

THE VADERLAND, THE UYSBEES, THE DRAKENSBERGER

Farming Sustainably: Embracing the Future

Avian Influenza: Overview of Bird Flu

The Jackal

Winner of Landini Solis Win a Tractor Competition.

> Discovering South Africa's Grasses

Photo credit: Andre Pretorius Photography

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Dear readers,

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It is with great excitement and anticipation that we welcome you to the latest edition of MyFarm magazine. As we stand on the cusp of a new era in agricultural communication, we are thrilled to announce the imminent launch of our MyFarm app and brandnew website, set to go live in the next week.

This momentous development represents the first phase of our mission to revolutionize the way people engage with agricultural content, research, and information. With the introduction of our app and website, we are offering our dedicated followers unprecedented access to a wealth of resources, including our rich content library, event calendar, and the MyFarm magazine.

What sets MyFarm apart is our commitment to authenticity and expertise. Our magazine writers are not just wordsmiths; they are individuals deeply rooted in the agricultural field.

With backgrounds ranging from master's degrees in agriculture to seasoned farmers and FarmSpace personalities, they bring a wealth firsthand knowledge of and experience to the pages of MyFarm. This ensures that the insights you gain from our magazine are not just theoretical but grounded in real-world expertise.

As we embark on this exciting journey, we invite you to explore the MyFarm magazine on our FarmSpace app and website, immerse yourself in the articles, features, and event updates, and connect with a community of fellow enthusiasts who share your passion for agriculture. But remember, this is only the beginning. Over the next two months, we have ambitious plans to expand our offerings, enabling you to access a comprehensive spectrum of agricultural products,

services, and information like never before.

We are confident that MyFarm will become your trusted companion on your agricultural journey, whether you are a seasoned professional, a curious hobbyist, or simply someone interested in learning more about the world of farming and agriculture.

We hope you enjoy the MyFarm experience as much as we have enjoyed creating it.

Warm regards,

Tinus Havinga DIRECTOR OF FARMSPACE

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THE VADERIAND, THE UYSBEES, THE DRAKENSBERGE



The first recordings of the "fat, black ox" of the Khoi and other indigenous groups can be traced back as far as 1497, when Vasco da Gama briefly set foot upon the beautiful shores of the Cape of Storms. For the price of three bracelets, he obtained one of these oxen for the continuation of his journey, subsequently praising the outstanding quality of the meat. Roughly 200 years later, after Jan van Riebeeck arrived and at the time Willem Adriaan van der Stel was governor of the Cape, cattle farming became a serious and extremely popular endeavour. Local farmers of the time had cattle herds of European origin that were influenced bv the greatly indigenous black cattle that da Gama spoke so highly of, and these animals would become an integral part of the daily lives of the settlers of the Cape, forming a fundamental part of the history of the country and its diverse groups of people.

As time carried on, these black cattle became known as the Vaderland cattle, the very same animals used bv several Voortrekker families as they left the Cape to travel north during a time called the Great Trek. Documentary evidence shows that the Voortrekkers left the Cape borders by 1835 with teams of Vaderlanders in front of their ox wagons. After the battle of Vegkop in 1836, more than 5,000 of the Voortrekkers' cattle, including the ones used as draft cattle, were

BY: SUNÉ BARTMAN (MSC AGRIC PRODUCTION PHYSIOLOGY AND PRODUCT QUALITY)

stolen. These were recovered sometime later along with a number of the local Ngunis, who contributed to the genetics of the Drakensberger as we know it today. After this, many of the Voortrekkers eventually settled along the Drakensberg range. Among these were Jacobus Johannes Uys and his son Dirk Cornelius Uys, who made a significant contribution to the development and improvement of this breed.



THEY WERE DEDICATED TO MAINTAINING THE BREED'S PURITY, AND WITH SYSTEMATIC INBREEDING AND STRICT SELECTION WITHIN A CLOSED HERD, THEY CREATED A DEFINITIVE BREED TYPE LATER KNOWN AS THE "UYSBEES" OR UYS CATTLE. The Uysbees, with its strong, big forequarter and smaller, lighter hindquarter, was mainly bred as a trek animal up until the discovery of gold in the Witwatersrand area. As mining became more mechanized, technologies improved, and the population grew, the emphasis on breeding began to shift away from their trek abilities and more towards meat production.

