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CHIPS

VOL 37 NO 4 • JULY / AUGUST 2023

FRESH PRODUCE MARKETS: PACKAGING AND REPACKAGING TO PERFECTION

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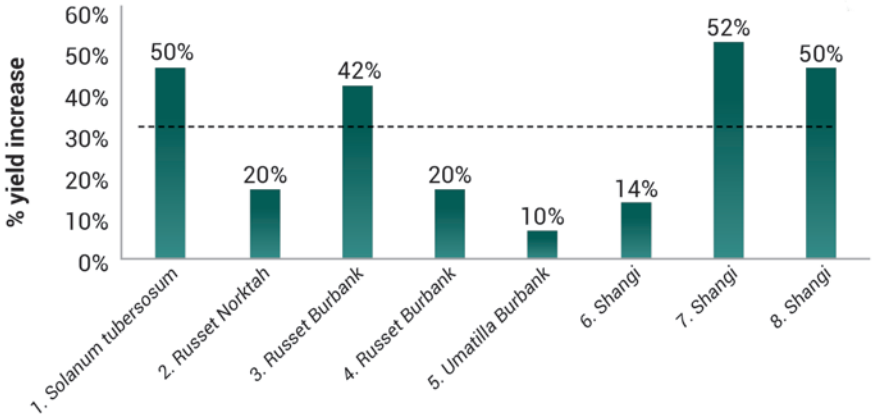

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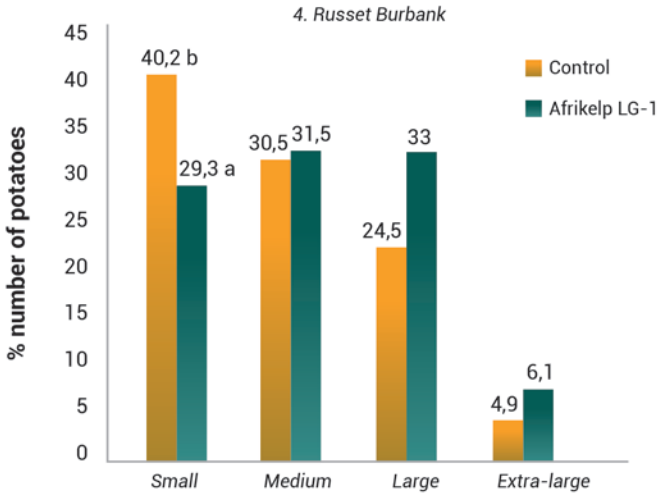

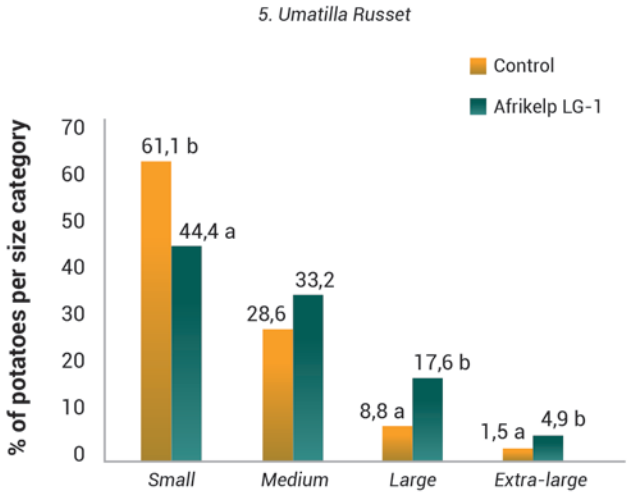

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So far so good

By Willie Jacobs, CEO, Potatoes SA

Current deliveries to the potato market are significantly lower than in previous years, but it has come to be expected. The culmination of the past 18 months of turbulent economic events is clear in the results we are seeing.

Factors such as the significant increase in input costs, erratic weather conditions in key planting seasons (the Eastern Free State) as well as harvesting seasons (the Southern Free State, Northern Cape, parts of Limpopo and the Sandveld) led to a considerable negative sentiment among potato producers.

The import duty battle

The fact that the industry battled to get the import duties confirmed again also played to reservations among key processors to increase processing capacity.

With already constrained processing capacity now a reality, the supply of French fries was significantly challenged by the onset of consistent load shedding which impacted not only the availability of fries, but also facilitated and exacerbated a build-up of raw material and subsequent wastage increase.

Taking the bull by the horns

It will take the potato industry some time to recover from these setbacks but, as we have come to expect of the most resilient farmers in the world, we are soon to be on track again. Producers experiencing severe strain due to load shedding have made a significant investment in back-up power capacity.

It will take the potato industry some time to recover from these setbacks but, as we have come to expect of the most resilient farmers in the world, we are soon to be on track again.

The cost of running these alternative energy sources would have been detrimental to the industry if some of the other negative influencers did not subside. However, it seems as though there is some relief in respect of certain key inputs such as fertiliser and chemicals, while the cost of fuel is also showing glimmers of beneficial movement.

Hats off to the end user

Consumers have shown us that they really and truly treasure the humble spud by spending significantly more on potatoes at the average price than in the past number of years. All in all, this has been beneficial to the potato industry in its entirety. Not only did their support improve the value proposition for potato cultivation, but it is also making it a competitive option in the production plan of the hesitant producer.

Re-establishing our markets

And, finally, discussions are well underway to set up the first joint management agreement on a municipal market, in this case Tshwane Market. This will allow members of the Institute of Market Agents of South Africa (IMASA) to gain some insight into and contribute towards the budget planning and spending of this key industry asset.

This development is a significant step in the right direction to re-establish sustainable markets and price discovery for all fresh fruit and vegetables.

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One step forward ...

Just about everyone is acquainted with the old saying "One step forward, two steps back" which essentially means that as soon as you feel that you are making progress, a setback occurs and you cannot help but feel that you are back at the beginning or even worse off than before.

The phrase has a very interesting origin: It was the title of a pamphlet written by Vladimir Lenin in 1904, in which he went into some detail regarding the internal divisions in the Marxist party in Russia. He wrote this approximately a decade prior to the Russian Revolution after which he ultimately established Soviet Russia … and the rest is history. I am not going to count the steps in that case.

Getting up

Reading the latest news (including the current ironic situation in Russia), it would seem that all humanity is always doing is taking more steps back than forward. Or is that really the case? Perhaps the saying should apply only to politicians and not to us 'normal' citizens.

Every morning I am amazed to see that traffic remains congested and despite everything that is happening, the good people of this country get up (mostly in the dark) and go to work. These same good people greet each other, converse, work together, laugh together and respect each other's differences and similarities, despite the fact that news reports tend to focus only on strife and conflict. Fact is, we are not that different and we mostly want the same things – good jobs, stability and peace.

Adapt for prosperity

Adaptability has become the cure for many a political ailment of our time. Together, we adapt to our circumstances and we make the absolute best of it by forging ahead. It isn't human nature to lie down and give up. The doom and gloom brigade are far and few and should keep to themselves. Instead, we honour those who came before us by learning from the fruits of their labour and improving the foundations they lay.

This is very apparent in the potato industry where producers keep on producing despite challenges presented by pests, climate change and water issues, to name but a few. The progress made in the potato industry will be front and centre soon when researchers convene to reflect on the latest trials and trial results in the potato industry. This is all positive and all non-political. It represents more than just two steps forward – it represents a will to improve, survive and thrive, no matter the circumstances. Sure, not everything is always coming up roses, but no one is admitting defeat.

So let's leave the politicians to operate in reverse and stumble over their internal divisions while the rest of us grow and develop. Let us adopt a mantra of going at least three steps forward while making room for a single step back once in a while, which we will regard as a learning curve from where we will go forward again. There is no other way.

Lynette Louw, redakteur
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Potatoes Aartappels SA

RESEARCH SYMPOSIUM
18 to 20 JULY 2023

Roots
IN THE GROUND
WITH THE
Future in mind

Programme Highlights

DAY 1

Opening, welcome and keynote address

Session 1: Mechanisation and irrigation research reviews and panel discussion on key equipment considerations for efficient farming.

Session 2: Soil health research reviews and panel discussion on facts and fallacies regarding soil health.

Session 3: Foliar diseases research reviews and panel discussion on efficient control of foliar diseases.

Research committee meeting

Informal Evening

DAY 2

Session 4: Potato tuber moth (PTM) research reviews and panel discussion on what triggered the PTM challenge.

Session 5: Innovations in crop protection research reviews and panel discussion on innovations we can expect in crop protection.

Session 6: Cultivar discussion including regional reviews and a panel discussion on the value of and take-outs from cultivar trials.

Session 7: Meeting global challenges and how we can integrate solutions to optimise quality and yield sustainably.

Session 8: Potato nutrition and impact on quality and shelf life: Review of quality and impact on cooking properties, and panel discussion on quality being a differentiator for marketability.

Session 9: Technologies that trigger innovation in potato production – research reviews and panel discussion on what the future of potato production looks like.

Session 10: Student review, summary and recap, and the way forward.

Gala evening

Sponsors: WinField United SA, Nexus, Philagro, Corteva Agriscience, Syngenta, AECI Plant Health, Laeveld Agrochem, Agri Technovation, Andermatt Madumbi, Adama, Yara.

For more information, email dirk@potatoes.co.za.

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Potato NEWS

Disclaimer: The views and information contained in these news pages do not represent that of Potatoes SA, Plaas Media, or their affiliates.

Extreme weather hits Europe

Extreme weather incidents are serving to rock Europe's potato industry to its very foundations. Last year was the second warmest year on record in Europe. The drought conditions resulted in a dramatic downturn in overall potato output.

Estimate figures suggest that the harvest across northern Europe, the United Kingdom (UK) and Ireland was around two million tons less than normal. That's around one third of the total UK and Ireland potato production with packers and processors now striving to supply customers from a fast-dwindling supply base.

The result was a dramatic increase in prices, particularly within the potato processing sector. Moreover, the excessive export of potatoes to other European countries has depleted the Irish and UK potato stocks to their lowest levels. Additionally, recent floods in Italy and southern Europe, and a cold, wet spring in Ireland have delayed planting activities, potentially causing a significant yield drop this year.

This crisis, further exacerbated by high input and storage costs, could stretch into 2024. – *Agriland*

Johann Kotzé to head Agri SA

Agri SA recently announced the appointment of Johann Kotzé as their new chief executive officer. "Kotzé is a creative leader with a passion for farming and the sustainability of the food system. He brings a wealth of experience as a former agricultural banker and a renowned leader in organised agriculture," said Jaco Minnaar, chairperson of Agri SA.

He started his career as a producer and thereafter became an agricultural banker at Absa. After working as a corporate banker in Mozambique, he became an independent business consultant. Kotzé returned to banking and oversaw Africa Agriculture for FNB. Since 2017, he has served as the chief executive officer of the South African Pork Producers' Organisation (SAPPO).

Kotzé will commence his tenure at Agri SA on 1 October 2023. – *Press release, Agri SA*

Johann Kotzé.

Preventing acrylamides in potato chips

Frying potatoes cause the formation of harmful chemicals called acrylamides. The acrylamide content in potato chips is influenced by factors such as the potatoes themselves, storage conditions and the heat treatment process. Researchers have been looking into acrylamides together with the food packing company Produsentpakkeriet in Frosta, northeast of Trondheim, Norway.

According to the research team, this project has provided the industry with new knowledge regarding the best ways of storing potatoes to reduce food waste. "It has shown us how to achieve optimum potato chip quality and minimise the risk of acrylamide formation."

The results demonstrate that three key factors are involved, the use of the right kind of potato, achieving the correct maturity before harvesting and achieving a correct and tailored storage temperature. The team discovered that measurements of sucrose and aspartic acid contents in potatoes offered the best indicators of the acrylamide levels that chips will obtain after deep frying. So far, the method has been well received by potato growers. – *News Medical*

Potatoes SA mourns death of its transformation manager

Nomvula Xaba (46), Potatoes SA's transformation manager, passed away on 29 May due to lung complications brought on by Covid 19.

"Her untimely death is a great loss, not only to her family and loved ones but also to us as her colleagues," said Willie Jacobs, CEO of Potatoes SA. "Nomvula was a pillar of strength in our team, a leader who was respected, admired and much loved."

Nomvula passed away two days before the celebration of her twelfth work anniversary at Potatoes SA. Jacobs praised her for being an excellent professional and wonderful human being.

Jacobs, on behalf of the Potatoes SA team, expressed condolences towards Nomvula's family, friends, loved ones and the potato community. – *Susan Marais, Plaas Media*

Nomvula Xaba.

Aartappel NUUS

Price of frozen potatoes could increase

There are concerns among some economists that the price of frozen potatoes may increase, adding to already high food inflation in South Africa.

The International Trade Administration Commission has introduced import duties on frozen potato chips from three countries in Europe namely Belgium, the Netherlands and Germany for the next five years.

The duties range from 8.8 to 239% to prevent further dumping. Duties were approved by the minister of trade, industry and competition, Ebrahim Patel. Potatoes SA has welcomed the anti-dumping decision as it helps protect local producers and enhances local competitiveness.

"This means the local industry will have to meet the demand that was previously imported from other countries. They have recently showed growth to the point where they are able to fill the gap. There have, however, been challenges in terms of electricity issues that have impacted the irrigation of crops and consequently production," said agricultural economist, Thabile Nkunjana. – *Potato Pro*

Turkey anticipates potato production increase

In 2023, a sharp increase in potato production is expected in Turkey, one of the top 15 potato exporters in the world, according to EastFruit Analysts.

Statistics confirm these expectations. In the first four months of 2023, Turkey imported 28.5 thousand tons of seed potatoes, which is a new historical record. This is also 91% more than the volume of seed imports for the same period in 2022.

The main volumes of seed potatoes, namely 79%, were supplied by the Netherlands. Another 7% of seed tubers were imported from the UK, 6% from France, 4% from Germany and 2% from Belgium.

The sharp increase in potato production in Turkey is a reaction to high table potato prices in the region and on the local market. Influenced by the rapid growth of domestic potato prices, the Turkish government banned its exports in early 2023. – *Potato Pro*

White packing potato prices increase in UK

The recent rise in UK packing potato prices has been weighing on demand from retailers, with supermarkets utilising contracted supplies as much as possible to reduce exposure to high prices in the free-buy market.

The Mintec Benchmark Prices for Grade 1 white packing potatoes EXW England were assessed at £400/mt in early June 2023, up £25/mt on the week and an increase of 321% year-on-year.

"There isn't any margin on free-buy potatoes at these price levels, so we have only been buying to ensure continuity of supply and where possible are relying on contracted stocks to offset the high prices," a UK supermarket buyer disclosed to Mintec.

Consumer demand for fresh potatoes has also eased in line with the arrival of warmer weather in both the UK and the EU. The shift has led to growers requiring increased irrigation to offset the lack of precipitation in recent weeks. – *Potato News Today*

Transforming long-term potato storage

Carrot Ventures in Canada recently announced the launch of Cellar Insights, an AgTech startup. It is built around a sophisticated suite of sensors and cloud-based algorithms that remotely monitor potato health in long-term storage. The solution includes predictive models and offers management insights to optimise returns.

Millions of potatoes are stored for up to 11 months in massive climate-controlled facilities in North America. During such long storage periods, producers face an escalating risk of loss due to shrinkage, reductions in quality, disease, sprouting or spoilage.

Reducing food loss and optimising the quality of crops post-harvest is an issue of worldwide importance. Potatoes are the world's third most important food crop, produced in over 100 countries. It is an essential and nutritious food staple, which has led to soaring cultivation rates in India and China. In North America, production value exceeds US$4 billion annually, with retail sales approaching US$14 billion. – *Potato News Today*

Pepsico launches monitor application

FMCG giant, PepsiCo, partnered with agriculture cloud company Cropin and launched a crop intelligence platform for monitoring potato yields using mobile app-compatible dashboards.

As part of its precision agriculture model, PepsiCo launched the pilot at demo farms based in India. Blight disease can cause up to 80% damage to potato crops, while ground frost is also an issue that potato producers grapple with in North India. Moreover, Indian cultivators have small landholdings and often lack the resources to monitor optimal resource utilisation such as water and fertilisers.

The platform offers a simple solution for managing these resources as well as evaluating pesticide use. It combines satellite imagery and remote sensing data to guide producers through the crop cycle. Producers can generate up to ten-day advance forecasts and monitor crops for health and potential disease warnings using the application. – *News nine*

Alternative energy generation: A hot potato for producers

By Phillip Crafford, Plaas Media

With no Eskom-sourced energy to power pivots during load shedding, how is one to irrigate one's crops? Producers are contemplating alternatives as the local energy crisis worsens by the day. Eskom's inability to meet energy demand has had a ripple effect in the agricultural sector. Solutions to this problem were top of the agenda at the recent Potato Industry Forum presented by Potatoes SA.

Alternative energy

Faure van Schalkwyk, energy research engineer at Solar Power Africa, stated that South Africans will have to investigate and invest more in alternative energy solutions. He added that supermarket chain stores have spent approximately R150 million on generator fuel to remain operational and maintain their cold chains. This could have been channelled into 20 MW of solar panels without battery storage. The best alternative for this situation is hybrid systems.

Van Schalkwyk said that research into alternative energy solutions and storage is a worldwide phenomenon. Sustainable alternatives for lithium-ion batteries are being explored as current battery production isn't sustainable or affordable. He mentioned that producers can consider biogas, floating solar PV technology, and agrivoltaics. He believes a review should be done of the supply chain's energy requirements so as to identify the best energy solutions.

Government's role

Hawie Viljoen, chief director of competitiveness incentives at the Department of Trade, Industry and Competition (DTIC), explained the DTIC's role in the South African enterprise industry. The department is very aware of the current energy crisis and supports investment and entrepreneurial opportunities in sustainable solutions as the crisis impacts agro-processing.

Viljoen said there is a global movement towards clean energies, with $2.4 trillion currently having been invested in it. Global technology collaborations are underway with hydrogen being an important option. To continue the drive for investment, the DTIC will offer industrial incentives to assist and guide strategic choices.

Effect on the economy

South African economist, Dawie Roodt, commented on the effects of international politics on the energy sector. Globally, factors such as the Russia-Ukraine war and subsequent sanctions on Russia, decreasing economic growth in major markets such as China, and possible recessions all have an impact on the economy.

This, together with government's mismanagement of government institutions, has reduced the appeal of foreign investment in South Africa. Roodt stated that, despite this situation, investment opportunities in South Africa's energy sector remain viable.

Panel discussion

The ripple effect of the energy crisis is that producers' irrigation costs will increase end-user costs. Anlie Hattingh, eNCA news anchor, led a panel discussion regarding viable solutions to meet energy demand. The panellists were Hawie Viljoen, Faure van Schalkwyk, Dawie Roodt, Johan Erasmus of Easy Greens and Sarel Haasbroek.

The discussion focussed on alternative energy solutions and

Renowned economist, Dawie Roodt.

Faure van Schalkwyk, energy research engineer at Solar Power Africa.

Hawie Viljoen, chief director of competitiveness incentives at the Department of Trade, Industry and Competition (DTIC).

Deon van Zyl, chairperson of the Potato Industry Development Trust (PIDT).

Willie Jacobs, chief executive officer of Potatoes SA.

Hein Oberholzer, chief financial officer at Potatoes SA.

how weatherproof they should be. Van Schalkwyk said the best answer is a bespoke solution for each business, especially considering load shedding's effect on irrigation. With 43% of the country's electricity capacity currently unavailable, it affects potato yields and profitability, added Haasbroek.

Energy supply companies (ESCOs) should be created and allowed to compete with Eskom. Roodt said that Eskom should be privatised, despite its impact on employment opportunities and income. Van Schalkwyk mentioned biogas as a viable solution, provided it provides a constant stream of energy.

PIDT report

Deon van Zyl, chairperson of the Potato Industry Forum, gave feedback on the Potato Industry Development Trust's (PIDT) activities and objectives of the past year.

Dr Ben Pieterse (Chairperson), Nokanyo Maceba, Martin Fourie, Deon van Zyl and Gert Bester are all trustees of the PIDT. The Department of Agriculture, Land Reform and Rural Development (DALRRD), the Potato Research Committee, Potato Industry Forum (PIF) and Potatoes SA nominate individuals to serve on the committee. Trustees establish the risk and audit, bursary and PIDT transformation advisory committees to assist them with their duties. The research technical advisory committee was terminated.

The *Marketing of Agricultural Products Act, 1996 (Act 47 of 1996)* aims to increase market access for all participants, promote efficiency, optimise export income and enhance the viability of the agricultural sector. Van Zyl said the PIDT uses the *Act* to organise and grow the industry and increase competitiveness. More funds will be allocated to enhance PIF membership involvement in the potato value chain. This includes manufacturers of bags, consumers, exporters and producers.

Potatoes SA's activities

Willie Jacobs, chief executive officer of Potatoes SA, discussed Potatoes SA and its role in the industry, including liaising with industry bodies such as DALRRD, the National Agricultural Marketing Council (NAMC) and the Potato Certification Service (PCS). It will focus on being more outcomes-driven, yet cost-efficient and content rich, and will continue supporting precision farming. Jacobs said that to remain relevant and properly assist producers, the organisation must be proactive in respect of external influences such as imports, exports and international events.

He highlighted the importance of research funding. Research projects identify methods for more energy-efficient and waterwise production and disease resistance in crops. These projects focus on water usage and quality, cultivar maintenance, and virus and disease management. Funding will also be provided for workshops and training sessions on irrigation scheduling.

The vision of Potatoes SA's marketing model is to attract new and retain current consumers. Its mission is to inform, educate and inspire all involved. The intent is to style the humble spud as a tasty, convenient and versatile vegetable. The strategy hopes to open communication channels with South African retailers and pre-packers.

Potatoes SA's key deliverables on transformation, he said, will be enterprise and small grower development, farm-based training and a tertiary skills development pipeline. Jacobs invited those present to attend the seventh transformation symposium to be held on 15 February 2024.

Financial report

Hein Oberholzer, chief financial officer of Potatoes SA, presented the PIF report and focussed on levies. The 2022/23 year represents the end of the organisation's fifth statutory period, the sixth starting in July 2023 until end June 2027. He explained the approval process for the application for the continuation and increase of levy rates.

Statutory levies are directed towards market development, research, transformation and information. Oberholzer noted that the pandemic caused a decrease in spending. From 2019 to 2023, the budget was spent as follows: 24.2% on market development, 20.3% on industry information, 25.9% on research and development, 6.4% on administration and 23.2% on transformation.

For more information, visit *www.potatoes.co.za/potato-industry-forum/.*

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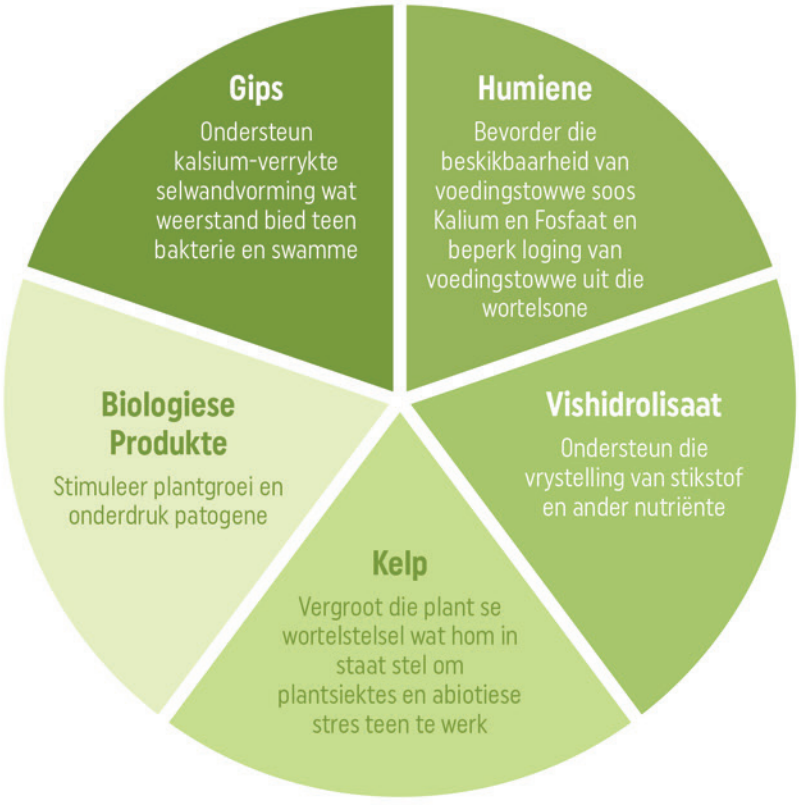

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Sandveld-aartappelprodusente takel talle uitdagings

Deur Hugo Lochner, Plaas Media

Die Sandveld Aartappelkwekersorganisasie (SAKO) se algemene jaarvergadering is onlangs op Lambertsbaai gehou. Uitdagings soos beurtkrag en stygende produksiekoste, die Sandveld Aartappelwerkgroep se jongste navorsingresultate, die rol van varsproduktemarkte in prysbepaling en die belangrikheid van goeie inligting is tydens die vergadering bespreek.

Jannie Basson, voorsitter van SAKO, het in sy voorsittersverslag gesê dit gaan vanjaar ietwat slegter met aartappelprodusente in die Sandveld as in 2022. Die redes daarvoor is erger beurtkrag, hoë produksiekoste en natuurlike ondergrondse waterbronne wat onder druk is weens ondergemiddelde reënval in 2022.

"Beurtkrag is 'n groot probleem op besproeiingsplase en plaas, saam met ander faktore, druk op produsente wat gevolglik minder hektare aartappels aanplant," het hy gesê.

Kommer oor water

Die groter Sandveld-area maak hoofsaaklik gebruik van ondergrondse waterbronne. In 2022 het die streek net sowat 50% van sy gemiddelde reënval aangeteken. Dit het 'n groot invloed op ondergrondse waterreserwes en watergehalte gehad.

SAKO laat toets die streek se ondergrondse water elke jaar deur 'n geohidrologiese maatskappy. "Die jongste resultate het gewys dat die streek se watervlakke en watergehalte gedaal het. Dit is kommerwekkend en ons as produsente sal moet besluit hoe ons hierdie situasie in die toekoms gaan hanteer," het Basson gesê.

SAKO is ook besig met 'n reserwe-bepaling van waterbronne deur 'n privaat konsultasiemaatskappy in samewerking met die Departement van Water en Sanitasie. "Die toetsuitslae sal ingespan word om water-kwotas en -produsente-allokerings aan te pas."

Ondersteun varsproduktemarkte

Basson het sy kommer uitgespreek oor die voortbestaan van Suid-Afrika se varsproduktemarkte as prysbepaler van tafelaartappels, asook die hoë kleinhandelsprys van aartappels. In die Sandveld, waar hoë-gehalte aartappels geproduseer word, is dit 'n groeiende tendens om aartappels direk aan kleinhandelaars te lewer. Dit is ongesond, aangesien die swakker gehalte produk nou na die varsproduktemarkte gestuur word en die markte steeds die primêre prysbepaler bly.

Hy is ook bekommerd oor die groeiende kleinhandelsprys van aartappels, wat kan uitloop op kopersweerstand. Die hoër insetkoste en energiekrisis wat ekstra onkoste deur produsente verg, veroorsaak dat produsente minder aartappels plant, met 'n gevolglike kleiner aanbod. Sodra die vraag die aanbod oorskry, sal pryse styg.

"Dit kan korttermynvoordele vir produsente inhou, maar ons weet die verbruiker is onder druk weens

Christo van der Rheede (links), hoof uitvoerende beampte van Agri SA, saam met Jannie Basson (middel), voorsitter van SAKO en Terrence Brown, voormalige Aartappels SA verteenwoordiger in die Sandveld.

Van links is Gert Bester, voorsitter van Aartappels SA, Willie Jacobs, hoof uitvoerende beampte van Aartappels SA, en Piet Brink, voorsitter van die Sandveld Aartappel-werkgroep.

ekonomiese toestande. Wie moet ons produk koop as die mense dit nie kan bekostig nie? As aartappels te duur raak, kan die aankoop daarvan stagneer," het Basson gesê.

Kundigheid produseer voedsel

Christo van der Rheede, uittredende hoof uitvoerende beampte van Agri SA, het gesê die boodskap wat Agri SA elke dag aan die regering oordra, is dat dit nie grond is wat voedsel produseer nie – dis kundigheid.

Organisasies soos Agri SA en Aartappels SA moet hierdie kundigheid beskerm en bemagtig, en daardie kundigheid se staanplek in die toekoms van Suid-Afrika verseker. "Verloor ons ons produsente, dan verloor ons voedselsekerheid en ons status as 'n voedselseker land," het hy gesê.

Let op pryse en gehalte

Die voorsitter van Aartappels SA, Gert Bester, het gesê die aartappelbedryf is onder groot druk en moet homself reg posisioneer om te oorleef. Hy het produsente gevra om nie volumes te jaag nie, maar eerder aanvraag reg te lees en op prys en gehalte te let. Die mark kan nie aartappels verkoop as die vraag nie groot genoeg is nie.

Hy het op die belangrikheid van oop kommunikasielyne tussen produsente en Aartappels SA gewys. "Die dag as Aartappels SA nie meer hoor wat produsente sê nie, of as produsente nie meer hoor wat Aartappels SA doen om hul probleme te help oplos nie, is daar geen kans vir Aartappels SA se voortbestaan nie.

"Daar is tans 'n regskud in die bedryf wat geleenthede bring. Produsente moet dit benut. Diegene wat suiwer volume najaag se bestaansreg is in gevaar. Dié wat op gehalte en prys let, sal hul mark beskerm en het 'n toekoms," het Bester gesê.

Pryse te ver van mekaar

Willie Jacobs, hoof uitvoerende beampte van Aartappels SA, het gesê niemand in die aartappel-waardeketting hoef marges op te gee om die produsente- en verbruikersprys nader aan mekaar te bring nie. "As ons net die doeltreffendheid en ekonomie van die bedryf kan verander, en as ons kan sê supermarkte hoef nie te voorsien vir verliese nie en produsente hoef nie produkte terug te stuur nie, kan ons 'n beter marge vir alle rolspelers verseker."

Die aartappelbedryf is volumegewys besig om 'n negatiewe tendens te betree. Die gemiddelde produsenteprys versus die gemiddelde verbruikersprys is een van die faktore wat daartoe bydra. Die produsenteprys maak nie meer as 30% van die totale verbruikersprys uit nie. "Die twee pryse sal net nader aan mekaar beweeg as almal met dieselfde inligting werk. Die inligting moet regdeur die bank dieselfde wees, sodat supermarkte beter prysbepalings kan doen.

Inligting is goud werd

Jaco Koekemoer, bemarkingsbestuurder van Aartappels SA, het produsente versoek om die markstelsel te ondersteun. Daar is agt moontlike bemarkingskanale wat 'n produsent kan gebruik om sy of haar produk te verkoop. "Die realiteit is dat Aartappels SA net van een prys weet en dit is die prys op die varsproduktemarkte. Ons weet nie wat die prys is van aartappels wat aan verwerkers, direk aan die kleinhandel of aan herverpakkers gelewer of uitgevoer word nie. Ons moet dus ons markagente ondersteun," het Koekemoer gesê.

Die nasionale streekskoördineerder van Aartappels SA, FP Coetzee, het die belangrikheid van die gebruik van inligting om vraag en aanbod nader aan mekaar te bring, beklemtoon. Hy het die voorbeeld gebruik van produsente in Limpopo wat, met 'n 55%-deelname in terme van inligting, 29% van hul produksie onder die gelykbreekprys moes verkoop. In provinsies met goeie deelname in terme van inligting (KwaZulu-Natal, die Noord-Kaap en Sandveld), het produsente minder as 10% van hul produksie onder die gelykbreekprys verkoop.

"Produsente moet weet wat in hul streek en op die varsproduktemarkte aangaan. Dit is beter om aartappels wat weens 'n te groot aanbod te lank op die markvloer lê en nie meer goed lyk nie, te verwyder. Die markvloer sal beter vertoon, die persepsie by die mark sal beter wees, en jou handels-merk sal beskerm word," het Coetzee gesê.

Klimaat lei tot laer opbrengste

Piet Brink, voorsitter van die Sandveld Aartappelwerkgroep, het gesê die

Jaco Koekemoer, bemarkingsbestuurder van Aartappels SA.

realiteit van klimaatsverandering is met ons. Die grootste uitdaging is water en hoe dit voortaan bestuur word. Nuwe tegnologie kan die proses vergemaklik, maar dit is belangrik om die regte en verbruikersvriendelike tegnologie te gebruik.

