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Cover photo: Roux Conradie

Animal Health and Biosecurity

South Africa's Invisible Shield



Ancient Grain Making a Comeback
From city rivers to farm fields
Sorghum Flour Small-Scale Production

Jongboer van die Jaar 2026 Kompetisies:
Mpumalanga & Wes-Kaap

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Editorial

June has been a month of contrasts and connections in South African agriculture. On one hand, we have celebrated the vision, resilience, and leadership of young farmers across provinces; on the other, we have confronted the hidden threats and systemic challenges that shape our sector's future.

From **Animal Health and Biosecurity**, South Africa's invisible shield against disease, to the **impact of prolonged rainfall on maize quality**, this edition underscores how science and vigilance remain central to safeguarding livelihoods. Articles on **crop lodging**, **polluted water risks**, and **apple replant disease** remind us that resilience is not only about weathering storms but also about anticipating the unseen.

At the same time, we have spotlighted the **Young Farmer of the Year** competitions in Mpumalanga and the Western Cape, celebrating these young leaders. Their stories are not just personal triumphs; they are testaments to generational transfer, innovation, and stewardship.

Heritage and innovation meet in our food features: the **return of pearl millet** as a food security superhero, small-scale **sorghum flour production**, and even culinary delights like **Cajun chicken burgers** and **vegetable salad with macadamia cream**. These articles remind us that agriculture is not only about production but also about nourishment, culture, and joy.

Finally, our ongoing series **From Symptoms to Systems** continues to unravel the complexity of agricultural health, showing how interconnected our challenges truly are.

Together, these articles form a mosaic: of science and soil, of heritage and hope, of farmers who lead with vision and communities that thrive through resilience. As we upload this edition for publication, may it inspire dialogue, innovation, and pride in the agricultural heartbeat of South Africa.

Until next time

Chris

In our [May 2026 edition](#) article "Post-Harvest Innovation: Storage, Packaging, and Value-Adding Technologies", we incorrectly referenced GreenCape in relation to sustainable packaging initiatives. The attribution was made in error. The example referred to broader packaging innovations in South Africa and not to GreenCape specifically.

We regret the oversight and have updated the article to reflect the correction. AgriAbout remains committed to accuracy and appreciates the vigilance of our partners in helping us uphold editorial integrity.

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Animal Health and Biosecurity:

South Africa's Invisible Shield

Agriculture is built on trust, trust that the food we eat is safe, that the animals we raise are healthy, and that the systems protecting them are resilient. Yet South Africa's farmers are facing a storm of biosecurity crises: Foot and Mouth Disease (FMD), Avian Influenza, and African Swine Fever (ASF). These outbreaks are not simply natural misfortunes; they are the result of weak enforcement of government protocols, leaving farmers exposed and the economy vulnerable.

FMD: A Persistent Threat

South Africa's suspension of its **FMD-free status** has blocked beef exports to key markets, costing millions in lost trade. Farmers in provinces such as Free State, Gauteng, KwaZuluNatal, and Mpumalanga are under quarantine, forced to cull herds and absorb losses. Communal grazing areas and game reserves remain reservoirs of infection, yet vaccination coverage and movement control remain inconsistent. The result is a cycle of outbreaks that erodes confidence in the sector and undermines longterm planning.

Avian Influenza: Poultry Under Pressure

Highly Pathogenic Avian Influenza has repeatedly struck poultry operations, forcing mass culling and export bans. Smallscale and backyard farmers, often without resources for advanced biosecurity, are hardest hit. Consumers feel the ripple effect in rising poultry and egg prices. Poor monitoring

of wild bird vectors and inconsistent enforcement of hygiene protocols have allowed repeated incursions, leaving the industry in a constant state of recovery rather than growth.

African Swine Fever: No Vaccine, No Margin for Error

ASF remains active in multiple provinces, with dozens of open outbreaks reported this year. With no vaccine available, control depends entirely on strict quarantine and movement restrictions. Informal pig producers, who often lack awareness or resources, are devastated by herd losses. Weak enforcement of confinement rules and poor awareness campaigns have allowed ASF to spread beyond traditional controlled areas, threatening both commercial and subsistence farmers.

The Cost of Weak Protocols

The economic impact is staggering:

- **Export bans** on beef and poultry have cost hundreds of millions in lost trade.
- **Rising input costs** for feed, veterinary services, and biosecurity infrastructure squeeze margins further.
- **Smallholder farmers** suffer disproportionately, lacking capital to absorb shocks or implement advanced systems.
- **Trust deficit:** Farmers increasingly criticize government veterinary services for slow response, poor communication, and inadequate enforcement of the Animal Diseases Act.

Farmers' Response: Innovation and Vigilance

Despite these challenges, farmers are not standing still. Many are investing in **precision agriculture**, using technology to monitor animal health, manage feed efficiency, and track disease risks. Others are strengthening **farm hygiene protocols** — disinfecting vehicles and footwear, implementing strict cleaning cycles, and controlling pests. Veterinary partnerships are expanding, with private practitioners stepping in where state services falter.

What Needs to Change

For South Africa to restore confidence, decisive action is required:

- **Stronger enforcement:** Movement controls, consistent vaccination, and transparent reporting must be nonnegotiable.
- **Expanded surveillance:** Laboratory capacity and field veterinary services must be scaled up to detect outbreaks early.
- **Farmer support:** Subsidies for biosecurity infrastructure, training, and compensation for culled herds are essential.
- **Regional cooperation:** Crossborder collaboration is vital to prevent diseases from spreading through porous boundaries.

The Human Dimension

Biosecurity is not only about systems — it is about people. Farmers disinfecting boots, workers managing feed safely, veterinarians guiding communities, and inspectors ensuring humane handling at abattoirs all contribute to resilience. Their vigilance protects livelihoods and strengthens trust in agriculture.

A Call to Leadership

The theme of this year's Agri Mpumalanga congress, *Take the Lead*, resonates deeply in this context. Leadership in agriculture today means more than production; it means stewardship, adaptability, and courage to demand accountability. Farmers are calling for government to match their commitment with decisive veterinary systems and practical support.

Conclusion

Animal health and biosecurity are the invisible shield of agriculture. Without them, disease spreads, markets collapse, and trust erodes. With them, farmers can build sustainable enterprises, communities can thrive, and South Africa can compete globally. The outbreaks of FMD, Avian Influenza, and ASF are stark reminders of what happens when protocols fail. But they are also a call to action: to strengthen systems, support farmers, and ensure that agriculture remains a source of growth, opportunity, and hope.





Agri Mpumalanga Jongboer van die Jaar 2026

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Die **Agri Mpumalanga Jongboer van die Jaar kompetisie**, aangebied tydens die jaarkongres op 28–29 Mei by die Forever Resort in Badplaas, het plaasgevind teen die tema “*Neem die Leiding*”. Hierdie geleentheid het jong boere se **bestuursvernuif, tegniese vaardighede en strategiese besluitneming** in die kollig geplaas.

Die kompetisie bied 'n platform waar jong boere erkenning ontvang vir hul vermoë om **volhoubaar en innoverend te**

produseer in 'n uitdagende en dinamiese landbouomgewing. Die beoordelingsproses sluit **plaasbesoeke en 'n deeglike evaluering** van elke kandidaat se bestuurspraktyke, finansiële insig, produksiebenadering en betrokkenheid by georganiseerde landbou en gemeenskappe in.

Teen hierdie agtergrond is **Anton Pelser** aangewys as wenner van die **Agri Mpumalanga Jongboer van die Jaar 2026 kompetisie**, 'n titel wat sy toewyding, geloof en leierskap in die sektor bevestig.





Agri Mpumalanga Jongboer van die Jaar Finalis

Steven Hearne:

Makadamiaboer met 'n roeping

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Op 31jarige ouderdom boer **Steven Ralph Hearne**, 'n finalis in die **Agri Mpumalanga Jongboer van die Jaar kompetisie**, saam met sy pa met **makadamias** in die Mbombelaomgewing. Die plaas lê hoog in die misgordel van die berge, 'n unieke klimaat wat uitstekende produksiepotensiaal bied, maar ook uitdagings meebring wat deeglike bestuur, aanpasbaarheid en langtermyn denke vereis.

Steven se rol is hoofsaaklik die dagtotdag bestuur van die boerdery. Hy is verantwoordelik vir produksiebeplanning, personeelbestuur, logistiek, instandhouding, verwerking en die implementering van nuwe praktyke en stelsels. Hy is ook betrokke by begrotings, kontantvloei, kapitaalbesteding en strategiese besluitneming. "Ek glo goeie boerdery gebeur in die detail, en daarom verkies ek om naby aan die daaglikse realiteit van die plaas te bly. Vir my gaan boerdery oor baie meer as produksie alleen - dit gaan oor rentmeesterskap van die grond, water, mense en die geleentheid wat God aan ons toevertrou het."

'n Roeping, nie net 'n beroep

Van kleins af het Steven geweet hy wil boer. "Dit was nooit vir my net 'n beroep nie - dit was 'n roeping. Daar is vir my iets besonder



daarin om saam met die natuur te werk en elke dag deel te wees van 'n proses van groei en skepping."

Hy vertel dat boerdery 'n mens nederigheid, geduld en geloof leer, omdat jy daaglik besef hoe afhanklik jy van groter dinge as jouself is. "Ek glo regtig 'n mens word met boerdery in jou bloed gebore. Dit is nie altyd maklik nie, maar as jy lief is vir wat jy doen, dra selfs die moeilike dae betekenis."

Eienskappe van sukses

Vir Steven is drie eienskappe onmisbaar vir 'n suksesvolle boerdery:

- **Volhoubaarheid:** "Dit beteken om 'n boerdery te bou wat finansiëel, menslik en produksiegewys sterk genoeg is om oor baie jare aanpasbaar, relevant en winsgewend te bly."
- **Praktiese betrokkenheid:** "Die beste kunsmis vir enige landery is die voetspore van die boer." Hy glo 'n boer moet sy plaas fisies ken, nie net van agter 'n lessenaar af nie.
- **Mensebestuur en finansiële dissipline:** "Jou werknemers is een van jou grootste bates, en sonder dissipline met begrotings,



kostes en kontantvloei is langtermynsukses byna onmoontlik."

Uitdagings en oplossings

Steven wys daarop dat drie groot uitdagings die sektor tans kenmerk:

- Klimaat en weer, wat elke seisoen onseker maak.
- Ekonomiese druk, veral stygende insetkoste en wisselvallige markte.
- Beleids en politieke onsekerheid, wat langtermynbeplanning bemoeilik.

Sy oplossings is prakties en vooruitdenkend: "Goeie boerdery begin by vooruitbeplanning en verantwoordelike bestuur. 'n Mens moet jou risiko's bestuur voordat moeilike tye aanbreek. Waterbestuur, tegnologie en presisieboerdery speel 'n groot rol om meer doeltreffend en volhoubaar te produseer."