Further development of this breed unfortunately faced many obstacles; a Rindpest outbreak in 1896 killed more than 700,000 cattle, and only a few years later roughly 600,000 head of cattle were slaughtered during the Anglo-Boer War of 1899-1902. Furthermore, the Stock Improvement Act of 1934 refused to acknowledge the Uysbees as a cattle breed, meaning breeders were not eligible for state subsidies as they only paid for the use of bulls from recognized cattle breeds.



Only thirteen years later а commission of the Department of Agriculture recommended in a report that the Uys cattle be acknowledged as a breed in terms of the Stock Improvement Act of 1934. Because of how common and prevalent this breed of cattle was around the magnificent Drakensberg mountains, and because their development largely took place in this area, it was recommended that their name be changed to "Drakensberger".

Today, thanks to its outstanding ability to adapt to climatic and environmental conditions, the Drakensberger has spread throughout the country, from Humansdorp in the south, through the eastern Free State, KwaZulu-Natal, and eastern Mpumalanga to Messina (Also known as Musina) in the Northern Province.

Furthermore, the Drakensberger is found in other countries with challenging environments, such as Namibia, Swaziland, Lesotho, Mozambique, Zimbabwe, Botswana, and even further north in the warm and humid climate of Equatorial-Guinea and as far as Australia.

On the 7th of November 1947, the South African Drakensberger Cattle Breeders' Society was established, finally recognizing the

Drakensberger as an official cattle breed. In February of the following year, the first inspections recorded 621 animals, with this figure increasing almost three-fold by 1954, when 1,723 animals were recorded. Of these, 73 were bulls. In 1961, the number of recorded animals rose to 4,752, showing the astonishing growth of this welladapted breed. Eight years later, the Drakensberger Cattle Breeders' Society was allowed as an Associate Member to SA Studbook, with Full Membership being awarded to them in 1972.



Cattle The Drakensberger Breeders' Society is deeply committed to improving and enhancing this remarkable breed and decided to make performance testing compulsory to gain membership. Since 1980, only performance-tested animals have become eligible for inspection and registration. Because the entire breed is subject to rigorous testing, the performance Drakensberger Cattle Breeders' Society conducted South Africa's first BLUP (Best Linear Unbiased Prediction) analysis using its extensive database.

The Drakensberger breed exhibits impressive versatility, thriving in various ecological settings. Historically, they have performed exceptionally well on sourveld grazing, but recent findinas suggest they excel even further in sweetveld environments. These cattle adapt and prosper in a wide range of landscapes, including snow-covered peaks, grassy plains, regions with red-water and gall sickness concerns, shrub veld, sandy dunes, hot climates, and sub-tropical areas with tick and heartwater challenges. Their ability to prosper in such diverse underscores conditions their resilience and adaptability.

ORIGINATING IN CHALLENGING CIRCUMSTANCES, THE DRAKENSBERGER HAS TRANSFORMED INTO A HIGHLY POPULAR AND PROFITABLE BREED.

This breed hails from a time when animals had to rely mostly on natural adaptations for survival, with no access to dipping fluids or proven medicine. They had to endure and withstand the challenges posed by flies, mosquitoes, ticks, and diseases transmitted by parasites, and only the strongest and best adapted survived. Today, the Drakensberger continues to impress with its resilience and impressive performance, leading to growing international interest in the breed from countries such as the United States, Canada, and Brazil. This breed's remarkable journey is underscored by its ability to thrive in harmony with nature, and Drakensberger breeders are steadfast in their mission to preserve the traditional black animals while maximizing the production of high-quality beef, all without compromising the breed's inherent qualities.







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info@ilgiafrica.co.za +27 51 101 0640 www.ilgiafrica.co.za ILGI AFRICA (PTY) LTD 2 Venter Ave, Bainsvlei, 9338, Bloemfontein, South Africa In the world of agriculture, the concept of sustainability can spark a range of emotions. While some understand and embrace its importance, others view it with apprehension, fearing that it may come with significant costs and complexities, where others want to move in its direction but have no idea how. However, when we delve into the heart of sustainability, we find that it's not something to be feared, but rather a pathway to a more secure and financially rewarding future - and something more easily achievable than one would imagine.