Die gemiddelde opbrengs van die werkgroep se jongste kultivarproewe was ongeveer 20% laer as dié van die vorige vyf jaar. "Ons soek nog na redes vir die laer opbrengste. Dit is duidelik dat dit iets anders as normale produksiepraktyke is. Ons vermoed die veranderde weersomstandighede, soos laer temperature in die knol-vultydperk, het 'n rol gespeel," het Brink gesê.

Die jaarlikse kultivarproewe toon duidelik watter kultivars bestendig vertoon en met vertroue geplant kan word. In die jongste proewe het Sifra en Mondial weer uitgestaan en is ook die kultivars wat die bestendigste oor die afgelope vyf jaar vertoon het.

Die kultivarproewe gaan egter nie net oor kultivarinligting nie. "Dit is 'n diens aan produsente en 'n belangrike kontakpunt waar

FP Coetzee, nasionale streeks-koördineerder by Aartappels SA.

Aartappels SA-lede bymekaarkom, kennis uitruil en ander aspekte van aartappelverbouing en -bemarking bespreek."

McCain Foods open tweede navorsingsplaas in Suid-Afrika

Deur Susan Marais, Plaas Media

Lichtenburg in Noordwes het op 26 April amptelik die tuiste van die tweede McCain bewaringslandbou-proefplaas geword, toe die Farm of the Future Africa-perseel daar geopen is. Dié stap is deel van die multinasionale voedselreus se strategie om bewaringslandbou teen 2030 op al McCain se aartappellanderye toe te pas as deel van volhoubaarheidsteikens.

Die eerste Farms of the Future-plaas is in 2020 in Kanada onthul en die maatskappy, met sy hoofkantoor in Toronto, hoop om teen 2025 'n derde perseel te open. "Die doel van die proefplase is om groter begrip vir bewaringslandboutegnieke te kweek, en om die plase se omgewingsimpak, koste en voordele te bestudeer," het Charlie Angelakos, McCain se visepresident vir globale eksterne sake en volhoubaarheid, gesê. "Dié vlagskipprojek onderstreep McCain se verbintenis tot die groei van Suid-Afrika se landbou en agri-verwerkingsbedrywe."

Van links na regs is Charlie Angelakos, McCain se visepresident vir globale eksterne sake en volhoubaarheid, Monako Dibetle, McCain Suid-Afrika se hoof van volhoubaarheid en kommunikasie, Unathi Mhlatyana, McCain Suid-Afrika se besturende direkteur, Karen Blumenschein, gade van die Kanadese Hoëkommissaris tot Suid-Afrika, Chris Cooter, Kanadese Hoëkommissaris tot Suid-Afrika, Desbo Mohono, LUR vir landbou, grondhervorming en landelike ontwikkeling in Noordwes, en Philippe Thery, globale hooflandboubeampte van McCain Foods Limited.

Die plaaslike klimaat

Angelakos het gesê McCain het Suid-Afrika spesifiek uitgekies vir sy kundigheid rondom bedryfsleidende bewaringslandbouprak-tyke, asook die feit dat talle ander lande waar McCain werksaam is onder soortgelyke klimaatstoestande produseer.

Desbo Mohono, die LUR vir landbou, grondhervorming en landelike ontwikkeling in Noordwes, het die opening van die nuwe fasiliteit verwelkom. "Voedselsekerheid bly 'n kwelpunt vir die regering en die staat kan nie die probleem op sy eie aanspreek nie. Ons het vennote nodig en daarom is ons dankbaar vir navorsingsplase soos hierdie."

Pieter Hollebrandse, 'n landbou-ingenieur en spesialis aartappelverbouer vir McCain in Suid-Afrika, verduidelik hoe hierdie trekker se wiel-as aangepas is sodat die wiele verder uitmekaar sit. Nou kan dié trekker op dieselfde spoor as die ander masjinerie loop, met die gevolg dat die grondkompaksie nie so erg soos in 'n tradisionele stelsel is nie.

Mohono het bygevoeg dat dit veral belangrik is dat nuwe toetreders tot die sektor gehelp moet word om kennis op te doen. "Al is hierdie projek gefokus op McCain se bedrywighede, moet ons nie vergeet dat produsente hierby gaan baat nie. Boerdery is 'n ernstige besigheid en hierdie inisiatief sal al ons aartappelboere kan help om hul besighede uit te bou."

Susan Marais van Plaas Media by Desbo Mohono, LUR vir landbou, grondhervorming en landelike ontwikkeling in Noordwes, Unathi Mhlatyana, McCain Suid-Afrika se besturende direkteur, en Jaco Koekemoer, nasionale bemarkingsbestuurder van Aartappels SA.

Unathi Mhlatyana, uitvoerende hoof van McCain in Suid-Afrika, sê dat die perseel ook dien as 'n platform om nuwe talent te werf en op te lei in lyn met die minister van landbou, grondhervorming en landelike ontwikkeling se plan om 'n nuwe generasie suksesvolle produsente te vestig.

Om so hulpbrondoeltreffend as moontlik te wees, is sonkragenergie en verskeie masjinerieskure by die plaas se hoofkantoor aangebring. Die maatskappy is ook besig om te kyk na hoe sonkrag ingespan kan word om besproeiing aan te dryf.

Vir meer inligting, kontak Monako Dibetle by monako.dibetle@mccain.co.za.

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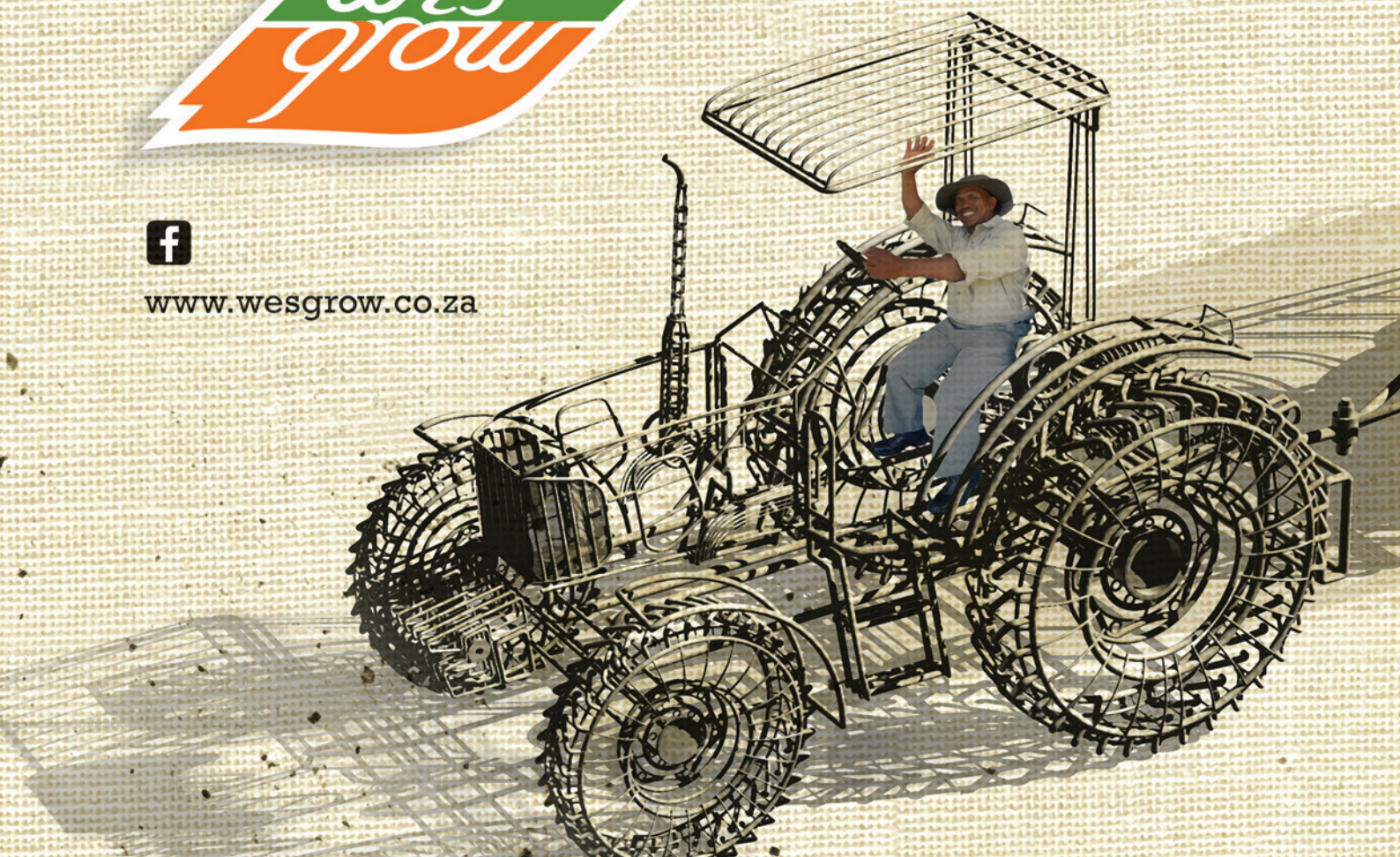

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Market monitor: The first 22 weeks of 2023 at fresh produce markets

By Lynné Roos, Sibabaliwe Rulumeni and Dikgetho Mokoena, Potatoes SA

The weekly average price of potatoes exhibited a consistent upward trajectory commencing from week 17 of 2023 at R53.53 and persisted in following a steady upward trend in subsequent weeks until week 22. The price trend in 2023 has consistently shown an upward trend, surpassing both the five-year average by R20.82 and the prices observed in 2022 by R17.30.

Weekly and daily average prices

Figure 1 indicates the weekly average price on all markets for all classes and sizes. By the end of week 22, the average weekly price was R58.43 per 10 kg bag, which was a 6% increase week on week. *Figure 2* indicates the daily average stock levels and the daily average price for the 22-week period of 2023.

Stock levels

Figure 3 illustrates the average stock levels of each month compared to the corresponding month in the previous year. Starting in April 2023, the daily stock levels exhibited an increase, averaging around 786 000 bags, compared to the average of 754 000 bags in March. However, May 2023 witnessed a decrease of 95 000 bags compared to April 2023 and a lower level compared to the same period last year, with approximately 209 000 bags. The average inventory trend aligned with the price trend, as the price consistently faced upward pressure starting from April.

Sales figures

During the initial 22 weeks of 2023, sales on the FPMs increased by 6% from 2022's corresponding figure, as indicated by *Figure 4*. Additionally, *Figure 4* shows that the average price for this period in 2023 reached its highest point in the past five years. However, the sales on the FPMs after

Figure 1: Weekly daily average price on all FPMs (all classes and sizes).

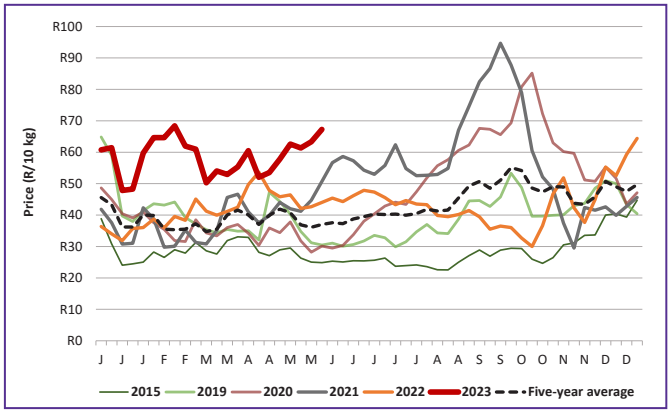


Figure 2: Daily average stock levels compared to daily average price (all classes and sizes).

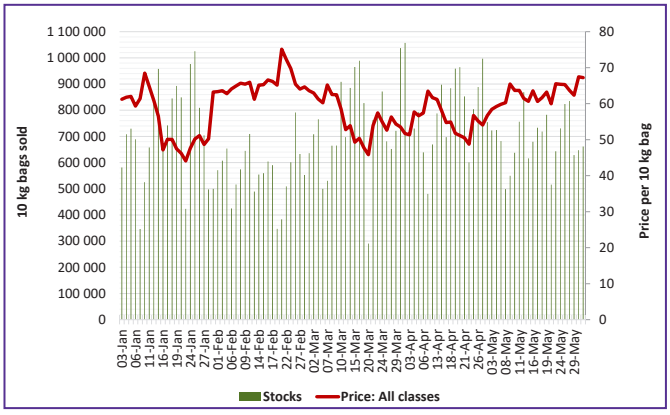


Figure 3: Average daily stock levels per month in 2022 versus 2023.

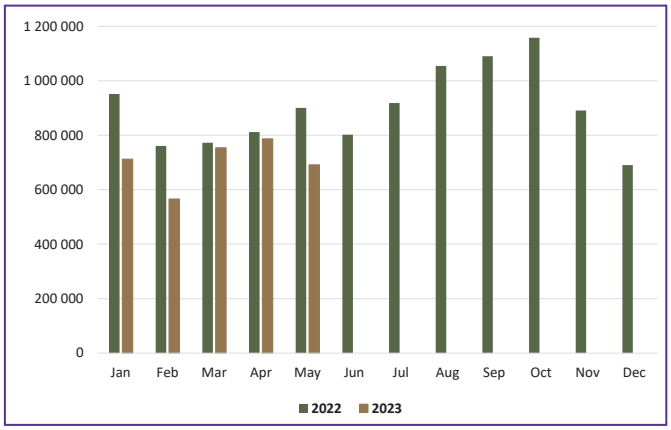


Figure 4: Cumulative number of 10 kg bags sold during the first 22 weeks (average price).

	Five-year average	2019	2020	2021	2022	2023
Number of bags sold	47119550.98	47214804	45957652	48615504	45987123	41974844
Average price	37.61028316	39.32184174	36.1106251	38.3787139	41.12744493	58.43090331

Table 1: Sales on FMPs until week 22 of 2023.

				Percentage of sales on FPMs			
Market	Number of bags 10 kg	% of total	Avg price (R/10 kg)	Class 1	Class 2	Class 3 & 4	Class 1 M
Johannesburg Market	16 741 447	39.9%	58.07	79%	13%	7%	18%
Tshwane Market	7 740 474	18.4%	58.1	67%	21%	12%	15%
Durban Market	4 191 336	10%	56.51	81%	12%	7%	24%
Cape Town Market	3 367 908	8%	68.93	78%	17%	5%	26%
Springs Market	2 259 094	5.4%	53.58	65%	21%	14%	13%
Bloemfontein Market	1 236 758	2.9%	59.37	60%	26%	13%	16%
East London Market	1 176 447	2.8%	60.13	77%	14%	9%	22%
Klerksdorp Market	1 139 180	2.7%	55.67	66%	20%	14%	14%
Welkom Market	1 072 972	2.6%	55.07	58%	24%	18%	12%
Port Elizabeth Market	1 025 248	2.4%	60.83	72%	19%	9%	24%
Pietermaritzburg Market	1 003 747	2.4%	51.57	66%	22%	12%	14%
Vereeniging Market	360 598	0.9%	54.87	73%	15%	12%	10%
Witbank Market	215 386	0.5%	57.62	69%	19%	12%	14%
Kimberley Market	183 942	0.4%	60.9	74%	17%	10%	25%
Nelspruit Market	137 794	0.3%	64.65	75%	16%	9%	9%
George Market	101 379	0.2%	61.99	75%	18%	7%	20%
Kei Market (Umtata)	10 083	0%	28.14	0%	0%	0%	0%
Total	**41 963 793**	**100%**	**58.43**	**74%**	**17%**	**9%**	**18%**

the initial 22 weeks of the year fell short by 5.1 million 10 kg bags in comparison to the average sales over the past five years. *Figure 5* provides an overview of the monthly sales on the FPMs starting from 2020.

In May 2023, sales surpassed the eight million 10 kg bag mark and sales decreased since March. Specifically, in April, sales dropped to 8.2 million 10 kg bags compared to March's sales of 8.6 million 10 kg bags, representing a decrease of 328 000 x 10 kg bags. In May 2023, there was a slight increase in sales by 124 000 x 10 kg bags, and sales remained above the eight million mark. It is worth noting that in May 2022, sales reached 8.9 million 10 kg bags.

Table 1 contains the number of bags sold by the various markets during the first 22 weeks of 2023. The five largest markets during this period were collectively responsible for 82% of the country's sales. The average price (all classes and sizes) for each market also appears in *Table 1*.

Individual market performance

Among the five largest markets, Durban and Springs market's average prices were R1.92 and R4.85 lower than the country's average price of R58.43 respectively. In terms of market composition, Durban and Johannesburg markets had the highest proportion of Class 1 bags in their total sales, accounting for 81 and 79% respectively, which were the highest percentages among the top five markets.

Figure 6 provides insights into the year-on-year price change for the top five markets. In all these markets, prices experienced an increase. Among them, the Cape Town market exhibited the highest

Figure 5: Monthly sales at FPMs from 2019 to 2023 (all packaging converted to 10 kg bags).

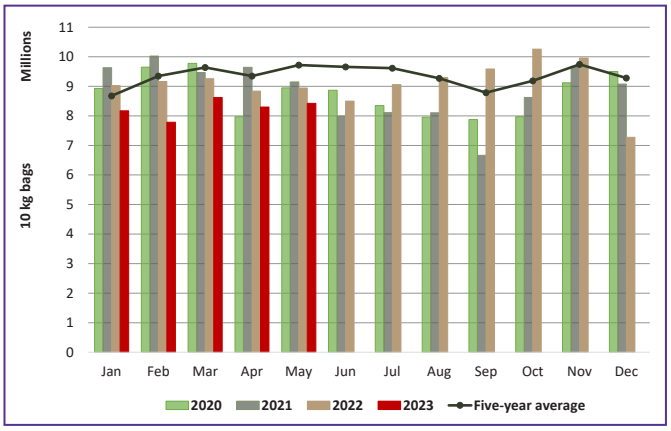
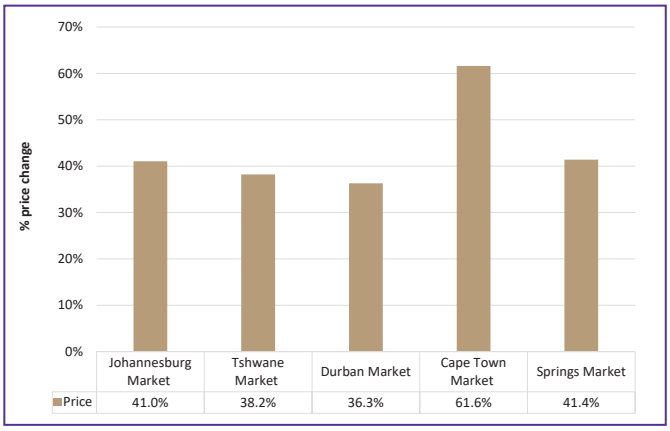


Figure 6: Year-on-year price change at top five markets.



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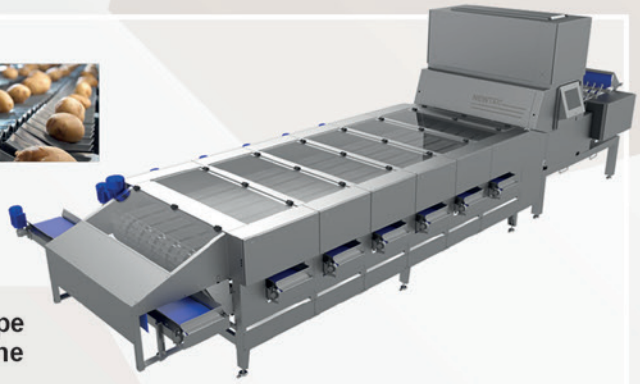

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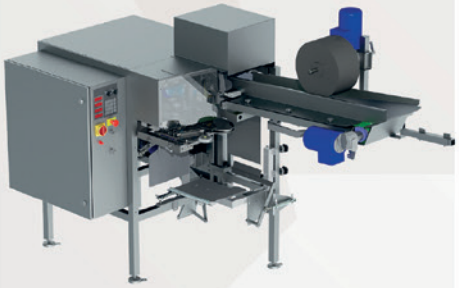

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Table 2: Sales per region on FPMs until week 22 of 2023.

				Percentage of sales on FPMs			
Region	Number of bags 10 kg	% of total	Avg price (R/10 kg)	Class 1	Class 2	Class 3 & 4	Class 1 M
Eastern Free State	11 797 757	28%	57.63	70%	17%	**13%**	13%
Western Free State	8 824 949	21%	59.12	77%	15%	8%	23%
North West	4 335 648	10%	60.16	79%	13%	8%	15%
Southwestern Free State	3 845 561	9%	63.8	80%	10%	9%	21%
KwaZulu-Natal	3 668 614	9%	57.1	78%	17%	5%	13%
Sandveld	1 874 813	4%	66.55	78%	19%	2%	27%
Gauteng	1 578 674	4%	51.94	84%	10%	5%	23%
Limpopo	1 563 607	4%	50.89	80%	18%	3%	25%
Northern Cape	1 134 330	3%	59.42	59%	18%	22%	16%
Northeastern Cape	1 064 688	3%	56	69%	22%	9%	23%
Other regions	926 721	2%	41.10	36%	53%	11%	12%
Ceres	695 265	2%	70.80	82%	9%	8%	25%
Mpumalanga	561 518	1.34%	51.89	66%	25%	9%	14%
Eastern Cape	50 329	0.12%	54.71	76%	19%	5%	19%
Southern Cape	40 970	0.10%	53.38	90%	5%	6%	35%
Southwestern Cape	349	0.00%	29.4	0%	0%	0%	0%
Total	**41 963 793**	**100%**	**58.43**	**74%**	**17%**	**9%**	**18%**

Figure 7: Number of 20 kg bags sold per region during the first 22 weeks of 2023.

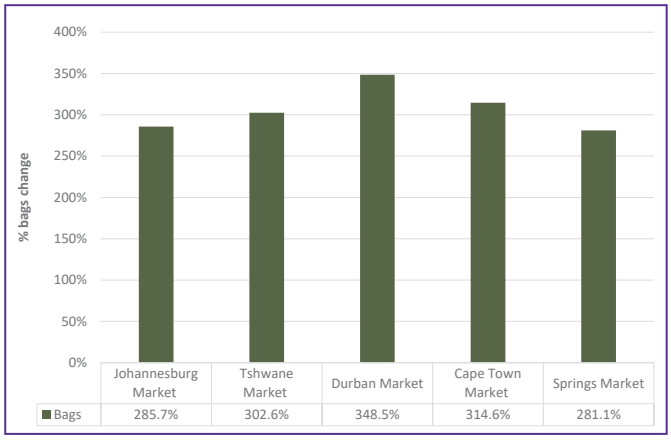
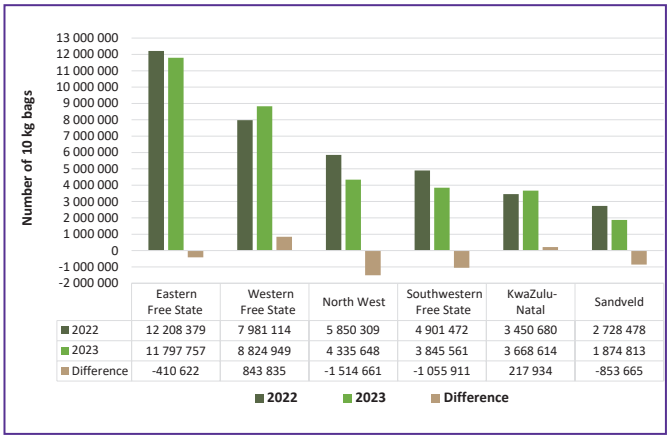


Figure 8: Number of 10 kg bags sold during the first 22 weeks per region: 2021 versus 2022.



percentage expansion with a price increase of 61.6%. On the other hand, *Figure 7* displays the volumes sold at the Springs market, which saw the smallest year-on-year increase among the top five markets, standing at 281.1%. This relatively lower growth in sales volume at the Springs market supported the observed price increase.

Regional performance

According to *Figure 8*, when comparing the sales of the six largest regions in 2023 with 2022, it is evident that four regions sold fewer 10 kg bags, while the remaining two regions sold more during the first 22 weeks. This indicates a mixed performance across the regions during this period.

In terms of market presence, the three largest regions in the market during this period (first 22 weeks) accounted for 59% of the total potato sales, as indicated in *Table 2*. *Table 2* also illustrates the percentage composition of each region's Class 1, 2, 3 and 4 supplied during this period. Among the production regions, five of them, Eastern Free State, Western Free State, North West, Southwestern Free State, and KwaZulu-Natal, had a percentage of Class 1 sales above 70%. Among them, Southwestern Free State had the highest percentage of Class 1 sales, standing at 80%.

For more information, contact Lynné Roos at email lynne@potatoes.co.za.

Group 3 Fertiliser

Group 3 Fertiliser

MetsonWorld

RRHIZ-UP™

RRHIZ-UP is a granular Arbuscular Mycorrhizal (AM) fungal product that forms a symbiotic relationship with the roots of most flowering plants, herbs, vegetables, and agricultural crops. RRHIZ-UP assists with root and shoot mass, Increased shoot height and Increased yield and flowering.

The species used in this product are as follow:

- *Funneliformis coronatum*
- *Funneliformis mosseae*
- *Claroideoglomus etunicatum*
- *Rhizophagus irregularis*

Percentage difference on yield

14.24%
B - RRHIZ-UP
25kg/ha

47.24%
C - RRHIZ-UP
50kg/ha

66.78%
D - RRHIZ-UP
100kg/ha

Please contact your nearest Metson Regional manager or agronomist to enquire about the optimal application rates per crop and/or further application details for RRHIZ-UP.

Fertiliser Group 3 I Registration No. M319 I Act 36 of 1947

Active Ingredients / Spore Count:

Funneliformis coronatum, Funneliformis mosseae, Claroideoglomus etunicatum, Rhizophagus irregularis

800 Propagules/ 10 g
70 Spores / 10g

Metson Manufacturing CC I 1999/059914/23 I
P O Box 1005, Cresta, 2118 I Tel: 011 792 8968

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AFRI COMPLIANCE

Overview of world potato markets

By PJ Nell, Potatoes SA

Severe weather conditions across the globe have impacted potato crops, leading to smaller harvests in the United States (US), Europe and Australia last year. Europe faced drought, while Australia dealt with heavy rainfall. This season, Europe is already feeling the effects of extreme weather, with record-high temperatures in Spain and Portugal causing reservoirs in southern Spain to dip below 30% capacity.

In addition, a cold and wet spring in northern Europe has delayed planting and hindered crop growth. As a result, potato prices have soared, with the average Spanish price surpassing €700/ton for the first time. In France, Belgium and Germany, prices of at least €400/ton have become the norm for processing potatoes.

Conversely, planting conditions in the US and Canada appear favourable, potentially leading to larger potato crops. However, producers in the US face the long-term threat of climate change, with 80% of cropland at risk by 2040. The challenges faced by the US and Europe have opened up opportunities for potato-exporting countries elsewhere such as China, India and New Zealand.

Largest crop since 2018 for US

Following a historically small potato harvest in 2022, which resulted in supply shortages and price increases, the upcoming potato crop in the US is expected to be the largest since 2018. Although this projection is based on anecdotal evidence and previous market trends rather than scientific analysis, there is optimism for a 5% increase in the planted potato area reaching 368 678 ha – the highest since 2019. With an estimated yield of 50.1 tons/ha, the national potato crop for 2023 could amount to 19.634 million tons, marking a significant increase.

Canada could surpass 2022 record

To address supply shortages in North America and beyond, Canada is expected to exceed its record potato crop from last year by increasing plantings. *North American Potato Market News* (NAPMN) anticipates a 2.3% expansion in plantings, totalling 396 000 acres (160 256 ha). Notably, Prince Edward Island is projected to witness a 2.8% increase, while the total eastern Maritimes area is expected to grow by 1.8%. In the Prairie area, a significant rise of 3.3% is forecast, primarily driven by a 5.4% increase in Alberta and an impressive 12.7% surge in Saskatchewan.

Based on estimates, assuming a 2.5% national increase in the planted area, they anticipate a total of 160 359 ha. If the same harvest loss of

Figure 1: US potato area and yield.

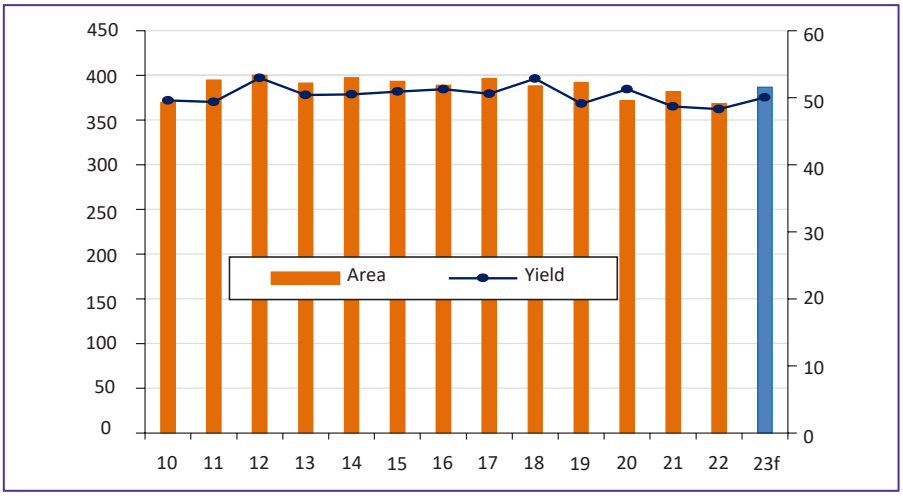


Figure 2: US potato production in million tons. (Source: USDA)

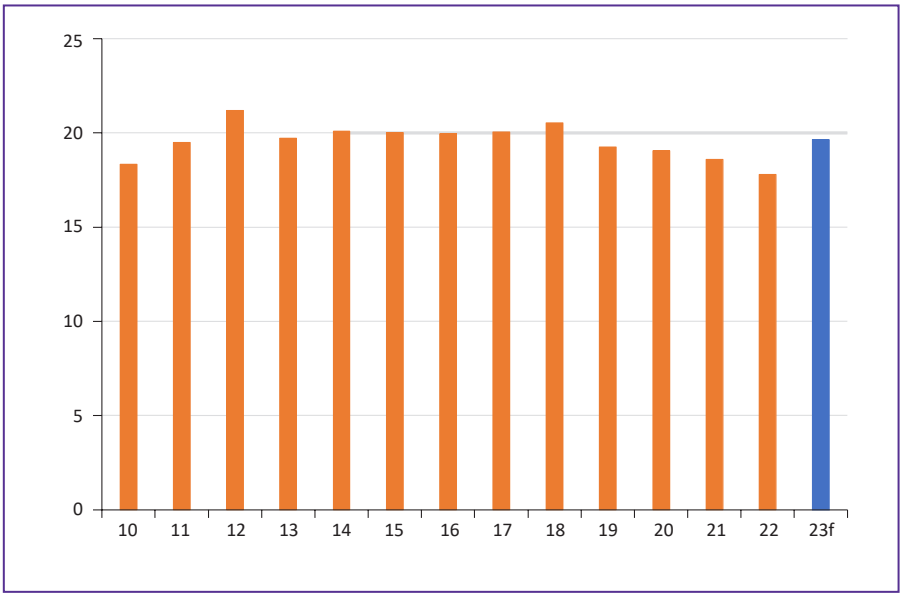


Table 1: US potato production from 2018 to 2023. (Source: USDA and WPM estimates for 2023)

	2023f	% change	2022f	% change	2021	2020	2019	2018
Planted area in '000 ha	386.678	+5.0	368.265	-3.5	381.619	371.704	391.858	388.418
Yield tons/ha	50.1	+3.6	48.3	-0.8	48.7	51.3	49.1	52.9
Production in million tons	19.634	+10.3	17.793	-4.3	18.590	19.052	19.251	20.530

1.3% as last year is experienced, the harvest area would amount to 158 274 ha. Maintaining the five-year average yield of 34.9 tons/ha (2018 to 2022) would result in a crop of 5.519 million tons. However, if last year's average yield of 36.1 tons/ha is achieved, it could potentially yield a record-breaking harvest exceeding 5.7 million tons.

Both the US and Canada are expected to continue the trend of increasing the production of processed potatoes. In the 2021/22 season, according to the USDA, 64.3% of the US potato crop was utilised for processing purposes.

European prices above €400/ton

Despite the recent public holidays, potato prices in Europe have surged to record highs of over €400/ton for processing potatoes. Strong demand and delayed plantings have contributed to the price increase.