Hy beklemtoon ook finansiële dissipline: "Hou skuldvlakke binne beheer, sodat die boerdery veerkragtig kan bly wanneer markte of produksietoestande onder druk is." Verder glo hy jong boere moet aktief betrokke bly by



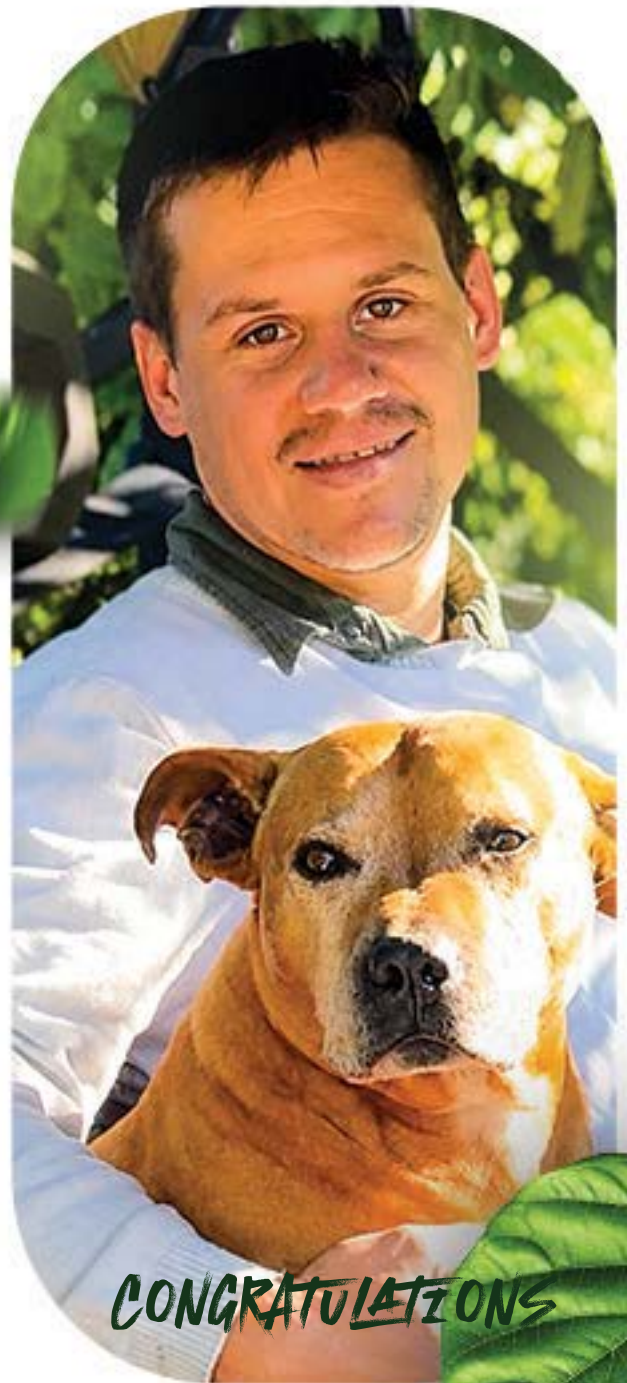
Proudly Honouring Excellence in Agriculture

Congratulations to
Steven Hearne, Young
Farmer of the Year Nominee!

We extend our warmest congratulations to Steven Hearne from farm Coysters near Mbombela on being nominated for the prestigious **Santam Landbou/Agri Mpumalanga** 2026 Young Farmer of the Year award.

This nomination is a testament to your hard work, innovative vision, and dedication to sustainable agriculture. Your commitment to excellence inspires the next generation of agricultural leaders and strengthens our community's food security.

We wish you the absolute best of luck at the upcoming awards ceremony. No matter the result, you are already a winner in our eyes and a true champion for the future of farming.



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georganiseerde landbou en gemeenskappe:
"As ons nie self deel van die gesprek en oplossings is nie, kan ons nie verwag dat dinge gaan verbeter nie."

Motivering en groei

Steven se deelname aan die kompetisie was gemotiveer deur 'n begeerte tot selfontwikkeling. "Dit het my die geleentheid gegee om krities na my eie boerdery en bestuurspraktyke te kyk en myself te meet teen ander jong boere. Ek wou leer — nie net oor produksie nie, maar ook oor leierskap en die groter rol wat jong boere in SuidAfrika moet speel."

Hy sê die ervaring het hom uit sy gemaksonne geneem en hom gedwing om meer doelbewus oor die toekoms van sy boerdery en sy eie ontwikkeling as boer te dink.

Raad aan jongboere

Sy raad is eenvoudig maar kragtig:

- "Moet nooit ophou leer nie. Luister na ouer boere, mentors en mense met ervaring."
- "Wees prakties betrokke by jou plaas en moenie bang wees om hard te werk nie."
- "Bou goeie mense rondom jou en belê in hulle. Niemand bou 'n suksesvolle boerdery alleen nie."
- "Bly geanker in jou geloof. Daar gaan moeilike seisoene wees, maar geloof gee



perspektief en hoop wanneer dinge onseker raak."

'n Boer met 'n nalatenskap

Steven glo boerdery gaan oor meer as net kosproduksie. "Boere bestuur natuurlike hulpbronne, skep werk, ondersteun gemeenskappe en help bou aan die toekoms van die land. Vir my gaan boerdery uiteindelik oor nalatenskap — om die grond, mense en geleenthede wat aan jou toevertrou is beter agter te laat vir die volgende geslag."

Hy glo die toekoms van Suid-Afrikaanse landbou bly sterk, mits jong boere aanpasbaar, nederig en leergierig bly, sonder om die waardes van harde werk, geloof en goeie rentmeesterskap te vergeet.





Agri Mpumalanga Jongboer van die Jaar Wenner

Anton Pelser:

'n Jongboer wat die leiding neem

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Op 33jarige ouderdom is **Anton Carel Pelser** tydens Agri Mpumalanga se jaarkongres op 28–29 Mei by die Forever Resort in Badplaas, aangewys as die provinsie se **Jongboer van die Jaar 2026**. Anton boer saam met sy pa, wat hy as sy mentor beskou op hul plaas **Astro Boerdery** in die Hendrina Omgewing. Dit bestaan uit 'n **saai en beesboerdery** wat mielies en sojabone op 'n 50/50 wisselboustelsel insluit. Hierdie stelsel fokus sterk op **grondbestuur en langtermyn opbrengspotensiaal**.

Die veekomponent bestaan uit 'n **Angus stoet** sowel as kommersiële diere, met aangeplante weidings wat onder die vee bestuur word. Anton is medeverantwoordelik vir die bestuur van die plaas en speel 'n groot rol in produksiebeplanning, aankope, verkope, finansiële besluite en die daaglikse koördinering van plaasaktiwiteite. Hy plaas klem op **presisieboerdery** en die implementering van nuwe tegnologie.

'n Beroep wat jou kies

Vir Anton was landbou nog altyd 'n roeping. "Ek dink landbou is 'n beroep wat jou kies. Dit is van kleins af wat ek wou doen en ek het nooit 'n ander beroep oorweeg nie. Die afhanklikheid van God en die feit dat jy die resultaat van jou werk kan sien, maak dit uniek. Nie twee dae is dieselfde nie."





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Baie geluk, Anton Pelser!

Dit is vir ons by Platorand Aviation Services 'n voorreg om deel van jou pad te wees en jou as die wenner van die Mpumalanga Jong Boer van die Jaar kompetisie te sien.

Jou harde werk, toewyding en passie vir die landboubedryf is werklik inspirerend. Dankie vir jou vertroue en lojale ondersteuning deur die jare.

Mag hierdie prestasie net die begin wees van nog groter hoogtes. Ons wens jou alle sukses toe vir die kompetisie — jy maak reeds 'n verskil in die bedryf!

Baie sterkte en geluk met hierdie besondere prestasie!

Juan en Zandee Steenkamp met die span van Platorand Aviation Services.

Kontak ons vir die diens van vliegtuie op Middelburg Vliegveld



Eienskappe van sukses

Hy glo drie eienskappe is noodsaaklik vir 'n boerdery wat volhoubaar en vooruitstrewend wil wees:

- **Passie en werk:** "As boerdery nie jou passie is nie, gaan die nodige werk nie gedoen word nie en is vooruitgang nie moontlik nie."
- **Aanpasbaarheid:** "Jy moet kan aanpas by veranderinge en bereid wees om nuwe goed te probeer. Gebruik die hulpbronne wat tot jou beskikking is."
- **Deeglike beplanning en bestuur:** "Insette en kontantvloei moet effektief bestuur word. Jy moet weet waarheen jy wil werk en hoe jy daar wil kom."

Uitdagings en oplossings

Anton wys daarop dat drie groot uitdagings die sektor tans kenmerk:

- Onvoorspelbare weer.
- Onvoorspelbare graanpryse.
- Die kosteknyptang wat alle boere raak.

Sy oplossings is prakties en strategies:
"Risikobestuur is belangrik. Ons gebruik kultivars met verskillende groeilengtes om risiko te versprei en kyk deeglik na watter



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VEELS GELUK ANTON PELSER

Ons by Platorand Lugbespuiting BK is werklik trots op jou aanwysing as die Mpumalanga Jongboer van die Jaar.

Ons wens jou alle sukses en voorspoed toe. Ons het 'n jare lange verbintenis met Astro Boerdery en is saam trots op die mooi prestasie.

Jy maak 'n reuse-impak op die bedryf en ons weet jy sal dit aanhou doen.

Beste wense,

Sias en Mandie Steenkamp asook die Platorand Lugbespuiting span.



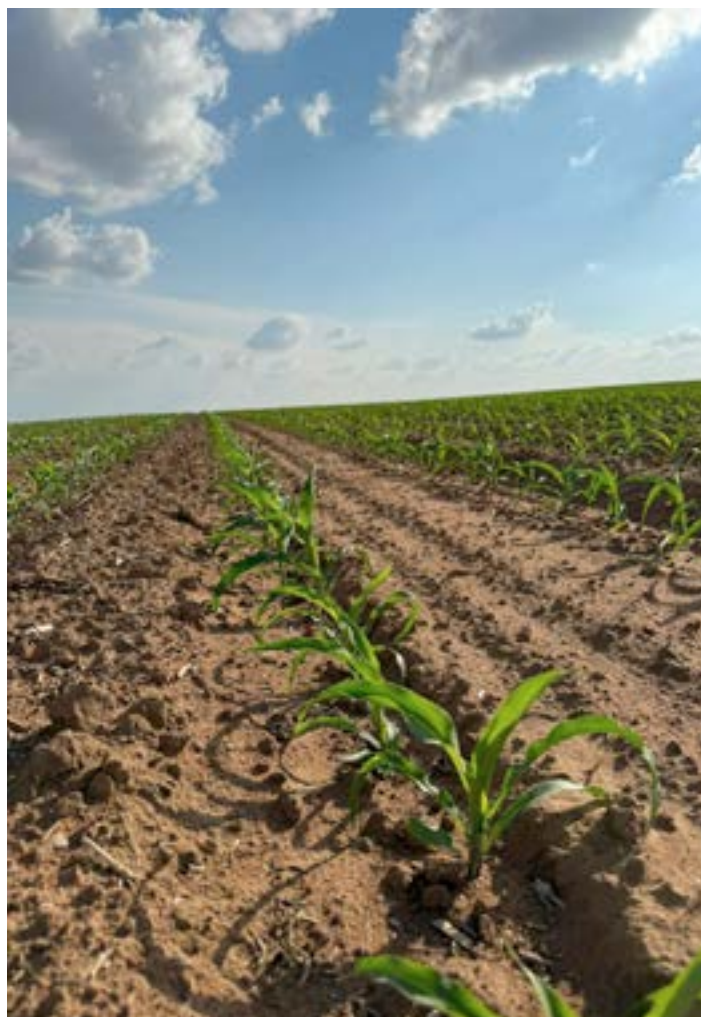
kultivar op watter land geplant moet word. Bemaking van graan is een van die moeilikste en belangrikste besluite om winsgewend te wees - sporadiese bemaking werk vir ons goed. Die kosteknyptang is 'n realiteit, daarom probeer ons om insette per hektaar so effektief moontlik te bestuur ten einde goeie opbrengste te verseker. Opbrengs op belegging is belangrik, jy moet nie jou oes koop nie. Die gebruik van tegnologie help ons om presisieboerdery toe te pas."

Motivering en deelname

Anton is deur die voorsitter van sy boerevereniging genomineer. "Dit was vir my 'n eer. Dit is 'n geleentheid om buite jou gemaksonde by ander boere te leer, en ook om te toets of jy op die regte pad is."

Raad aan jongboere

Sy raad is eenvoudig maar kragtig: "Ek leer nog elke dag. As jy nie weet nie, moenie bang wees om te vra nie. Gebruik die hulpbronne tot jou beskikking. Boerdery is 'n geloofsaak. As jy saad in die grond sit, glo jy dit gaan reën en daar gaan 'n oes wees. God sal sorg, maar jy moet jou kant bring. Moenie opgee nie."