We often observe international agricultural practices not only for their successes but also as predictors of future changes to come to South Africa. These changes can range from shifts in market prices and supply dynamics to alterations in rules and regulations. In recent years, many nations have implemented sustainability standards in agriculture, setting precedents for practices that may soon become the norm here.

ARMING SUSTAINABLY Embracing the future

By: Enrike Maree (BScAgric Animal Science) @GOAL Sciences: Research & Communications Officer



It's not about fearing potential future laws but proactively embracing sustainability, which can yield both environmental and economic benefits. While there's no guarantee that foreign restrictions or regulations will be implemented locally, benefit can still be gained by preparing for it and actively seeking ways to move towards sustainable production.

Sustainability isn't a one-dimensional term confined to environmental conservation or carbon taxes. It comprises a multidimensional tapestry that includes efficiency, nutrient density, economic viability, and societal well-being. While we may look to other nations for inspiration and direction, it's essential to remember that South Africa boasts some of the world's finest farmers and that our circumstances are not always equal to other nations. Our strength lies in our ability to adapt to unpredictable climatic conditions and navigate the sometimes rough waters of geopolitics, but also in the potential of improvement in certain areas of production.



SMALL IMPROVEMENTS, LARGE GAINS

In that context, there are many practical ways that farmers can navigate improvements towards sustainability with little to no investment. One of the essential steps in preparing for sustainability is diligent record-keeping. Often, valuable resources are wasted on farms due to poor record-keeping practices. However, diligent record-keeping can highlight production inefficiencies, losses and areas where waste can be minimized or where management should be adjusted or efficiency can be improved. Efficiency essentially translates directly to "more-for-less", which in this case can mean less water, land-use and greenhouse gas emissions and in other words, improved sustainability.

То optimise efficiency, however, improved management practices are key. Effective management practices can significantly reduce resource usage and streamline processes. For instance, in the case of livestock farming, better observation and strategic timing of activities like artificial insemination concerning an animal's oestrus cycle can reduce the "non-productive" time of a female, during which she is technically wasting resources. Something more simple like ensuring adequate feeding and drinking space for livestock is another simple management factor. When animals have sufficient access to feed and water, they consume what they need, reducing their stress and improving their productivity by quickening the turnaround time for livestock, from birth to market. Consider experimenting with the addition of extra feeders and drinkers. If you notice increased intake, it means the animals were not consuming or producing optimally before and most likely did not perform optimally, either due to competitive stress or simply because they didn't consume sufficient amounts of energy and protein for growth.



The management of housing and paddocks can also impact resource utilization by ensuring animal comfort, and by reducing the energy expenditure of animals used for things like maintaining body heat, which in turn increases the energy available for growth or reproduction. Adjusting factors like ventilation and temperature control, or working with natural climatic conditions to enhance airflow and temperature without relying on extra energy can further contribute to both animal comfort, and the reduction of electricity use. In addition, wellventilated, dry and clean housing will prevent harbouring of diseases and in effect, ensure animal health and productivity, while preventing excessive use of antibiotics.

SOIL: AGRICULTURE'S GOLD

The health of our soil is paramount in sustainable agriculture.

Soil carbon sequestration, the process of capturing and storing atmospheric carbon dioxide in the soil, can help reduce atmospheric greenhouse gases. In addition, healthy soil is not only more productive but also retains water better, reducing the need for irrigation. Hence, for both livestock and crop farming, grazing and soil management is one of the most important factors of reducing global emissions.

Well-managed grazing livestock can assist in the sequestration of carbon, reducing emissions, improve soil conditions, and enhance both soil and plant biodiversity. The veld, or pasture, can consequently carry more animals, reducing the need for additional land for grazing. Practices like ultra-high-density grazing and regenerative grazing can make a substantial difference in this regard. Regenerative grazing practices focus on mimicking natural grazing patterns of wild herbivores. It involves frequently moving livestock to mimic the behaviour of wild herds. This not only reduces overgrazing in certain areas but also encourages natural fertilization through trampling and manure distribution. Healthy soil and increased biodiversity are common outcomes of such practices, underscoring their importance in sustainability.