In Belgium, the Belgapom price skyrocketed by €50/ton to reach €400, surpassing the previous mark of €300/ton set in the 2018/19 season. Trade reports indicate that processors are willing to pay prices exceeding €400/ton to secure supply, emphasising the seller's market.

Prices are on the rise across Europe, with Germany's Rhineland organisation, REKA, reporting a recent average price of €402.50/ton, ranging from €395 to €410/ton.

Reflecting a relatively more abundant harvest in 2022, the main PotatoNL price in the Netherlands surged by 13% to an average of €392.50/ton, reaching another all-time record.

French processing potato prices also hit €400/ton, marking a €50/ton increase for all types. Current prices are €150/ton higher compared to the beginning of the season and double the prices from a year ago.

Figure 3: Planted area of potatoes in Canada ('000 hectares)

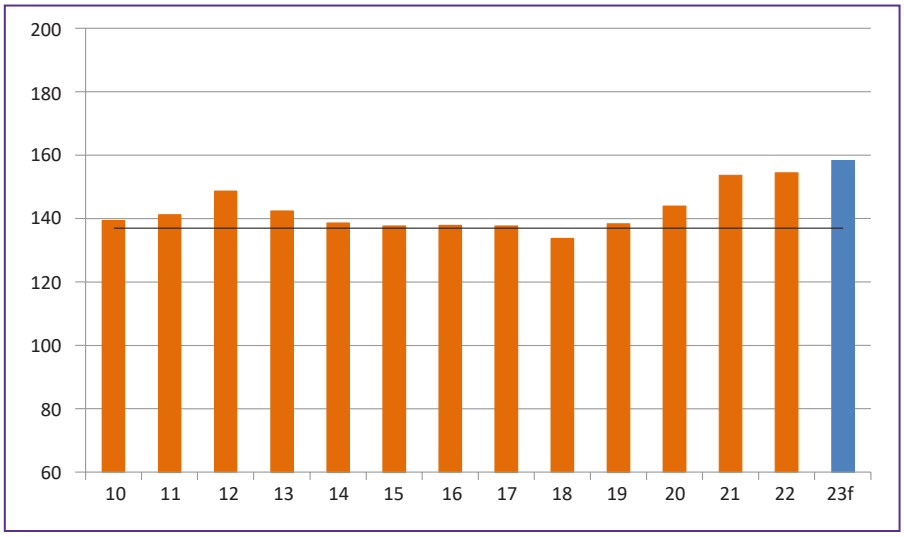
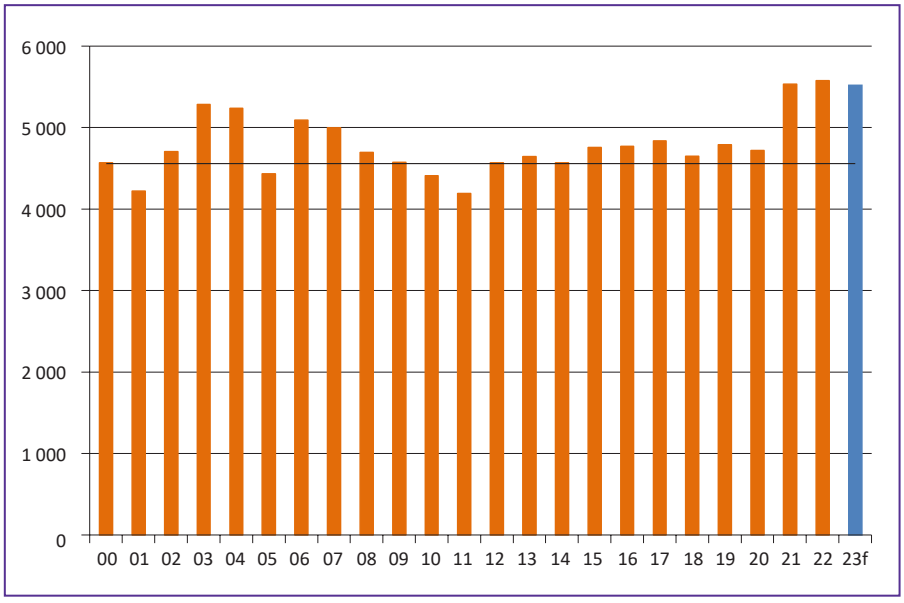


Figure 4: Canadian potato production ('000 tons)



Notably, export prices in France have also witnessed an increase, reaching new highs with a €10 to €20/ton surge. The absence of a benchmark Agata bulk price quote suggests that stocks may already be running low. In contrast, table potato prices have experienced minimal movement.

Delayed planting due to wet weather and hindered crop growth caused by cold conditions have impacted potato production in northwest Europe this year. While temperatures are expected to rise above 20°C in parts of northern France and warmer conditions are anticipated elsewhere, the forecast also includes more rain, which may further slow down planting progress. The current wet weather increases the risk of shallow rooting, making the

Table 2: Spanish potato area, yield, production and ex-farm price. (Data source: Ministerio de Agricultura, Alimentación y Medio Ambiente)

Area ('000ha)	2023	% change	2022	% change	2021	2020	2019	2018	2017
Extra early	3.227	6.3	3.037	-1.6	3.087	3.440	3.597	3.647	3.917
Early	12.601	-6.5	13.481	1.1	13.339	13.449	13.907	14.386	14.433
Total early	15.828	-4.2	16.518	0.6	16.426	16.889	17.504	18.033	18.350
Middle	28.717	-3.9	29.879	3.2	28.962	30.682	30.474	29.899	31.633
Late			17.096	-4.5	17.895	17.833	19.583	19.556	20.895
Total			**63.493**	**0.3**	**63.283**	**65.404**	**67.561**	**67.488**	**70.878**
Yield (t/ha)									
Extra early	25.6		25.1	-4.4	26.2	23.6	23.5	20.8	23.5
Early			29.7	-10.0	33.0	30.6	31.2	27.3	30.2
Total early			28.9	-9.1	31.8	29.1	29.6	26.0	28.7
Middle			27.3	-5.7	28.9	28.8	29.6	27.4	29.8
Late			37.6	-6.8	40.4	37.8	41.7	37.0	36.8
Total			**30.5**	**-7.3**	**32.9**	**31.4**	**33.1**	**29.8**	**31.6**
Production ('000 t)									
Extra early	82.618	8.5	76.126	-5.9	80.901	81.156	84.367	76.034	92.094
Early			400.739	-9.1	440.740	410.992	434.185	392.675	435.374
Total early			476.865	-8.6	521.641	492.148	518.552	468.709	527.468
Middle			814.4	-2.7	836.738	884.716	901.471	818.353	942.171
Late			643.4	-11.0	722.727	674.969	817.100	723.871	769.831
Total			**1 934.665**	**-7.0**	**2 081.106**	**2 051.833**	**2 237.123**	**2 010.933**	**2 239.470**

crops more vulnerable to potential hot and dry weather later in the season.

Spring in Spain

Record-breaking spring temperatures in Spain, reaching 38.7°C in Cordoba on 27 April, have had a significant impact on the potato crop. This temperature surpassed the previous April record of 37.4°C set in Murcia 12 years ago. In addition to the extreme heat, the country is also grappling with drought, with 27% of Spanish territory facing water shortages and being on alert or in an emergency.

As of 25 April, the national water reserve was at 50.1% of its capacity. However, public reservoirs in the southern regions of Spain are at alarmingly low levels: 24.8% in Guadalquivir, 27.9% in Guadalete-Barbate, 34.6% in Segura, and 36.2% in Cuenca Mediterránea Andaluza.

In response to the challenging drought conditions, Spanish minister of agriculture, Luis Planas, appealed to the European commissioner for agriculture, Janusz Wojciechowski, during the Agriculture and Fisheries Council (AGRIFISH) meeting held on 25 April. Minister Planas requested support for Spanish producers and cattlemen in this "exceptional" drought situation.

Specifically, he asked for advanced common agricultural policy (CAP) annual payments for this year and early payment of over 50% of the funds owed. He also sought the activation of the CAP crisis reserve and proposed allowing autonomous communities to use unexecuted funds from the LEADER programme (rural development programme) to support affected farms.

The early potato area in Spain has decreased significantly, with a revised figure of 12 601 ha, down 6.5% from last year's 13 481 ha. Andalucia maintained a similar planting area, while Murcia witnessed a 14.1% decline. The Canary Islands, Galicia and the Baleares Islands also reported reduced areas for early potatoes. However, the Spanish extra-early potato harvest saw an upward revision, with production increasing by 8.5% to 82 618 tons from 3 227 ha. The average yield per hectare slightly exceeded last year's average. Overall, the total potato area in Spain is expected to decline, including the combined area for extra-early, early and middle-season potatoes.

Spain also experienced a record ex-farm price of €718.6/ton, likely due to factors such as low stocks, delayed harvests and lower yields. Producers in the Valencia region anticipate a yield reduction despite an increase in planted area.

Portugal sees 5% growth

According to the Instituto Nacional de Estatistica, the potato area in Portugal is estimated at 14 600 ha, a 5% increase compared to last year. The irrigated potato area has risen by 600 to 12 600 ha, while the non-irrigated area remains unchanged at

2 000 ha. These estimates align with forecasts from Porbatata, confirming a recovery in the planted area, especially in the central and northern regions, which are traditional market areas.

Portugal has witnessed an 18% increase in imports of seed potatoes, reaching 13 687 tons in January and February, compared to 11 633 tons in the same period last year. This rise in imports could support further expansion of the potato area in Portugal this year.

Showers are forecast for the western, central and northern coastal regions this week, benefitting potato development. Maximum temperatures will range from 24 to 34°C, with the south experiencing showers only on 6 May and temperatures potentially reaching 36°C, requiring irrigation.

In terms of drought, during the first half of April, 78.2% of Portugal was in a meteorological drought, as reported by the country's meteorological agency, IPMA.

The average ex-farm price of new potatoes increased to €1 030/ton in the week leading up to 23 April, marking a 3% increase compared to the previous week and a significant 98.8% increase compared to the same week last year, according to SIMA-GPP. Market prices in the Algarve ranged from €800/ton to €1 100/ton for white-skinned potatoes, depending on size. In the Entre Douro e Minho market, the average price for white-skinned potatoes stood at €1 000/ton.

Late planting affects UK market

The UK potato market has been impacted by cold and wet weather, similar to mainland Europe, resulting in delayed planting and potentially the smallest area on record.

Growers are encountering issues such as compaction and rooting problems, which will affect crop growth throughout the season. To compensate for the extended maturation period, some growers are prioritising maincrop planting over second earlies. It is anticipated that plantings in Great Britain (England, Scotland and Wales) will not exceed

100 000 ha, with the most significant reductions observed in the fresh table-packing potato sector. Increased demand and higher contracts have led growers to shift towards processing potatoes.

Late planting and diminishing stocks have contributed to higher prices for old crop potatoes. The *Potato Call* newsletter reports prices of up to £400 for 2022 crop white potatoes. Premium quality bagged chipping potatoes are fetching prices exceeding £500 per ton.

Indian fry exports rebound

Indian fry exports regained momentum following initial supply problems during the start of the Indian rabi (spring) harvest. This recovery came after a decline in sales in January. In February, total exports reached 8 444 tons, showing a 1.3% increase compared to the previous year and marking the end of two months of declining sales. The business performance was further aided by a slight dip in average prices, at the time of this article standing at IR 116 285/ton (US$1 423/t; €1 278/t).

Notably, the average export price for Indian fries rose by 72.3% compared to a year ago. Although sales figures did not show significant change from 2022, export earnings experienced a substantial increase of 74.6%, reaching IR 981.9 million (US$12 million; €10.8 million).

India's largest customer, the Philippines, significantly increased its purchases of Indian fries, reaching 2 911 tons compared to 348 tons previously. This represents a 76% increase from the previous year, despite the Filipino price of IR116 863/ton (US$1 430/t; €1 285/t), which is 77% higher than last year. Over the course of 12 months, sales to the Philippines have surged by 63.8% to 35 713 tons, making the country responsible for 40% of India's total fry exports.

Thailand's purchases also improved compared to January, reaching 2 821 tons. However, this figure is still 25.9% lower than the previous February. Prices in Thailand have increased by 75.1% since then, reaching IR117 242/ton (US$1 434/t; €1 289/t). Meanwhile, Indonesia witnessed a significant price rise of 94.3% to IR118 903/ton (US$1 455/t; €1 307/t), but managed to purchase 806 tons, marking its highest purchase since last April. Yearly business with Indonesia has increased by 53.4% to 5 979 tons. Vietnam followed closely, with February purchases of 514 tons increasing its annual sales tenfold to 5 214 tons. The price in Vietnam has risen by 61.6% over the past year to IR106 378/ton (US$1 301/t; €1 170/t).

In contrast, sales to Malaysia in February decreased by 38.9% to 476 tons, with a price of IR115 405/ton (US$1 289/t; €1 269/t). South Africa offers a much lower price of IR89 031/ton (US$1 089/t; €979/t), but its sales experienced a significant drop of 63.2% to just 96 tons.

Overall, Indian fry sales have grown by 43.2% to 89 963 tons compared to last year, resulting in earnings that are 107.6% higher at IR8.1 billion (US$99 million; €89 million).

China's fry exports in high demand

China's fry exports continue to grow, having reached a monthly record of 13 467 tons, which is 73.5% higher than the previous year. Strong demand from Japan and Malaysia helped offset the decline in demand from China's leading import markets, the Philippines and Thailand.

Sales to Japan increased by 150 tons, reaching 2 268 tons, a 45.1% increase from a year ago. Despite a significant increase in the import price, the Japanese market remains strong. The price was 11.9% higher than a year ago, while the overall export price increased by 42.3%. Annual sales to Japan have grown by an impressive 154.1% this year, totalling 22 996 tons.

Sales to Malaysia tripled compared to February, reaching 1 407 tons, despite a price that was 80.6% higher than last year. Over the course of 12 months, sales to Malaysia have increased by 249.9% to 5 326 tons. In comparison, Indonesia's price, which rose by 54.0% over the past year, remains lower. Sales to Indonesia decreased to 1 889 tons, but China's fry business with Indonesia has still grown by 438.1% year-on-year.

The Philippines, China's biggest export customer, saw a slight decrease in sales to 2 473 tons, a drop of 26.9% compared to last year. The annual sales growth to the Philippines is no longer as impressive, standing at 28.5% over the past 12 months. In contrast, China's business with the rest of the Southeast Asian market is growing more rapidly. Sales to Thailand also decreased to 2 384 tons, but they are still significantly higher than in March 2022, up by 233.9% with annual sales having increased by 269.2% to 19 432 tons.

China's sales to Vietnam rose by a staggering 1 621% over the past 12 months, reaching 1 446 tons. However, sales of 131 tons to Australia in March surpassed Vietnam's business. The price in Australia was lower than Vietnam's, but annual sales to Australia remain half of what they were in 2021, totalling 477 tons. Overall, China's annual export earnings have increased by 139.2% compared to the previous year, reaching RMB 1.23 billion (US$178 million; €160 million).

It was a weak March for importers as Chinese imports of processed potato products reached only 2 575 tons, showing a slight improvement of 600 tons compared to February. However, this is a significant decrease of 46.3% compared to the previous year. Despite a low price of RMB 8 704/ton (US$1 259/t; €1 132/t) in February, sales from the US increased to 1 613 tons.

The price increase from RMB 8 704 to RMB 9 484/ton (US$1 372/t; €1 233/t) did not seem to have a major impact. It was only 16.2% higher than the price a year ago, which is well below the average import price rise of 26.7%. Annual sales from the US remain significantly lower at 19 658 tons, a decrease of 42.4%. The overall import market declined by 50.3% during the same period, totalling 35 586 tons.

Belgium lowered its price by more than RMB 1 000 to RMB 9 244/ton (US$1 337/t; €1 202/t), resulting in a modest increase of 80 to 555 tons compared to the previous year. However, annual sales for Belgium have decreased by 42.9% to 4 574 tons. Turkey had a challenging month with sales of only 154 tons and the highest price among the main importers at RMB 10 015/ton (US$1 449/t; €1 302/t). Its annual sales are down by 34.7% to 7 299 tons.

The Netherlands, the only other importer in March, experienced a slight decline with sales of 252 tons, a decrease of 40 tons compared to the previous month. Despite having the lowest price at RMB 9 131/ton (US$1 321/t; €1 187/t), its annual sales have also decreased by 32.9% to 2 365 tons.

Good month for New Zealand

New Zealand experienced its best month for fry exports since early 2020, with sales reaching 6 698 tons in March, a 44.9% increase compared to the previous year. The strong demand in Australia, where domestic crop issues have arisen due to recent weather events, has been a key factor in this growth. Despite facing challenges in processing potato exports since mid-2020, New Zealand has benefitted from Australia's supply difficulties.

Sales to Japan also saw improvement, with 259 tons sold in March, a 41.5% increase from the previous month. However, the price to Japan has risen sharply in the past year, up by 60.6% to NZ$2 575/ton.

The future of New Zealand's exports relies on its performance in the growing Southeast Asian markets, particularly Thailand, Malaysia, Indonesia and the Philippines. Sales to Thailand increased by 18% this month, while sales to Malaysia were nearly three times higher than the previous month, marking a 22% increase from a year ago.

Sales to the Philippines decreased by 18.8% in March, resulting in an annual sales decline of 23.7%. Sales to Indonesia continue to struggle, with a significant drop of 95.1% compared to a year ago.

The high freight costs faced by New Zealand exporters, along with emerging competition from China and India, have affected the country's ability to compete in Southeast Asia. Despite higher export prices, which have contributed to a 78% increase in March's total export earnings compared to the previous year, challenges remain.

Fry imports into New Zealand have started to rise, reaching 1 740 tons in March, albeit still 4.4% less than last year. Australia and the Netherlands have been the main suppliers, with Australian fries priced at NZ$2 366/ton and Dutch fries at NZ$1 922/ton.

For more information and references, email the author at pj@potatoes.co.za or Lynne Roos at lynne@potatoes.co.za.

REGISTERED FRESH PRODUCE AGENCIES

BLOEMFONTEIN FRESH PRODUCE MARKET

Bloemfontein Market Agency
Modise Market Agency
RSA Bloemfontein Market Agency
Subtropico Bloemfontein Market Agency
Vrystaat Market Agency

CAPE TOWN FRESH PRODUCE MARKET

Boland Market Agency
Fine Bros Market Agency
Rhoda's Market Agency
RSA Cape Town Market Agency
Subtropico/Spes Bona Market Agency

DURBAN FRESH PRODUCE MARKET

Hanly Market Agency
Port Natal Market Agency
RSA Coastlands Market Agency
Subtropico Durban Market Agency

EAST LONDON FRESH PRODUCE MARKET

AA Market Agency
Border Farmers Market Agency
Martin & Scheepers Market Agency
Subtropico East London Market Agency

GEORGE MUNICIPALITY

RSA Southern Cape Market Agency

JOBURG FRESH PRODUCE MARKET

Botha Roodt Johannesburg Market Agency
CA-TU Fresh Market Agency
C L de Villiers Market Agency
Citi Deep Waatlemoen Market Agency
Citifresh Market Agency
Dapper Market Agency
DW Fresh Produce Johannesburg Market Agency
Exec-U-Fruit Market Agency
Marco Market Agency
Matla Market Agency
Metro Market Agency
RSA Johannesburg Market Agency
Subtropico Johannesburg Market Agency
Swartberg Market Agency
Uni Dev Market Agency
Wenpro Johannesburg Market Agency

KEI FRESH PRODUCE MARKET

Farmers Direct Market Agency

KING WILLIAM'S TOWN FRESH PRODUCE MARKET

RSA Eastern Cape Market Agency

KIMBERLEY FRESH PRODUCE MARKET

Kimberley Market Agency
Subtropico Kimberly Market Agency

KLERKSDORP FRESH PRODUCE MARKET

Garfield Market Agency
J Frances & Son Market Agency
Matlosana Market Agency
Subtropico Klerksdorp Market Agency
W.L. Ochse & Kie Market Agency

LIMPOPO PROVINCE

RSA Limpopo Market Agency
RSA Mooketsi Market Agency

NELSPRUIT MUNICIPALITY

RSA Nelspruit Market Agency
Whoopi Up Nelspruit Market Agency

NOORDEINDE FRESH PRODUCE MARKET

Noordeinde Market Agency

PIETERMARITZBURG FRESH PRODUCE MARKET

G.W. Poole Market Agency
Natalia Market Agency
Nkosi Market Agency
Peter & Co Market Agency
Subtropico Pietermaritzburg Market Agency

PORT ELIZABETH FRESH PRODUCE MARKET

African Market Agency
Algoabaai Market Agency
Gouws & Co Market Agency
Lansdell Market Agency
W Finlayson & Co Market Agency

SPRINGS FRESH PRODUCE MARKET

AM Meyer Market Agency
New Africa Market Agency
RSA Springs Market Agency
Springs Vegtable Market Agency
Subtropico Springs Market Agency

TSHWANE FRESH PRODUCE MARKET

Botha Roodt Pretoria Market Agency
Du Plessis & Wolmarans Market Agency
DW Fresh Produce Tshwane Market Agency
Farmers Trust Market Agency
Fresh Way Market Agency
Mabeka Market Agency
Noordvaal Market Agency
Prinsloo & Venter Market Agency
RSA Tshwane Market Agency
Subtropico/Protea Market Agency
Tshwane Green Market Agency

VAAL MUNICIPALITY

RSA Vaal Market Agency

VEREENIGING FRESH PRODUCE MARKET

Subtropico Vereeniging Market Agency

WELKOM FRESH PRODUCE MARKET

Botha & Roodt Welkom Market Agency
Opkoms Market Agency
Subtropico Welkom Market Agency

WITBANK FRESH PRODUCE MARKET

Subtropico Witbank Market Agency
Witbank Market Agency

OTHER

Agri Empire Market Agency
Comfy Fresh
Core Fruit
Farm Fresh Direct
Federated Farmers
Fruitways
GrapeHub
Green Network
HL Hall & Sons
Multiflora
RSA Beyond
Stargrow
Subtropico Online
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APAC ondersteun ondersoek op varsproduktemarkte

Deur Liana Mocke

Die Mededingingskommissie is meedoënloos en daarom moet die varsproduktemarkte geen steen onaangeroer laat om sy samewerking aan die kommissie te verleen in die nuutste ondersoek na varsproduktemarkte nie.

Dit is die waarskuwing van Francois Knowles, registrateur van die Raad vir Landbouprodukteagente (APAC) waaraan markagente wetlik moet behoort. Hy het tydens 'n webinar rakende die stand van varsproduktemarkte beklemtoon dat APAC die kommissie se ondersoek wat op 13 Februarie vanjaar geloods is, ten volle ondersteun.

'n Komplekse stelsel

Volgens Knowles behoort die ondersoek sowat 18 maande te duur. "Ons sal die uitkoms daarvan moontlik eers in 2024 ontvang en dit sal interessant wees om die kommissie se bevindinge aan te hoor. Dit bly egter ons as belanghebbendes in die waardeketting se werk om seker te maak die ondersoekers verstaan hoe die markte funksioneer.

"Die markstelsel is kompleks en soortgelyk aan groothandel. Dit is ons plig om te verseker dat die ondersoekers 'n deeglike begrip van die ingewikkelde prosesse en stelsels kry waarmee ons te doen het. Ons moet slim en duidelik te werk gaan om ons funksies en stelsels korrek te verduidelik." Hy doen derhalwe 'n beroep op die bedryf om hul samewerking aan die kommissie te verleen.

Die formele ondersoek gaan die algemene stand van mededinging, konsentrasievlakke en struktuur van 'n varsproduktemark ondersoek. In 2022 was daar 39 varsproduktemarkplatforms in Suid-Afrika met 925 geregistreerde markagente, waarvan 757 aktiewe verkoopspersone was. Volgens Knowles gaan die ondersoek egter nie net fokus op spesifieke ondernemings of besighede nie. "Die ondersoek moet wel bepaal of daar enige nadelige gevolge binne die waardeketting van varsproduktemarkte is wat kompetisie belemmer, beperk en verwring."

Daar sal ook ondersoek word hoe opkomende en kleinskaalse kommersiële boere beter deur varsproduktemarkte hanteer moet word. Knowles het as 'n voorbeeld benadruk dat alle boere wat deur geregistreerde agente bemark, binne vyf dae na hul eerste lewering aan markte betaal moet word.

Vorige uitslag steeds onbekend

APAC glo die ondersoek is belangrik en dat dit kwessies kan uitwys wat mededinging beïnvloed, selfs al is dit binne 'n bedryf wat gereguleer word. "Ons verwelkom hierdie ondersoek en ons doelwitte is in lyn met die kwessies wat ondersoek word," het hy gesê.

Die olifant in die vertrek is egter, volgens Knowles, die uitkoms van die ondersoek by die Johannesburgmark en die Tshwane-mark wat in 2017 uitgevoer is. Die uitslag van hierdie ondersoeke is steeds nie bekendgemaak nie. Die markagente se werksaamhede is ondersoek ná 'n bevel deur die Hooggeregshof. Hulle was na bewering betrokke by verbode koördineringsaktiwiteite. Hierdie aktiwiteite was daarop gemik om pryse wat deur kleiner tussengangers gehef word, te onderbie deur onder markpryse te hef vir sekere ooreengekome tydperke van 'n verhandelingsdag.

Uitdagings by markte

Volgens APAC is die grootste uitdagings by varsproduktemarkte dat daar te min in munisipale markte herbelê word, swak bestuur, daling van markaandeel, 'n markstelsel wat hersien behoort te word, sekuriteit by markte wat veel te wense oorlaat en die privaatsektor wat al hoe meer wegbeweeg van beleggings in die markte. Knowles sê daar is toenemende groei in die gaping tussen varsprodukte wat in die land geproduseer word en die volume wat op varsproduktemarkte verhandel word.

In Mei vanjaar was die totale massa varsprodukte wat op 16 van die land se grootste markte verkoop is, insluitend Kaapstad, Johannesburg en Tshwane, 1.06% minder as in Mei 2022. Port Elizabeth-mark het vir die twee vergelykbare maande die grootste afname van meer as 10% in Mei 2023 aangeteken.

Ander uitdagings sluit in die nadelige gevolge op werksaamhede van beurtkrag en infrastruktuur wat nie voldoende funksioneer of in stand gehou word nie.

Toekoms van markte in Suid-Afrika

Ten spyte van al die uitdagings wat markte tans ervaar, beklemtoon Knowles dat dit onmisbaar in die Suid-Afrikaanse ekonomie bly. Markte is primêre bronne van voedselsekerheid en moet ten alle koste beskerm word as afsetpunte vir boere waar prysontdekking 'n elementêre rol speel.

Knowles huldig steeds die opinie dat markte herstel moet word tot hulle voormalige status van uitnemendheid as verskaffers van voedsel aan verbruikers.

Vir meer inligting, skakel 011 894 3680 of besoek APAC se webblad by *www.apacweb.org.za.*

Moderne Fasiliteite verseker die toekoms van varsproduk verhandeling

Nile se aanlyn markplek bars uit sy nate soos boere en kopers van varsprodukte aanlyn beweeg. Ons nuwe Agri Hub konsolideer en versend bestellings wat aanlyn geplaas word na kopers in 40 dorpe en stede oor 10 lande.

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’n Nuwe benadering tot markinligting

Deur Pieter van Zyl, Nile.ag-markontleder

Die debat rondom prysvorming en die bemarking van varsprodukte gaan nog lank met ons wees. Die res van die wêreld se bemarking van veral varsprodukte (en dit sluit aartappels in), het alreeds in ’n rigting ontwikkel weg van varsproduktemarkte (VPM’e) soos ons dit ken.

Die oorsese aartappelprodusent sal sy produkte direk aan handelaars, verpakkers, verwerkers of kleinhandelaars verkoop. Die idee is juis om die bemarkingsketting so kort en doeltreffend as moontlik te maak. Daar is nie meer lande in die wêreld wat oor VPM’e beskik soos hier in Suid-Afrika nie. Impliseer dit noodwendig dat die oorsese produsente nou uitgelewer is aan die res van die voedselketting? Nee.

VPM’e as prysvormingsmeganisme

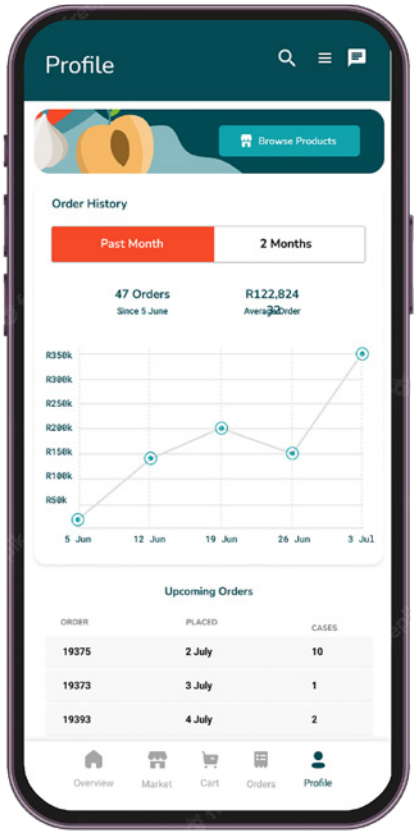
In Suid-Afrika vervul ons markte tans die rol van ’n prysvormingsmeganisme. ’n Prysvormingsproses vind plaas waar kopers en verkopers op ’n gegewe tydstip op ’n spesifieke prys ooreenkom. ’n Voorwaarde is dat daar baie kopers en verkopers moet wees, sodat geen rolspeler ander kan beïnvloed nie. Ook moet daar genoegsame markinligting beskikbaar wees.

Oorsese aartappelproduserende lande het geen markte soos ons hier in Suid-Afrika nie, maar tog funksioneer hulle prysvormingsmeganismes uitstekend. Markinligting daar word voortdurend ingesamel en aan die bedryf beskikbaar gestel.

Sonder VPM’e, soos ons dit ken, kan jy dus ’n prysvormingsmeganisme hê. Daar moet net voldoende en deursigtige markinligting beskikbaar wees. Dit skep ’n geleentheid vir digitale platforms soos Nile.ag, waardeur boere reeds betekenisvolle volumes verhandel, om die deursigtigheid van direkte transaksies te verseker.

Rol van digitale platforms

Digitale platforms het die vermoë om intydse data oor verskeie streke en afsetkanale te versamel en kan dus meer verteenwoordigende inligting verskaf as streeksgebonde markte met meestal informele afset.



Gedurende 2020 is vir die eerste keer meer tafelaartappels buite die VPM’e verkoop as deur markte self. Wanneer na die skerp opwaartse tendens van direkte bemarking gekyk word, wil dit nie voorkom asof hierdie tendens sommer kan verander nie.

> ’n Prysvormingsproses vind plaas waar kopers en verkopers op ’n gegewe tydstip op ’n spesifieke prys ooreenkom.

Volledige markinligting is daagliks beskikbaar via Aartappels SA, maar dit is net vir sowat die helfte van die tafelaartappeloes. Daar is dus ’n geleentheid om data van die ander helfte van die oes te integreer met bestaande markdata, ten einde prysinligting te verskaf wat meer verteenwoordigend is van die algehele mark en dus ’n beter basis sal wees vir toekomstige prysvorming.

Pieter was vir meer as 15 jaar verbonde aan Aartappels SA en is tans deeltyds by Nile.ag as markontleder betrokke.
Vir meer inligting, kontak Nile.ag by 060 316 2301 of stuur ’n e-pos aan team@nile.ag.

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Resistance management of moths

By Gustav Venter, technical lead insecticides, Syngenta

Both the potato tuber moth (PTM), *Phthorimaea operculella*, and the tomato leaf miner moth, *Tuta absoluta* (*Tuta*) or *Phthorimaea absoluta*, are micro-lepidopterans from the family Gelechiidae. Both pests have caused significant economic damage to solanaceous potato and tomato crops in large parts of the world.

These pests have been reported to be difficult to control in the potato and tomato growing regions of South Africa. Concerns for possible resistance have increased because producers are still observing substantial damage despite following rigorous spray programmes.

These pests are prone to develop resistance because of their high reproduction capability and multiple overlapping generations. It is important to consider that all insect populations have the potential to harbour individuals that are naturally resistant to any substance, but only becomes problematic when these resistant individuals start to dominate a population of concern. Scientific research must be conducted to confirm resistance.

Whether or not these pests are resistant, producers are facing enormous challenges controlling their numbers and are subsequently suffering major losses because of crop damage. Aside from shifts in sensitivity or possible resistance to currently registered insecticides, other factors may be influencing the levels of efficacy producers are achieving when trying to combat PTM and *Tuta*. These factors and other challenges may also lead to more rapid development of resistance.