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Baie geluk aan Anton Pelser met sy welverdiende aanwysing as Mpumalanga Jongboer van die Jaar!

Jou passie, harde werk en toewyding tot die landboubedryf is 'n inspirasie. As 'n trotse verskaffer aan jou boerdery is dit vir ons 'n voorreg om deel van jou suksesverhaal te wees.

Ons wens jou alle voorspoed toe en sien uit na nog baie mylpale saam.

Van almal by Ermelo Toyota - baie geluk, Anton!

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Baie Geluk Anton Pelser Astro Boerdery

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Hy beklemtoon ook die waarde van 'n sterk gesinsbasis: "n Goeie vrou en gelukkige huis is van onskatbare waarde. Dit bou jou op en ondersteun jou as dinge soms moeilik is."

Ervaring as wenner

Oor die oomblik toe sy naam as wenner aangekondig is, sê Anton: "Dit was 'n besondere oomblik van dankbaarheid en trots. Wanneer jy daaglik besig is met die uitdagings en verantwoordelikhede van boerdery, staan jy nie altyd stil by wat reeds bereik is nie. Om my naam as wenner te hoor, was vir my 'n bevestiging van harde werk, toewyding en ondersteuning van die mense om my."

Hy voeg by: "Op 'n persoonlike vlak gee dit my selfvertroue en bevestiging dat die manier waarop ek sake aanpak, besluite neem en uitdagings hanteer, op die regte pad is. Vir die boerdery is dit 'n erkenning van die werk wat oor tyd gedoen is. Geen boer bereik sukses alleen nie, en ek sien hierdie titel ook as 'n weerspieëling van die span, familie en ondersteuningsnetwerk wat deel is van die boerdery se sukses."



Agri Mpumalanga Jongboer van die Jaar 2026.



JONG BOER. GROOT IMPAK.

Baie geluk, **Anton Pelser**, met jou aanwysing as Agri Mpumalanga se Jongboer van die Jaar 2026!

Jou reis bewys: Wat met hart geplant word, groei tot uitnemendheid.

Die VKB Groep is besonder trots om geassosieer te word met Astro Boerdery, en waardeur die vertroue en getroue ondersteuning wat ons vennootskap oor die jare laat floreer het.

Mag elke seisoen vorentoe nuwe geleenthede en oorvloed bring.



GROOT **DROME.**
GROOT **TOEWYDING.**
GROOT **PRESTASIE.**

**'N WELVERDIENDE ERKENNING
VAN UITNEMENDHEID ...**

Bayer wens graag vir **Anton Pelser**
geluk met sy toekenning as Jongboer
van die Jaar 2026!

Hierdie uitsonderlike prestasie weerspieël die
toewyding waarmee jy elke uitdaging op die
plaas aanpak en die uitnemendheid waarna jy
voortdurend streef. Jou passie vir boerdery en
jou strewe na groei en innovasie is 'n inspirasie
vir die volgende generasie boere.

***Bayer is dankbaar om deel van jou
reis te wees en ons sien uit na die
vele hoogtes wat jy nog gaan bereik.***



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Toekomsvisie

Anton se raad aan jongboere is om nooit op te hou leer nie: "Vra vrae en maak gebruik van die kennis en ervaring van mense om jou. Moenie oorhaastige besluite neem nie, en toets nuwe idees eers op 'n kleiner skaal voordat jy dit volledig implementeer. Fokus op dit wat binne jou beheer is en doen dit elke dag na die beste van jou vermoë. Wees geduldig, bly aanpasbaar en vertrou op die Here se leiding en genade deur die goeie en moeilike tye."

Sy doelwit bly eenvoudig: "Om vir nog baie jare met passie en dankbaarheid te kan boer. Ek streef daarna om elke jaar beter te doen as die vorige een — of dit nou in produksie, bestuur, doeltreffendheid of persoonlike groei is. Boerdery is 'n voortdurende leerproses, en ek wil aanhou ontwikkel, nuwe geleenthede ondersoek en 'n volhoubare boerdery bou wat ook vir toekomstige geslagte waarde kan skep."

AgriAbout wens **Anton Pelser** hartlik geluk en wens hom alle sukses toe vir die **Nasionale Jongboer van die Jaar kompetisie later vanjaar**.



**Baie geluk Anton Pelser
Mpumalanga Jongboer van die Jaar
Molatek is trots om met jou boerdery
geassosieer te word.**



Mpumalanga Jongboer van die Jaar!

*Baie geluk Anton Pelser, dit is vir Rand Agri
'n voorreg om sedert 2002 nou al met die
derde generasie van Astro Boerdery besigheid
te doen.*

*Dankie vir jul ondersteuning en ons wens
jou en jou nageslag alle voorspoed toe met die
voortgesette uitbouing van Astro Boerdery.*

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The Ancient Grain Making a Comeback:

Could Pearl Millet Be South Africa's Food Security Superhero?

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Throughout South Africa, from the semi-arid plains of Limpopo Province to the heat-stressed farms of the North-West Province, a pressing question echoes louder with each passing season: which crops can still guarantee reliable harvests in the face of climate change? For decades, maize has been the cornerstone of South Africa's food system, shaping diets, markets, and agricultural policy. Yet, as droughts intensify, rainfall patterns grow increasingly erratic, and the costs of fertilizer and other inputs continue to rise, maize alone is proving to be a fragile foundation for national food security.

This challenge is not unique to South Africa. Globally, farmers are grappling with the reality that conventional staple crops are struggling to adapt to shifting climatic conditions. The solution may lie not in new technologies alone but in rediscovering indigenous grains, such as pearl millet.

A crop built for tough conditions

Pearl millet, with its origins in the Sahel region more than 4,000 years ago, is a crop inherently designed for survival. It thrives in

high temperatures, tolerates poor and acidic soils, and most critically produces grain under low and erratic rainfall. These traits make it uniquely suited to the very conditions now facing South African farmers.

Why pearl millet matters now

South African agriculture faces a crisis. Farmers confront unpredictable seasons, escalating fertiliser costs, declining soil fertility, and increasingly frequent heatwaves. In many smallholder and low-input systems, crop failure has shifted from being an occasional setback to a recurring threat. Against this backdrop, pearl millet offers a compelling alternative.

Unlike maize, which is highly vulnerable to prolonged dry spells, pearl millet demonstrates exceptional resilience (Figure 1). It uses water efficiently, maintains growth under extreme heat, and produces grain even when rainfall is scarce or irregular. For farmers in marginal environments, this reliability can mean the difference between harvest and hunger.

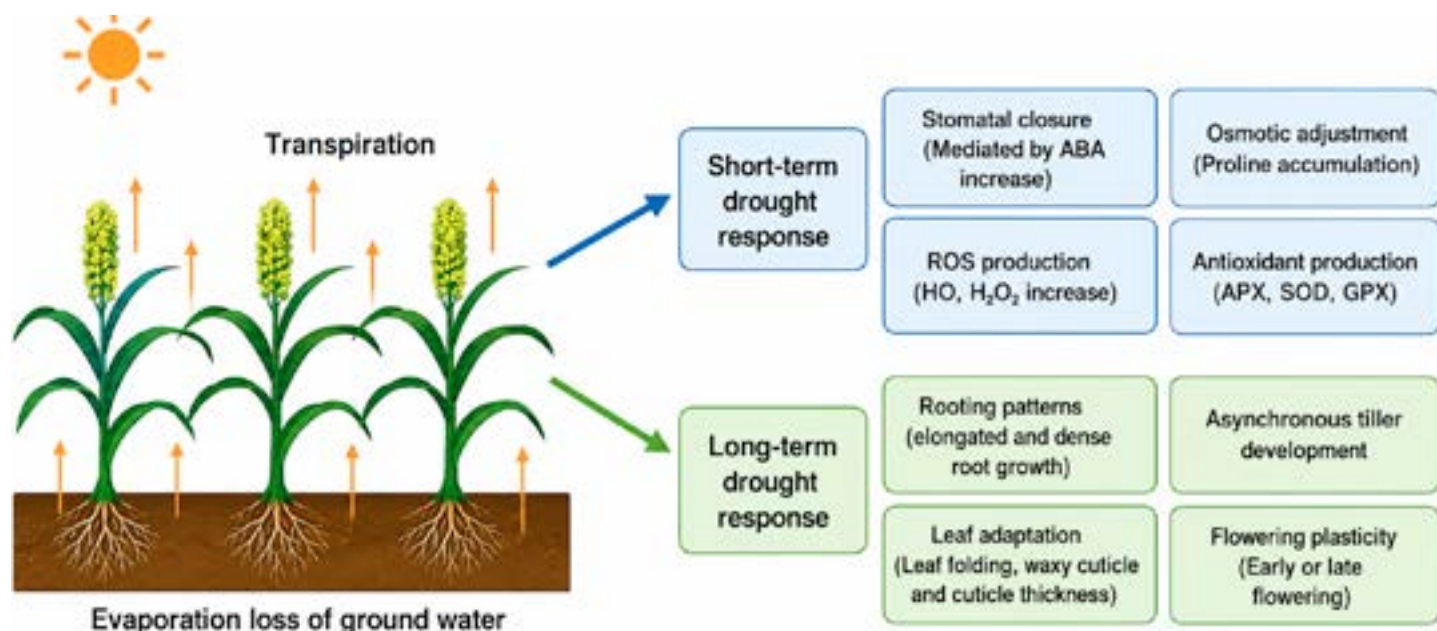


Figure 1: Short-term and long-term drought responses in pearl millet, including antioxidant defence mechanisms against reactive oxygen species (ROS) (<http://doi.org/10.3389/fpls.2023.1059574>).

A familiar solution hiding in plain sight

While pearl millet is not widely grown in South Africa today, it is not entirely unfamiliar. South African farmers already experiment with sorghum and cowpea; pearl millet fits naturally into this resilience strategy. It also offers flexibility. The grain can be used

for porridge, flour, and traditional foods. The crop itself can serve as livestock feed, fodder, or even a source of fuel in resource-constrained settings. In mixed farming systems, this versatility is a major advantage (Figure 2).

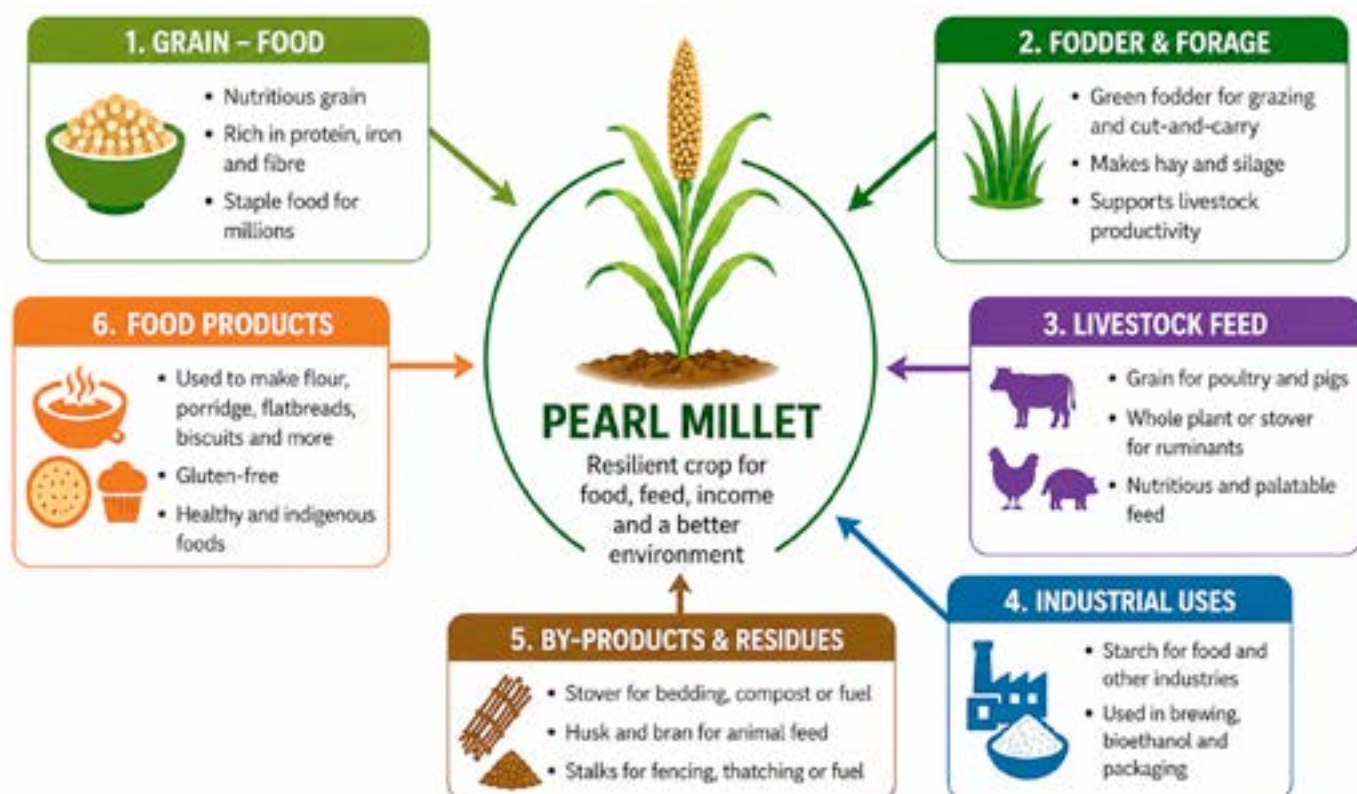


Figure 2: The versatility of pearl millet (one crop, many uses, multiple benefits)



So why is it not widely grown?