In terms of cropping, practices like crop rotation, cover cropping, and minimal tillage can be used. Crop rotation involves planting different crops in succession to improve soil fertility and disrupt pest cycles. Cover cropping involves planting specific crops during fallow periods to protect and enrich the soil. Minimal tillage reduces soil disturbance, preserving its structure and carbon content. Even in crop farming, integrating livestock can reduce the need for fertilizers and water while improving soil health. Consider implementing practices like allowing livestock to graze on crop remnants for natural fertilization.



Sustainability starts with small yet impactful changes that don't necessarily require significant investments. In South Africa, as in many other nations, sustainability isn't merely a choice but a necessity. As global markets evolve, and environmental concerns take center stage, our agricultural practices must adapt. South African farmers have shown time and again that adaptability and resilience are our strengths. By implementing sustainable practices, improving resource management, and optimizing our interactions with the land, we can not only thrive in a changing world but also lead the way towards a more sustainable future. In conclusion, sustainability is not something to fear; it's a beacon of progress.







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THE JACKAL

A POTENTIAL DEFINITIVE HOST OF NEOSPORA CANINUM

By: Johann de Beer BScAgric Animal Science

Neosporosis is an infectious disease caused by the protozoan parasite Neospora caninum¹²³. This microscopic, unicellular parasite can invade, live, and multiply inside animal cells³. The disease affects cattle and companion animals and is one of the most frequently diagnosed infectious causes of abortion in cattle worldwide¹³. It can also affect dogs, leading to conditions such as gradually progressive myositis with paraparesis¹².

Neospora caninum was first reported in 1925. Initially, it was thought to be a type of Isospora bigemina, with cattle as an intermediate host responsible for vertical transmission and dogs as the definitive host responsible for horizontal transmission. The parasite was officially recognized and named as a new species in 1988. Prior to this recognition, infections of N. caninum were often misidentified as an infection of Toxoplasma gondii. Interestingly, twelve years before the recognition of N. caninum, Hammondia heydori was recognized. Its oocysts are morphologically similar to those of N. caninum, leading to speculation that research performed on H. heydori prior to 1988 could have been conducted on N. caninum. N. caninum and T. gondii differ in their definitive hosts and primary infection targets. T. gondii primarily infects humans, felids, and sheep with felids as a definitive host, while N. caninum often infects cattle and dogs with canines being the definitive host.

Impact on Agriculture

Neosporosis is considered one of the most serious emerging diseases affecting cattle and dogs worldwide. It has also been reported in sheep, horses, and various wildlife species. The disease leads to abortion in cattle due to the vertical transmission of the parasite. This parasite is expected to be identified anywhere on earth where cattle are found, posing a major economic threat to any cattle-producing country due to severe losses associated with abortions.

Lifecycle and Biology

The life cycle of N. caninum comprises three infectious stages: tachyzoites, tissue cysts, and oocysts. It involves two modes of reproduction: sexual reproduction in the definitive host (including the oocyst stage) and asexual reproduction in the intermediate host (including the tachyzoites and tissue cyst stages).

The life cycle begins when unsporulated oocysts are shed from infected canids through their feces. These robust oocysts can withstand freezing and drying of the feces, enabling them to survive outside the host for prolonged periods. After sporulation occurs outside the host, each oocyst contains two sporocysts that each contain four sporozoites.

The next stage occurs when an intermediate host like cattle ingests the sporulated through fecaloocysts contaminated water sources or pastures. The sporozoites are then liberated from the oocyst in the gut of the animal through excystation and travel into the gut wall where they develop into tachyzoites. These tachyzoites replicate rapidly over a period of three weeks.

Given that other members of the Canidae family have been identified as definitive hosts for *N. caninum*, it is plausible that jackals could also serve this role. Jackals share habitats with many livestock species worldwide and could potentially contribute to the spread of N. *caninum* if they are indeed definitive hosts.