High population numbers

Populations may be high in numbers due to many factors including, but not limited to, weather conditions such as temperature and humidity, a build-up of populations by leaving infected plant material lying around, not spraying crops that have been deemed too far gone, and not removing weeds that may act as alternative hosts. These factors may lead to a farm inadvertently building up the pest population for itself and its neighbours.

Insect pests are notoriously difficult to control, and an insecticide's control is substantial if it can control around 80% of a population. Pests such as PTM and *Tuta* can rapidly go through multiple generations and lay large amounts of eggs to beat the odds. For example, if an area has 100 000 individuals and we achieve 80% control, we still have roughly 20 000 individuals who are able to quickly reproduce and build up numbers fast.

Ineffective application

A major issue in chemical pest control is application quality. This can start in the spray tank if the mixture contains too many products (that may not

The potato tuber moth can rapidly go through multiple generations and can quickly reproduce. (Image: Central Science Laboratory, Harpenden, British Crown, Bugwood.org)

Tuta is known to affect potato and tomato crops worldwide and, like potato tuber moth, is difficult to control. (Image: Marja J van der Straten, NPPO, the Netherlands)

ideally partner), if dirty water is used, if the products are not mixed in the right order, or even if the pH is not optimised for the products in the tank.

Before the products even reach the plant, there can be blocked or dirty nozzles that decrease spray deposition and penetration. Lastly, incorrectly calibrated sprayers may lead to insufficient spray deposition or runoff.

Incorrect product use

All insecticides are not equally made, and each has its strengths and weaknesses. Some products, for example, are contact only and others can be translaminar (moving from one side of the leaf to the other) or systemic (moving up or down or in both directions in the entire plant). Other chemicals effectively control eggs, and some may only kill larvae of a certain size. Some insecticides do not affect the pest it makes initial contact with but will only affect the next generation.

Product attributes should be clearly understood before they can be used effectively. Products that are routinely used as a drip or drench application can lead to the rapid development of resistance.

Over-reliance on MoA IRAC group

Insecticides are grouped into modes of action (MoA) and classified into IRAC groups. For example, a well-known contact insecticide group, pyrethroids, are classified as Group 3A and works by modulating sodium channels in the target. The MoA for this group indicates that it works on nerve and muscle functions *(irac-online.org/mode-of-action/classification-online)*.

Major problems may arise when a single group of insecticides is applied week after week without alternating the IRAC group. A common mistake is to use different products (of registered trade names) from the same group, thinking that the IRAC group is being alternated in a spray programme. Using the same group multiple times on a single generation can lead to a quicker buildup of resistance in that group (all products) because surviving individuals reproduce offspring that have a higher likelihood of having natural resistance.

Contributing to this issue is the lack of an abundance of registered IRAC groups to control PTM and *Tuta*.

The perfect storm

Unfortunately, all these factors play a major role in efficacy and can drastically lower the working of a product before we even consider resistance. Even more concerning is that these practices can lead to the development of resistance because it exposes surviving individuals to sublethal dosages of the active ingredients, a perfect pathway to resistance.

There are several ways to delay insecticide resistance:

- Do not exclusively rely on insecticides. Rather make use of an integrated approach by monitoring populations and by using cultural and biological methods to reduce population pressure.
- Do not exclusively use products from a single IRAC group. Alternate with alternative groups and apply tank mixes when applicable.
- Follow label instructions and apply the correct product for the intended outcome.

Insecticide resistance management

Follow basic integrated pest management (IPM) practices:

- Plant clean seedlings.
- Maintain host-free periods to reduce population build-up.
- If possible, use physical exclusion such as netting with double-door exclusion.
- Solarise or cultivate soils to kill pupae.
- For PTM, ensure crack formation is minimised to reduce access to tubers.
- Rotate plantings with crops that are not hosts.
- Monitor pest populations.
- Control weeds that act as alternative hosts.
- Use pheromones to monitor, mass trap and disrupt mating.
- Manage natural enemy populations.
- Applying these strategies across a large production area will ensure better results (management practices, spraying the same IRAC group in the same week and alternating according to IRAC guidelines).
- Understand the insecticide and use it at the correct life stage for specific pests.
- Use clean water and correct the pH with the required buffer.
- Add the products to the spray tank in the recommended order.
- Calibrate and maintain all equipment.
- Ensure correct application penetration and deposition with minimal runoff.
- Apply these strategies across a production region to ensure effectiveness.

Table 1: Number of products registered for each crop and pest.

Crop	Potatoes		Tomatoes	
Target	Tomato leaf miner moth	Potato tuber moth	Tomato leaf miner moth	Potato tuber moth
Products	7	30	11	6
IRAC groups	4	12	8	4

Using the window application method:

- Expose a single generation to a single mode of action group as far as possible to avoid successive exposure and resistance selection.
- Spray windows should be calibrated to a pest's life cycle and should be around 30 days for *Tuta* and PTM.
- Multiple applications within a window are acceptable if the combined residual activity does not exceed the window period (follow label guidelines for the maximum number of applications).
- Allow enough time to pass before the same IRAC group is applied (60 days in most cases) and adhere to local MRL and PHI guidelines.
- Keep other pests in mind that will also be affected by applied modes of action as the window method is applied on a crop basis and not on a pest basis.
- Rotate IRAC group modes of action.
- Follow up with alternate modes of action by using products from a completely different IRAC group and not just a product with a different trade name.
- Maintain cultural practices such as the removal of old plant material that may increase population numbers throughout.
- Remove tomatoes that are no longer producing fruit and are not being sprayed.
- Bury or burn plant material that can harbour pests.
- An example of the window method for *Tuta* can be found at *irac-online.org/pests/tuta-absoluta*.

In conclusion, these pests are notoriously difficult to control, and, understandably, we want a quick and simple solution to manage them. Applying alternative methods of control and strategising spray programmes might be written off as time-consuming and ineffective.

Unfortunately, if we do not follow every single step to reduce population numbers and subsequently reduce or delay resistance, we will only exacerbate the problem and reduce the quality of the few products we have available. Try to keep in mind that every single percentage of efficacy we can gain by following these strategies could lead to hundreds or thousands of fewer pests on our crops.

We should aim to work together in production regions, strategise, execute, measure and thus improve our strategy weekly and consequently annually.

For more information and references, contact the author at Gustav.venter@syngenta.com or visit *www.irac-online.org*.

Resolve potato leafminer conflict with CONFLICT GRANULE

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A water-dispersible granular translaminar insecticide with stomach action to control potato leafminer in potatoes.

FEATURES

- **CONFLICT GRANULE** is a IRAC group code 6 insecticide.
- **CONFLICT GRANULE** is effective against Lepidoptera larvae resistant to organophosphates, pyrethroids and insect growth regulators.
- **CONFLICT GRANULE** is translaminar and rapidly absorbed into the plant.
- After ingestion, larvae stop feeding and die within four days.
- **CONFLICT GRANULE** has a short withholding period.
- **CONFLICT GRANULE** comes in small packaging.
- **CONFLICT GRANULE** has less to no dust, making it safe to handle and clean chemical spills.

DOS AND DON'TS

- Commence application as soon as you notice the first signs of the pest.
- Apply as a high-volume, full-cover spray in 500–1000ℓ of water per hectare.
- Use the higher rate under more severe pest pressure.
- Follow-up applications can take place at 7-day intervals.
- Do not use **CONFLICT GRANULE** when bees are actively foraging.
- Do not apply more than three times per growing season.
- Use a drift retardant such as **INTERLOCK** to prevent drift.

villa

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Registration details: CONFLICT GRANULE: Active ingredient: emamectin benzoate (avermectin) 200g/kg, Reg. No L 11195, Act No. 36 of 1947. Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD. Co. Reg. No. 1983/008184/07, PO Box 801, Kempton Park, 1620. Tel. (011) 396 2233

INTERLOCK: Active ingredient: vegetable oils, polyoxy ethylene fatty acid ester 880g/ℓ. Reg. No. L 10254, Act No. 36 of 1947, Registration holder: WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD. Co. Reg. No.2015/312008/07, PO Box 10413, Aston Manor, 1630. Tel. (011) 396 2233

Products. Insights. Expertise.

The answer to the potato leaf miner crisis

Liriomyza spp., more commonly known as potato leaf miner, is increasingly becoming a problem with some areas having recorded yield losses of up to 70%.

With many insecticides not as effective against potato leaf miner as they were in the past, and some of the older, effective products becoming unavailable in future due to loss of active ingredients, an effective insecticide to control this pest is necessary.

Control the insect and the eggs

Villa's CONFLICT GRANULE is registered to control potato leaf miner. The active ingredient in the product, emamectin benzoate, is a well-known insecticide in the row crop industry, especially for its effects – both ovicidal and larvicidal – on the *Lepidoptera* species. It doesn't only kill the eggs, but it prevents *Lepidoptera* from feeding within hours of ingestion, leading to paralysis and death of the larvae within two to four days.

It has the highest concentration (200 g/kg) of active ingredient on the market and it is a water-dispersible granule (WDG), which leads to CONFLICT GRANULE having many advantages. CONFLICT GRANULE requires less transport for the active ingredient and takes less storage space as it is packed in bags and not drums.

Furthermore, the product dissolves quickly and is non-flammable, making it safer to store and creating little to no dust during mixing (WDG and not WP). It is also less aggressive than emulsifiable concentrate formulations and is more user-friendly.

Safe and efficient

CONFLICT GRANULE is a non-sytemic, translaminar insecticide. It provides residual activity against foliage-feeding pests. It is, therefore, safer for a wide range of beneficial insects and has no potential for bioaccumulation. CONFLICT GRANULE is the answer to the potato leaf miner crisis.

> It doesn't only kill the eggs, but it prevents *Lepidoptera* from feeding within hours of ingestion, leading to paralysis and death of the larvae within two to four days.

All-round leaf miner defence

CONFLICT GRANULE is perfect for an integrated pest management strategy, especially against *Lepidoptera* larvae resistant to organophosphate, pyrethroids and insect growth regulators. With a rate of 60 to 96 g/ha, CONFLICT GRANULE is recommended with CHARGE, a non-ionic adjuvant with spreading and penetrating properties and INTERLOCK, an adjuvant that improves canopy penetration and deposition.

Usage and application

With a recommended three applications at seven-day intervals and a short withholding period of one day between the last application and harvest, CONFLICT GRANULE is the perfect insecticide for late-season applications when it comes to the unwanted potato leaf miner.

In addition to CONFLICT GRANULE'S registration on potatoes, it can also be used on apples, pears, citrus and tree nuts, making it the perfect product to keep in your store for the control of *Lepidoptera* species.

Always consult the CONFLICT GRANULE product label before any application. Alternatively, speak to your chemical advisor or a Villa Crop marketing advisor in your area.

CHARGE active ingredient: polyether-polymethyl siloxane-copolymer 1000 g/l. Reg. No. L 9100, *Act No. 36 of 1947* (warning). Registration holder: VILLA CROP PROTECTION (PTY) LTD. Co. Reg. No. 1992/002474/07

INTERLOCK active ingredient: vegetable oils, polyoxy ethylene fatty acid ester 880 g/l. L 10254, *Act No. 36 of 1947*. Registration holder: WINFIELD SOLUTIONS REGISTRATION HOLDINGS (PTY) LTD. Co. Reg. No.2015/312008/07

CONFLICT GRANULE active ingredient: emamectin benzoate (avermectin) 200 g/kg. L11195, *Act 36 of 1947*, (harmful). Registration holder: Universal Crop Protection (Pty) Ltd. (Reg. no. 1983/008184/07).

For more information, contact Villa Crop at 011 396 2233 or *www.villacrop.co.za*.

KwaZulu-Natal dryland cultivar trial conducted at Cedara over three growing seasons

By James Arathoon and Taslos Magubane, KwaZulu-Natal Department of Agriculture and Rural Development

The increasing use of irrigation for the production of potatoes and other crops is a global phenomenon. This trend is expected to continue due to climate change and the ever-increasing demand to produce more food from limited arable land to feed the growing world population. Consequently, the pressure on water sources will increase.

Currently, 83% of potato production fields in South Africa are irrigated. However, not all growers have access to irrigation water. Some areas do not receive sufficient rainfall for good yields to be obtained, and in some growing seasons the rainfall received may be below the quantities required for yields to be economically viable. Therefore, the identification of high-yielding cultivars with good water use efficiency is necessary.

Dryland conditions evaluated

A research project was implemented at the Cedara Research Station (S29° 32' 15 33, E30° 16' 09 19), which is situated in the moist mist-belt zone of the KwaZulu-Natal Midlands (900 to 1 400 m above sea level with 830 to 1 140 mm annual rainfall). The objective was to evaluate the performance of potato cultivars grown under dryland conditions. This report contains the results obtained from three growing seasons (2019/20 to 2021/22).

The trials were planted on on a Hutton soil (46 to 50% clay) on 19 September 2019, 17 September 2020 and 14 September 2021 at a seeding rate of 37 037 tubers/ha in rows spaced 0.9 m apart. Fertiliser was applied according to Fertrec recommendations for a 70 t/ha yield based on the results of soil analyses. Six fungicides and five insecticides were applied weekly in a rotation from ridging until 90% senescence.

The tubers were harvested two to three weeks after 100% senescence, then graded according to size (Large >250 g; Large medium 170 to 250 g; Medium 100 to 170 g; Small 50 to 100 g; Baby 5 to 50 g) and weighed to determine yield. The data was subjected to the analysis of variance (ANOVA) procedure in the statistical package, Genstat (22nd edition). Differences between treatment means were measured using Fisher's

Figure 1: Location of the Cedara Research Station potato cultivar evaluation trial.

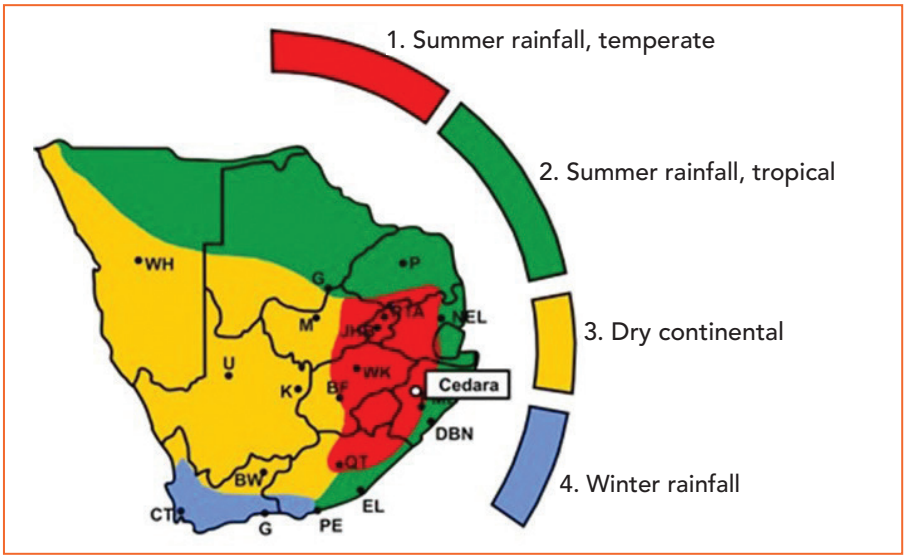


Figure 2: Monthly rainfall in the three growing seasons and the long-term monthly means at Cedara. (Long-term data: 93 years' data: 1923 to 2015, ARC-ISCW, Cedara)

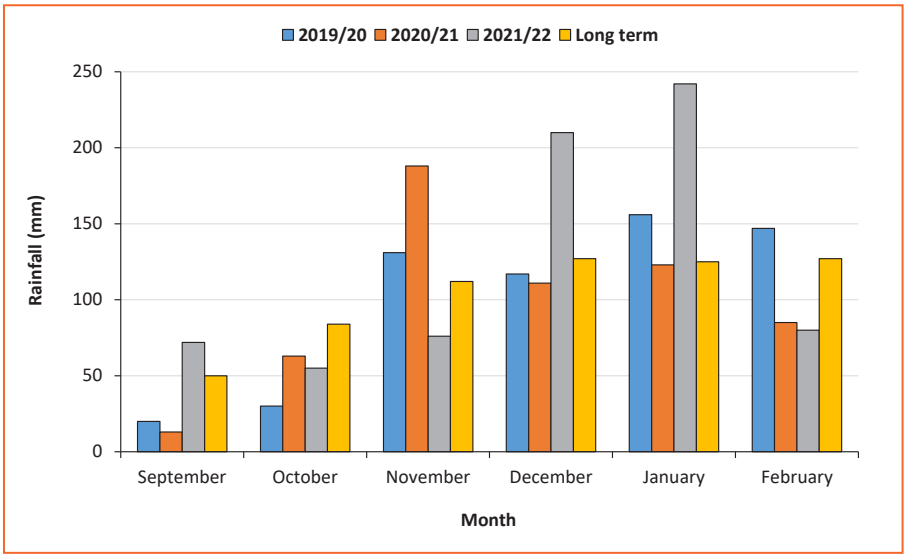


Figure 3: Monthly mean maximum and minimum temperatures in the three growing seasons and the long-term monthly means. (Long-term data: 93 years' data: 1923 to 2015, ARC-ISCW, Cedara).

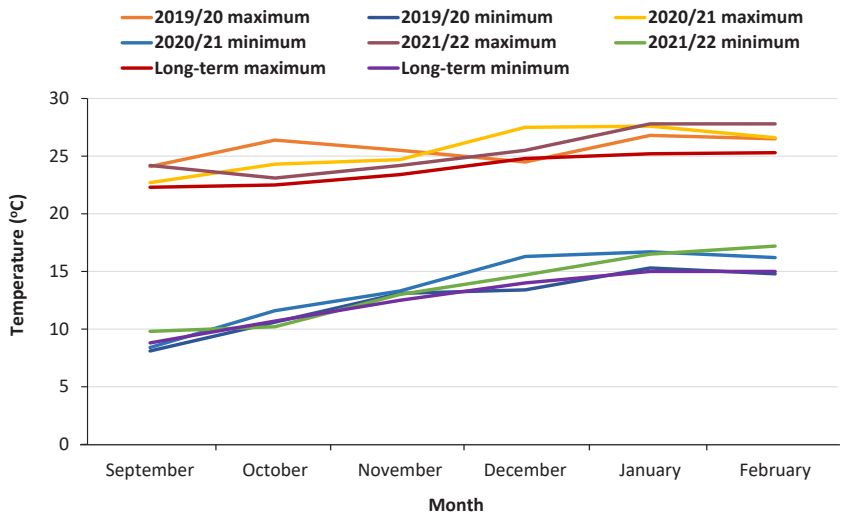
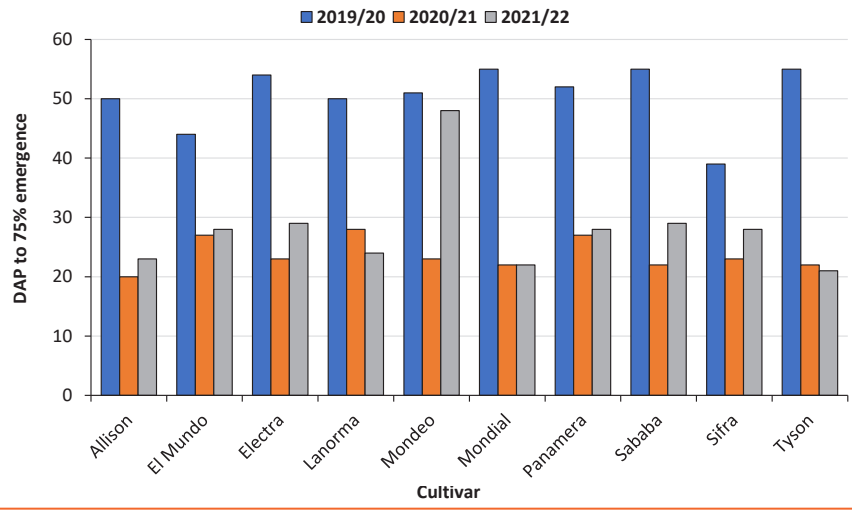


Table 1: Seed quality rating* at planting of the ten cultivars in the three growing seasons

Cultivar	2019/20	2020/21	2021/22	Mean
Allison	3.0	3.0	1.0	2.3
El Mundo	3.0	2.0	1.0	2.0
Electra	3.0	2.0	1.0	2.0
Lanorma	3.0	2.5	2.0	2.5
Mondeo	2.5	2.0	1.0	1.8
Mondial	3.0	3.0	1.0	2.3
Panamera	3.0	2.5	1.0	2.2
Sababa	3.0	3.0	1.0	2.3
Sifra	4.0	3.0	1.0	2.7
Tyson	3.0	3.0	2.0	2.7
Mean	3.1	2.6	1.2	2.3

*1 = Fresh seed; 3 = Well-sprouted; 5 = Over-sprouted.

Figure 4: Number of days after planting (DAP) to 75% emergence of the ten cultivars in the three growing seasons.



protected least significant difference (LSD) procedure at a 5% confidence level (P=0.05).

The importance of seed quality

The resilience of potato tubers to remain viable when very dry conditions are experienced for a long period after planting was evident in the 2019/20 growing season. Very little rain fell from planting until the last week in October and the mean maximum temperatures for September and October were considerably warmer than the long-term means (*Figures 2* and *3*).

This resulted in the cultivars taking a mean of 51 days after planting (DAP) to reach 75% emergence (*Figure 4*). However, Sifra took 39 days to emerge, but the plant stand was significantly lower (*Figure 5*), which resulted in a significantly lower yield compared to the other cultivars (*Figure 8*). The tubers of Sifra were slightly 'over-sprouted' at planting, whereas the tubers of the other cultivars were 'well-sprouted' (*Table 1*).

This indicates the importance of seed quality at planting, especially under dryland conditions. Despite the delayed emergence, the mean plant population was not significantly different to the means of the other two growing seasons.

Due to sufficient rain after planting in the 2020/21 and 2021/22 growing seasons, the cultivars took a mean of 24 and 28 DAP to reach 75% emergence, respectively (*Figure 4*). As the seed was fresher (less sprouted) in the 2021/22 growing season, 75% emergence occurred slightly later. In addition, the seedlings of Mondeo took 48 days to reach 75% emergence. The plant stand of Mondeo, together with that of Sababa, was significantly lower than the other cultivars (*Figure 5*). In the 2020/21 growing season, Lanorma had a significantly lower plant stand than the other cultivars. Overall, plant population was significantly positively correlated to yield.

Haulms per plant

A significant interaction was measured between the cultivars and seasons for

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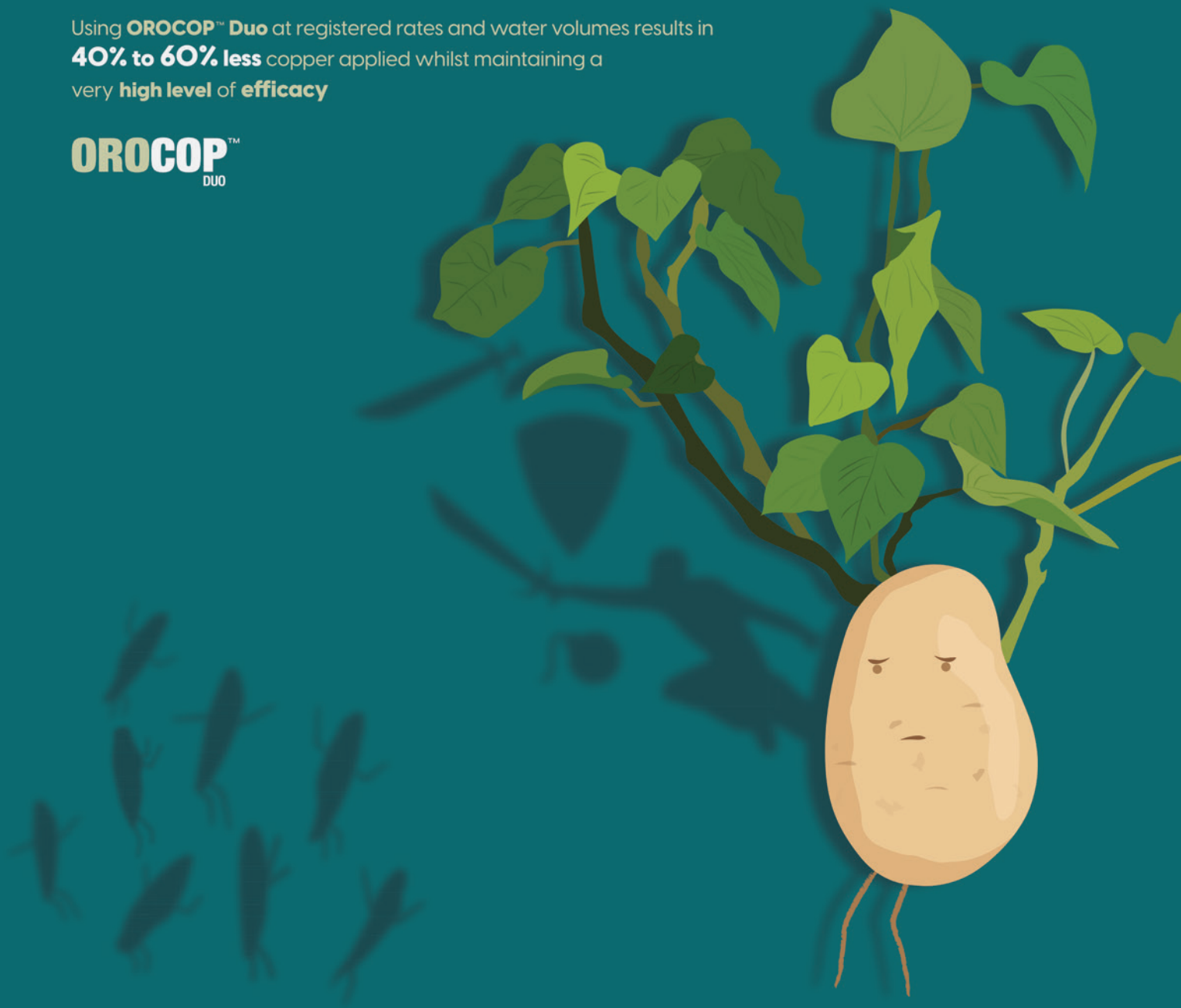

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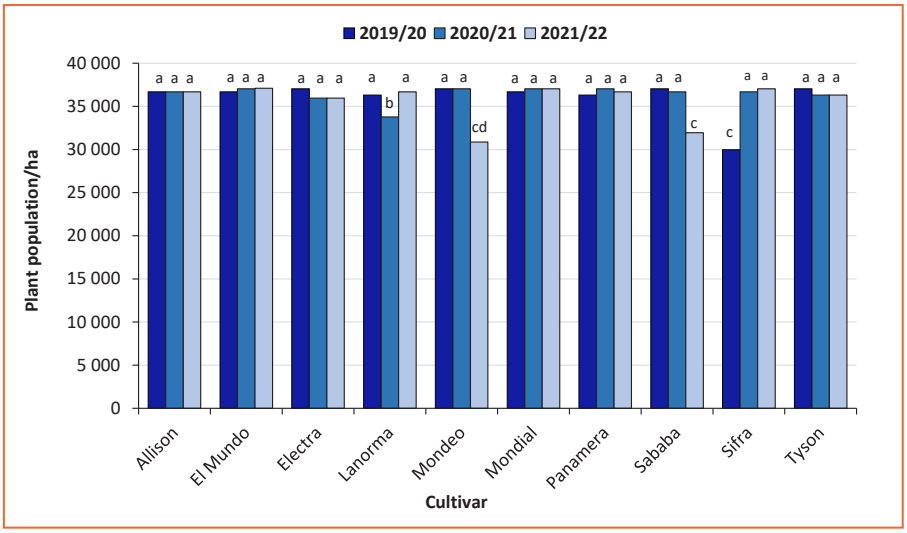
Figure 5: Plant population/ha of the ten cultivars in the three growing seasons.



Values with the same alphabetical letter are not significantly different.

Figure 6: Number of haulms/plant of the ten cultivars in the three growing seasons.

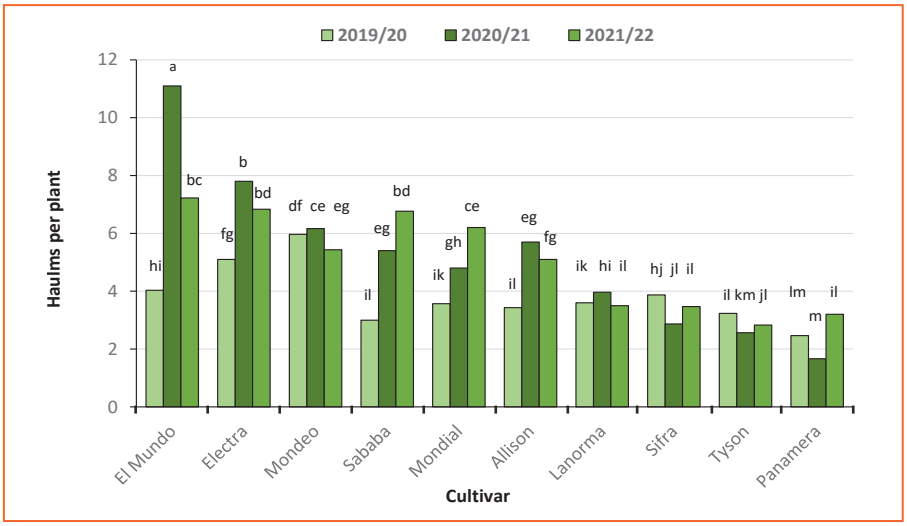
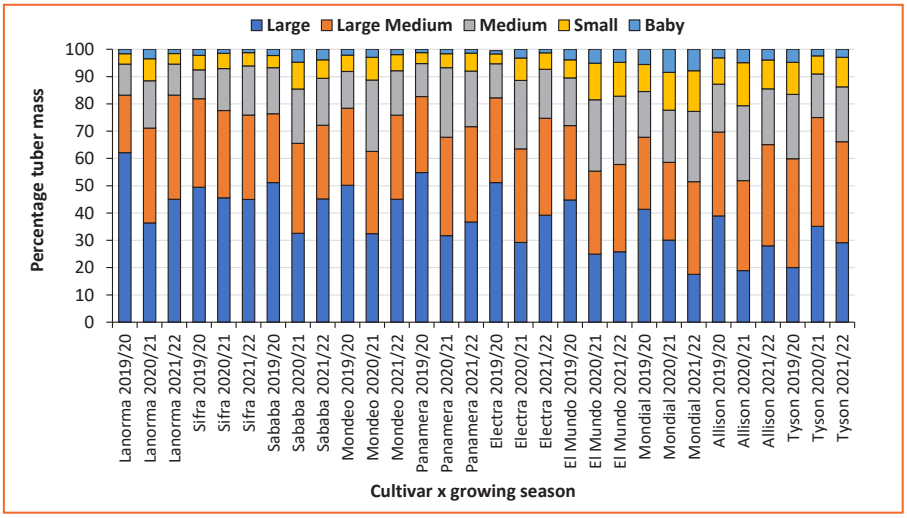


Figure 7: Percentage of tuber mass at the five grades for the ten cultivars in the three growing seasons.



the number of haulms produced per plant (*Figure 6*). The prolonged lack of rain after planting in the 2019/20 growing season reduced the energy levels in the tubers. This resulted in a significantly lower mean number of haulms per plant compared to the other two growing seasons.

While significant differences in the number of haulms per plant were measured between the three growing seasons for most cultivars, the numbers produced by Lanorma, Mondeo, Sifra and Tyson were not significantly different. El Mundo produced a significantly higher mean number of haulms per plant than the other cultivars. Panamera produced the lowest mean number of haulms per plant. Overall, the number of haulms per plant was significantly positively correlated to yield.

Table 2 indicates the number of days from planting to harvest of the cultivars in the 2019/20 growing season. Harvesting occurred approximately two weeks after 100% senescence. The number of days to 90% senescence was not recorded in the 2019/20 growing season but was in the 2020/21 and 2021/22 growing seasons. El Mundo and Panamera had the shortest and longest growth periods, respectively, in both seasons. The mean number of days to 90% senescence was significantly less in the 2021/22 growing season compared to the 2020/21 growing season (122 days versus 125 days).

Tuber size

Despite the delayed emergence of the seedlings in the 2019/20 growing season, the adequate rainfall received after emergence contributed to a significantly higher mean percentage mass of Large tubers compared to the latter two growing seasons (*Figure 7*).