Despite its strengths, pearl millet remains largely underutilized in South Africa. Historically, maize and wheat dominated, sidelining indigenous crops.

Barriers include:

- Limited availability of locally adapted seed
- Low consumer awareness and demand
- Few processing and value-chain opportunities
- Limited research investment compared to major crops

Conclusion

Food security in South Africa is no longer simply a matter of producing more maize or wheat; it is about building resilience into farming systems that must withstand the shocks of climate change. Pearl millet, with its proven ability to thrive under heat stress, poor soils, and erratic rainfall, offers precisely that

resilience.

Its role is not to replace maize, but to complement it—providing farmers with a safety net when conventional crops fail and ensuring households retain access to food and fodder even in the harshest seasons.

Barriers such as seed availability, consumer awareness, and weak value chains are real but surmountable with targeted investment. Ultimately, the true superpower of pearl millet lies not in its yield potential alone, but in its ability to offer reliability where uncertainty dominates. In a climate-stressed future, rediscovering ancient grains like pearl millet may be one of South Africa's most powerful strategies for safeguarding food security.

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From Symptoms to Systems:

PART 3

Where it Unravels

Dr Ida Wilson

Independent Crop Production Consultant

If crop production were as simple as identifying problems and correcting them, outcomes would be predictable. They are not. Even in well-managed systems with skilled decision-makers and advanced tools, results remain inconsistent. The same programme applied in two fields can produce very different outcomes. A treatment that worked one season may fail the next. Inputs are increased, refined, and adjusted, yet problems persist. This is not unusual—it is normal. Here, the limits of current thinking begin to show.

Assumptions in Decision-Making

Most crop management follows a logical sequence: observe the problem, identify the cause, apply a solution. This assumes observations are accurate and complete. It assumes visible symptoms reflect the true state of the system. Often, they do not.

The Disconnect Between Observation and Intervention

What is observed is often the final expression of interactions already underway. By the time symptoms appear, conditions have been developing for days or weeks. The system has already shifted, and the chance to influence the original cause may have passed.

Example: Blueberry Orchard

Lesions appear on flowers, so a fungicide programme is implemented. Logical, often necessary. Yet infection may have begun

weeks earlier under favourable conditions. By the time lesions are visible, the disease is entrenched. Intervention can limit the spread but cannot reverse what has occurred. Here, timing is not just important, it is decisive.

Simplification and Its Risks

Yield reduction is often attributed to one factor, fertilisation, pests, or drought. Each may be partly correct, but rarely the full picture. The performance of the plants results from multiple factors acting together over time. Isolating one cause simplifies the problem but narrows the solution.

Example: Maize Field Variability

Uneven growth may be treated with fertiliser. Yet variability may stem from soil structure, compaction, or water distribution set early in the season. Fertiliser may improve growth, but variability remains. The symptom is treated, but the pattern persists.

Preventative Strategies and Uncertainty

Simplification drives preventative inputs: fungicides applied before disease is confirmed, herbicides applied before weeds emerge, and insecticides applied before infestations. These aim to protect yield. Although often justified, they remain rooted in uncertainty.

Without accurate detection, it is unclear what is being managed, or if intervention is needed. Entire systems are treated for potential



problems rather than confirmed ones. This leads to overuse of inputs, higher costs, and unintended consequences like resistance of biological populations to pesticides.

Conditions and Effectiveness

Even correct decisions may fail. Effectiveness depends on timing, environment, plant physiology, and application accuracy. A herbicide may fail under suboptimal conditions, not because it is ineffective, but because temperature, moisture, or growth stage of weeds are misaligned with its mode of action. A fungicide may fail if canopy density prevents coverage. Failure is more often blamed on the product itself, rather than the conditions of use.

Snapshots vs. Dynamics

Observations are often single snapshots, but crop systems are dynamic. A disease detected early may spread rapidly if rainy weather delays fungicide application. By the time intervention is possible, the system has already shifted.

The Cycle of Adjustment

Problems are observed, interventions applied, outcomes evaluated. If unsatisfactory, adjustments follow. This cycle repeats all season, each adjustment chasing the shortcomings of the last. It does not address underlying instability.

Escalating Complexity

Over time, programmes grow more detailed,

intensive, and input-dependent. Decision-making becomes reactive. The system grows harder to manage, not easier.

Variability and Uncertainty

Outcomes become less predictable despite greater effort. Producers may begin to question their approach: despite following recommendations and applying inputs, results do not meet expectations.

This reflects not poor management, but the **limits of the decision-making** framework. Current thinking breaks down because it assumes problems can be solved in isolation, in systems where everything is connected.

Toward Systems Behaviour

To move forward, the focus must shift from isolated problems to system behaviour. We must look beyond symptoms, beyond single factors, and beyond snapshots. We must understand how conditions develop over time, how components interact, and how decisions shape the system. This requires a fundamental change in perspective.

In the next edition of AgriAbout, we will explore hidden constraints in crop production systems and the importance of systems thinking in reducing vulnerability.

Contact the author: ida@cropgeniusai.com

Read PART 4 (**Hidden Constraints**) in the next edition of AgriAbout

The impact of prolonged rainfall on maize quality

Ndwandwe Fezeka, Dr Zuma-Netshiukhwi Gugulethu and Chauke Mkatoko
Agricultural Research Council: Natural Resources and Engineering

In the context of increasing climate variability and the occurrence of extreme weather events during the cropping season, landrace maize (*Zea mays* L.) varieties face significant challenges that can adversely affect plant development, grain quality, productivity, seed security and food security. Prolonged rainfall events, as experienced in most part of the South African provinces, often associated with climate change, has evidently led to waterlogging, increased lodging incidence, delayed physiological maturity, and heightened susceptibility to fungal diseases such as ear rot and disease infestation. Excess moisture during the reproductive and grain-

filling stages creates conducive conditions to the explosion of toxigenic fungi, particularly *Fusarium* and *Aspergillus* species, which synthesize mycotoxins including aflatoxins, that pose significant risks to food and feed safety.

Simultaneously, sustained soil saturation and high percentage of relative humidity impede kernel drying process, resulting in elevated grain moisture content at harvest that renders the grain physiologically susceptible to microbial respiration, heating, and structural deterioration during storage.



Picture 1 Illustration of maize sprouting on different landrace maize varieties

The physical kernel integrity is further compromised through a plethora of factors such as waterlogging-induced lodging, ear rot and grain mould development, and stress cracking.

Observations at landrace seed multiplication confirmed that persistent wet conditions induce pre-harvest sprouting, reduce kernel weight, and test weight, and diminish seed vigour and germination potential. Waterlogged soils and accompanying winds also increase the incidence of lodging and ear drop, resulting in substantial harvest losses. Collectively, these factors reduce the economic value of maize grain and pose challenges for shelling, storage deterioration, processing, and food safety.

Pre-harvest sprouting

Pre-harvest sprouting represents a significant challenge to agricultural productivity, characterized by the premature germination of grains while the cob is attached to mother plant. This was observed on at sites and was associated with rainfall and high humidity during late February/March 2026 heavy rainfall which occurred 5-7 days consecutive days of severe rainfall, ranging between 10 to 25 mm/day (Picture 1 & 2), this finding was also recorded by. The dry and wet fluctuations result to grain swell and shrink, facilitating seed cracking and renders the kernel susceptible to germination under favourable environmental conditions. This process results in the hydrolysis of starch granules, a decrease in molecular weight, and a marked

reduction in peak and final starch viscosities. This further results in the loss of grain viability and seedling vigour, rendering the seeds unsuitable for future planting. Moreover, many traditional and modern varieties have reduced levels of seed dormancy, which makes it more susceptible to sprouting when environmental conditions are ideal for absorption of water.

Difference between mould and mycotoxin

Molds and mycotoxins are closely related but fundamentally different (Table 1). Molds are living microscopic fungi that grow on crops, food products, and other organic materials under favourable climatic conditions such as high atmospheric relative humidity, high water content and warm temperatures. In contrast, mycotoxins are toxic chemical compounds also referred to as secondary metabolites produced by certain Mold species during its growth and development. While Mold contamination is often visible as discoloured, powdery, or fuzzy growth on plant tissues, mycotoxins are invisible and may remain in the crop even after the Mold is no longer present. In maize, fungal species such as Fusarium and Aspergillus infect ears and kernels, particularly under prolonged wet conditions, leading to the production of mycotoxins such as Fumonisin and Aflatoxin. Therefore, although Mold growth can reduce grain quality and market value, the presence of mycotoxins poses a more significant threat to food safety, animal health, human health, and economic sustainability due to their persistence and toxicity.

Table 1. The key practical differences between Mold and mycotoxins

	Mold	Mycotoxins
Nature	It is a living organism, mushrooming under conducive climatic conditions	A secondary metabolite, chemical compound
Visibility	Often visible as fuzzy patches (white, green, black, and other colours)	Invisible, odourless, and much smaller than spores and can penetrate deeper into the lungs
Purification	Yes, the spores can be removed by using decontaminators	Chemically stable: mycotoxins persist even after the mould is removed
Health risks	The spores can cause allergic reactions and respiratory irritation when inhaled	Toxic effects (liver damage, immunosuppression, carcinogenesis)
Path of exposure	Inhalation of spores	Ingestion of contaminated food, inhalation, and skin contact
Examples	Aspergillus, Fusarium, Penicillium.	Aflatoxins, fumonisins, deoxynivalenol (DON), zearalenone, ochratoxin A.
Impact on crops	Causes spoilage, discoloration, reduced quality, and diseases such as ear rot in maize.	Causes food safety risks, livestock toxicity, human health problems, and economic losses.

Mold growth

Mold growth on landrace maize is a major concern, particularly under conditions of prolonged rainfall, high humidity, poor field drainage, and inadequate post-harvest drying (Picture 2). Landrace maize varieties are traditionally cultivated and genetically diverse and exhibit varying levels of resistance or susceptibility to fungal infection depending on genetic strains and environmental conditions. These fungi can infect maize ears before harvest when wet conditions persist during flowering, grain filling, and maturity. Ear damage caused by insects, birds, or lodging further increases susceptibility to fungal colonization. Once established, moulds can continue developing during storage if grain moisture remains above safe levels of about greater than 14% and when seed segregation of contaminated seeds was not performed. Evidence underscores that the moisture content at the time of threshing is a critical determinant of long-term storage stability; for example, grains threshed at higher moisture levels (e.g., 23%) exhibit significantly higher rates of mould growth over storage periods compared to those threshed at optimal, lower moisture levels. The consequences of mould growth extend beyond visible grain deterioration. Mold infestation also reduces grain quality, market value, seed viability, and overall productivity.