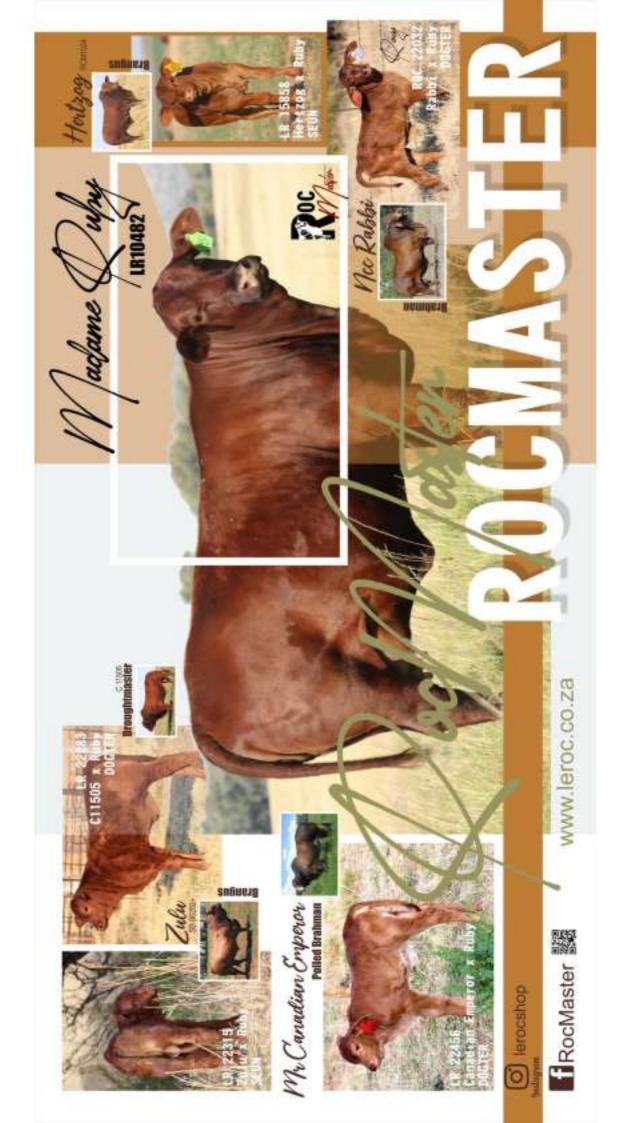
Understanding whether jackals are definitive hosts for N. caninum could have significant implications for controlling its spread and mitigating its impact on livestock industries worldwide.

As previously stated, cattle and other warm-blooded animals are seen as the intermediate host for this parasite, and dogs are seen as the definitive host. However, other wild canids including the coyote, grey wolf, and dingo have been identified as also being a definitive host for N. caninum. Therefore, it is believed that the jackal can also play a role as a definitive host of N. caninum. While more research is needed to confirm whether jackals are definitive hosts for Neospora caninum, considering this possibility is crucial for developing effective strategies for managing neosporosis in livestock populations.

(1) Neosporosis in Animals - Merck Veterinary Manual. www.merckvetmanual.com/generalized-conditions/neosporosis/neosporosis-in-animals. (2) Parasitic Infection (Neosporosis) in Dogs | PetMD.

ps://www.petmd.com/dog/conditions/infectious-parasitic/c_dg_neosporosis.

3) Neosporosis | Moredun. https://moredun.org.uk/research/diseases/neosporosis.



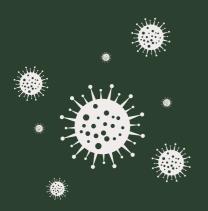
AVIAN INFLUENZA A COMPREHENSIVE OVERVIEW OF BIRD FLU

By: Elna de Lange - BSc(Agric) Animal Science

Avian Influenza (AI), commonly known as bird flu, is a highly contagious viral disease primarily affecting birds, including both domestic and wild species. It poses significant threats to the global poultry industry and can also have implications for human health. AI is caused by influenza viruses, with certain subtypes, such as H5 and H7, being of particular concern due to their potential to evolve into highly pathogenic strains.

The classification of AI in South Africa is based on the severity of its impact on poultry, resulting in two main categories: Low Pathogenic Avian Influenza (LPAI) and Highly Pathogenic Avian Influenza (HPAI). HPAI strains can lead to severe clinical symptoms and high mortality rates among infected poultry.

In this article, we delve into the intricacies of Al, its modes of transmission, key symptoms, economic repercussions on the poultry industry, recent developments in South Africa, and the role of vaccination in mitigating its effects.



How is Avian Influenza Spread?

Al is primarily spread through direct and indirect contact with infected birds and their respiratory secretions or excrement. Here are the key modes of transmission:

Direct Bird-to-Bird Contact

Infected birds can transmit the virus to healthy birds through close contact. This is particularly common in commercial poultry farms where birds are housed in close quarters.