This result could also have been due to fewer tubers produced per plant and therefore less competition, which allowed the tubers to enlarge. A significant interaction was measured for the percentage mass of Large tubers between the growing seasons and cultivars. However, no significant differences were measured for Sifra

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between the growing seasons. The highest mean percentage mass of Large tubers was produced by Lanorma, but the value was not significantly different to those of Sifra, Sababa and Mondeo.

No significant interaction was measured between the seasons and cultivars for the percentage mass of Large Medium tubers. A significantly lower mean percentage of Large Medium tubers was measured in the 2019/20 growing season. Tyson had the highest mean percentage of Large Medium tubers, but the value was not significantly different to those of Allison and Electra. Overall, the mass percentages of all grades were not significantly correlated to yield.

Good yields produced

The rainfall received from tuber initiation to the end of bulking in the three growing seasons was sufficient to ensure that good yields were produced (*Figure 8*). Due to the slow emergence of the cultivars and the fewer haulms/plant in the 2019/20 growing season, the mean yield (49.42 t/ha) was significantly lower than in the 2020/21 growing season (55.10 t/ha), during which the rainfall was more evenly distributed.

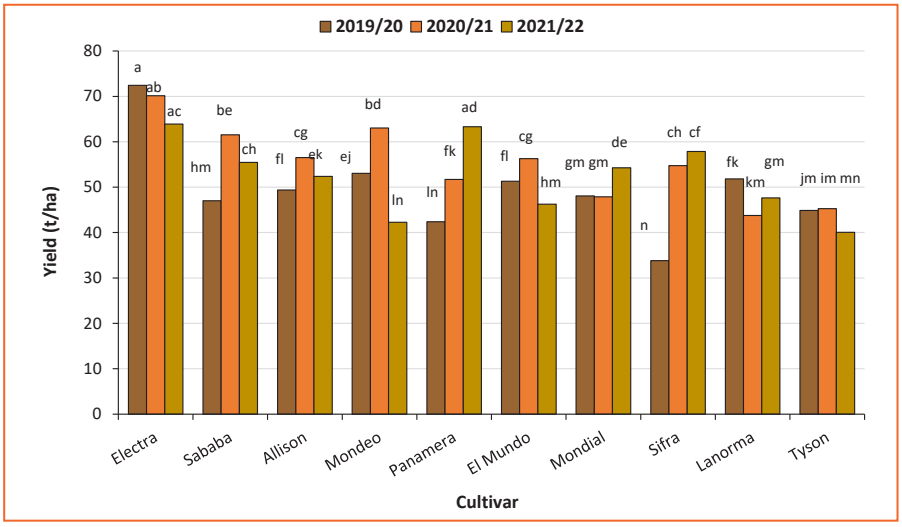
A dryland potato cultivar evaluation trial at the Cedara Research Station.

Although a significant interaction was measured for yield between the growing seasons and the cultivars, no significant differences were measured for Allison, Electra, Lanorma and Tyson, indicating that these cultivars had greater yield stability despite the climatic variations between the growing seasons. Electra produced the highest yields in all three growing seasons. Tyson produced the lowest mean yield.

Table 2: Number of days after planting to harvest of the ten cultivars in the 2019/20 growing season and to 90% senescence in the 2020/21 and 2021/22 growing seasons.

Cultivar	2019/20	2020/21	2021/22	Mean
	Harvest	90% senescence		
	(DAP)	(DAP)		
Allison	167	124.3 ef	116.3 hi	**120.3**
El Mundo	160	112.0 ij	107.5 j	**109.7**
Electra	167	129.3 ce	119.0 gh	**124.2**
Lanorma	174	127.0 de	128.0 de	**127.5**
Mondeo	167	134.0 ac	132.0 bd	**133.0**
Mondial	174	131.7 bd	137.3 a	**134.5**
Panamera	167	134.0 ac	136.7 ab	**135.3**
Sababa	167	121.7 fg	116.0 hi	**118.8**
Sifra	154	119.0 gh	119.3 gh	**119.2**
Tyson	154	114.3 hi	107.7 j	**111.0**
Mean	**165**	**124.7**	**122.0**	**123.4**
LSD (P<0.05) season			1.641	
LSD (P<0.05) cultivar			3.669	
LSD (P<0.05) season x cultivar			5.188	
CV%			2.5	

Figure 8: Yield of the ten cultivars in the three growing seasons.



Conclusions and recommendations

When seed potato tubers lie dormant in very dry soil for an extended period after planting, the seeds must be of good quality to ensure that they remain viable.

Due to high rainfall in the KwaZulu-Natal Midlands, good yields (>50 t/ha) are obtainable under dryland conditions with most cultivars. However, the performance of the ten cultivars evaluated may have varied considerably compared to the results obtained if they were grown under much drier conditions.

Electra produced the highest yields in all three growing seasons and therefore it is recommended for growing under dryland conditions in the KwaZulu-Natal Midlands.

For more information, contact James Arathoon at james.arathoon@kzndard.gov.za or visit *www.kzndard.gov.za.*

The Globally Harmonised System in context in the potato industry

By Dr Gerhard H Verdoorn, CropLife South Africa

The Food and Agricultural Organization (FAO) of the United Nations has been pushing for unification (harmonisation) of the classification and labelling of chemicals so that all chemicals have global hazard classifications matched by labels that leave no room for the 'ifs' and 'buts' regarding chemicals.

That means if a pesticide, for example, is classified as acutely toxic in France and has a corresponding label, that pesticide must have the same hazard classification and corresponding label in South Africa. Over the past 40 years or so it has been the prerogative of nations to have their own hazard classification and corresponding labels of which the classification was loosely based on the World Health Organization's (WHO) human toxicity classification of chemicals.

The latter resulted in a plethora of hazard classifications and labels that are extremely confusing. An example of this in South Africa is paraquat of which some product labels indicate the hazard classification as TOXIC while others have HARMFUL as their hazard classification.

The Department of Employment and Labour (DEL) promulgated *Regulation R280 of 29 March 2021 for Hazardous Chemical Agents* with an amended *Regulation R682 of 29 April 2022* in time for the *Occupational Health and Safety Act, 1993 (Act 85 of 1993)* to compel all manufacturers of hazardous chemicals to re-classify and label their products according to the regulations which encompass all the elements of the Globally Harmonised System (GHS) requirements. The final deadline for compliance with the regulation is 30 September 2023. That means that all pesticides going to market from 1 October 2023 must be re-classified and labelled with the new label formats and safety data sheets (SDSs) as dictated by the regulations. Potato producers must avail themselves of the new label formats because they are vastly different from what was used up until now for pesticide labels.

GHS versus WHO classification

The WHO classification system is based on human toxicity (hazards) and does not include hazards for the environment or anything else. It also mostly focusses on the active ingredient's human toxicological profile, although some pesticide producers have human toxicological profiles for their pesticides based on their formulation toxicity.

The GHS hazard classification considers all ingredients, including the active ingredients, solvents, emulsifying agents, stabilisers, anti-foaming agents, phase transfer reagents, etc. in the hazard classification for human health, environmental health and the physical environment. For example, some substances such as glyphosate may carry a hazard warning for metal surfaces and others may carry a hazard statement for flammability.

All of the toxicological and physical chemistry data are included in calculating the hazard level of the formulated pesticide products using a complex equation (not for the faint hearted). Once that calculation is completed, the originator compiles a new safety data sheet (SDS) and after that, drafts the new GHS format label.

Job done on their part, right? No. They have an obligation in terms of the regulations mentioned earlier to inform the user (potato producer) of the hazards of the pesticides, meaning to explain what the new label means, what the hazard symbols mean, explain what the precautionary statements mean and inform the producer regarding the end-of-life cycle management of the packaging and any leftover materials. That task is normally devolved to the crop adviser who sells the pesticides to the potato grower.

GHS hazard symbols and statements

The most visual part of the new GHS format label is the set of hazard symbols accompanied by so-called signal words (words that describe the hazard of the pesticide formulation).

Take note that these symbols and signal words address only the hazards of pesticides, not the risks. Risk arises when a person handles or uses the pesticide and, while hazard is an intrinsic characteristic of a pesticide that cannot be mitigated unless the formulation is changed significantly, risk can be easily mitigated if the correct precautionary measures are deployed. The new GHS format labels must include precautionary statements such as the type of protective clothing that must be worn, keeping products under lock and key, preventing contamination of water bodies, etc.

WHO colour bands replaced

Many people have noticed the absence of well-known colour bands and pictograms on the new GHS format labels. In reality, the colour bands have been replaced by the hazard signals that are universal in nature because they are the same for a product all over the world.

The pictograms have been replaced by the precautionary statements. It therefore requires all potato growers to take a fresh look at pesticide labels to acquaint themselves with the hazards and precautions in order to apply the pesticides safely.

Regulation add-ons

The DEL also built worker safety and risk mitigation into the regulations. Gone are the days of not issuing spray operators and pesticide store managers with personal protective equipment and clothing. Pesticides are intrinsically hazardous and may cause harm to the person if the precautions are not adhered to. If the label of very toxic pesticide issues a precaution that the person handling or applying such a product must wear a respirator, then that is compulsory by law.

It means the employer (potato producer) must issue the employee (spray operator) with a respirator mask and the spray operator shall wear it when applying the pesticide. In short, there are thus two sides to the coin, one for the producer and one for the spray operator.

Should producers be concerned?

In truth, the hazards of pesticides do not change; the GHS simply makes it much clearer and broader than what we were used to. Now we know that some products may cause damage to an unborn child, for example, or may cause severe respiratory tract irritation. It is no reason to shy away from pesticides. All we need to do is to really start implementing the precautionary measures when working with pesticides.

If a product such as methamidophos is used in potato production, it requires quite a solid set of personal protective equipment to be worn by workers who handle and apply the product. If all the precautions are taken seriously, the risk is mitigated down to virtually nil. But allowing farm workers to spray methamidophos without full body cover and a respirator is simply putting the person at huge risk.

Information on GHS labels

CropLife SA's Agri-Intel database will start displaying GHS format labels probably during the fourth quarter of 2023, while many of the registration holders already supply their products with GHS format labels. The website of these registration holders also displays the GHS format labels and SDSs.

Some registration holders currently sell the products with the older WHO format labels and the new GHS format labels. Your CropLife SA accredited crop adviser should be able to provide guidance on the interpretation of the new GHS format label.

Pesticide safety is vital

CropLife SA calls on all potato producers to acquaint themselves with the new GHS format labels. Request the crop adviser from whom you buy your inputs to offer training to yourself and your farm workers on responsible handling and use, including interpretation of the new GHS format hazard symbols, hazard signal words and precautionary statements. They have a duty to do it in terms of the regulations and, as we say at CropLife SA: It is the right thing to do.

Figure 1: Hazard symbols with their corresponding signal words.

For more information, contact Dr Gerhard Verdoorn at 082 446 8946 or gerhard@croplife.co.za.

Limpopo-kultivarproef onder besproeiing op Tom Burke in 2022

Deur Chantel du Raan, Potatoes SA

Die Limpopo-produksie-area produseer sowat 22% (2021-oesjaar) van die totale aartappelproduksie, wat dit die hoogste in Suid-Afrika maak. Hierdie streek plant vir die gebruik van tafel- en verwerkingsaartappels onder besproeiing.

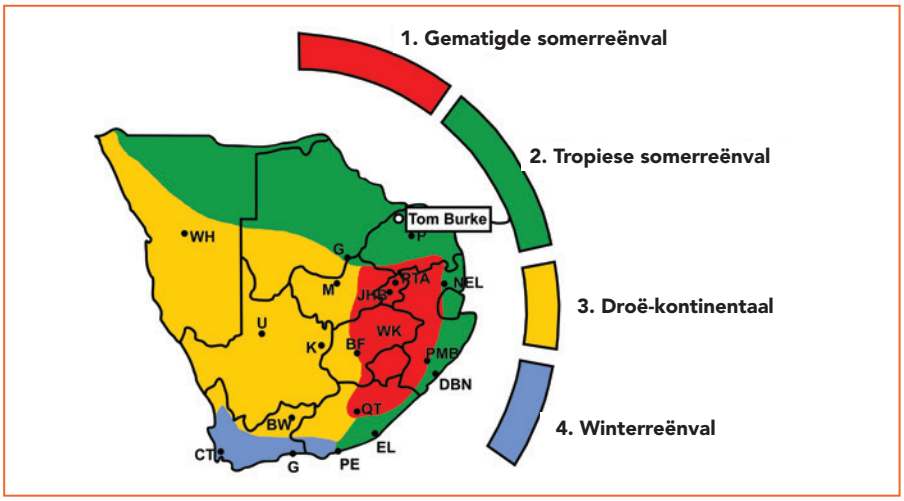
Proewe is uitgevoer op Tom Burke, wat feitlik op die grens van Botswana geleë is. Tom Burke is 'n tropiese somerreënvalgebied met 'n jaarlikse gemiddelde reënval van 371 mm/jaar (*Figuur 1*). Baie warm somers kom voor, terwyl die winters weer koud is met swartryp wat dikwels in Junie en Julie voorkom.

Die proef is in 'n ewekansige blokontwerp uitgevoer in sandleemgrond met drie herhalings. Verdere tegniese inligting rakende die proefperseel en uitleg is in *Tabel 1* opgesom.

Verteenwoordigende grondmonsters is voor plant geneem en ontleed om die grondvoedingstatus van die proefperseel te bepaal. Die resultate van die grondontleding vir hierdie proef word in *Tabel 2* aangedui.

Dit is belangrik om daarop te let dat groeitydperke die oesopbrengs van kultivars kan beïnvloed. Groeiperiode word gedefinieer as die aantal dae van opkoms tot natuurlike loofafsterwe, afhangend van die seisoen. Die presiese tydsberekening van die vier groeifases hang af van die omgewing en die bestuurspraktyke wat wissel tussen lokaliteite asook

Figuur 1: Ligging van Tom Burke in die Limpopo-produksiegebied.



Tabel 1: Opsomming van tegniese inligting rakende proefperseel en uitleg.

Plaas	**Ratho Boerdery**
Produsent	Jako Nel
Plantdatum	19 Mei 2022
Oesdatum	19 Oktober 2022
Besproeiing/droëland	Besproeiing
Dubbel- of enkelrye	Dubbelrye
Loofafsterwe	Natuurlik
Tussenry-spasiëring	0.75 m
In-ry spasiëring	0.30 m
Proefperseel per eenheid	15 m^2
Plantestand	44 444 plante/ha

Tabel 2: Grondontledingsresultate vir die Tom Burke-kultivarproef voor plant, 2022.

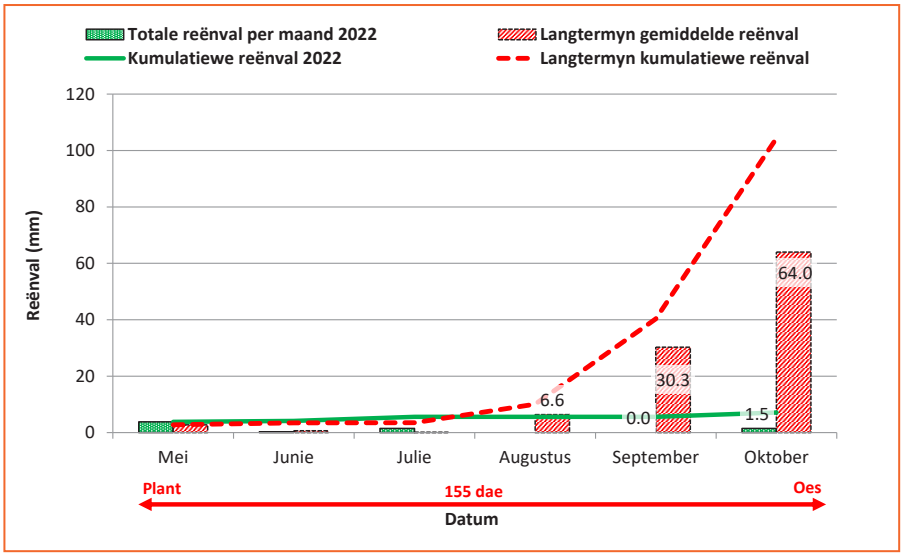
Bruto digtheid (kg/m^{-3})	pH (H_2O)	P-Mehlich	Ammonium-asetaat					% van KUK[1]			
		P	K	Ca	Mg	Na	S	K	Ca	Mg	Na
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	%	%	%	%
1.49	8.21	62	152	616	218	27	2	7.24	57	33	2.18

[1]*KUK = Katioon-uitruilkapasiteit.*

Klei % = 6	Silt (%) = 16	Sand % = 78

	Bemestingsprogram					
	Voedingswaarde					
	N (kg/ha)	P (kg/ha)	K (kg/ha)	Ca (kg/ha)	Mg (kg/ha)	S (kg/ha)
Totaal	**271.9**	**72.8**	**283**	**1 004.1**	**72**	**336.4**

Figuur 2: Reënval gedurende die 2022-groeiseisoen asook die langtermyn gemiddelde reënval.



kultivars, onder andere as gevolg van verskillende groeitydperke. Die kultivars, plantgereedheid van moere, stand (%) en halmtelling van hierdie proef word in *Tabel 3* aangedui.

Seisoenale invloede

Temperatuur, dagliglengte en water is die belangrikste abiotiese faktore wat die groeipatroon, opbrengs en gehalte van aartappels beïnvloed. Om te bepaal wat die aanpassingsvermoë van nuwe kultivars in die Tom Burke-omgewing is, is dit belangrik om hierdie faktore in aanmerking te neem wanneer die prestasie van verskillende kultivars geëvalueer word. Dit is ook belangrik dat die kultivars vir 'n aantal seisoene geëvalueer word, aangesien klimaat van seisoen tot seisoen verskil.

Daaglikse weerdata is verkry vanaf die Hanover-stasie op die proefperseel, terwyl die langtermynweerdata vanaf die LNR se Swartwaterstasie (-22.85186, 28.19898) verkry is. Klein hoeveelhede reënval is regdeur die groeiseisoen aangeteken. In die 2022-groeiseisoen is 7.11mm reën aangeteken, wat laer is in vergelyking met die langtermyn gemiddelde reënval van 104.3mm (*Figuur 2*).

Die maksimum- asook minimum-temperature (*Figuur 3*) vir die 2022-groeiseisoen was deurentyd laer as vorige jare. Tydens Augustus tot Oktober van die groeiseisoen het die maksimumtemperatuur aansienlik gewissel en was dit vir 34 dae tussen 35 en 42°C, en vir 72 dae bo 30°C. Die optimale gemiddelde lugtemperatuur vir knolvulling wissel tussen 14 en 22°C. Wanneer die temperatuur bokant 29°C styg, sal min of selfs geen knolgroei voorkom nie aangesien koolhidrate dan gebruik word vir respirasie. Geen rypskade is gedurende die groeiseisoen ondervind nie.

Effek van hitte-eenhede

Hitte-eenhede is ook 'n belangrike faktor om in ag te neem, aangesien die ontwikkeling van die plant hoofsaaklik gebaseer is op die versameling van hitte-eenhede. Dus word aanvaar dat die plant 'n sekere aantal hitte-eenhede moet versamel om 'n ontwikkelingsfase te voltooi.

Die hitte-eenhede van die 2022-groeiseisoen was effens laer as die langtermyn gemiddelde hitte-eenhede en word in *Figuur 4* aangedui. Aan die einde van die seisoen was die langtermyndata se kumulatiewe hitte-eenhede 30.4% laer as die kumulatiewe hitte-eenhede van hierdie jaar se seisoen.

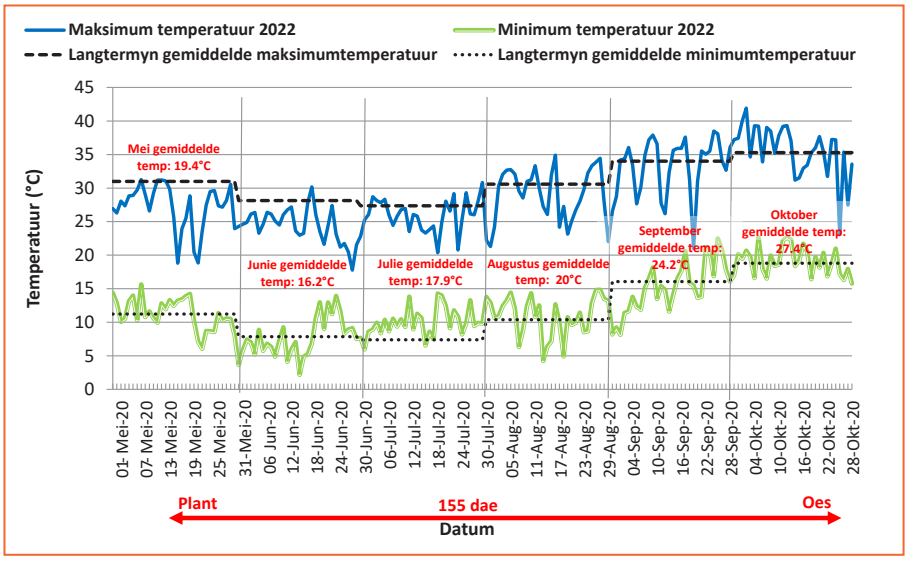
Kultivarprestasie en opbrengs

Die opbrengsdata is statisties verwerk met behulp van die GenStat®-program en die gemiddelde was geskei deur gebruik te maak van die Tukey KBV-toets. Die kultivareffek gedurende die 2022-proewe (*Figuur 5*) was statisties beduidendend ($p<0.05$) ten opsigte van opbrengs, terwyl die koeffisiënt van variasie laag (16%) was. Dit dui daarop dat die proewe goed uitgevoer is en die resultate betroubaar is.

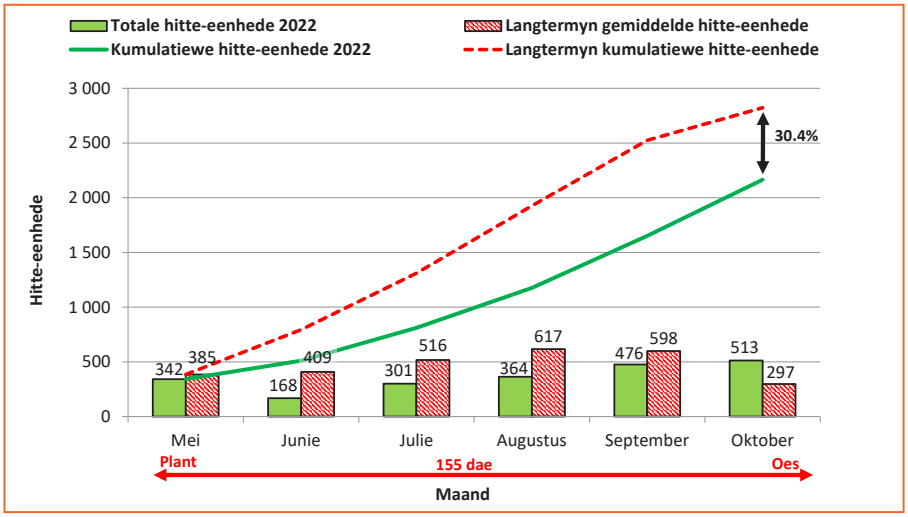
Die gemiddelde opbrengs (77.7 t/ha) vir die 2022-seisoen was laer (27.3 t/ha) teenoor die proefgemiddelde van die vorige drie jaar (50.4 t/ha). Gedurende die 2022-proewe (*Figuur 5*) het die kultivars Foxy, Sound, Valor, Panamera, Mondeo, Sifra en Sababa die hoogste opbrengste gelewer en ook hoër opbrengste as die proefgemiddeld (77.7 t/ha) behaal.

Ten einde die prestasie van die kultivars in terme van opbrengs en kwaliteit te bepaal, is opbrengs, grootteverspreiding en klas gebruik om 'n bemarkingsindeks teen die gemiddelde markpryse vir die betrokke dag te bereken.

Figuur 3: Minimum- en maksimumtemperatuur (°C) gedurende die 2022-groeiseisoen asook langtermyntemperatuur.



Figuur 4: Hitte-eenhede gedurende die 2022-groeiseisoen asook langtermyngemiddeld.



**Totale hitte-eenhede spesifiek bepaal vir aartappels (drumpeltemperatuur = 5°C) as gewas, bereken vanaf uurlikse data.*

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Voordelige mikorisaswamme ontwikkel swamdrade (bekend as hifes) wat klein grondruimtes binnedring waar die wortelvolume normaalweg nie ontwikkel nie. Sodoende word die effektiewe wortelstelsel uitgebrei.

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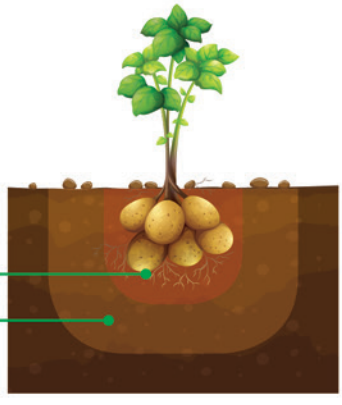
- Dra by tot optimalisering van 'n grondgesondheidstrategie.
- Verbeter toegang tot voedingstowwe en water, asook die opname daarvan.
- Prakties en gebruikersvriendelik om as deel van goeie landboupraktyk aan te wend.
- Verbeter opbrengste.

Om voordeel te trek uit dié moderne deurbraak, gesels vandag nog met jou naaste Philagro-kundige.



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EndoMaxx® (Reg. nr. M200, Wet nr. 36 van 1947), bevat Arbuscular Mycorrhizal Fungi (*Rhizophagus irregularis* (5 625 propagules/g), *Claroideoglomus luteum* (5 625 propagules/g), *Claroideoglomus claroideum* (5 625 propagules/g), *Claroideoglomus etunicatum* (5 625 propagules/g). **EndoMaxx®** is 'n geregistreerde handelsmerk van Mycorrhizal Applications LLC, Grants Pass, OR, VSA.

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PRODUKTE WAT WERK VAN MENSE WAT OMGEE

Tabel 3: Karaktereienskappe rakende groeiperiode, plantgereedheid, stand (%) en halmtellings vir elke kultivar in die 2022 Tom Burke-kultivarproef.

Agente	Kultivar	Groeitydperk (dae)[1]		Plant-gereedheid[2]	Stand (%)	Halms per plant	Halms per ha
GWK	**Connect**	Medium tot lank	(120)	1	100	2.9	128 888
RegenZ	**El Mundo**	Kort tot medium	(90-100)	1	100	3.2	142 221
RSA	**Foxy**	Kort tot medium	(95-100)	4	100	4.7	208 887
GWK	**Lanorma**	Kort	(80-90)	2	100	4.2	186 665
RegenZ	**Mondeo**	Medium	(90-110)	1	100	3	133 332
WEPgrow	**Mondial**	Medium tot lank	(110-115)	4	93.9	3.8	158 585
WEPgrow	**Panamera**	Lank	(120-125)	3	100	3.8	168 887
WEPgrow	**Sababa**	Medium tot lank	(110-115)	3	100	2.6	115 554
WEPgrow	**Sifra**	Kort tot medium	(90-100)	1	96.9	2	86 132
First Potato Dynamics	**Sound**	Medium	(100)	4	90.9	4.8	193 918
GWK	**Tyson**	Kort tot medium	(90-100)	2	96.9	2	86 132
RSA	**Valor**	Medium	(100-110)	2	100	3.4	151 110
RegenZ	**Vicenta**	-	-	1	100	1.4	62 222

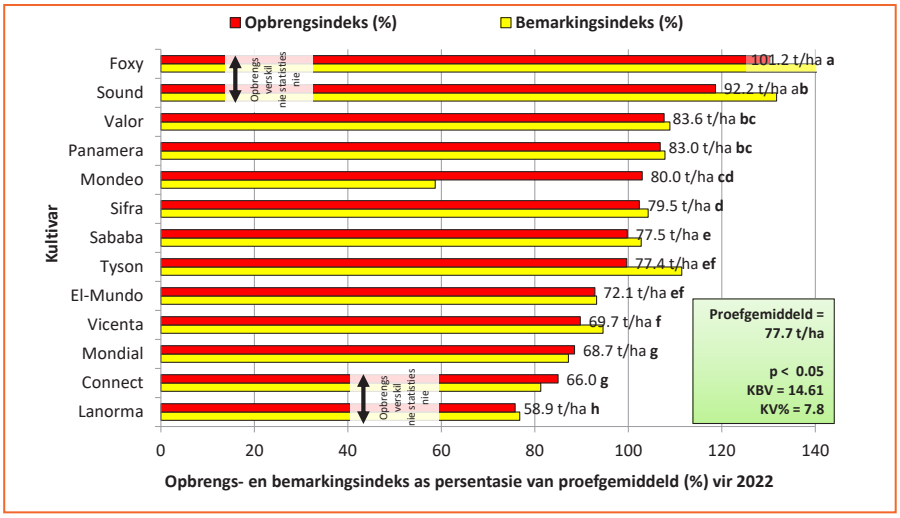
[1]Algemene riglyne en kategorieë (dae vanaf opkoms tot natuurlike loofafsterwe, afhangend van die seisoen): Kort = 70-90 dae; Kort tot medium = 80-100 dae; Medium = 90-110 dae; Medium tot lank = 90-120; Lank = 90-140 dae.
[2]Plantgereedheid van moere: 1 = Vars; 2 = Effens vars; 3 = Plantgereed; 4 = Effens oud; 5 = Oud.

Tabel 4: Hoofredes vir afgradering tydens die 2022 Tom Burke-oes.

Kultivar	Groei krake	Hergroei	Insekskade	Meganiese beskadiging	Misvorming	Motskade	Nerflos	Rhizoctonia	Growwe skil	Sandspleet	Silwerskurf en swartspikkel	Stingelent-verrotting	Vergroening	Vrot
Connect		●				●	●		●		●			
El Mundo			●			●		●						
Foxy						●				●			●	
Lanorma								●			●			
Mondeo			●			●	●				●			
Mondial					●	●		●		●			●	●
Panamera	●						●				●			
Sababa														●
Sifra						●				●	●	●	●	
Sound						●		●		●	●			
Tyson		●		●										
Valor						●					●	●		
Vicenta						●				●	●			

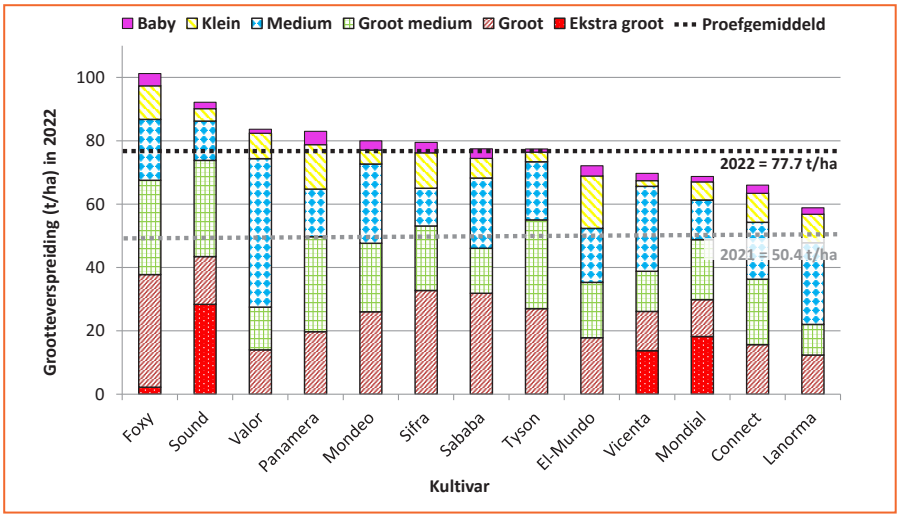
● *<5% insidensie* ● *5 tot 15% insidensie* ● *>15% insidensie*

Figuur 5: Totale opbrengs en bemarkingsindeks per kultivar as 'n persentasie van die proefgemiddeld.