Picture 2 Showing the mushrooming of fungal infestation on maize cobs.

Mycotoxin contamination

Mycotoxins occurrence is strongly influenced by environmental conditions, particularly temperature and moisture in landrace maize production systems. Under scenarios of climate variability and prolonged rainfall events, maize is increasingly vulnerable to mycotoxin accumulation. In landrace maize

populations, variability in genetic resistance and ear morphology influence susceptibility to contamination, highlighting the need for integrated management approaches that combine resistant germplasm, timely

Table 2. Different types of mycotoxins, favourable climate conditions and major effects.

Mycotoxin	Producing Fungus	Favourable Conditions	Major Effects
Aflatoxins	<i>Aspergillus flavus</i> , <i>A. parasiticus</i>	High temperatures, drought stress, poor storage	Liver damage, cancer, immune suppression
Fumonisin	<i>Fusarium verticillioides</i> , <i>F. proliferatum</i>	Warm, humid conditions	Esophageal cancer, neural tube defects, livestock diseases
Deoxynivalenol (DON/ Vomitoxin)	<i>Fusarium graminearum</i>	Wet and cool conditions	Feed refusal, vomiting, reduced growth
Zearalenone (ZEN)	<i>Fusarium graminearum</i>	Cool, wet weather	Reproductive disorders in animals
Ochratoxin A	<i>Aspergillus</i> and <i>Penicillium</i> spp.	Poor storage conditions	Kidney damage, immunotoxicity

harvesting, effective drying, and improved storage practices to safeguard food safety and nutritional security.

Mycotoxins are toxic secondary metabolites produced by certain fungi, mainly species of *Fusarium*, *Aspergillus*, and *Penicillium*. In landrace maize, the most common mycotoxins include fumonisins, aflatoxins, deoxynivalenol (DON), and zearalenone (ZEN) (Table 2). These toxins can accumulate in maize kernels when fungal pathogens infect the crop during flowering, grain filling, or storage. Environmental stresses such as excessive moisture, insect damage, and temperature fluctuations further increase the risk of contamination.

Mycotoxins poses a critical threat to human and animal health. Ingestion of fumonisins has been identified as a risk factor for serious health conditions, including neural tube defects and craniofacial abnormalities in unborn children, while chronic exposure to aflatoxins is associated with various toxic effects.

Effective management strategies

Mold and mycotoxin management is most effective as a multi-layered approach that addresses prevention, detection, and remediation instantaneously. Controlling moisture is the cornerstone of prevention, as maintaining indoor relative humidity below 60%, fixing water leaks promptly, and ensuring adequate ventilation denies mould the conditions it needs to grow.

In food systems, the focus shifts to harvest and storage practices combined with regulatory testing and removal of source and addressing the root moisture cause leading to recurrence. Therefore, effective management strategies including the use of resistant landrace varieties, improved field sanitation, timely harvesting, proper drying, and adequate storage conditions are indispensable for minimizing mould development and ensuring food safety.

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Reference list



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Competition 2026



The Santam Agriculture/Agri Western Cape Young Farmer of the Year competition celebrates excellence in modern farming. It highlights young producers who demonstrate outstanding management expertise, technical skill, and strategic decisionmaking. It provides a platform where young farmers are recognised for their ability to farm sustainably and innovatively in a dynamic and often challenging agricultural environment.

Aligned with Agri Western Cape's annual theme, "Steadfast in a Changing World", the competition showcases candidates who embody the qualities of today's agricultural leaders: adaptable, forwardthinking, and committed to longterm sustainability.

The judging process is rigorous and comprehensive. It includes farm visits and detailed evaluations of each candidate's management practices, financial insight, production approach, and their involvement in organised agriculture and community life. This ensures that the title reflects not only technical excellence but also leadership, vision, and contribution to the broader sector.

Through this competition, Agri Western Cape and Santam Agriculture reaffirm their commitment to supporting the next generation of farmers, individuals who will carry the industry forward with resilience, innovation, and passion.



Richard Hutton-Squire: A Visionary Leading with Passion

KLIEK HIER
om in
Afrikaans
te lees

Richard HuttonSquire (40) has been named the **winner of the Santam Agriculture/Agri Western Cape Young Farmer of the Year 2026 competition**, announced during a glittering gala evening in Paarl on 10 June. Richard is the CEO of the **HuttonSquire Farms (Pty) Ltd**, which operates four units in the Elgin, Grabouw, Vyeboom, Villiersdorp (EGVV) region, producing apples and pears primarily for the export market. He also serves as Farm Manager at **Solberge Farm in Elgin**, renowned for exceptional colour and quality fruit, achieving remarkably high yields per hectare.

A Calling in Agriculture

Richard explains his motivation clearly: "I decided long ago that I want to grow healthy food for people to eat. I always enjoyed working outdoors on the farm. I love the challenge of producing fruit of high quality and volume."

Qualities of Success

For him, three qualities define a successful farm:

- "You must be able to implement various precision techniques when it comes to crop management. Doing the basics well is important, but one also needs to attend to the details."
- "A successful farm needs to have good systems and policies."
- "You must build a motivated and committed team to carry out all the required tasks on time."





ons is daar waar dit saak maak

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van die span agter
Richard Hutton-Squire
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Challenges and Solutions

Richard acknowledges the realities of farming today: "Extreme weather and climate variability mean one season is never the same as another. Infrastructure and logistical failures are another challenge, we rely heavily on the state for electricity, roads, and ports. If these key things fail, then we will not be getting our product to market. Housing and services for our staff are also critical because our industry is labourintensive and we need a skilled and stable workforce. It is difficult for them to perform at work when their basic needs are not being met."

His solutions are practical and forwardlooking: "One needs to be dynamic and prepared to do things differently if required. We also need to be innovative. Renewable energies on the farm and packhouse can help, and we must support our industry bodies that lobby for improvements. We must work with the public sector to build houses for employees and provide on farm services where possible."

Motivation and Advice

Richard's motivation for entering the competition was to inspire others: "I want to show other young farmers what is possible with passion, hope, and hard work. I want to be an inspiration and share my passion for agriculture."

His advice is grounded in simplicity: "In agriculture you don't have to do fancy things



Richard Hutton-Squire
WENNER van die Agri Wes-Kaap Santam Jongboer 2026



**Ons is trots om as
een van sy lojale
verskaffers benoem te
word.**

**Ons waardeer die
vennootskap en wens
jou alle sukses toe!**



to be a success. If you focus on doing the basics consistently and well, you can succeed. With this approach, consistent hard work will pay dividends in the end."

Incremental Innovation

He highlights the value of small improvements: "One of our focus points for the last few years was to make many minor improvements to existing systems. These often don't cost very much if anything. This can create serious value by increasing efficiency and is seen as incremental innovation too. The results when this all comes together are phenomenal."

Reflections on Winning

Looking back on the gala evening, Richard says: "It was a very proud moment for my family and I. Winning this title is a big honour for me, I am glad that the hard work has paid off."

The recognition means a great deal: "The title gives me a lot of confidence to know that we have been doing an excellent job and encouragement to carry on. It is special that the farm also gets recognised for the achievement. The employees are incredibly happy to be a part of the team that brought this trophy home."

His advice to aspiring young farmers is consistent: "Work hard and make sure to focus on getting the basics right. It is important to get the details of the basics correct before doing extra or fancy things on the farm."



Looking Ahead

Richard's next goal is clear: "It is now my goal to win the National title this year. At this moment though we need to focus on preparing for the 2027 harvest. In the medium term I would like to create an employee-focused brand and become an employer of choice in the local area."

AgriAbout extends its warmest congratulations to **Richard HuttonSquire** on this outstanding achievement and wishes him every success in the **National Young Farmer of the Year competition later this year.**



PK Uys:

'n Lewensverhaal in landbou

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in English](#)

Pieter Kruger (**PK**) **Uys** (40) **boer** saam met sy gesin in die **Robertsonomgewing**, waar **wyndruiwe, appelkose en perskes** die kern van die bedryf vorm. Hy behartig en koördineer alles van aanplantings en besproeiing tot kunsmistoediening en arbeidsbestuur. PK sê: "Ek is bevoorreg om nog saam met my skoonpa te boer. Hy is vir my 'n verskriklike groot mentor in my lewe en ek koester dit om hom as my klankbord te hê."

Familie en wortels

PK is getroud met **Lenél Uys**, en saam het hulle drie seuns: **P.K. (11), Lucas (7) en Conrad (5)**. Hy vertel dat landbou van kleins af deel van sy lewe was: "Ek is blootgestel aan landbou van geboorte af... my familieplaas is in Heidelberg (Kaap) en van kindsbeen af is landbou in ons are!"

'n Passie en roeping

Vir PK is boerdery meer as 'n beroep, dit is 'n lewensverhaal. "Landbou hou my nederig en ek staan soggens op omdat ek wil opstaan, nie omdat ek moet opstaan nie. Ek is lief vir landbou, dit is 'n lewensverhaal op sy eie en met al die uitdagings daarby, maak dit jou as mens sterk!"

Eienskappe van sukses

Hy glo drie dinge is onmisbaar vir sukses:

- **Geloof:** "Jy moet kan glo, hoop en vertrou! Nie net in jouself nie, maar sonder die Here is jy verlore."





- **Besluitneming:** “Om ’n besluit te kan neem en 150% te glo dis die regte besluit en om ’n sukses daarvan te maak, al was dit die verkeerde besluit, dit gebeur ook.”
- **Aanpasbaarheid:** “Om suksesvol te kan aanpas by konstante verandering in die landbou.”

Uitdagings en oplossings

PK wys daarop dat aanpasbaarheid, ’n gesonde verhouding met jou werksmag, en verantwoordelike bestuur van grond en water die sleutels is om uitdagings te oorkom. “Jy moet kan aanpas en so spoedig moontlik indien nodig korrekte veranderinge kan maak en praktiseer. Jou werkgewer/werknemer verhouding moet goed wees... en jy moet teruggee aan jou grond, nie net neem nie.”

Motivering en raad

Sy deelname aan die **Santam Landbou/Agri WesKaap Jongboer van die Jaar 2026 kompetisie** spruit uit ’n begeerte om te leer: “Ek het ingeskryf met die doel om te kyk wat ek uit die proses kon leer, maak nie saak wat die uitkoms is nie. Wat kan ek positief uit die kompetisie neem en dit toepas op ons boerdery en myself as persoon.”





Aan jongboere gee hy die volgende raad: "Glo in jouself en gebruik jou geleenthede wat oor jou pad kom. Daar is goeie tye en slegte tye, maar bly vashou in dit wat jy glo! En moet nooit ooit skaam wees om te vra vir hulp of raad nie. Sorg dat die Here saam met jou in jou bakkie ry, dan sal jy nooit val nie, en indien jy val, is die opstaan maklik saam met die Here."

'n Boer en 'n mens

PK is lief vir mense en geniet dit om ander te help. Hy sê hy is net 'n gewone mens wat probeer om altyd positief te wees. "Visvang is ek baie lief voor. Braai en lag... ek is net 'n gewone mens. Ek is ook baie lief vir my gesin! My vrou Lenél hou my op die pad."



**Trotse ondersteuner van
WOB**



**Baie geluk PK Uys met hierdie
besondere prestasie!**

Roux Conradie:

Boer met visie en volhoubare praktyke

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Op 28jarige ouderdom boer **Roux Conradie** by **Saronsberg Wynkelder** in Tulbagh, waar wingerd die kern van die bedryf vorm, aangevul deur olywe. Hy verduidelik: "My rol behels die bestuur en koördinerende take op die plaas. Ek geniet dit om betrokke te wees by beide die praktiese en bestuurskant van die boerdery, en fokus sterk op doeltreffendheid, kwaliteit en volhoubaarheid."