Indirect Transmission

Al can be indirectly transmitted through contaminated feed, water, equipment, clothing, and vehicles. People who handle infected birds or their products can unintentionally spread the virus if proper biosecurity measures are not in place.

Wild Birds

Migratory wild birds, especially waterfowl, are natural hosts and carriers of avian influenza viruses. During their migrations, they can potentially spread the virus across regions. Additionally, gulls and shorebirds also play a significant role in the evolution and maintenance of avian influenza viruses. Direct contact between wild and domesticated birds, including poultry, presents a likely transmission route for the virus.

Key Symptoms of Avian Influenza (HPAI):

Avian Influenza (AI) can manifest in poultry with a range of symptoms, including:

Respiratory Distress

Infected birds may exhibit respiratory distress, characterized by laboured breathing and wheezing. This symptom can be a significant indicator of AI infection.

Reduced Egg Production

Affected hens may experience a sudden drop in egg production or produce misshapen and discoloured eggs.

Increased Mortality Rates

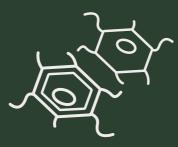
There is often a notable increase in mortality rates among infected birds, with seemingly healthy birds succumbing to the disease.

Lethargy

Birds infected with AI may appear tired and lethargic, showing a lack of interest in normal activities.

Refusal to Eat

Loss of appetite is a common symptom, and infected birds may refuse to eat or drink.



Discharge from Nose, Eyes, and Mouth

Al can lead to the presence of discharge from the nose, eyes, and mouth of infected birds. This discharge can be clear or may contain pus.

Swelling

Swelling of various body parts can occur, including the head, eyes, legs, combs, and wattles. This swelling is often accompanied by inflammation and redness.

Coughing, Sneezing, and Diarrhoea

Infected birds may exhibit coughing and sneezing, and some may develop diarrhoea, contributing to the spread of the virus.

Sudden Death

In severe cases, AI can lead to sudden and unexplained deaths among the bird population.

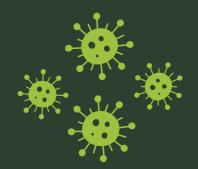
It's important to note that the severity and combination of symptoms can vary depending on the strain of the virus, the age and health of the birds, and other factors. Rapid identification of these symptoms is crucial for implementing control measures to prevent the further spread of the virus and minimize its impact on poultry populations.

Economic Impact and Consequences for the Poultry Industry:

When AI strikes, its economic repercussions are significant. This financial burden encompasses several aspects, including the necessity to cull infected birds, the imposition of trade embargoes on poultry products, and a decline in consumer confidence in poultry consumption. Smaller farm operators, in particular, find themselves grappling with the daunting task of replacing infected flocks, which strains their resources and resilience. Furthermore, this outbreak has a ripple effect, leading to an increase in poultry product prices, which directly impacts consumers. This price surge not only affects household budgets but also compounds the emotional toll on farm staff, who face the challenges of managing the outbreak.

The South African Poultry Association (SAPA) indicated that the shortage of chicken and eggs attributed to avian flu may persist until the end of October.

The emergence of the new virus strain, H7N6, has caused a substantial setback, resulting in a staggering loss of more than 15 to 20 percent of the national chicken production in South Africa. SAPA's general manager, Abongile Balarane, has expressed particular concern regarding the devastating impact of this strain in the Gauteng and Mpumalanga regions.



Developments in Avian Influenza Outbreaks in South Africa:

South Africa has been wrestling with Avian Influenza, marked by a series of significant outbreaks. Notably, in 2017, there was the HPAI H5N8 outbreak, followed by HPAI H5N1 in 2021 and HPAI H5N2 in 2022. More recently, the nation has been confronted with a sudden surge in H7 PCR-positive samples, leading to confirmed HPAI H7 outbreaks across various provinces. Additionally, HPAI H5 outbreaks have been reported in the Western Cape and KwaZulu-Natal provinces.

Ongoing investigations are underway to ascertain suspected outbreaks in both chickens in KwaZulu-Natal and shorebirds in the Eastern Cape. In response to these outbreaks, authorities have implemented swift control measures, including quarantine protocols and culling. These actions, while vital for curbing the spread of the virus, have significant repercussions on both the poultry industry and trade. These critical developments were recently highlighted in the report update dated September 5, 2023, issued by the Department of Agricultural, Land Reform, and Rural Development of South Africa.

