

For more information, contact Paul van As, Surgetek: Tel: 011 1303/4/5 E-mail: [vanasp@surgetek.co.za](mailto:vanasp@surgetek.co.za) Web: [www.surgetek.co.za](http://www.surgetek.co.za) 🌱



A closer view of the wiring and surge protection products in the junction box.



The completed installation of a borehole outlet pipe being fitted with earthing and surge protection units housed in the junction box. Note the sealed weather-proof junction box.

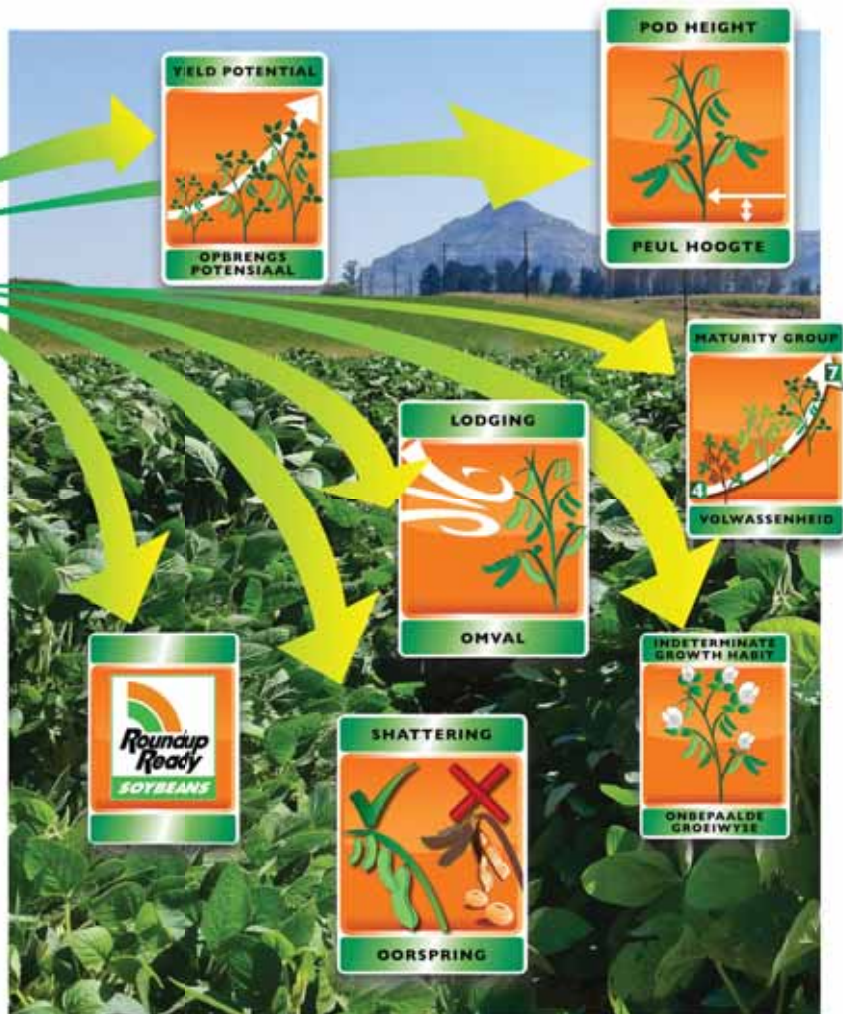
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