'n Passie vir landbou

Vir Roux was die keuse vir landbou natuurlik. "Ek geniet dit om buite te werk. Landbou gee mens die geleentheid om elke dag nuwe uitdagings aan te pak en terselfdertyd 'n bydrae te lewer tot voedselproduksie en die ekonomie," vertel hy.

Eienskappe van sukses

Hy glo drie eienskappe onderskei 'n suksesvolle boer: "Aanpasbaarheid, om vinnig by nuwe omstandighede en uitdagings aan te pas. Dissipline en konsekwentheid, klein goed wat elke dag reg gedoen word maak 'n groot verskil oor tyd. En goeie mense bestuur, geen boerdery kan suksesvol wees sonder sterk verhoudings en spanwerk nie."

Uitdagings en oplossings

Roux wys daarop dat klimaatsverandering, stygende insetkoste en die druk om winsgewend te bly groot uitdagings is. Sy oplossing lê in tegnologie en leer: "Ek glo hierdie uitdagings kan oorkom word deur beter tegnologie en bestuurspraktyke





toe te pas, voortdurend te leer en aan te pas, en sterk verhoudings binne die landbougemeenskap te bou. Jongboere moet ook meer oop wees vir innovasie en nuwe maniere van dink."

Motivering en visie

Sy deelname aan die **Santam Landbou/Agri WesKaap Jongboer van die Jaar 2026 kompetisie** spruit uit 'n begeerte om jongmense in landbou aan te moedig. "Ek het ingeskryf omdat ek glo dit is belangrik om jongmense in landbou aan te moedig en blootstelling te gee. Dit is ook vir my 'n geleentheid om myself uit te daag, by ander jongboere te leer en 'n positiewe bydrae tot die bedryf te maak."

Raad vir jongboere

Roux se raad is eenvoudig maar kragtig: "Wees geduldig en hou nooit op leer nie. Landbou toets mens gereeld, maar deursettingsvermoë en 'n bereidheid om hard te werk maak 'n groot verskil. Bou goeie verhoudings, luister na mense met ervaring, maar wees ook bereid om nuwe idees te probeer."

'n Boer vir die toekoms

Vir Roux is landbou 'n roeping en 'n verantwoordelikheid. "Landbou bly een van die belangrikste bedrywe in SuidAfrika en die toekoms van die sektor lê grootliks in die hande van jongmense. Ek glo daar is nog baie geleenthede vir groei en innovasie, en dat jongboere 'n groot rol gaan speel om die bedryf vorentoe te neem."

Albert Smit:

Jongboer met rooibos in sy are

[CLICK HERE
to read article
in English](#)

Op 31jarige ouderdom boer **Albert Smit** op **AMW Boerdery, Jakkalsvlei naby Clanwilliam**, waar hy 'n veelsydige onderneming bestuur wat rooibostee, sitrus en skaapboerdery insluit.

Hy sê: *“Ons is die jongboere wat die boerdery vorentoe moet vat. Ek glo tegnologie is nie 'n luukse nie, maar 'n noodsaaklikheid wat boerdery makliker en meer doeltreffend maak.”*

Erfenis en passie

Clanwilliam is bekend as die geboorteplek van rooibostee, en Albert dra hierdie erfenis met trots. Hy vertel: *“Ek is baie geesdriftig oor rooibostee, oestyd is elke jaar vir my 'n hoogtepunt.”* Rooibos as 'n erfenisgewas plaas hom in 'n lang tradisie van boere wat hierdie unieke Suid-Afrikaanse plant bewaar en bevorder. Albert se liefde vir landbou het hom selfs op die skerm gebring: in 2021 was hy te sien in die 13de reeks van *Boer soek 'n vrou*, waar sy entoesiasme vir boerdery en sy menslikheid duidelik na vore gekom het.

Uitdagings en oplossings

Albert erken dat jongboere voortdurend met uitdagings soos klimaat, markdruk en insetkoste gekonfronteer word. Sy antwoord lê in innovasie en volhoubaarheid: *“My langtermyn visie is om sitrus en rooibos uit te brei, werkers te bemagtig, die plaas te optimaliseer en volhoubaarheid te verseker met presisieboerdery.”*

'n Boer vir die toekoms

Hy stel homself uitdagende doelwitte: om 90% energie selfversorgend te wees, die grond wat hy huur te koop, en sy plaas se diversifikasie verder te versterk. Hierdie visie weerspieël 'n balans tussen tradisie en vooruitgang, rooibos as 'n erfenisgewas, en presisieboerdery as 'n moderne oplossing. Albert se verhaal is een van balans en groei. Hy verteenwoordig die gees van die **Santam Landbou/Agri WesKaap Jongboer van die Jaar 2026 kompetisie**: 'n jongboer wat met trots sy streek se erfenis dra, maar ook met durf en innovasie die toekoms bou.






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Baie geluk, **ALBERT SMIT!**

Good Hope Marketing en Goede Hoop Sitrus
 wens jou hartlik geluk met jou deelname
 aan die Wes-Kaap Jongboer van die Jaar.

Jou toewyding, visie en harde werk
 is 'n inspirasie vir die volgende geslag
 landbouers. Ons is trots op jou!



VAN ONS PLAAS
NA U TAFEL,
 MET TROTS EN PASSIE.



BOUEND AAN 'N STERK TOEKOMS, SAAM. 

From our orchards to the world.



Crop Lodging:

A hidden threat to living laboratories

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Landrace crop variety seed multiplication enables the increment in seed quantity, crop diversification while maintaining the crop genetic composition and characteristics. The use of the term landrace refers to the locally adapted crop varieties that have evolved over time, passed on from generation to generation, and retained within communities. Landrace seeds are preserved, available and differ from communities and agroecological zones. The conservation of these seeds is based on farmer selection through crop type preferences, natural adaptation to local environmental conditions and consumption preferences. The quantity of these seeds is minimal but sufficient since production is at smallholder level.

Landrace seed multiplication is a requirement to ensure sufficient seed sovereignty, security, and preservation of genetic diversity and adaptability. However, seed production and yield are affected by a plethora of factors such as, genetic makeup of a crop type, climatic conditions, soil capability, crop management practices, pests and diseases, pollination

efficiency, post-harvest management and the most insignificant but detrimental factor which is crop lodging. Lodging risk is related to yield potential mostly in semi-arid agroecosystems, where obtaining sustainable crop development and high yield without increasing lodging risks is a key challenge.

Insignificant factor but disruptive

As insignificant as it is, crop lodging is one overlooked challenge in living laboratories such as field multiplication plots and experimental forms as it is associated with yield losses in crop production. It is the permanent dislodgment or bending causing the crop to bend over classically approaching to crop optimal maturity stage or at harvest, mainly observed on cereal crops. The factors aggravating crop lodging are driven by a combination of factors such as, strong winds and heavy rainfall, high planting density, planting patterns, heavy grain heads, weak stems and poor root anchorage, excessive nitrogen fertilization, and certain genetic traits increasing susceptibility. The lodging negative effects

poses a serious threat to living laboratories, as it disrupts accurate measurements of plant performance conditions which is essential to experimentation and educational purposes.

Types of crop lodging

Crop lodging is broadly divided into two main types which are root and stem lodging. Root lodging occurs when the root system fails to anchor the plant causing the entire plant to tilt without stem breakages, but leaves may be damaged at a certain degree. During this phenomenon, the plant uproots while the stem remains intact which is common after strong winds and heavy rains that over

saturate the soil profile and destabilize the soil.

Stem lodging occurs when the stem is destabilized whether by bending or breaking at weak internodes of the stem. This phenomenon is further subdivided into culm bending and culm breaking. *How are the two differentiated?* (Table 1). Culm-bending refers to the bending or lodging of the culm but does not snap, this is highly common in crops with pliable tissues. Whereas, culm-breaking the stem snaps and cracks at weak internodes, often severe and irreversible, contributing to higher biomass and yield losses.

Table 1 Factors contributing to culm bending and culm breaking in grain crops.

Aspect	Culm Bending	Culm Breaking
Definition	Stem bends without completely snapping.	Stem snaps or cracks completely.
Wind effect	Major cause but wind strength determines the level of stem bending.	Extreme winds force stem fatigue and breakage
Heavy rain	Oversaturated soil increase plant weight, promoting bending.	May contribute indirectly if stems become weakened.
Excess nitrogen fertilizer	Produces tall, succulent, weak stems that bend easily.	Weaken stem tissues, increasing risk of breakage.
Heavy grain/panicle weight	Causes stems lodge under the load of grains and number of maize cobs.	Weak structural strength may cause stems to snap.
Weak stem structure	Reduces resistance to bending.	Reduces resistance to breaking.
Pests (stem borers)	Weaken stems, making lodging more expected.	Create holes and damage leading to stem breakage.
Diseases	Stem and root diseases reduce support.	Diseases weaken tissues to point of stems breakage.
Poor root anchorage	Plants topple over from the base, mostly under shallow soils.	Less commonly a direct cause of stem breakage.
Mechanical/livestock damage	Usually results in temporary or permanent bending.	Can directly snap stems.
Drought stress	May reduce stem strength in some crops.	Make stems brittle and prone to breaking due to dryness.
Stem wall thickness	Thin walls increase bending susceptibility.	Thin or weak walls increase breaking susceptibility.

Additionally, stem lodging occur at different crop stages refers to lodging occurring based on crop development stages. Evidently, stem lodging timing matters enormously, since at pre-anthesis or nearing flowering stage result to greatest yield reduction comparing to post-anthesis or close to harvesting. Whereas, under conditions whereby transient lodging allows partial recovery while permanent

lodging result to yield reduction and entirely crop failure (Table 2). However, partial lodging describes a proportion of the field crop affected and an angle, whereby at 90° dead flat on the soil surface is more detrimental to crop yield comparing to 30° lean toward the ground. Understanding the distinctive differences between lodging types enables for the adoption of tailors’ preventative and corrective measures, and crop selection.

Table 2 Classification of Stem Lodging Across Phenological Growth Stages and Failure Mechanisms in Crop Plants

Crop stage	Lodging classification	Characteristics	Distinctive effects
Early vegetative stage	Early stem lodging	Young stems bend due to wind effects, heavy rain, weak establishment	Plants may recover; usually limited yield loss if damage is minor.
Vegetative growth stage	Vegetative stem lodging	Stems bend before flowering.	Reduced light interception, impaired growth, and recovery depending on severity.
Flowering stage	Reproductive-stage stem lodging	Lodging occurs during flowering or head emergence.	Significant reduction in pollination efficiency and grain formation; moderate to severe yield losses.
Grain filling stage	Late-season stem lodging	Stems fall after flowering while grains are developing.	Reduced photosynthesis, poor grain filling, lower grain weight and quality.
Maturity stage	Harvest lodging	Crops lodge close to harvest due to storms, heavy heads, or weakened stems.	Harvest difficulties, grain losses, increased disease risk, and reduced market quality.

Why lodging matters in living laboratories

The key lodging measurement parameters in the landrace multiplication trial under heavy rains that occurred during the last weeks of February 2026. The on-field rain gauge and the nearest automatic weather station recorded receiving an average of 88 mm to 125 mm of rains in a window period of about 11 days. The average maximum temperature ranges from 29°C to 31°C with the minimum ranging

from 17 to 18°C. During heavy rains in the last week of 2026 in February, the combination of oversaturated soil, wind effect, and water weight on crop canopy contributed to stem bending. Lodging susceptibility was evaluated based on lodging incidence (35%), lodging severity index (75%), culm strength, breaking resistance, and lodging angle (45° from the vertical axis). Heavy rains contributed to the severity of lodging observed in the crop (Figure 1).