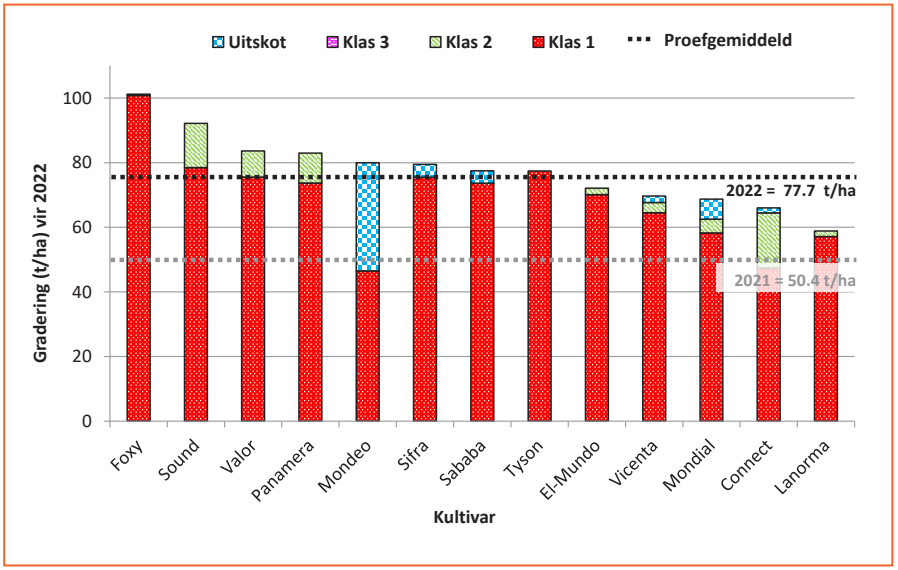


**Waardes gevolg deur dieselfde letter is nie beduidend verskillend van mekaar nie.*

Figuur 6: Groottegroepverspreiding van elke kultivar tydens finale oes.



Figuur 7: Gradering van elke kultivar tydens finale oes.



Die opbrengs vermenigvuldig met die heersende prys wat bepaal word deur die grootteverspreiding en gradering gee die bemarkingsindeks (*Figuur 5*).

Foxy en Sound het die hoogste bemarkingsindeks behaal wat toegeskryf kan word aan 'n kombinasie van 'n hoë persentasie Groot-grootteverspreiding (*Figuur 6*) en 'n hoë persentasie klas 1 (*Figuur 7*) wat deur die kultivars gelewer is. Grootteverspreiding en gradering is dus ook van die faktore wat gebruik word om aartappels te klas; daarom is dit belangrike faktore om in ag te neem om optimale, ekonomies-bemarkbare opbrengs te verseker.

In *Figuur 6* word die grootteverspreiding, *Figuur 7* die gradering van die opbrengs en in *Tabel 4* die hoofredes vir afkeuring van die onderskeie kultivars aangetoon. Hoë temperature voor oes het 'n groot hoeveelheid afgraderings veroorsaak weens hergroei.

Meting van opbrengspotensiaal

Die LINTUL-POTATO-DSS plantgroeimodel is gebruik om potensiële opbrengste van die kontrolekultivar, Mondial (G4), te bereken. Potensiële opbrengs kan gedefinieer word as die teoretiese boonste opbrengsgrens in 'n situasie waar water, voedingstowwe en biologiese faktore optimaal is vir die seisoen waarin die proef gegroei het. Die inligting stel ons in staat om te evalueer hoe die werklike opbrengs behaal deur proef, met gesimuleerde potensiële opbrengste vergelyk. Die verskil tussen die potensiële en werklike proefopbrengs verwys na die opbrengsgaping. Dit illustreer hoe optimaal produsente gebruik maak van hul omgewing en beskikbare hulpbronne om hoë opbrengs te behaal.

Die verhouding tussen werklike opbrengs (77.7 t/ha) teenoor potensiële opbrengs (85 t/ha) is 97% bereik en het dus 'n klein opbrengsgaping wat daarop dui dat die beskikbare omgewing uiters doeltreffend benut word. Daar is dus beperkte geleenthede vir verdere toename in opbrengste.

Tabel 5: Prosesseringseienskappe en interne kwaliteit vir 2022. (Uitgevoer deur LNR-Roodeplaat).

Kultivar	Skyfiekleur[1]	SG[2]	Droëmateriaal (%)[3]	Holhart	Bruinvlek
Connect	50	1.071	18.38	0	0
El Mundo	48	1.065	17.05	0	0
Foxy	40	1.060	15.92	0	0
Lanorma	57	1.076	19.38	0	0
Mondeo	52	1.064	16.78	0	0
Mondial	57	1.071	18.24	0	0
Panamera	56	1.071	18.38	0	0
Sababa	60	1.066	17.27	0	0
Sifra	55	1.064	16.80	0	0
Sound	59	1.071	18.31	0	0
Tyson	56	1.067	17.44	0	0
Valor	52	1.074	18.96	0	0
Vicenta	54	1.076	19.26	0	0
≥ Norm (Aanvaarbaar vir prosessering)			<Norm (Onaanvaarbaar vir prosessering)		

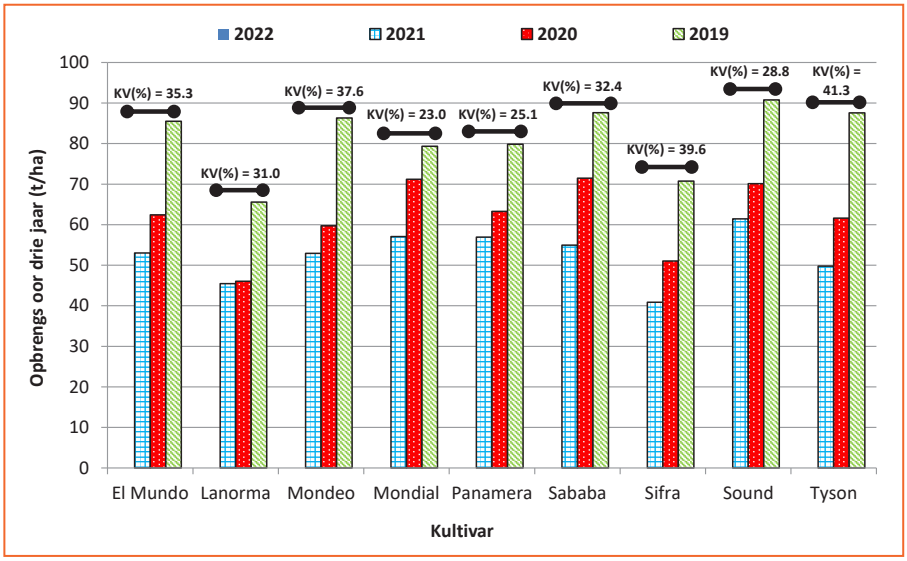
[1]Skyfiekleur met waarde >50 en sonder defekte is aanvaarbaar vir die droëskyfiebedryf.
[2]Soortlike gewig van >1.075 is aanvaarbaar vir die prosesseringsbedryf.
*[3]Die persentasie droëmateriaal is 'n berekende waarde: DM% = 24.182 + 211.04 * (SG-1.0988). Die werklike persentasiewaarde sal effens verskil tussen kultivars uit hierdie berekeningswaarde.*

Dit is belangrik om te let op die kultivars se vermoë om konsekwent te presteer, ten spyte van fluktuasies in die klimaat oor tyd. *Figuur 8* bevat die drie-jaar data vir die kultivarproewe in die Tom Burke-produksiearea. Bo elke kultivar word die koëffisiënt van variasie tussen die drie jaar aangedui. Dit blyk dat Lanorma en Sound die minste variasie toon vir die Tom Burke-gebied.

Verder is dit ook belangrik om op die interne gehalte van die produk te fokus ten einde ekonomies-optimale, bemarkbare opbrengs en dus winsgewendheid te verseker. Dit sluit belangrike faktore in soos die prosesseringseienskappe, soortlike gewig (SG) asook inwendige defekte (holhart en bruinvlek) wat in *Tabel 5* opgesom word.

Gedurende die 2022-groeiseisoen het al die kultivars, behalwe El Mundo en Foxy, aan die norm van >50 voldoen vir prosessering. Wat SG betref, het slegs die kultivars Lanorma en Vicenta aan die norm van ≥1.075 vir prosessering voldoen. Geen kultivars het inwendige defekte getoon nie.

Figuur 8: Prestasie van kultivars oor drie jaar uitgedruk as 'n persentasie van die proefgemiddeld.



Dankie aan al ons medewerkers: Jako Nel, produsent van Ratho Boerdery, Schalk Grobbelaar, werkgroepvoorsitter, Renier Fouries van GWK, Chris Prinsloo van Wesgrow, Jeanine van Jaarsveld van FPD, en Michelle Lombard van RSA Saadbeurs. Vir meer inligting en navrae, kontak Dirk Uys by dirk@potatoes.co.za.

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want ons weet

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Kontak InteliGro sodat ons ook op jou plaas kan betrokke raak.

info@inteligro.co.za | www.inteligro.co.za

SABI invites farmers to join them on a new water saving mission

SABI, South Africa's premier irrigation water saving organisation, is extending a special invitation to all farmers to join the institute and enjoy the benefits of membership. SABI has embarked on an exciting drive to include farmers as SABI members and partners.

"Water is a scarce resource and farmers are serious about conserving our precious water and ensuring water quantity plus water quality is preserved for future generations. We believe the best way of conserving water and ensuring optimum irrigation is by becoming a SABI member, as you have direct access to a range of technical knowledge, practical advice and technologies via SABI membership.

"If you are a SABI member it is clear and sends out a message to all that you are serious about saving water," says SABI president, Michael Esmeraldo.

Access to top-notch services

"Farmers will ensure via SABI membership, that their teams on the farm have access to the latest trends and technologies in water saving and also training. We are looking forward to farmers joining us and reaping the benefits of our knowledge and tradition in irrigation water and water conservation in South Africa," he says.

Michael Esmeraldo, president of SABI.

It is important for farmers to realise that one of the most powerful and practical ways to save water is by using accredited SABI designers. SABI approved designers are highly trained and have passed the irrigation equivalent of a board exam.

It is important to note that all members are bound by the *SABI Ethical Code*, which requires that the design of an irrigation system should conform to the SABI norms for a specific region. Thus, farmers' use of a SABI accredited designer ensures that the irrigator is provided with an irrigation system, which will ensure optimal use and management of the available water sources.

Moreover, farmers experiencing problems with the operation of such systems are able to contact SABI – as a non-profit organisation it remains an objective body – for an investigation or evaluation.

Actively making a difference

Furthermore, SABI is active in establishing irrigation design norms for South Africa, and members have the opportunity to play an active role in this process and to be aware of changes and advances in irrigation norms.

SABI boosts optimum irrigation and water saving via not only its designers, but also through training, communication products and events. SABI's events such as its congress and forum – to be held this August at the Lord Charles Hotel in Somerset West – are popular knowledge sharing and networking events with exhibitions of the latest irrigation technologies.

Farmers joining SABI will be happy to be involved in an institute that sponsors an irrigation course for Grade 11 learners in agricultural schools around South Africa. The SABI school course is very popular nationally. "Water conservation must begin from grassroots, and we are proud of our school training programme," says Michael.

"SABI is proud to be fulfilling a vital role in ensuring the efficient and optimum use of irrigation water and the conservation of water. We invite all farmers from all provinces of South Africa to join us on this mission and reap the benefits on farms and in their enterprises," says Michael.

By becoming a SABI member, farmers will receive a range of excellent benefits that include:

- SABI meetings (social and knowledge sharing events held around South Africa).
- Events (the highly rated and hugely successful SABI congress and the technical forum plus social happenings, such as golf days, which are very popular). Members get discounts on these.
- *SABI Magazine*, a glossy print and digital magazine. Members enjoy discounts on advertising.
- Active participation in the drafting of norms and codes of practice.
- Being up to speed on the latest local and international irrigation technologies.
- Special discounts on individual/ custom-designed IrrigationWise Academy training courses.

For more information, contact Riana Lombard on riana@sabi.co.za or info@sabi.co.za or download a membership form and complete it on *www.sabi.co.za*. We look forward to you joining us.

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A25783

Insights from the UK's Fight Against Blight initiative

By Lukie Pieterse (Photographs: Dr Eugenia Banks, Ontario Potato Board)

The Fight Against Blight (FAB) programme in the United Kingdom (UK) is a comprehensive campaign aimed at reducing pesticide use while preserving potato crops by improving our understanding of late blight and its management. The initiative was launched to address the knowledge gap identified in the epidemiology and integrated control of potato late blight.

The programme started in 2004 and since then, blight scouts have sent in well over 10 000 samples of potentially blight-infested potato plants for genotyping in designated laboratories across the UK. These scouts are trained to identify the disease and provide information to growers regarding the best strategies for managing it. They've received specialised training to identify and monitor outbreaks across the UK.

Late blight lesions.

Their role is to keep a watchful eye on potato fields during the growing season and to look for signs of late blight, which can include dark patches on leaves and stems, as well as white mildew-like growth. When they identify an outbreak, they report it to the relevant authorities as well as the growers in the area right away.

The information provided is critical in helping growers manage the disease effectively. Moreover, these scouts also provide detailed information to the growers regarding the best strategies for managing the disease. They help growers determine the appropriate timing and dosage of fungicide applications and provide guidance on crop management practices that can reduce the risk of the disease.

Tools and technologies

Another aspect of the campaign is the development of innovative tools and technologies for early disease detection. For example, the development of outbreak maps has been funded by the UK government to help growers identify high-risk areas and take preventive measures.

These maps use data collected from a network of scouts, weather monitoring stations and other sources to provide accurate information regarding the spread and severity of late blight outbreaks. The maps are updated regularly and show the locations of reported outbreaks, as well as predictions for future outbreaks based on weather patterns and other factors. This information is then used by growers to make informed decisions regarding crop management practices and fungicide applications.

The development of these maps is a significant advancement in early disease detection, as they provide growers with a means to monitor the disease at a regional level. The maps help to identify high-risk areas where the disease is likely to occur, enabling growers to take proactive measures to reduce the risks such as resistant varieties, early application of fungicides and other integrated pest management (IPM) strategies.

Understanding *P. infestans*

A significant objective of the FAB initiative is to improve our understanding of the local and international populations of *Phytophthora infestans*, the organism responsible for potato blight. This objective is integral to the development of more effective fungicides and other strategies to combat this destructive pathogen.

P. infestans is a highly adaptable and rapidly evolving organism that can develop resistance to fungicides, making it challenging to control. By improving our understanding of the characteristics and behaviour of different populations of *P. infestans*, researchers can gain valuable insights into how the pathogen adapts and evolves, as well as identify the factors driving its spread.

This information can help researchers develop more targeted and effective fungicides and management strategies specific to the particular strains of the pathogen present in a given area.

Increase elemental nutrient uptake and efficiency with Cosmocel

By Wilhelm Schultz, technical co-ordinator, Cosmocel SA

The collective global understanding of plant nutrition has changed significantly in the past decade. This can be attributed to ground-breaking new research indicating that the nutritional requirements of plants can be almost completely fulfilled through healthy soil and, most importantly, the interactions between the plant, soil and the microbiome. The latter refers to the bacteria and fungi living in symbiosis within the plant as well as the rhizosphere.

Boost resistance and soil health

The overindulgent use of chemical fertilisers desensitises the activity and reactivity of the plant as well as the microbiome. Much like the human microbiome, the plants' interactions with natural living organisms dictate key reactions and effects on overall health. By enhancing the natural functions of plants, producers can increase natural resistance to diseases and pests and improve soil health, all while reducing financial and labour inputs.

Cosmocel's strategy for potato production aims to increase carbon nutrition while supplying the plant with accessible nutrients and energy. Increased carbon nutrition initiates the plant's resistance to stress and amplifies energy levels.

When supplying highly active carbon factions to the plant and soil environment, bacterial activity is elevated. This stimulates the release and uptake of elements and metabolites from the bacteria to the plant.

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Complementing elemental nutrients with organic compounds, these products increase the uptake, movement, assimilation and metabolism within the plant, resulting in higher-yielding crops with improved quality.

To find out more, contact Wilhelm Schultz of Cosmocel SA at 061 902 0139 or wschultz@cosmocel.co.za.

POTATO

SOIL APPLIED (Pivot or high volume boom spray)

Weeks after emergence	PLANTING	1	3	5	7	9	11	13	TOTAL KG/L PER HA
BIOCEL	1 L/Ha								1 L/Ha
COSMOROOT	4 Kg/Ha								4 Kg/Ha
BARRIKAT	2 L/Ha								2 L/Ha
H-85		1 Kg/Ha	1 Kg/Ha	1 Kg/Ha	1 Kg/Ha	1 Kg/Ha	1 Kg/Ha	1 Kg/Ha	7 Kg/Ha
MAINSTAY CALCIO		4 L/Ha	4 L/Ha	4 L/Ha	4 L/Ha	4 L/Ha	4 L/Ha	4 L/Ha	28 L/Ha
MAINSTAY MAGNESIO		2 L/Ha	2 L/Ha	2 L/Ha	2 L/Ha	2 L/Ha	2 L/Ha	2 L/Ha	14 L/Ha

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For more information regarding this program, please visit out website **www.cosmocel.co.za** and get in touch with one of our representatives

Having a better understanding of the pathogen's genetic makeup, virulence and other key characteristics can also help researchers predict future outbreaks, enabling growers to take proactive measures to prevent or minimise damage.

The FAB initiative has made significant advancements and developments in understanding the genetic makeup of *P. infestans* and how it affects virulence. Researchers have identified specific genetic markers that contribute to the pathogen's virulence, or ability to cause disease, in some strains of *P. infestans* more than others.

Moreover, by understanding the genetic basis of *P. infestans* virulence, researchers can predict how the pathogen will change and evolve. They can anticipate new strains that may emerge and develop methods to combat them before they spread.

Focus on IPM strategies

IPM strategies have become an increasingly important focus of the FAB initiative. IPM is an ecosystem-based approach to pest management that aims to reduce the reliance on chemical pesticides and minimise the risk of environmental harm. One of the key advantages is that it combines multiple approaches to pest control, making it more effective than any single method.

A stem infected by late blight.

For example, IPM strategies for managing late blight may include the use of resistant potato varieties that are less susceptible to the disease, crop rotation to reduce the build-up of inoculum in the soil, and biological control agents such as parasitic fungi that attack *P. infestans*. By combining these methods, growers can reduce the overall pesticide load on their crops, while also improving yield and quality, reducing production costs, and minimising the risk of environmental damage.

Moreover, IPM strategies are adaptable, allowing growers to tailor their pest management practices to their specific needs and the conditions on their farms. This flexibility makes it easier for growers to quickly respond to changes in the environment or emerging pest threats.

Lessons for other countries

The FAB initiative in the UK serves as an excellent example of potato blight prevention and management for potato producers in other countries. The initiative's success in developing IPM strategies, promoting sustainable farming practices and improving our understanding of the local and international populations of *P. infestans* can be replicated in other potato-producing countries.

One key takeaway is the importance of early detection and monitoring of late blight outbreaks. The establishment of a network of blight scouts, who monitor and report outbreaks of *P. infestans* across the UK, has proven an effective way to manage the disease. Producers in other countries could establish similar networks, or even participate in regional or international networks to share best practices for early detection and monitoring.

Another lesson is the value of using IPM strategies in combination with chemical pesticides. By focussing on a range of approaches such as resistant varieties, crop rotation and biological control agents, growers can reduce their reliance on chemical pesticides and promote more sustainable methods of pest management.

Late blight on several leaves.

Moreover, the development of innovative tools and technologies for early detection of the disease, such as outbreak maps, can also be applied in other countries. This technology enables producers to identify high-risk areas and take preventive measures to protect their crops.

Finally, the FAB initiative's emphasis on research and development is another crucial lesson for producers in other countries. For instance, the identification of specific genetic markers that make some strains of *P. infestans* more virulent than others led to the development of new fungicides that target these specific strains. This research provides valuable insights into the evolution and behaviour of *P. infestans*, which can aid effective pest management worldwide.

Overall, the FAB initiative is a good model for potato blight prevention and management in other countries. By learning from the successes and innovations of this initiative, producers worldwide can reduce their reliance on chemical pesticides, promote sustainable farming practices and manage potato blight more effectively.

For more information, email the author at lukie@potatonewstoday.com.

Op die voorvoet teen laatroes

Laatroes kom selde op Suid-Afrikaanse aartappels voor, maar is veel meer aggressief as die bekende en meer gereelde vroeëroes. Syngenta se siekterisikodiens (*www.syngenta.co.za/service/weather-and-risk-map-service*) is een stuk gereedskap wat kan help om hierdie verwoester te stuit.

Die roesprobleem in Suid-Afrika

Roes is 'n konstante kopseer vir aartappelprodusente. In Suid-Afrika is vroeëroes die groot sondebok en produsente weet dat 'n voorkomende spuitprogram 'n gegewe is om hierdie siekte wat in warm, klam toestande floreer te beheer. Daarenteen het laatroes koeler, nat weer nodig en is meer algemeen in die Europese klimaat. Die feit dat kultivars wat hier verbou word uit Europa ingevoer word en geteel is om laatroesbestand te wees, beskerm Suid-Afrikaanse produsente teen hierdie siekte.

"Dit is tot 'n groot mate waar, maar is nie 'n waterdigte waarborg nie," sê André Labuschagne, bemarkingsbestuurder Aartappels en Subtropiese Vrugte by Syngenta. "Laatroes kom gewoonlik in April of Mei in Limpopo en die Sandveld voor, en in Augustus of September op die Hoëveld en Limpopo wanneer toestande in die siekte se guns tel."

Gunstige omstandighede

Laatroes het net 'n paar uur onder ideale toestande, soos wanneer 'n onverwagse front koel en nat weer bring, nodig om vatplek te kry en groot skade aan te rig. Die feit dat 'n ernstige uitbreking 'n hele oes kan vernietig, beklemtoon die noodsaaklikheid om in chemiese swamdoders wat laatroes kan voorkom te belê. Gegewe die sporadiese aard van die siekte, selfs onder gunstige toestande, neig produsente egter om nie voorkomend te spuit nie ten einde die koste van hul gewasbeskermingsprogramme so laag as moontlik te hou.

> Laatroes het net 'n paar uur onder ideale toestande, soos wanneer 'n onverwagse front koel en nat weer bring, nodig om vatplek te kry en groot skade aan te rig.

Hoe 'n produsent weet wanneer dit regtig nodig is om te spuit, is 'n vraag wat Syngenta met sy siekterisikodiens help beantwoord. Hierdie diens is gratis vir Suid-Afrikaanse produsente op Syngenta se webwerf beskikbaar en kombineer weervoorspellings en siekterisikomodelle om waarskuwings te genereer vir spesifieke weerstasies of areas rondom 'n weerstasie.

Só werk dit

Produsente kry 'n waarskuwing via WhatsApp wanneer die weer wat vir die volgende vyf dae voorspel word, gunstig is vir die ontwikkeling van laatroes. Dit gee hulle genoeg tyd om hul aartappellande met 'n voorkomende bespuiting teen besmetting te beskerm.

Al wat 'n produsent te doen staan, is om te registreer en die gewas, siekte, weerstasies en tydperk te kies waarvoor waarskuwings nodig is. Dit is maklik om weerstasies by te sit of af te haal, en om die diens te stop of te aktiveer na gelang van bewerkingstoestande. Syngenta het onlangs die diens uitgebrei om ook ryp- en hittestremmingwaarskuwings te bied.

Hierdie gevorderde stelsel trek op Maandae en Donderdae data, en stuur om 07:00 'n WhatsApp vir elke stasie uit. As daar geen risiko is nie word geen boodskap gegenereer nie. Produsente word dus nie met irrelevante kennisgewings lastig geval nie.

'n Beduidende voordeel is die geskiedenis wat vir verwysingsdoeleindes in die stelsel geberg word. Die argief bevat weerdata vanaf 2016, wat produsente kan gebruik om spuitprogramme op te stel en te bepaal waarom een bespuiting meer of minder suksesvol as 'n ander was. Sodoende kan die tydsberekening van toedienings voortdurend verfyn word.

Laatroes affekteer ook ander gewasse, soos tamaties. Tamatieprodusente vind dus ook baat by die risikodiens, synde hulle roesprobleme ooreenstem met dié van aartappelprodusente.

Produseer volhoubaar

"Volhoubaarheid is 'n prioriteit vir almal van ons," sê Labuschagne. "Net so min as wat produsente 'n oes aan laatroes wil afstaan, wil hulle ook nie kanse waag wanneer weerstoestande onverwags gunstig is vir die ontwikkeling van siektes nie.

"Met hierdie diens haal Syngenta heelwat onsekerheid uit die besluitnemingsproses, en help ons produsente om tyd te spaar en opbrengs en oesgehalte te verbeter, terwyl hulle boonop geld spaar deur onnodige chemiese toedienings te vermy."

Vir meer inligting, besoek *www.syngenta.co.za/service/weather-and-risk-map-service*.

The story behind soft rot

By Dirk Uys, Potatoes SA

Potatoes New Zealand chief executive, Chris Claridge, reminded viewers during a Newstalk ZB broadcast on 5 January this year that: "Potatoes aren't particularly good swimmers and don't like being submerged in water for long periods." This is also true for South African potatoes. We have noted numerous incidences of soft rot and blackleg symptoms in areas that received higher than normal rain during the past season.

Blackleg and soft rot are not new to South African potato producers and have been widely covered in *CHIPS*. These bacterial diseases were first identified in South Africa in 1988. Initially, it was referred to as *Erwinia* soft rot but has since been associated with *Dickeya* spp. and *Pectobacterium spp.*, which occur widely in South Africa, according to a study conducted by Dr Jacquie van der Waals.

Optimal conditions

This pathogen is an anaerobic bacterium which survives in conditions where little oxygen is present, such as in very wet conditions. Infection occurs when the pectolytic enzyme breaks down the cell wall contents. It does not produce a resting structure, which means moisture must be available for survival.

> Soft rot-causing bacteria are opportunistic and identify target plants under stress. The development of this disease is dependent on the temperature and moisture levels both on fields and in stores.

Fortunately, these bacteria are not able to survive in the soil for long periods, but it can survive in tubers, plant debris and various host plants, which include beetroot, capsicums, carrots, cabbage-like crops, cucurbit, maize, onion, tobacco, tomatoes and of course *Solanaceae* volunteers and related weeds (Niederwieser, *CHIPS*, January/February 2012).

Identifying infection

Tubers are initially symptomless but contain bacteria in the lenticels and wounds. Under suitable conditions, these bacteria start to multiply and invade the potato without triggering its defence mechanisms.

Once suitable conditions such as waterlogging occur, the plant is put under stress which acts as a trigger. Soft rot-causing bacteria are opportunistic and identify target plants under stress. The development of this disease is dependent on the temperature and moisture levels both on fields and in stores.

When a critical bacterial population is achieved, the 'call to action' is triggered and the plant is attacked. Enzymes are produced which break down the host cell walls, resulting in the content leaking and

Typical soft rot symptoms inside potatoes.

Some characteristics of the Blackleg bacterium.

- *Pectobacterium* produces enzymes that break down plant cell walls. This is aggravated once it reaches a 'call to action' critical mass.
- Water is required for survival and dissemination.
- The causal organism survives with and without oxygen.
- This organism is an opportunist waiting for the correct conditions, which include moisture and higher temperatures. Once conditions are conducive, it becomes aggressive.
- It enters through wounds and weak areas.
- It can survive in dead plant material as well as various host plants.

the occurrence of typical soft rot symptoms, as seen in *Photograph 1*. Once the bacteria have penetrated the plant, it blocks the vascular tissue (Mololeke, 2013).

Three main methods of transmission can occur. This includes:

- Tubers can be infected by already infected tubers early in the production season.
- Water is an important carrier.
- Mechanical transmission through insects, animals and equipment is also possible.

Controlling the bacteria

Typical of this bacteria, soft rot is difficult to control chemically. Soft rot increases after excessive rainfall and is aggravated when harvesting while the soil is wet. Careful planning is essential during periods of wet weather to minimise lifting wet crops.

If desiccation is being done, it must be done fast. Optimise Ca fertilisation. This is essential for strengthening the cell wall. Minimal work has been done to characterise local varieties for tolerance, but it is valuable to reduce the risk by planting different varieties from different sources.

Soft rot symptoms observable on the outside of potatoes. (Photo: Prof J van der Waals)

Preparation tips to minimise risk (Elphinstone, n.d.):

- Avoid cultivars that are known to be tolerant.
- Check seed quality if the seed was stored incorrectly.
- Check your rotation system.
- Remove volunteer weeds that are known hosts.
- Avoid soils with soil diseases or nematodes.
- Plant ready and certified tubers.
- Store in well-ventilated areas.
- Soil preparation and plant depth are critical to enabling optimal emergence.
- Remove suspect seed tubers before planting.
- Do not plant in very hot or cold soils.
- Do not leave tubers in the sun.
- Do not over-irrigate after planting.
- Fertilise correctly. Focus on optimal Ca levels and manage N levels.
- Ridge in time.
- Uniform irrigation is critical. Don't start too early.
- Remove sick plants.

Post-harvest precautions

- Harvest in time but ensure that the skins have set.
- Use clean equipment.
- During packing, check chlorine levels and dry tubers as fast as possible.
- Use well-ventilated storage conditions.
- Don't transport tubers when temperatures are extreme.

For enquiries and references contact Dirk Uys at dirk@potatoes.co.za.

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Ultrasol® K Plus

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Repeated pivot applications of Ultrasol® K Plus from the time of tuberization in potato enables:

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'n Groot plus vir jou aartappelopbrengs

Aartappels absorbeer 'n hoë hoeveelheid kalium gedurende die groeiseisoen. Kalium speel 'n belangrike rol in die plant se waterstatus of turgor, asook die beweging van die stomata.

Dit is wetenskaplik bewys dat KNO_3 of kaliumnitraat die beste bron van kalium in 'n aartappel-bemestingsprogram is. Kaliumnitraat bestaan uit 38% kalium en 13% stikstof. Kaliumnitraat is ook hoogs oplosbaar en is dus dadelik vir die plant beskikbaar. Hortologiese gewasse wat geskik is vir die gebruik van Ultrasol K Plus-toedienings, is gewasse wat chloried-sensitief is, hoë hoeveelhede koolhidrate produseer, gereeld topbemesting moet kry, in sandgrond geplant word, asook by 'n lae pH verbou word.

Ultrasol K Plus op aartappels

Aartappels is 'n hoë-waarde gewas en is ook 'n verbruiker van stikstof (N) en kalium (K). *Figuur 1* illustreer die hoeveelheid K wat deur die knolle verwyder word. Die hele plant verwyder meer as dubbel die hoeveelheid K as die knolle. Dit beteken dat 8 tot 8.8 kg K per ton aartappels verwyder word. Die plant moet die verhouding handhaaf deur die K in die grond en bemeste K te balanseer. Aartappels benodig ook 4.5 kg N per ton knolle.

Voordele van bemesting met Ultrasol K Plus (stikstof in nitraatvorm):

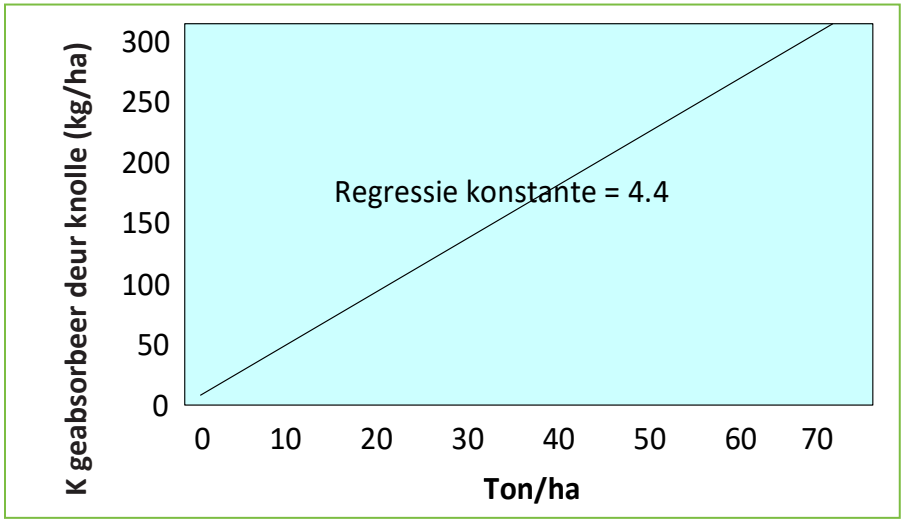
- Verhoogde opbrengs (13% teen-oor ander kaliumbronne).
- Die stikstof- en kaliumbehoefte word aangespreek.
- Verlengde rakleeftyd en houvermoë.
- Verbeterde gehalte.
- Verbeterde stikstofdoeltreffenheid.
- Verbeterde opname van kalium, kalsium en magnesium.
- Meer energiedoeltreffend, dus meer koolhidrate beskikbaar vir opbrengs en gehalte.
- Geen grondverbrakking nie.