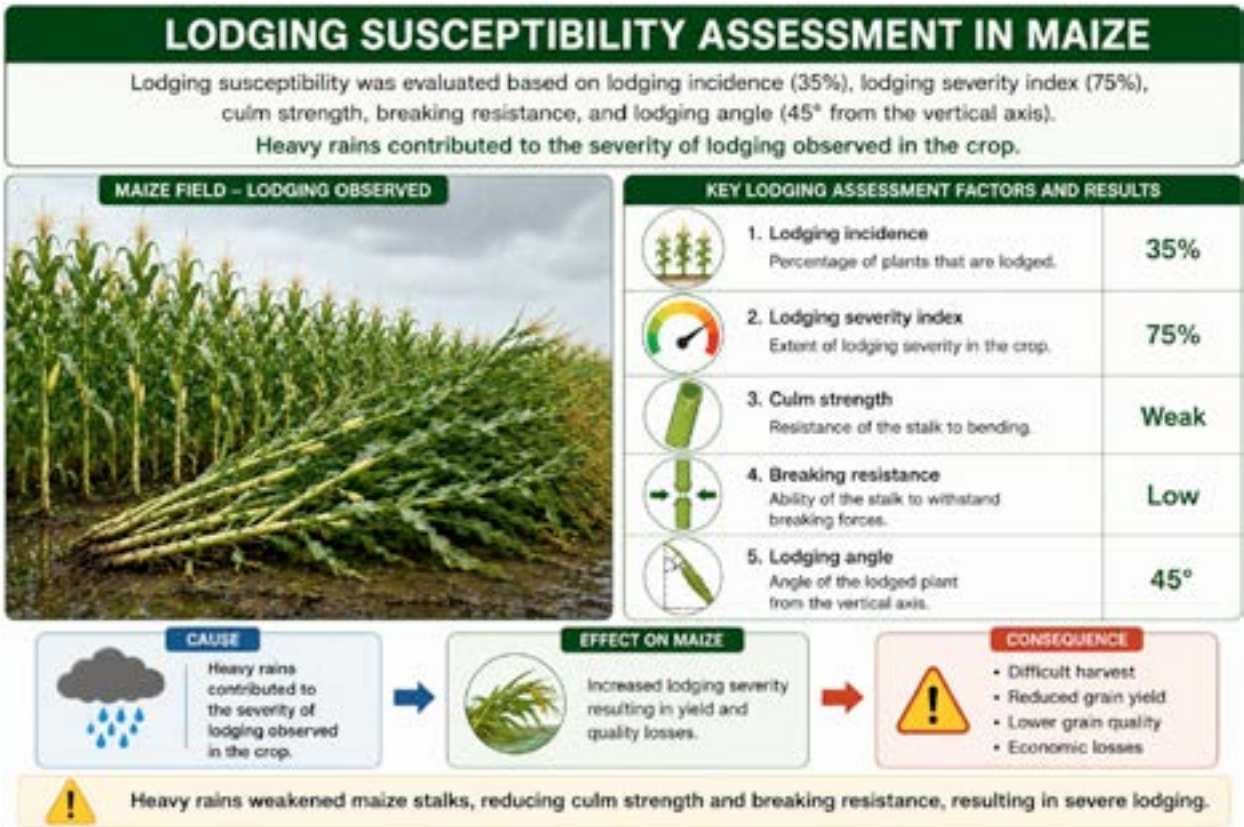


Figure 1 Infographic on landrace maize susceptibility assessment report in March 2026



Picture 1 (a) Water overflow and poor drainage, (b) farmer initiative of furrow diverting water from living laboratory.

In the light of comprehending the effects of crop lodging, it is also evident that there is a risk of economic losses within living laboratories. Severely damaged crops may produce lower yields, poorer grain quality, greater harvesting difficulties and further contributing to loss of resources utilized for agricultural inputs or perhaps partially wasted if lodging occurs before data

collection or harvest. Swift actions taken by farmers prevented the loss of yield and further damage in maize stalks. Picture 1 (a & b) furrowing creation to minimize living laboratory flooding and water logging, and Picture 2 (a & b) earthing up or ridging to straighten maize stalk and minimizing further plant damages.



Picture 2 (a) Culm stem bending in ThabaNchu, (b) direct earth up to straighten maize stalk.

To protect living laboratories from the effects of lodging, proactive management practices are essential. Understanding the intrinsic factors such as the genetic susceptibility, genotypes and stem anatomy is crucial, and extrinsic factors such as planting density, waterlogged soils, rainfall patterns and the probability of fungal disease occurrence. Therefore, cautious monitoring of weather conditions and crop growth stages assist to take preventive measures before lodging occur and becomes severe.

Crop lodging prevention measures for smallholder farmers

For smallholder agroecosystems, crop lodging requires effective reduction through the integration of affordable and sustainable crop management practices. Such as the adoption and the use of lodging-resistant and locally adapted varieties, combined with optimum plant spacing and timely planting, contributes significantly to stem strength and crop stability. Balanced nutrient management, including the application of organic compost and manure, improves soil health and promotes strong root development. Effective water management through proper drainage and soil water conservation practices further reduces the risk of root lodging, particularly during periods of heavy rainfall. In addition,

the control of weeds, pests, and diseases through usage of nature-based solutions to maintain plant vigour and structural integrity. In the Thaba Nchu region where landrace multiplication trials are held the establishment of windbreaks, mulching and the adoption of conservation agriculture practices enhance crop resilience to environmental stresses. Collectively, these measures improve crop standability, reduce yield losses associated with stem lodging, and contribute to sustainable agricultural productivity among smallholder farmers for the preservation of landrace genetic resources.

Acknowledgment

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From city rivers to farm fields: The hidden risk of polluted water

Dr Kyle van Heyde:
ARC-Natural Resources and Engineering

Water pollution in South Africa's urban rivers and dams is widely recognized as a growing environmental and public health concern. Yet its downstream impacts on farms and smallholdings, where these rivers often serve as lifelines for irrigation and livestock, receive far less attention. Rivers flowing out of urban centres can act as conduits of pollution, carrying contaminants into peri-urban and rural landscapes, placing the burden squarely on communities whose livelihoods depend on them.

South Africa's constitution guarantees the right to an environment that is not harmful to health or well-being. Communities along polluted rivers face declining water quality, reduced agricultural productivity, and heightened health risks - a disproportionate impact that undermines both livelihoods and food security.

Pollution doesn't travel alone

Urban water pollution is not a singular issue, but a combination of stressors moving through hydrologically interconnected systems. Wastewater discharges, storm water run-off, industrial effluent, legacy mining and poor waste management all contribute to declining water quality. Equally important is how these pollutants interact and compound one another. Plastic debris is a useful example. Because plastics are buoyant and durable, they can travel long distances through rivers and dams. Once in the water, they become coated with biofilms that may harbour harmful bacteria and pathogens. Thus, pollution is not only transported downstream but transformed along the way, with hazardous potential (Figure 1).

Impacts on crops and soil

For farmers, water quality directly affects productivity. High nutrient levels are common



Figure 1



Figure 2

in polluted systems receiving wastewater inputs. While nutrients are essential for plant growth, excessive concentrations can disrupt soil chemistry, affect crop health, and lead to imbalances that reduce yields *and crop quality* over time.

In eutrophic systems such as Hartbeespoort Dam, irrigation water can carry high nutrient loads and organic material *which accelerate soil degradation and complicate long-term management*. Elevated ammonia can become toxic to crops, while high salinity may burn plant tissues and disrupt the soil microbial communities that support fertility, ultimately raising input costs and eroding productivity over time.

Risks to livestock

Livestock are also vulnerable to poor water quality. Many smallholder, communal and commercial farmers rely on rivers and dams as primary water sources for animals. When these sources are contaminated, livestock may be exposed to pathogens and pollutants that cause illness, reduce productivity and trigger costly disease outbreaks. For smallholder farmers, the loss of even one animal can have serious economic and social consequences, affecting food security and household income (Figure 2).

Building resilience in agricultural landscapes

While addressing pollution at its source remains critical, farmers can also build resilience within affected landscapes. Wetlands and riparian zones filter pollutants, trap sediments and improve water quality.

When protected or restored, they act as buffers that reduce the impacts of upstream pollution.

Farmers and landowners can also help reduce visible pollution before it moves further downstream. Where safe and appropriate, litter traps, floating capture nets, debris booms and regular clean-up points can intercept plastic waste in farm channels, drainage lines and small streams. These systems must be carefully placed and maintained *to avoid* worsening flooding, blocking natural flow, or releasing trapped material during high-flow events.

Applied research and advisory support are also important. Through the ARC-Natural Resources and Engineering, water quality-related research, assessment and advisory services, farmers can make practical decisions - from identifying water quality risks to choosing safer abstraction points and timing water use to minimise exposure.

Looking ahead

Water quality is not only an environmental issue, but an agricultural, economic and social one. Improving South Africa's rivers will require coordinated action across sectors, including better urban infrastructure management, stronger wastewater regulation, and investment in restoration and remediation. For farmers, practical steps such as protecting riparian buffers and wetlands, intercepting plastic debris where appropriate, and making informed decisions about when and where to abstract water, can reduce exposure to polluted water.

Ultimately, clean and reliable water is about more than ecosystem protection. It is about safeguarding agricultural productivity, rural livelihoods and the resilience of communities that depend on rivers and dams. Ensuring water quality is therefore central to sustaining South Africa's agricultural future.

For more information, visit the ARC-Natural Resources and Engineering services page on the ARC website: <https://www.arc.agric.za/Pages/About%20Us/Natural-Resources-and-Engineering.aspx>

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Built for Small Fire Management and Heavy-Duty Clearing:

The Husqvarna 578BTF Blower

As winter sets in, much of South Africa turns drier and dustier, increasing the demands placed on both farmers and their equipment. Around workshops, machinery bays, and sheds, and along fence lines and firebreaks, debris and dry material can build up quickly. Keeping these areas clear is not only part of routine farm maintenance, but also a crucial step in maintaining safer working environments during the dry winter months.

For farmers and landowners, winter maintenance and firebreak work calls for equipment that is powerful, reliable, and built to handle long hours in challenging conditions. Downtime, poor performance, or equipment that struggles under pressure can quickly slow productivity when there is already a lengthy list of seasonal tasks to manage, and when the risk of fire becomes an added operational concern. The Husqvarna 578BTF petrol backpack

blower is built for this reality.

Professional-Grade Power for Essential Farm Maintenance

The Husqvarna 578BTF is designed for heavy-duty professional use, with the performance needed to move large volumes of built-up debris quickly and efficiently. Powered by a 75.6cc engine, it delivers strong blowing force with air speeds of up to 100m/s and an airflow output of 1,500m³/h, making it well suited to large agricultural properties and demanding workloads.

The blower is specifically designed for the removal of combustible material and can also assist in controlling smaller grass fires, making it especially relevant during South Africa's winter months when dry conditions increase fire risk across many farming regions. Whether clearing





Watch the video

around fuel storage areas, maintaining cleaner fence lines, or managing controlled burns, the 578BTF gives operators the power needed to work efficiently across larger areas.

Husqvarna's X-TORQ® engine technology provides powerful performance with improved fuel efficiency, helping operators maintain productivity while managing fuel consumption during long working days. The simplified starting procedure with air purge also helps reduce interruptions in the field.

Comfort and Durability for Long Hours in the Field

Extended clearing work can place significant strain on operators. The 578BTF features a backpack design with a double harness system that distributes weight evenly for improved comfort during prolonged use. An adjustable offset handle helps improve manoeuvrability and working position, supporting better control.

Durability is equally important in agricultural environments. The heat-resistant nozzle is designed to withstand high temperatures during close-proximity fire control, while the protected fuel hose system uses a sturdy rubber guard to help prevent damage from branches and dense vegetation. The robust design reflects Husqvarna's focus on creating equipment that stands up to professional use season after season.

Built for Farmers Who Depend on Their Equipment

Farmers invest in equipment that works hard, starts reliably, and performs consistently when it matters most. The Husqvarna 578BTF reflects the brand's long-standing focus on user-driven design, setting a higher standard for quality and durability, and delivering dependable performance in tough environments.

Whether clearing around operational areas or supporting winter fire preparedness, the 578BTF is built to help farmers work more efficiently through the season while reducing unnecessary effort and downtime.

Find out more at
www.husqvarna.com/za
[#WeAreHusqvarna](https://www.instagram.com/wearehusqvarna)



Sorghum Flour Small-Scale Production

Theresa Siebert
ARC-Natural Resources And Engineering

Sorghum flour is a staple food with high domestic demand. The flour is fine and white, but the incorporation of different quantities of bran alters the colour to pale brown.

Harvesting:

Sorghum is harvested when fully mature. The mature plants are cut and left in the field

with the head exposed to the sun to dry. Drying is complete when the moisture content is reduced to 10-12%. If sun drying is not possible, the heads are hung from a structure under a roof to dry; a fire can be made on the ground to assist in drying the heads. Once dry, the heads are cut 7.5 to 15cm below the grain bearing portion and taken for threshing.



Threshing:

Threshing is done manual by beating the heads with sticks on the ground or in sacks or using a mortar and pestle. It is possible to improve yield and efficiency of the threshing process when the following guidelines are used:

- The heads should be threshed on mats or cement blocks, not on sand, gravel or stones.
- The grains should have a maximum moisture content of 12%. This reduces the possibility of mould development during storage.
- Threshing should be done early to reduce exposure to pests.

Winnowing:

The threshed sorghum kernels are cleaned using a winnowing basket to remove light grains, leaves, dust and husks. Larger material is removed by hand. The grain should also be inspected for signs of mould or other spoilage, with affected grain being removed immediately.

Storage:

The cleaned sorghum may be stored if required. The grain can be stored in bins, silos, tanks, or bags on condition that they are clean, dry and resistant to pests and rodents. A cool, dry storage environment is required. The grain should be inspected regularly during the storage period to ensure it is not infested. The container should be opened and the grain lifted and checked for heating and odours. Dark kernels (signs of mould) indicate that the moisture content is rising. In this case the grain should be tipped out and dried again before further storage. Sun drying may be used.

Husking:

The outer layer of the kernel, called the husk or bran, is removed by a husking machine (huller). This machine consists of abrasive disks or stones set on a horizontal shaft that rotates at high speed inside a casing. The husks are rubbed off by the grinding action of the whirling stones and the friction of the other grains. The rate of flow of the grain must be adjusted so that the grain is kept in the casing long enough to remove the desired



percentage of husk. The lighter husk particles are continually removed from the hulled grain by a fan. The husked grain flows from the overflow outlet into collection containers. The grain is now ready to be milled.

Milling:

Milling of sorghum can be a dry or a wet process on small scale. Traditionally, the grains are soaked and milled, but modern equipment make use of a 'dry abrasion' technique. Both options will be discussed.

Wet Milling:

The grains are soaked for 3-4 days in water, drained and dried in the sun for 3-5 hours. Soaking improves the good milling characteristics of the grains by traditional stone grinding methods. The correct amount of moisture has been absorbed when the grains are soft, but not wet, when squeezed. Too little moisture will result in the grains breaking down to a fine powder in the mill without shattering into pieces. Too much moisture clogs the mill.



The moist grains are milled using grinding mills of various designs. The type of mill, speed, and setting adjustment all effect the quality of the flour obtained. Stone and plate mills are typically used on small-scale.

Stone mills: The grain is milled between two flat stone surfaces of which the base stone is stationary, and the top stone is rotated. The grain is fed through the centre of the top stone and crushed and ground as it moves between the stones towards the periphery. Stone mills come in different sizes and can be turned by hand, animals, water, diesel, or electric motors. The flour obtained from stone milling can vary from coarse to very fine, depending in the size and quality of the stone.

Plate mills: this is a variation on the traditional grinding stones. Metal plates are used instead of stones, and both rotate. The grain is fed between the two plates and is ground by a constant rubbing action. The pressure between the plates can be adjusted by a hand-screw to deliver either fine or course flour of various degrees. The flour emerges and falls into a bag or bowl at the bottom of the mill. Take note that plate mills are also suitable for dry milling.

The moist flour obtained by wet milling must be dried for safe storage. This can be done in the sun for 1-2 hours by spreading the flour out in thin layers. The flour can be mixed and turned at regular intervals to ensure uniform drying.

Dry milling is performed by hammer mills or plate mills. Hammer mills essentially consist of a circular chamber in which fixed or swinging hammers rotate at high speed. The grain is ground by impact; by rubbing against the casing; and by compression. The flour passes through a removable sieve at the base of the chamber into collection containers. The hammers in the mill should be of good quality, hardened steel.

Sieving:

The flour is sieved with a fine sieve with 1mm apertures if the flour is intended for human use. Larger sieves are used if the flour is intended for animal use. The coarse flour left on the sieve is returned to the mill. Hammer mills have the added advantage that milling and sieving can be performed in one action.

Packaging:

Under correct storage conditions, sorghum flour has a shelf life of up to two years. Wet milling can reduce the expected shelf life, especially if the post-milling drying is not done properly. If the flour is produced in areas with high humidity, special care should be taken to package it is dry, moisture-proof plastic bags as stored in a cool, dry area that is rodent free. In areas with low humidity, it may be stored in hessian or jute sacks. Heat sealable polyethylene bags are used for retail packaging.

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Apple Replant Disease in South Africa

South Africa's apple industry, concentrated in regions such as the Western Cape, is a vital contributor to both local markets and international exports. Yet growers face a persistent challenge when establishing new orchards: **Apple Replant Disease (ARD)**.

What is ARD?

ARD occurs when new apple trees are planted in soils previously used for orchards. Over time, harmful soil organisms accumulate and attack the feeder roots of young trees. The result is **poor establishment, reduced vigour, and lower yields**, which can undermine orchard profitability and sustainability.

Why It Matters Locally

- **Economic impact:** Apples are a major export crop, and delays in orchard productivity affect competitiveness.
- **Regional focus:** Areas with long histories of apple production are more prone to ARD because soils have been repeatedly used for orchards.
- **Crop specificity:** While pears are generally not affected, apples show significant susceptibility, making ARD a cropspecific concern.

Management Approaches

Growers in South Africa are exploring several strategies to reduce ARD's impact:

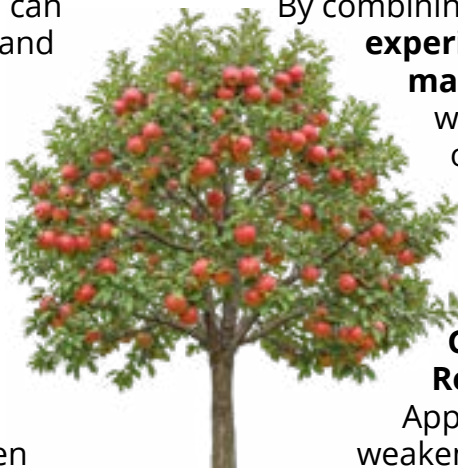
- **Soil fumigation:** Provides shortterm relief but is costly and environmentally sensitive.
- **Organic amendments:** Adding composts or plantbased materials can improve soil health and suppress harmful organisms.
- **Rootstock choice:** Selecting rootstocks with greater tolerance to ARD is an area of ongoing interest.
- **Soil health practices:** Crop rotation, microbial diversity, and organic matter

management are increasingly emphasized to build resilience.

Looking Ahead

ARD is not a problem with a single solution. Instead, it requires a **multipronged approach** that balances shortterm orchard establishment with longterm soil health. For South African apple growers, the challenge is clear: to replant orchards in ways that sustain productivity, protect the environment, and secure the country's position in global markets.

By combining **innovation, practical experience, and careful soil management**, the industry is working to ensure that new orchards thrive — and that ARD becomes a challenge that can be managed rather than a barrier to growth.



Grower Tips: Managing Apple Replant Disease

Apple Replant Disease (ARD) can weaken young apple trees when orchards are replanted on old soils. While no single fix exists, these practices can help reduce its impact:

- **Improve soil health:** Add compost or organic matter to boost microbial diversity and resilience.
- **Rotate crops:** Plant cover crops or alternate species before reestablishing orchards to break pest and pathogen cycles.
- **Choose rootstocks wisely:** Select varieties known for stronger establishment in challenging soils.
- **Limit stress:** Ensure adequate irrigation, balanced nutrition, and careful planting to support early growth.
- **Monitor regularly:** Check young trees for signs of poor vigour and act quickly with soil or nutrient adjustments.

Cajun Chicken Burgers

Ina Paarman

The secret to these burgers lies in the short cooking time of the chicken breasts and the delicious onion topping.

Serves: 2

You Will Need:

- 2 T (30 ml) oil
- 2 chicken breasts, skinless and boneless
- 2 t (10 ml) Ina Paarman's Cajun Seasoning
- 2 burger buns
- butter for spreading, softened
- 1 onion, halved top to bottom and sliced into halve rings
- 1 T (15 ml) oil
- 1 x sachet Ina Paarman's Spicy Cajun Flavour Bomb

To Serve:

- mayonnaise
- lettuce
- tomato

Ina's Tip

You can make a flavoured mayo by mixing ½ cup (125 ml) mayonnaise with 1 sachet of Cajun Flavour Bomb.

Method:

Spread the halved burger buns with butter.

Heat the frying pan and toast the buttered sides of the buns in the hot pan.

Butterfly and flatten the chicken breasts.

Season the chicken breasts with the Cajun Seasoning.

Heat 2 T (30 ml) oil in the unwashed pan (previously used for toasting the buns) over high heat.

Pan-fry the butterflied breasts.

Cook them only until they're just lightly browned. (Do not overcook.)

Remove the chicken from the pan.

To the remaining pan juices, add the 1 T of oil and sliced onion.

Sauté the onion over medium heat for about 5 - 7 minutes until softened and golden.

Add the sachet of Cajun Flavour Bomb and cook for 1 minute.

To Assemble:

Spread the toasted buns with mayonnaise, add shredded lettuce, sliced tomatoes, the cooked chicken, and the deeply flavoured onion mixture.



Dit Begin Tuis



Ons voeg die fynproewer smaakie by.

Al ons resepte is aanlyn beskikbaar by www.inapaarman.co.za



Vegetable Salad with Macadamia Cream

Ina Paarman

A flavourful winter salad, rich in texture and nutritional value. It can be prepped ahead, refrigerated, and served on the day or the next day in lunch boxes.

Serves: 6

You Will Need:

Roasted Pumpkin:

500 g pumpkin or butternut cubes, peeled and seeded

2 T (30 ml) olive oil

2 t (10 ml) Ina Paarman's Vegetable Seasoning

Roasted Cauliflower:

1 medium cauliflower head, cut into florets

2 T (30 ml) olive oil

1 t (5 ml) Ina Paarman's Vegetable Seasoning

Other Ingredients:

⅓ cup (80 ml) macadamia nut butter (or see tip below for making your own)

⅓ cup (80 ml) roasted macadamia nuts, roughly chopped

Roasted Brussels Sprouts or Broccoli:

250 g Brussels sprouts or broccoli, halved

1 T (15 ml) olive oil

1 t (5 ml) Ina Paarman's Vegetable Seasoning

Balsamic Dressing:

¼ cup (60 ml) Ina Paarman's Balsamic Vinaigrette

¼ cup (60 ml) seedless raisins or sultanas

1 T (15 ml) capers, chopped (optional)

Ina's Tip

Make your own macadamia nut butter by blending 1 cup (100 g) roasted macadamias in a strong, small blender or Nutri Bullet. It will become crumbly at first, then transform into a thick buttery paste. Add a teaspoon or two of olive oil if you are struggling to get the right consistency.

Method:

Preheat the oven to 200 °C.

In a medium bowl, toss the pumpkin cubes with the olive oil, and season it with the Vegetable Seasoning.

Spread it out on a third of a baking tray.

Do the same with the Brussels sprouts and cauliflower.

Roast the vegetables for 25 minutes.

Remove them from the oven and leave to cool.

For the dressing, stir together the Balsamic Vinaigrette, raisins, and capers, (if using) in a small bowl.

To assemble on a salad platter:

Spread the nut butter on the platter.

Top it with the roasted vegetables, then spoon over the balsamic dressing mixture.

Top the vegetables with the chopped macadamia nuts.

Serve at room temperature.



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