Die nuutste verwikkelinge in die bemestingswêreld is dat jodium erken word as 'n hoogs noodsaaklike element in hortologiegewasse. In 'n hortologiese toets op *Arabidopsis thaliana*-plante is gevind dat jodium verantwoordelik is vir die aktivering van meer as 550 gene. Jodium is ook gebonde aan meer as 82 proteïene in die plant. Meer as 100 proewe is onlangs wêreldwyd gedoen op verskillende gewasse en die bevinding is dat 'n gemiddelde 10% opbrengsverhoging asook verhoogde gehalte verwag kan word wanneer jodium in die progam gebruik is.

Ultrasoline K Plus** is kaliumnitraat wat met jodium verryk word om die gewenste stikstof-, kalium- en spoorelementbalans te verkry. Om eenvoudig Ultrasol K Plus*** met Ultrasoline K Plus** (met bygevoegde jodium) te vervang, sal jodium toegedien word teen 'n veilige, dog doeltreffende dosis en al die bewese voordele sal verkry word.

Vir verdere inligting oor die belang van jodium in plante, kyk gerus na 'n internasionale webinar by *https://dt9xom8irs6kr.cloudfront.net/u219626/924819-127180675889835129.mp4.*

Figuur 1: Kalium verbruik deur aartappels (knolle alleenlik).



*Alle stellings in hierdie artikel kan ondersteun word met verwysings wat op versoek verskaf kan word.

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Oos-Vrystaat droëland kultivarproef op Reitz in 2022/2023

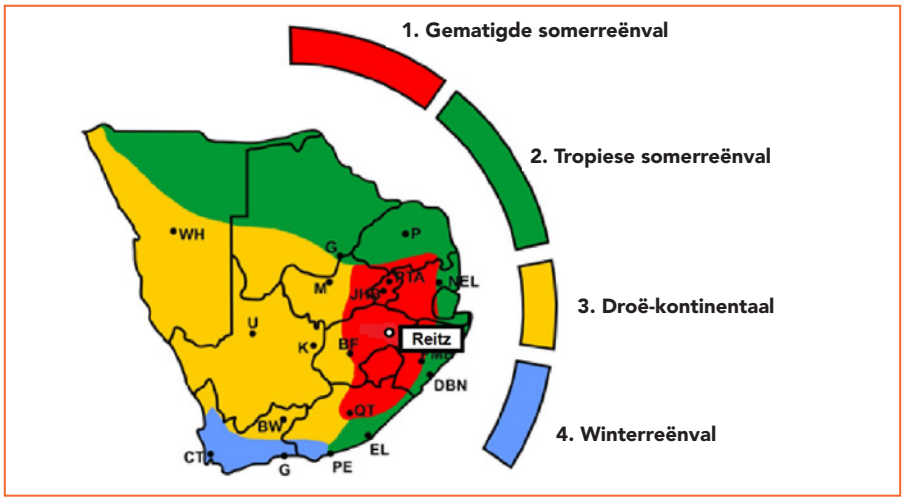
Deur Enrike Verster en Anjé Erasmus, Aartappels SA, en Geyer Terblanche, Fick & Seun Boerdery

Die Oos-Vrystaat is 'n groot aartappelproduksiestreek waar 'n noemenswaardige gedeelte van die land se kommersiële aartappels tans deur 48 produsente op nagenoeg 9 384 ha geproduseer word.

Die mees prominente kultivars wat in dié streek vir tafelverbruik geproduseer word, is Mondial, Lanorma en Panamera.

Reitz val in Suid-Afrika se gematigde somerreënvalgebied (*Figuur 1*) en ontvang die afgelope 19 jaar 'n gemiddelde jaarlikse reënval van 509 mm (plaaslike LNR weerstasie). Hierdie streek ervaar warm somers en baie koue winters, met ryp wat vanaf middel Mei tot vroeg September kan voorkom.

Figuur 1: Ligging van Reitz in die Oos-Vrystaatse produksiegebied.



Die kultivarproef te Reitz is uitgelê in 'n ewekansige blokontwerp met drie herhalings per kultivar. *Tabel 1* verskaf bykomende tegniese inligting rakende die proef. Grondmonsters is voor plant geneem om die grondvoedingstatus van die proefperseel te bepaal (*Tabel 2*).

Verskille in groeitydperke

Ingesluit in die kultivarproef is kultivars met kort en lang groeitydperke en derhalwe kan groeiperiodes die uiteindelike opbrengs van sekere kultivars beïnvloed. Die lengte van groeiperiodes is onderhewig aan die aard van die seisoen, maar word gesien as die hoeveelheid tyd wat verloop vanaf opkoms tot natuurlike loofafsterwe.

Tabel 1: Opsomming van tegniese inligting rakende proefperseel en uitleg.

Plaas	**Middelbult (Fick & Seun Bdy)**			
Produsent	Geyer Terblanche			
Plantdatum	21 Oktober 2022			
Oesdatum	16 Maart 2023			
Besproeiing/droëland	Droëland			
Dubbel- of enkelrye	Trapsgewys – dubbelrye in wal			
Loofafsterwe	Natuurlik			
Tussenry-spasiëring	0.9 m			
In-ry spasiëring	45 cm			
Proefperseel	18 m^2			
Bemestingsprogram	**Voedingswaarde**			
	N (kg/ha)	P (kg/ha)	K (kg/ha)	Ca (kg/ha)
Totaal	120.35	69.01	113.8	31.0

Tabel 2: Grondvoedingstatus van proefperseel voor plant.

pH (H_2O)	P	Ca	Mg	K	B	Fe	Cu	B	Mn
	Mehlich III (dpm)	(dpm)	(dpm)	(dpm)	(dpm)	(dpm)	(dpm)	(dpm)	(dpm)
5.6	61	265	62	178	0.42	148	2.0	0.42	46

Tabel 3 sit uiteen hoe hierdie groeiperiodes van kultivar tot kultivar verskil. Plantgereedheid van moere ten tye van plant van die proef, sowel as standpersentasie en halmtelling wat later in die groeiperiode waargeneem is, word aangedui in *Tabel 3*.

Kultivarprestasie en -opbrengs

Die evaluering van nuwe kultivars soos in die Reitz-kultivarproef verskaf onder andere resultate rakende opbrengs- en bemarkingsindeks. Die bemarkingsindeks van die betrokke kultivars word bereken deur elke kultivar volgens kwaliteit en groottegroepe te klas en sorteer, byvoorbeeld klas 1 Groot of klas 2 Groot-medium.

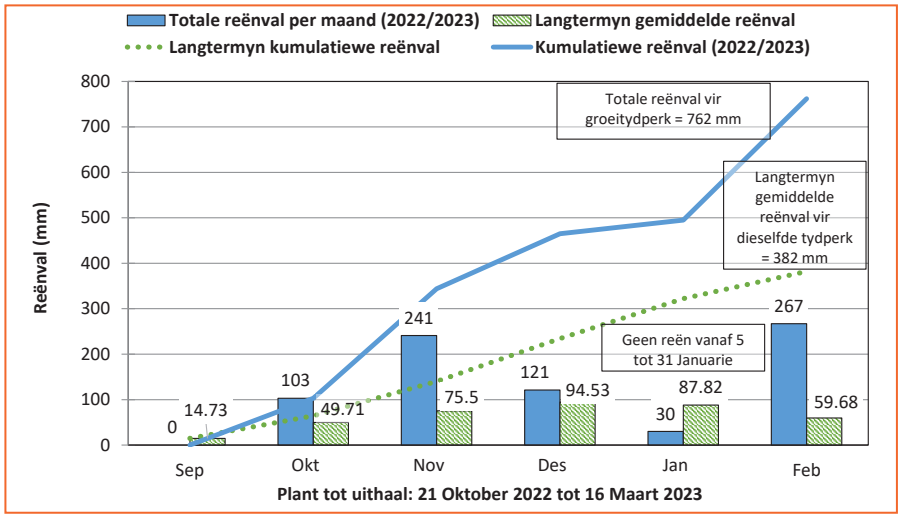
Dienooreenkomstige prysvergelykings word dan gemaak met markpryse soos verkry ten tye van oes. Die prestasie van nuwe kultivars kan nie net op die resultate van een spesifieke seisoen geskoei word nie, aangesien klimaat van een jaar na 'n volgende kan wissel. Juis daarom word die

Tabel 3: Karaktereienskappe rakende groeiperiode, plantgereedheid, stand (%) en halmtellings vir betrokke kultivars.

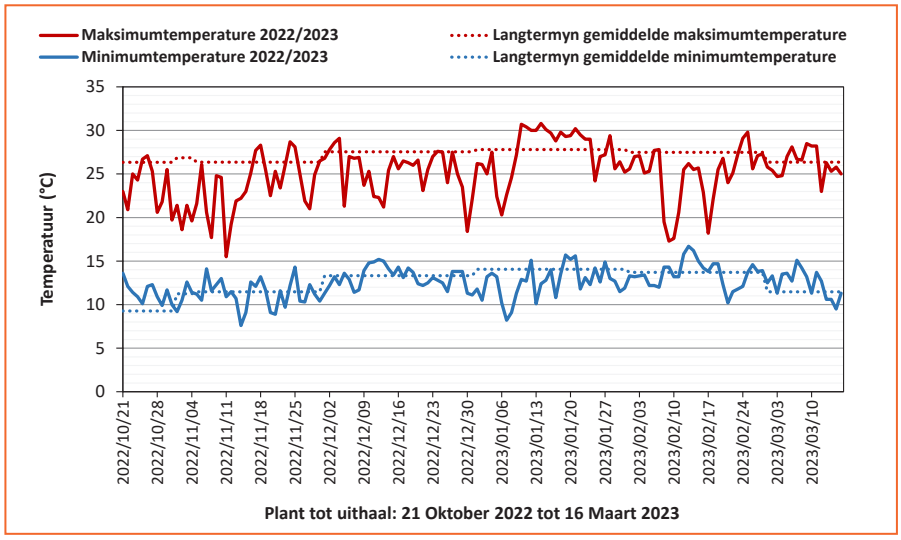
Kultivar	Groeiperiode (dae)[1]		Plant-gereedheid[2]	Stand (%)	Halms per plant	Halms per ha
11Z49A1	Medium	(100)	3	83	4	81 974
11Z55A5	Medium	(100)	3	65	3	48 147
Allison	Medium tot lank	(120)	1	72	7	124 442
Alverstone Russet	Medium tot lank	(100)	1	70	4	69 134
Amany	Medium tot lank	(110)	3	83	3	61 480
Belmonda	Medium	(100-110)	3	56	5	69 134
CMK2012	Lank	(120)	1	72	5	88 887
CMK2015	Lank	(120)	1	65	4	64 196
Foxy	Kort tot medium	(90-100)	3	77	5	95 060
Kelly	Lank	(120)	3	95	5	117 282
Lady Alicia	Medium	(95-100)	2	32	3	23 703
Lanorma	Kort	(80-90)	3	83	3	61 480
Lilly	Medium	(100)	3	70	5	86 418
Mondial	Kort tot medium	(95-100)	1	79	3	58 517
Noya	Kort	(80-90)	3	72	3	53 332
Palace	Lank	(110-115)	1	74	4	73 085
Panamera	Kort tot medium	(95-100)	1	83	4	81 974
Prince	Lank	(110-115)	1	81	2	39 999
Sababa	Medium tot lank	(110-115)	2	81	3	59 999
Sifra	Kort tot medium	(90-100)	2	70	4	69 134
Sound	Medium	(95-100)	1	70	7	120 985
Tyson	Kort tot medium	(90-100)	2	68	4	67 159

[1]Algemene riglyne en kategorieë (dae vanaf opkoms tot natuurlike loofafsterwe, afhangend van die seisoen): Kort = 70-90 dae; Kort tot medium = 80-100 dae; Medium = 90-110 dae; Medium tot lank = 90-120 dae; Lank = 90-140 dae.
[2]Plantgereedheid van moere: 1 = Vars; 2 = Effens vars; 3 = Plantgereed; 4 = Effens oud; 5 = Oud.

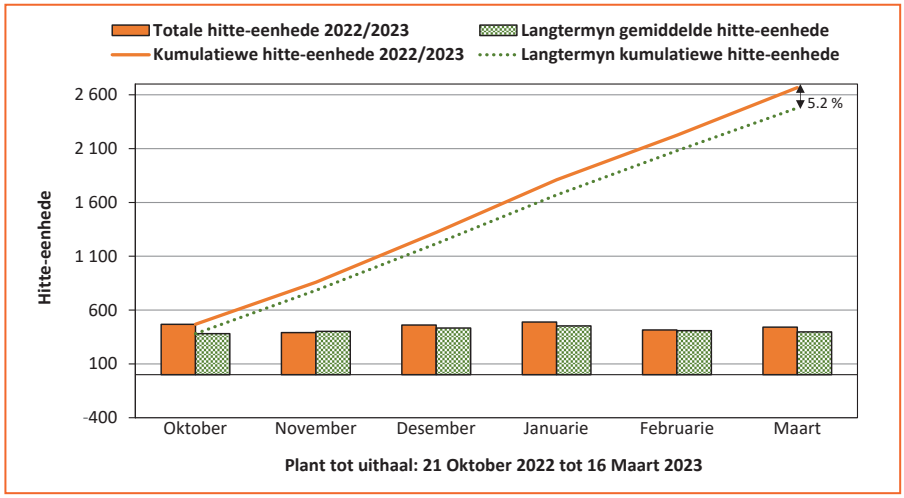
Figuur 2: Reënval in die 2022/23-seisoen asook langtermyn gemiddelde reënval.



Figuur 3: Minimum- en maksimumtemperature in die 2022/23-seisoen sowel as langtermyntemperature.



Figuur 4: Hitte-eenhede in die 2022/23-seisoen asook langtermyn gemiddelde hitte-eenhede.



**Totale hitte-eenhede spesifiek bepaal vir aartappels as gewas (drumpeltemperatuur = 5°C). Bereken vanaf uurlikse data.*

kultivars verkieslik oor 'n aantal seisoene getoets.

Seisoenale aspekte

Soos met enige gewas is temperatuur, beskikbaarheid van water (hetsy goeie besproeiingskedulering of reënval), sowel as hitte-eenhede belangrike faktore wat 'n wesenlike invloed uitoefen gedurende die aartappelplant se groeitydperk. Hierdie faktore word dus in aanmerking geneem wanneer die prestasie van kultivars geëvalueer word. Toepaslike daaglikse en langtermynweerdata word verkry vanaf 'n nabygeleë Hortec-weerstasie en 'n gekose LNR-weerstasie wat so na as moontlik aan die proefperseel geleë is.

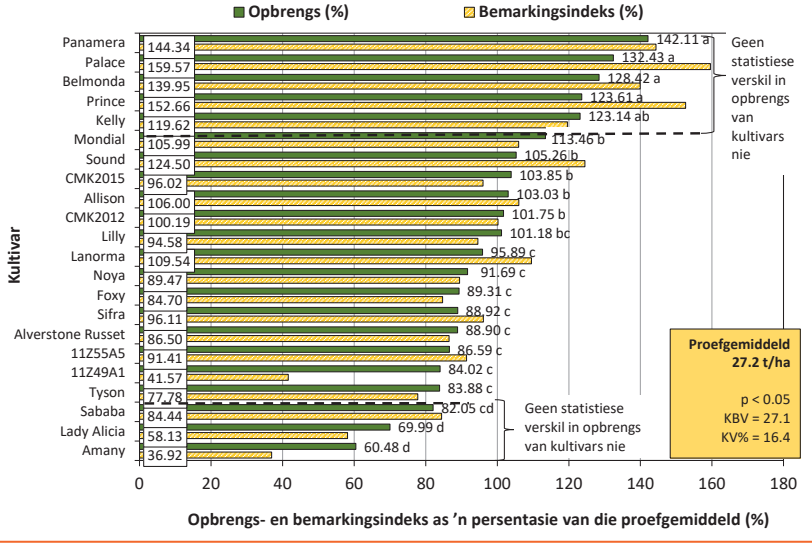
Die 2022/23-seisoen was gekenmerk deur bogemiddelde reënval (*Figuur 2*). In die latere stadiums van die groeitydperk in Januarie is geen reënval aangeteken nie, waarna uitermatige hoë reënval in die laaste maand van groei in die vorm van gereelde buie aangeteken is. Hierdie waarnemings reflekteer in die gehalteprobleme wat aangeteken is in die vorm van misvorming.

Minimum- en maksimumtemperature word in *Figuur 3* uiteengesit. Saam met die maande van bogemiddelde reënval, het die seisoen ook tye met groot fluktuasies in maksimumtemperature ervaar.

Die versameling van hitte-eenhede gedurende 'n groeitydperk is 'n belangrike faktor in die ontwikkeling van 'n aartappelplant. Die tendens van hitte-eenhede beskikbaar vir die kultivarproef van hierdie seisoen by Reitz, blyk hoër as die langtermyndata-tendens van hitte-eenhede te wees, alhoewel die bo-gemiddelde warm temperature in Oktober in die tyd voor planttyd aangeteken is. Verder in die groeitydperk is meer hitte-eenhede ingesamel as wat die langtermyn-data-tendens weergee, ten spyte van die bo-gemiddelde reenval en baie bewolkte dae deur die seisoen (*Figuur 4*).

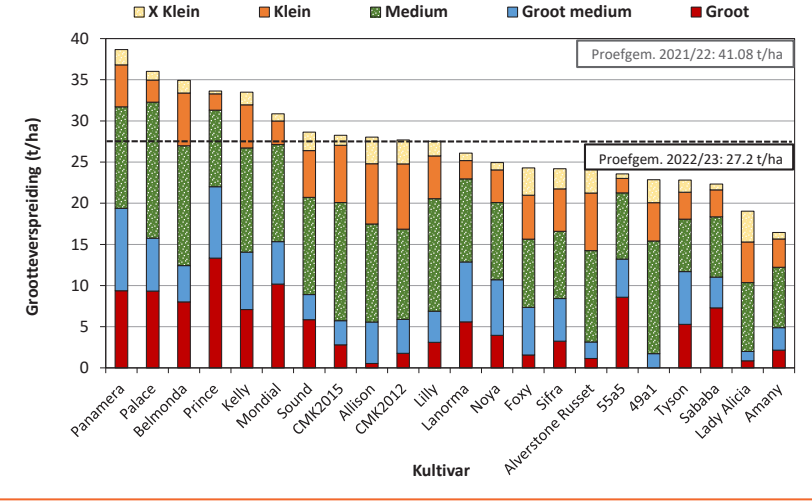
Opbrengsdata versamel tydens oesdag word onderwerp aan statistiese verwerking met behulp van die GenStat®-program. Die Tukey-toets van kleinste betekenisvolle verskille

Figuur 5: Totale opbrengs per kultivar as 'n persentasie van die proefgemiddeld.

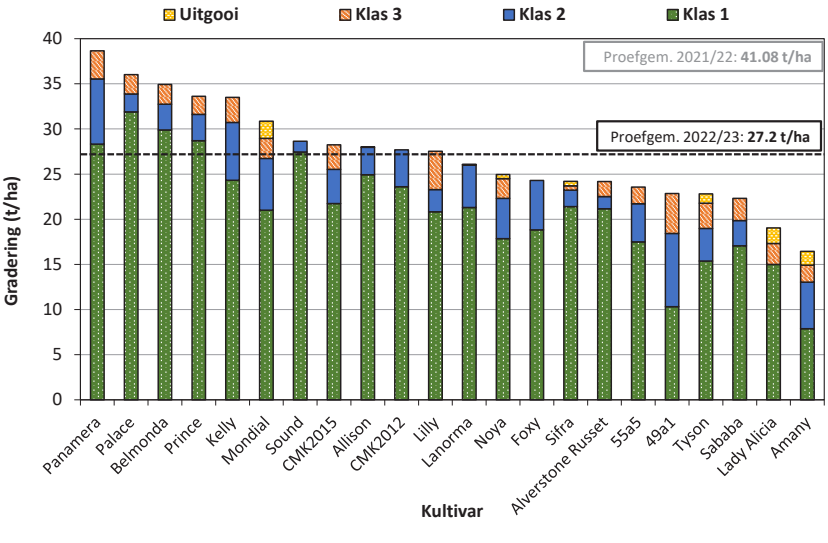


**Waardes gevolg deur dieselfde letter is nie beduidend verskillend van mekaar nie.*

Figuur 6: Groottegroepverspreiding van elke betrokke kultivar.



Figuur 7: Gradering van elke betrokke kultivar.



(KBV's) is gebruik om die gemiddelde te skei. Die kultivareffek gedurende hierdie betrokke proef (*Figuur 5*) was statisties beduidend ($p<0.05$) en die koëffisiënt van variasie was binne perke (16.4%). Hierdie faktore dui daarop dat die proef so goed as moontlik uitgevoer is te midde van uitdagende weerstoestande en ystervarkskade en dat die resultate derhalwe betroubaar is.

Opbrengste en bemarkingsindeks

Die opbrengs van elkeen van die kultivars word deur die proefgemiddeld gedeel (die proefgemiddeld van al die kultivars word as 100% geneem). Hierdeur word 'n opbrengsindeks bepaal en word elke kultivar se prestasie in terme van opbrengs as 'n persentasie van die proefgemiddeld gelees.

In hierdie seisoen is die proefperseel gepla deur ystervarke en gevolglik moes vermiste waardes aangewend word om die data suksesvol te kan analiseer. In effek genereer die GenStat®-program waardes deur berekeninge op die beskikbare datastel. Dit mag die uitkoms van die data tot 'n mate beïnvloed en dit is belangrik om daarvan kennis te dra.

Die gemiddelde opbrengs van die proef vir die 2022/23-seisoen is 27.2 t/ha – aansienlik minder as die vorige seisoen se gemiddeld van 41.08 t/ha. Verskeie roese is ook deur die seisoen op die kultivars opgemerk, tot mindere en meerdere mates. Panamera, Palace, Belmonda, Prince en Kelly het die beste opbrengs gelewer met geen statistiese verskil in opbrengs nie. Panamera, Palace, Belmonda en Prince het ook die beste bemarkingsindeks behaal.

'n Goeie bemarkingsindeks word toegeskryf aan 'n hoër opbrengs van groot aartappels en/of 'n goeie persentasie met goeie kwaliteit. Groottegroepverspreiding en gradering is onontbeerlike evaluasies wanneer daar gekyk word na 'n kultivar se bemarkbaarheid (*Figuur 6* en *7*).

Gehalte en afgradering

Die hoofredes vir afgradering word aangedui in *Tabel 4*. Oor die

Tabel 4: Hoofredes vir afgradering.

Kultivar	Misvorming	Spleetskurf	Mot	Insek	Bruinskurf	Sandspleet	Stingelentvrot
11Z49A1				x	x		
11Z55A5		x					
Allison							
Alverstone Russet							
Amany	x						
Belmonda							
CMK2012							
CMK2015							
Foxy							
Kelly					x	x	
Lady Alicia							
Lanorma				x			
Lilly							
Mondial	x		x			x	
Noya							
Palace			x				
Panamera	x						
Prince				x		x	
Sababa	x						x
Sifra							
Sound			x				
Tyson							

**Geen interne defekte soos holhart of bruinvlek was teenwoordig by enige van die kultivars nie.*

Die gemiddelde opbrengs van die proef vir die 2022/23-seisoen is 27.2 t/ha wat aansienlik minder is as die vorige seisoen se gemiddeld van 41.08 t/ha.

algemeen was die gehalte redelik goed onder die weerstoestande en was daar min motskade. Misvorming en sandspleet het weens die aard van die seisoen die gehalte van kultivars in hierdie proef beïnvloed.

Soos die aard van seisoene is, fluktueer die prestasie van kultivars van seisoen tot seisoen, bloot omdat klimaat van een seisoen na 'n volgende nooit eenders is nie. Derhalwe is dit belangrik om konsekwente prestasie van kultivars oor 'n aantal seisoene in ag te neem. Hierdie proef is vir twee jaar uitgevoer en die variasie van kultivars in hierdie twee seisoene word in *Figuur 8* aangedui.

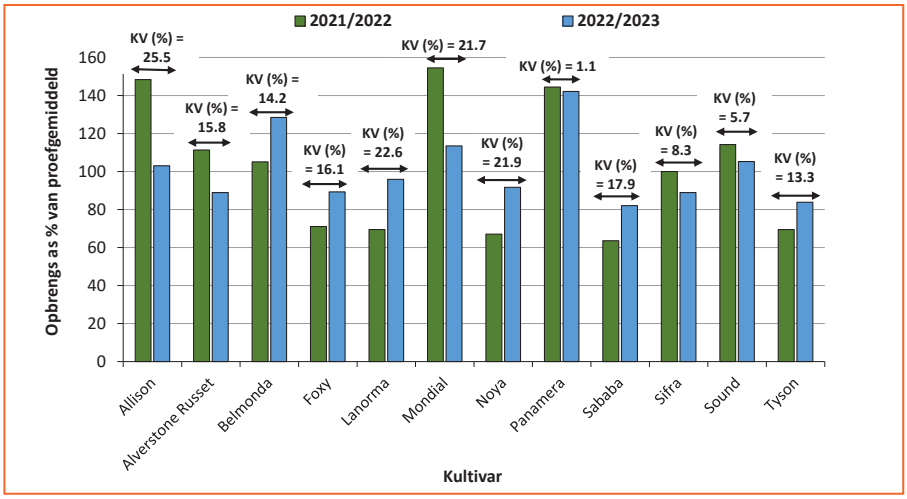
Laastens, wanneer daar gekyk word na die interne kwaliteit van aartappels, kan prosesseringseienskappe ook geëvalueer word. Om te voldoen aan prosesseringsvereistes, moet kultivars aan 'n skyfiekleurnorm van >50 en 'n soortlike gewig (SG) van ≥1.075 voldoen (*Tabel 5*). Verskeie kultivars het die vereiste skyfiekleur getoon sowel as voldoen aan die SG-vereiste.

Tabel 5: Prosesseringseienskappe van kultivars. (Uitgevoer deur LNR-Roodeplaat)

Kultivar	Skyfiekleur[1]	SG[2]	Droëmateriaal (%)[3]
11Z49A1	55	1.080	20.13
11Z55A5	45	1.075	19.24
Allison	48	1.080	20.14
Alverstone Russet	61	1.088	21.91
Amany	50	1.068	17.58
Belmonda	58	1.066	17.18
CMK2012	61	1.076	19.39
CMK2015	56	1.082	20.72
Foxy	49	1.077	19.56
Kelly	56	1.085	21.26
Lady Alicia	61	1.105	25.56
Lanorma	50	1.096	23.66
Lilly	48	1.072	18.62
Mondial	52	1.068	17.63
Noya	53	1.077	19.64
Palace	39	1.077	19.66
Panamera	50	1.070	18.06
Prince	54	1.085	21.26
Sababa	58	1.073	18.79
Sifra	45	1.077	19.56
Sound	50	1.074	18.99
Tyson	42	1.086	21.55

[1]Skyfiekleur met waarde >50 en sonder defekte is aanvaarbaar vir die droëskyfiebedryf.
[2]Soortlike gewig van >1.075 is aanvaarbaar vir die prosesseringsbedryf.
[3]Die persentasie droëmateriaal is 'n berekende waarde:
*DM% = 24.182 + 211.04 * (SG-1.0988). Die werklike persentasiewaarde sal effens verskil tussen variëteite uit hierdie berekeningswaarde.*

Figuur 8: Prestasie van kultivars wat vir albei jaar in die proef ingesluit was, uitgedruk as 'n persentasie van die proefgemiddeld.



Koëffisiënt van variasie (KV%) is ingesluit op die grafiek: 'n Waarde wat in essensie die mate van verskil in prestasie in die spesifieke kultivar oor die aantal jaar voorstel. Hoe groter die KV%-waarde, hoe meer wissel die kultivar se prestasie oor die aantal jare aangedui op die grafiek.

Vir meer inligting, kontak Enrike Verster by enrike@potatoes.co.za of Anjé Erasmus by anje@potatoes.co.za.

Sustaining inclusive potato production in Limpopo

By Rachichi Marokane, national transformation co-ordinator, Potatoes SA

The history of the transformation division of Potatoes South Africa has been well-documented, and the Department of Agriculture, Land Reform and Rural Development (DALRRD) has acknowledged that it has the potential to implement potato industry development programmes across the country.

During the previous season, as requested by DALRRD, Potatoes SA submitted a proposal that would initially see developing farmers and food security projects being supported with production inputs for their respective production scales in the Capricorn district of Limpopo. Following feasibility studies, a compilation of a business proposal, and a due diligence exercise by DALRRD and Potatoes SA, approval for the proposal was granted early in March 2022.

The proposal was initially designed to support potato projects under Potatoes SA's development programmes, but due to the database provided, with additional projects at variable production scales located within the Capricorn district, it had to be amended to support other feasible projects. All these farmers are situated along the various parts of the Limpopo potato belt.

Partnership with DALRRD

Potatoes SA, as a co-funder and implementing agent, initiated the implementation of these projects. As implemented by Potatoes SA over the years, information days, training and mentorship in potato production are expected to be rolled out during the 2023/24 production season. The execution of this project is bound to be a success story seeing as Potatoes SA's transformation division staff are equipped with knowledge of agronomic practices, agricultural economics, as well as project management and administrative skills.

With the price of fuel and electricity having more than doubled in the past five years and potato prices not adjusting to inflation, farmers have been struggling to break even. As mandated by the National Agricultural Marketing Council's (NAMC) guidelines, Potatoes SA continues to commit to sustaining farmers under its programmes. Not only does external funding offer an opportunity to existing farmers, but it also sees Potatoes SA expanding its support to a greater number of farmers and hectares in other regions across the country.

The department and Potatoes SA have been operating parallel to one another, with no overlapping occurring when it comes to the monitoring of projects. Potato

production training was offered by the Agricultural Research Council (ARC), with seed potato production training also conducted along with one of the country's top seed potato growers, Wesgrow.

It is important to note that Potatoes SA and DALRRD cannot fully meet the individual needs of potato producers. However, these farmers have built their own support networks through secondary co-operatives across the district with role-players such as PepsiCo offering off-take prospects.

Potatoes SA remains the mouthpiece of the potato industry, offering support to developing farmers by way of institutional models and facilitating business development units that ensure farming sustainability.

New possibilities

There is still a need for packhouses and sorting and washing facilities to be provided to 95% of the funded farmers. This brings with it a further possible opportunity to invest in a central agro-processing facility that can house post-harvest services located in central points within the province/district with easy accessibility for potato farmers.

It is therefore ideal to align with other programmes in order to determine how issues of market access and infrastructure can be addressed. Potatoes SA sees itself continuing with this form of collaboration, not only in Limpopo, but also in other provinces across South Africa where potato production is feasible.

For any enquiries, email the author at rachichi@potatoes.co.za.

Bursary propels a young lady into a career she loves

By Rotondwa Raligidima, Potatoes SA

The Potatoes SA bursary recipient, Sophy Thaba, was born and raised in Mankweng, commonly known as Turfloop, in Limpopo. She lived there with her parents and three siblings. Sophy says her parents inspired and encouraged her to strive for the things she wanted, helped to develop her intellectually and taught her to respect others.

Raised in a family that embraces agriculture, Sophy could not help but fall in love with the industry at a young age. She assisted her parents with their backyard vegetable garden, which led to her realising early on that she wanted to pursue a career in agriculture.

Finding a path

Upon graduating from high school, her mother encouraged her to enrol in an agricultural diploma course while she was contemplating a specific field. Sophy registered for a course in veterinary nursing at the University of Pretoria in 2010. Upon completing her diploma, Sophy realised she did not want to pursue this career path and enrolled to study biochemistry at the University of Limpopo. She soon realised she was not interested in that course either, and took a gap year.

Sophy Thaba after receiving her BSc degree in agriculture (soil science) in 2018.

Sophy returned to university in 2014. She enrolled for a bachelor's degree in science in agriculture, specifically in the soil science programme, at the University of Venda. Sophy became a Potatoes SA bursary recipient in her third year in 2016 after having applied in 2015. She completed her degree in 2017.

The Potatoes SA bursary programme offered by the Potato Industry Development Trust (PIDT) is aimed at providing financial assistance to students in need who want to pursue a career in agriculture. The bursary enabled Sophy to pay her tuition fees, accommodation, study materials and meals.

A life-changing opportunity

According to Sophy, the bursary significantly impacted her life because it allowed her to pursue her studies without worrying about finances. Potatoes SA also offered her the opportunity to attend its induction programme. She found the programme to be informative and gained a better understanding of the potato industry.

Sophy made Potatoes SA proud by winning awards for best performing student in soil science and agricultural studies. In 2017 she was appointed as a tutor in soil science to assist second- and third-year students.

Sophy currently works at the University of Venda as an assistant teacher. She started working as an intern in 2018 through an internship programme sponsored by the National Research Foundation (NRF). After her internship, she continued her education at the same university and applied for an MSc in agriculture (soil science). She was appointed on a fixed contract in 2020 and now teaches soil chemistry, soil fertility and plant nutrition.

Paying it forward

Sophy appreciates the bursary she received from Potatoes SA and all the opportunities and exposure that came with it. She says that being part of the Potatoes SA programme enabled her to travel to different provinces to attend Potatoes SA events and visit different farms. The most memorable experience was visiting a fresh produce market where she learned about potato quality checks, grading and packaging.

Sophy's gratitude reflects in her work. "I always recommend the bursary to my students and some have even been awarded the bursary for a master's programme," she says. "The bursary offers both financial assistance for undergraduates and postgraduate research funding, so applicants who are interested in potato research would benefit from this fellowship."

A bright future

Sophy is passionate about academic work. She is fulfilled by the process of learning and passing knowledge on to others through lectures and practical work. She hopes to pursue a PhD degree in future.

Sophy encourages struggling students by saying: "Think about what you really want to do. It can be anything, big or small. Once you've decided on your goals, develop systems and habits to work towards them. Take small steps and you're good to go."

For enquiries, email Rotondwa Raligidima at rotondwa@potatoes.co.za.

Reclassified potatoes waiting to be repackaged.

Packaging and repackaging to perfection

By Susan Marais, Plaas Media

"Play to your strengths and outsource your weaknesses." These words by American entrepreneur Gary Vaynerchuk sum up why producers should be thankful to supply chain companies. After all, while potato producers excel at producing one of the more challenging vegetable crops on earth, the packaging and marketing thereof might not be their forte.

This is where companies such as Allways Fresh come into play. The company was established in 2016 after it splintered from NuLeaf Fresh, which was founded in 2012.

"The company procures the majority (95%) of the produce it packs directly from producers," says Roelf Nagel, director of Allways Fresh. They obtain produce from all corners of South Africa and maintain business relations with strategic suppliers around the world, allowing them to supply products which are not readily available in South Africa at certain times.

Farm-level relationships are key

Martie Stopford, procurement officer at Allways Fresh, says there are certain standards producers must adhere to before the company can procure vegetables from them. This includes standards set by local authorities, as well as the internationally recognised certified standard for good agricultural standards, GLOBAL G.A.P. If a farm does not have GLOBAL G.A.P. in place, the produce might still be acceptable. Allways Fresh will, however, conduct extensive minimum residue level (MRL) testing to ensure that produce is safe before value-adding for the retail sector commences.

On paper, this might seem non-threatening, but producers know this is easier said than done. That is why Allways Fresh values honest and clear communication with its producers. "This is the backbone of a good relationship," says Stopford.

"We visit our producers early on in the season to establish whether all required documentation is in order and to determine the farming circumstances and crop quality. Especially with potatoes, you can never say with absolute certainty what a producer's yield will look like. We've seen instances where a top producer had two consecutive seasons in which we were unable to utilise his crop."

Despite the state of a crop, the relationship should never suffer. "We report back to our producers on every delivery by supplying a quality assessment report. We are extremely aware of the sensitivity of working with people's livelihoods and the ongoing sustainability of their farms."

Quality over quantity

Because they deliver a value-adding service to retailers (generic brand packaging), the company can help introduce smaller-scale potato producers and newer entrants to the potato industry. "It's all about quality," Nagel explains.

The only thing that truly matters is quality. Quantity is a less important detail. "Quality will never be compromised when the produce arrives at our value-adding facility in Germiston," Nagel says. "It is important to bear in mind that retailers' standards are much higher than those set out by the Department of Agriculture, Land Reform and Rural Development."

Different parties conduct their own evaluations. Retailers inspect the floor daily; health officials visit at least once a month and MRL testing is done continually. Inspectors from the independent quality assurance company, Prokon, also visit the premises regularly.

"Approximately 100 tons of potatoes are handled by us every day of the week, 365 days of the year. We cannot afford to slip up when it comes to quality." They also work on Christmas day – one of the busiest days of the year at the warehouse.

Stopford says this year has been an especially difficult one for potato producers due to extreme heat, rain and load shedding. "Potatoes remain a very difficult crop to maintain."

Timing is essential

"Ideally, vegetables should not be stored for more than three days in our facility before they are distributed," Nagel says. The inbound quality process at Allways Fresh is stringent. Every load of potatoes received at the packhouse facility is inspected for acceptability based on a visual inspection.

The second inspection is a detailed internal and external quality assessment whereby the product is evaluated according to the Allways Fresh customer base specifications. The detail of ratio to mass and a multitude of defects are checked. Only when the second stage of quality inspection has been completed and the product has passed the stipulated requirements will the delivery be accepted and recorded in their packhouse management system.

"You won't believe how many potatoes are not sorted correctly on farms. It's incredible how many potatoes we still need to take out," Nagel says. "We throw out between 8 and 15% of the potatoes taken in at the warehouse." Allways Fresh packs only grade 1 potatoes for the retail market. Anything below that will be taken to the Johannesburg Fresh Produce Market at City Deep, where it will be sold in order to try and recover the procuring costs Allways Fresh incurred.

The rest of the potatoes that are of the correct standard will be sorted, packaged and sent to the relevant retailer's distribution centres (DCs). Sorting, value-adding and distribution will ideally happen on the same day that the produce is sent to the retailer. The reason why potatoes should be moved to shops as quickly as possible relates to shelf life.

Retailers aren't allowed to keep potatoes on the shelf for more than five days after having been packaged, and seven days during the winter. "If it hasn't been sold and exceeded the sell-by date, the product is removed from the shelf at the retailer's expense," Nagel says.

He adds that unwashed potatoes could potentially play a major role in this regard, as it has a longer shelf life than washed potatoes. "Eighty percent of the world uses unwashed potatoes. Washed potatoes have a shelf life of four to five days, and unwashed potatoes can remain on the shelf for 21 days. Apart from the increased shelf life, unwashed potatoes can also save producers a packet when it comes to labour and water use." Allways Fresh does not have washing facilities at the packhouse.

How is the price determined?

The price that Allways Fresh will pay producers is linked to the daily potato prices established at the Johannesburg Fresh Produce Market. Nagel says a producer must be paid a fair price as the farming operation needs to remain sustainable.

Roelf Nagel, owner of Allways Fresh.

Jaco Koekemoer, marketing manager of Potatoes SA.

Martie Stopford, procurement officer at Allways Fresh.

Allways Fresh's highest costs drivers (apart from the cost of produce) include salaries, labour, logistical and packaging expenses. Packaging makes up approximately 5% of their costs. Other costs include the renting of a prime location in Gauteng, as well as massive load shedding costs. Currently, the company pays around R250 000 per month for diesel to keep their generators running. They are in the process of moving to solar energy. The main office already runs on solar power.

"From our side, we aim to make approximately 2% net profit on all produce that's sent to retail," Nagel says.

Potatoes being inspected at the Allways Fresh repackaging centre.

Adding value

"Value-adding facilities play a vital role in the value chain because they ensure that the quality of produce on the shelf meets the standards that keeps the retail (and ultimately the consumer) happy," says Jaco Koekemoer, marketing manager of Potatoes SA.

Always Fresh keeps track of produce received and supplied to the retail sector by means of a unique traceability code issued to each supplier. Nagel says every unit is linked to a specific farm, identified by the traceability code. Dating is also encrypted on the packaging – if a quality recall is actioned it is easy to identify the origin and date supplied because of the traceability system. However, this rarely happens with potatoes. "We've only seen a recall of potatoes once and that was three years ago," Nagel remembers.

Another attribute of value-adding facilities is the fact that they can negotiate with retailers during times of need to temporarily lower standards (to that of the Department's). "A very cold winter could mean a lot of damage to potatoes. Under these circumstances, we could persuade retailers to allow a 20 mm cold crack," Nagel says, adding that Prokon's approval is also required.

He does not see value-adding facilities taking over the fresh produce market's role. "We need our markets to remain free and independent. We prefer that most produce move through the markets so that a healthy price discovery mechanism is ensured to the benefit of all role-players. After all, that is where a fair price is established."

Various types of vegetables are repacked for retailers daily.

For more information contact Allways Fresh on 011 825 0659 or visit *www.allwaysfresh.co.za*.

Keuses en nogmaals keuses

Deur Eben Rautenbach, PSG Wealth Adviseur

Ons is byna daagliks in 'n situasie waar ons keuses moet maak, wat dit ook al mag wees. Sommige keuses is moeilik en ander is weer maklik. Die moeilikes is gewoonlik dié waar ons onseker is oor wat die regte keuse is en hoe die prentjie vorentoe gaan lyk. Wanneer die impak van die keuse klein is, kan dit soms gemaak word deur 'n muntstuk op te skiet.

Wanneer ek met kliënte sit en hulle met welvaartbeplanning help, hoe en waar hulle moet belê, kan die besluite nie met die opskiet van 'n muntstuk bepaal word nie. Die resultaat kan rampspoedige gevolge hê. Die risiko van hierdie speletjie is net té groot.

Dieselfde geld ook wanneer jy self sulke keuses moet maak, byvoorbeeld: Gaan ek al my geld in 'n besigheid sit wat ek hoop gaan uitwerk? Of gaan ek al my geld iewers in die buiteland belê omdat ek nie meer glo aan 'n toekoms in die land waarin ek bly nie? Dit is belangrik om te onthou dat hierdie twee voorbeelde baie emosionele elemente bevat wat jy sal moet uitskakel wanneer jy keuses uitoefen.

Kom ons plaas dit in perspektief. Gestel dit is Februarie 2020 en jy het die kans om gebeure van die volgende drie jaar vooruit te kan sien. Jy sien Covid en inperkings kom, die plundering in KwaZulu-Natal, die oorstromings, die oorlog in Oekraïne, inflasie en rentekoerse wat die hoogte inskiet, beurtkrag wat Suid-Afrika op sy kop keer en besighede laat sneuwel. So kan ons nog 'n klompie gebeurtenisse hierby voeg.

Met inagneming van al hierdie faktore moet jy besluit waar om jou geld te plaas. Die algemeenste antwoord hierop sal onder jou matras of in die bank wees. Daar is net te veel vrees op die horison. Weereens kry ons emosies die oorhand.

Wanneer ons dan in Februarie 2023 op drie jaar terugkyk, het niemand geweet dat die beste plek Suid-Afrikaanse aandele sou wees gevolg deur buitelandse aandele en dan Suid-Afrikaanse effekte nie. Net so kan ons na ander tydperke kyk waar ons gedink het Suid-Afrikaanse aandele is die beste plek en agterna uitgevind het dit was nie.

> Dit is ook belangrik om te verstaan dat diversifikasie jou nie sal laat voel of jy die lotto gewen het nie; dit versprei wel risiko en help jou om by 'n doelwit uit te kom.

Wanneer ons na bateklasse kyk, kyk ons na prys en waarde en dit weerspieël potensiaal. Hoe dit presies oor die korttermyn gaan uitspeel weet niemand nie en daarom is die antwoord om te diversifiseer in alles wat goeie potensiaal het. Dit is ook belangrik om te verstaan dat diversifikasie jou nie sal laat voel of jy die lotto gewen het nie; dit versprei wel risiko en help jou om by 'n doelwit uit te kom.

Dink mooi oor jou keuses

Ek lees anderdag weer 'n artikel oor die algehele ineenstorting van die Suid-Afrikaanse ekonomie, en dat mense aangeraai word om alle residensiële en genoteerde eiendomme te verkoop, alle bydraes tot aftree-annuïteite te staak, goud te koop, alle diskresionêre portefeuljes af te koop en die geld oorsee te belê. En so gaan dit aan.

Wat is die regte keuse? Niemand gaan weet nie. Die vraag is of die ineenstorting wel sal gebeur. Kan ek nou iets rondom dit beheer? En sê nou dit gebeur nie, en ek het al hierdie drastiese stappe geneem? Weereens, as ek diversifiseer, versprei ek my risiko.

Ek glo diversifikasie is 'n belangrike beginsel en strategie om toe te pas in jou boerdery, jou besigheid, hoe jy welvaart skep, en in menige ander situasies waar keuses uitgeoefen moet word.

Vir meer inligting, kontak Eben Rautenbach (PSG Wealth Bloemfontein Deale Road) by eben.rautenbach@psg.co.za of 072 958 5228.

The art of conciliation

By Anneline Scriven, senior legal advisor, LWO Employers Organisation

The Commission for Conciliation, Mediation and Arbitration (CCMA) in South Africa facilitates the resolution of workplace disputes through conciliation, mediation and arbitration. It serves as a forum for dispute resolution between employers and employees. Conciliation is the first step in the dispute resolution process and aims to reach a mutually acceptable settlement without going to court.

Conciliation is a process before the CCMA, a bargaining council or an accredited agency, where a conciliator will try to assist parties to resolve a workplace dispute. It is a compulsory process by law; however, the outcome is voluntary as it is the right of parties to decide whether they wish to settle the dispute and on what terms.

The process is private and confidential, off the record and 'without prejudice' – nothing the parties say during the process can be held against them in another process, unless by agreement or an order of a court.

Pre-conciliation

The commissioner or a conciliator may contact parties by phone or otherwise prior to the commencement of the conciliation in order to seek ways to resolve the dispute. If the dispute is resolved, the outcome is binding.

Advantages of conciliation

Conciliation is a free process providing for the quick and fair resolution of disputes. It is an opportunity for parties to listen to one another and to attempt to agree on an outcome that will bring closure.

Conciliation process at the CCMA

- **Filing the dispute:** The initiating party must complete and submit the CCMA's prescribed forms within the stipulated timeframe. The other party is notified of the dispute and given an opportunity to respond.
- **Selection of a commissioner:** The CCMA appoints a commissioner who acts as a neutral third party to facilitate the process. The commissioner schedules a date, time and venue for the conciliation hearing.
- **Preparing for conciliation:** Both parties gather relevant documents and evidence to support their case. They may also engage in pre-conciliation negotiations or attempt to resolve the matter informally.
- **Conciliation hearing:** The conciliation hearing takes place at the CCMA office or agreed-upon location. The commissioner facilitates discussions between the parties, encouraging dialogue and exploring possible solutions.
- **Settlement agreement:** If the parties reach a settlement during conciliation, they record the terms of the agreement in writing. This agreement is legally binding and enforceable.
- **Certificate of outcome:** If a settlement is reached, the commissioner issues a certificate of outcome confirming the resolution of the dispute.
- **No settlement reached:** If the parties fail to reach a settlement during conciliation, the matter may proceed to arbitration, where a decision will be made by an independent arbitrator.

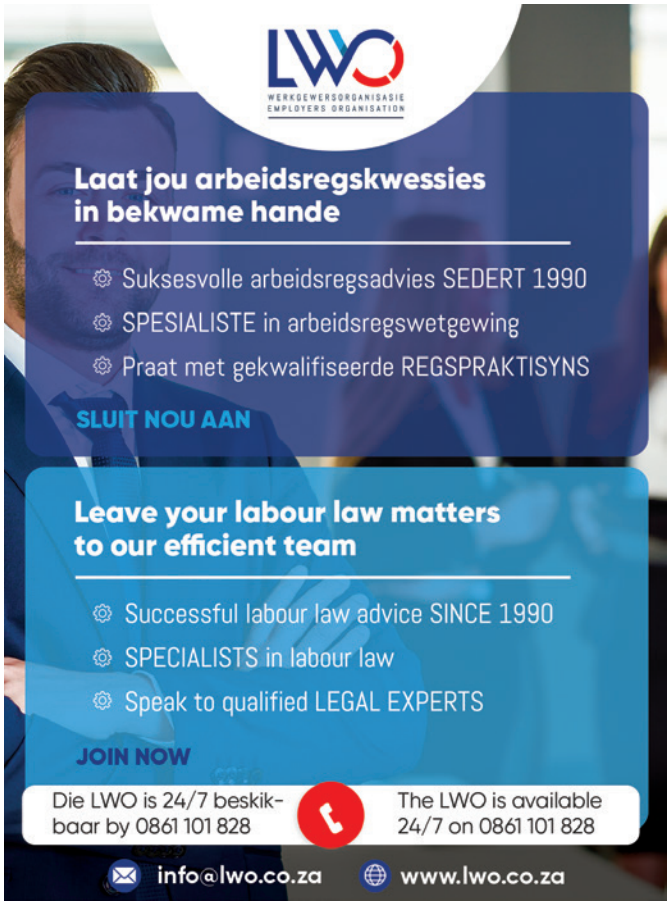
Applying for conciliation

An employee may apply for conciliation using an *LRA 7.11* referral form within:

- Thirty days of the date of dismissal.
- Ninety days of the date of an unfair labour practice.
- Six months of the date of an act of unfair discrimination.
- Six months after the act or omission referred to in section 198D (1) of the *LRA*.

A late referral will require an application for condonation.

For more information, send an email to Anneline Scriven anneline@lwo.co.za.



During April and May 2023, a total of 13 potato producing regions as well as non-producing suppliers delivered potatoes nationally to fresh produce markets.

Average percentage downgraded: **7.64%.**

Total number of bags delivered from 13 regions and non-producing suppliers and inspected on the fresh produce markets: **12 456 035.**

Figure 1: Classes of potato bags inspected at all fresh produce markets during April/May 2023.

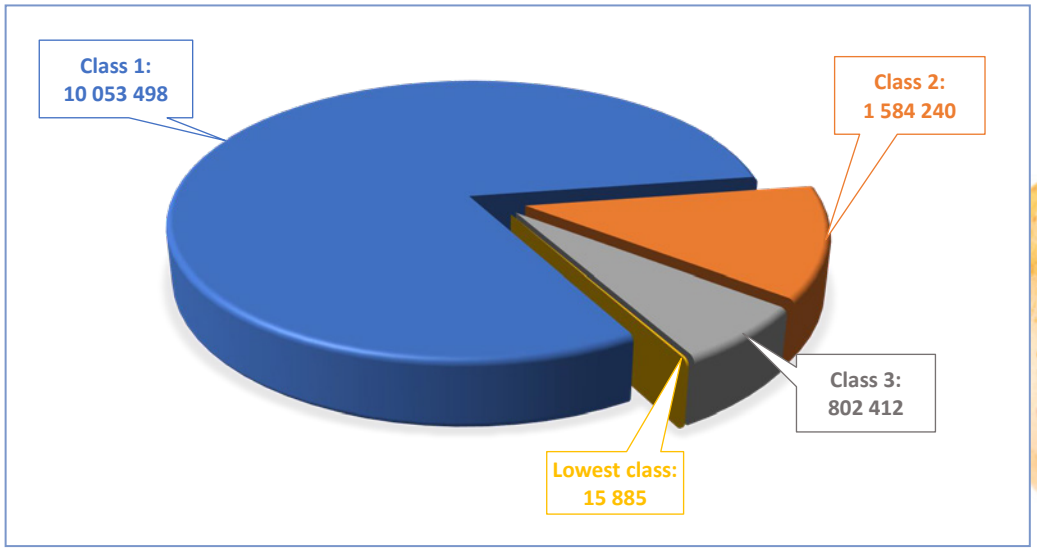


Figure 2: Classes of potato bags downgraded (total 951 250) at all fresh produce markets during April/May 2023.

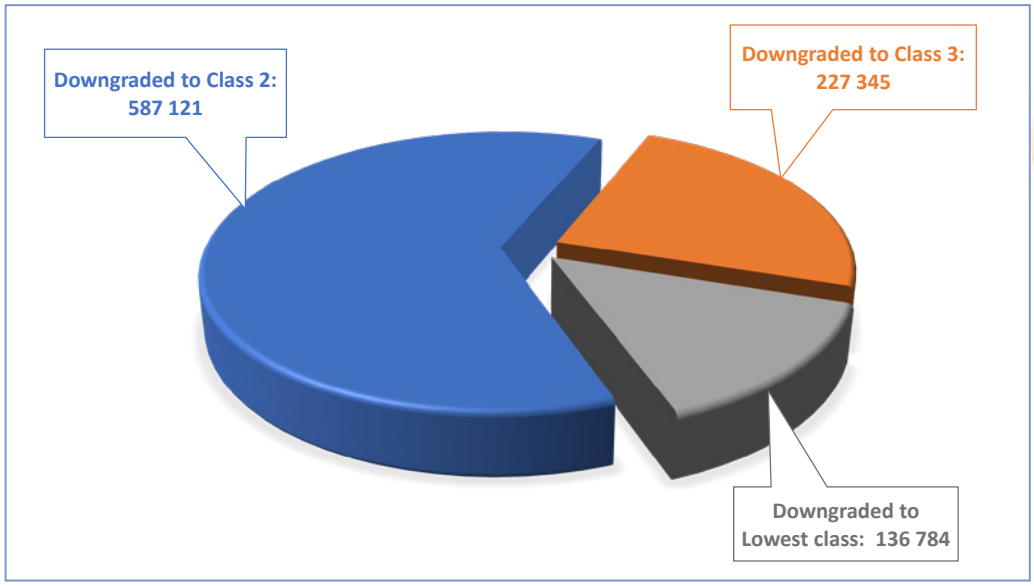


Figure 3: Potatoes downgraded (%) per region at all fresh produce markets during April/May 2023.

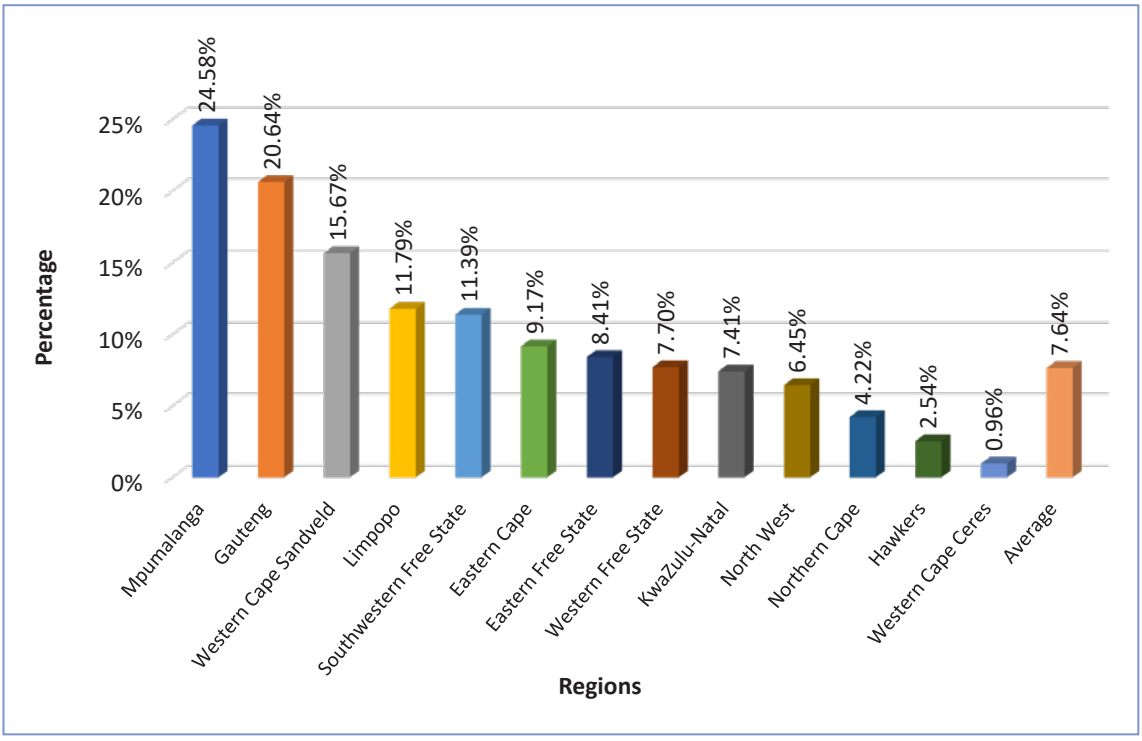
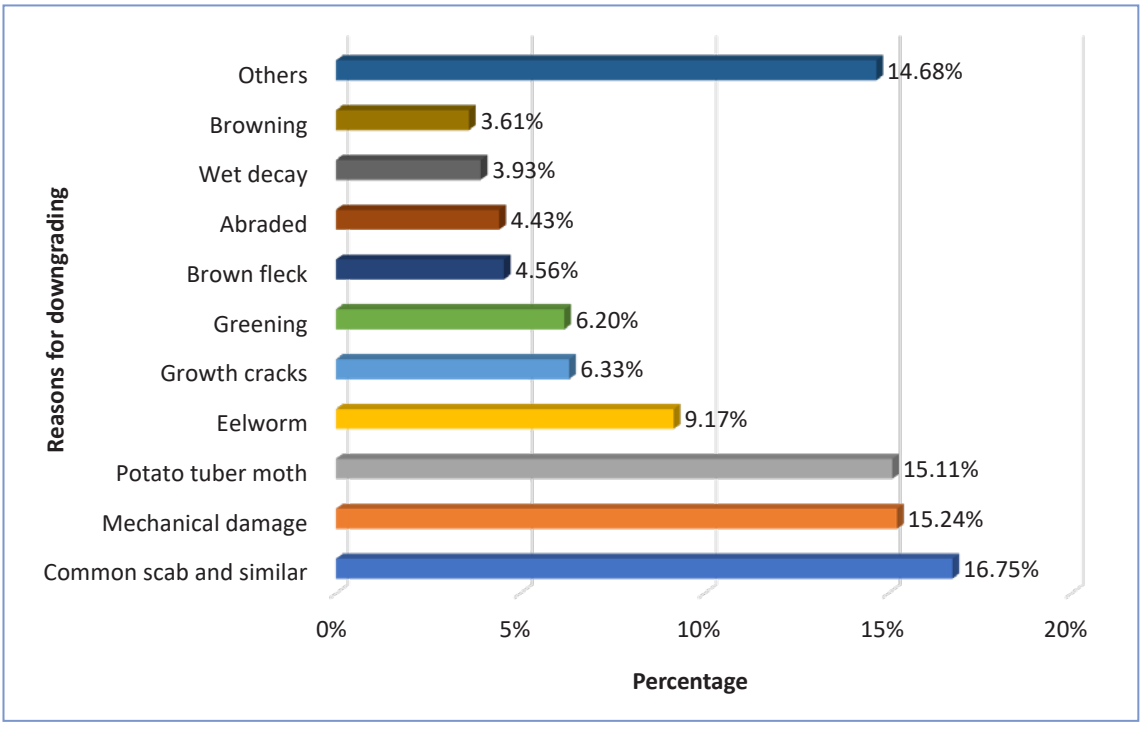
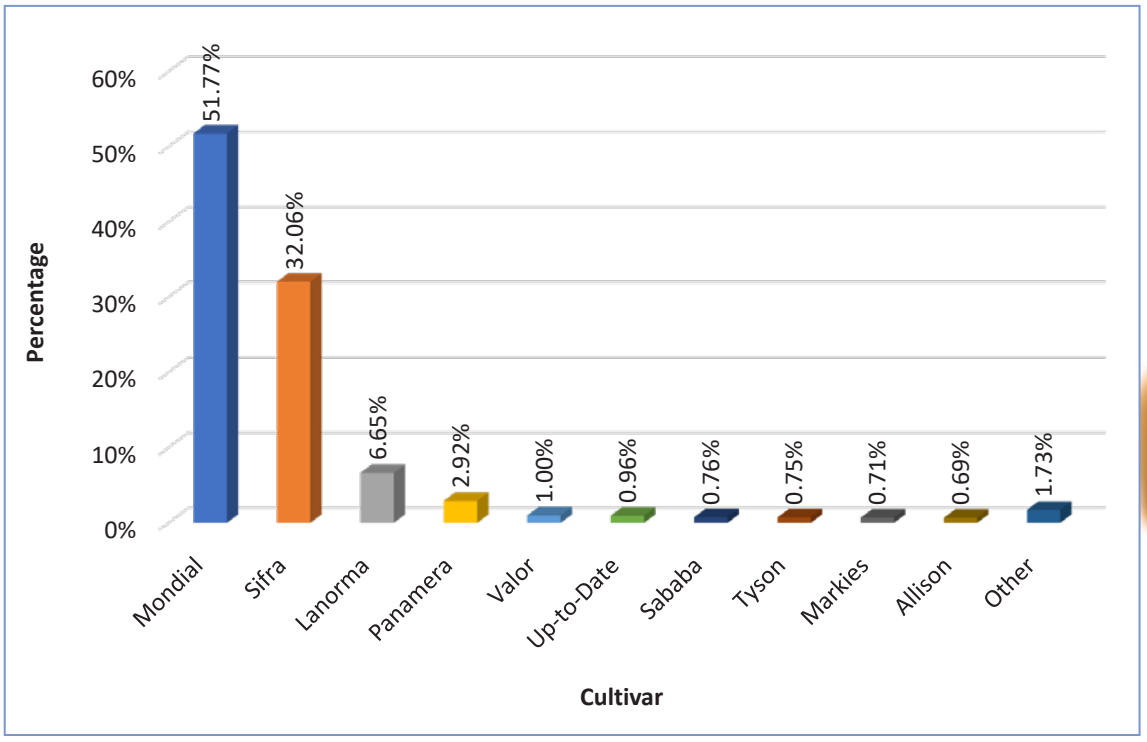


Figure 4: Main reasons for downgrading at all fresh produce markets during April/May 2023.



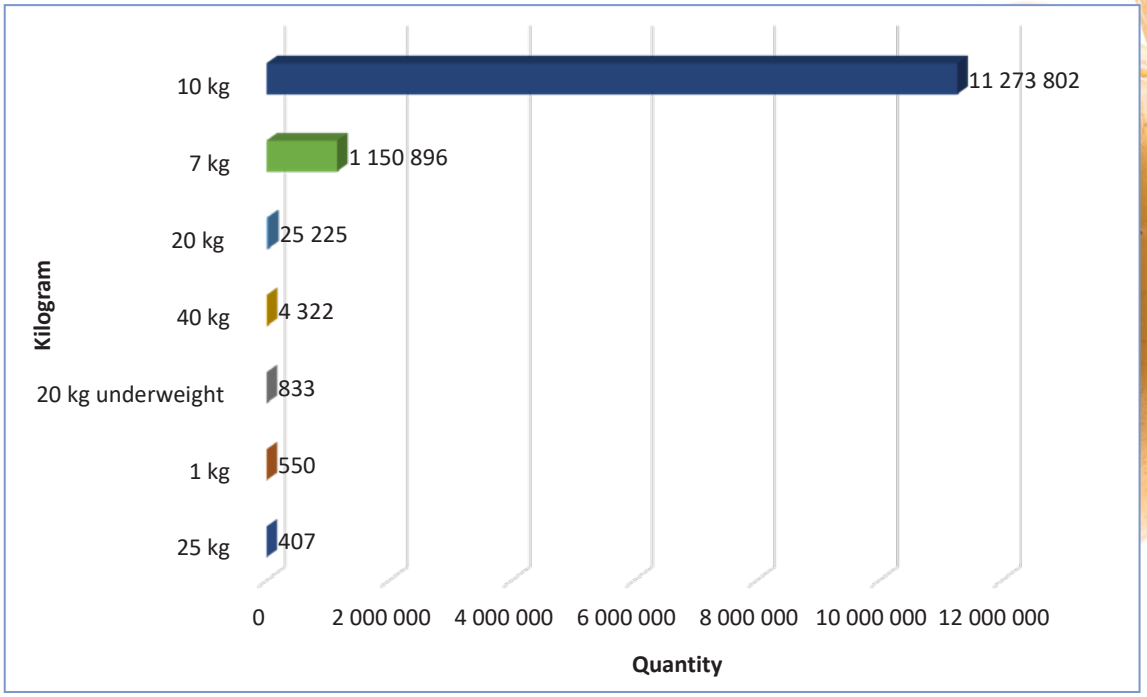
Other include: *Insect damage; malformed; too small; soiled; dry stem-end; hollow heart; watergrass damage (external); skin eelworm; wilt; broken and cut tubers; vascular browning; sprouts; collectively too big and small; cold damage; soiled decay; wet by decayed tubers; watergrass damage (internal).*

Figure 5: Cultivar varieties inspected at all fresh produce markets during April/May 2023.



Other include: *Hertha, Mondeo, El Mundo, Avalanche, Innovator, Savanna, Connect, Electra, Nicola, Taurus, BP1, Almera, Apache (POWW).*

Figure 6: Volumes of different potato bags inspected at all fresh produce markets during April/May 2023.

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