Vaccination as a Possible Tool in Avian Influenza Prevention:

At the World's Poultry Science Association's 39th Scientific Symposium in Pretoria, Dr. Shahn Bisschop shed light on the potential of using vaccination as a tool against AI in poultry. The debate surrounding AI vaccination revolves around its costeffectiveness, potential drawbacks such as symptom obscuration and viral mutations, and the substantial benefits it offers, including enhanced protection and reduced virus circulation.

Advocates are proposing the establishment of consultative committees, the initiation of trial vaccination programs, and addressing traderelated concerns. Notably, South Africa's poultry industry is actively considering vaccination as a strategic tool in the battle against HPAI. While recognizing its advantages, stakeholders are also aware of the implementation challenges that lie ahead.

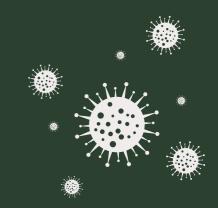
As we navigate the ongoing challenges posed by Avian Influenza in South Africa and beyond, it is abundantly clear that swift responses and effective control measures are paramount.

These outbreaks have far-reaching consequences, impacting not only avian populations but also the poultry industry at large.

Vaccination emerges as a promising tool in the fight against AI, offering the potential for reduced viral circulation and enhanced protection. However, this avenue is not without its complexities and potential pitfalls, including cost-effectiveness and the risk of symptom obscuration and viral mutations. To address these concerns, advocates are calling for the establishment of consultative committees, the implementation of trial vaccination programs, and a careful consideration of trade-related issues. As we look ahead, it is crucial for all stakeholders to remain vigilant and informed. Our collective efforts to combat Avian Influenza will not only minimize its impact but also foster a future where both birds and humans can coexist with reduced risk. It is a shared responsibility to prioritize the health and welfare of all species affected by this viral threat, and through proactive measures, we can work towards a safer and healthier environment for all.









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DISCOVERING SOUTH AFRICA'S GRASSES An Introduction

By: Suné Bartman (MSc Agric Production Physiology and Product Quality)



"Grasses are characterized by their tuft-forming or creeping growth habit and typically lack brightly coloured flowering parts. Their leaves are composed of three main components: a long, slender leaf blade, a leaf sheath, and a ligule." – Fritz van Oudshoorn, Guide to Grasses of Southern Africa.

magnificent Among the many wonders of nature, the beautiful region of Southern Africa is blessed with an extremely diverse range of grasses - boasting roughly 10% of all the grass species found on earth. Some of the world's best grazing grasses, and many species used for the cultivation of pastures, for the purposes of thatching, as lawns and as ornamental grasses, are found here. Remarkably, out of the nearly 1,000 grass species inhabiting Southern Africa, about one-third is endemic to the region.





This can be attributed to the large variety of environmental and climatic conditions that are found in the Southern parts of Africa; from arid deserts to lush forests, coastal plains, and high-altitude grasslands - encompassing both winter and summer rainfall regions - Southern Africa offers its own world of ecological diversity.

Grass, and the pivotal role it plays in nature and the lives of all humans and animals, is an increasingly significant topic. Not only do they serve as a crucial source of food, but they also fulfil ecological functions essential to the natural balance. The grass family is arguably one of the most important plant families on our planet.

Grasses have a profound impact on life in various ways; approximately 10,000 years ago, grasses were among the first to be purposefully cultivated for the use of food, and today, staples like maize, wheat, and rice are still some of the most abundant grains in the modern diet. They are also either directly or indirectly the key to survival for nearly all livestock and wildlife species. Yet, perhaps the most overlooked and underestimated role of grass lies in its ability to protect and fortify the earth's topsoil. Through their remarkable adaptability and distinctive growth patterns, grasses have the ability to effectively shield the soil from the erosive forces of rainfall and wind.

Long ago, when the continents were all joined together in one giant landmass known as Pangae, the first grasses probably grew in the forests. At this stage, the earth experienced a moist, humid climate. And with their broad leaves, grasses would have been able to compete with the tall forest trees for sunlight.

As Pangae broke into the continents we know today, the topography of these continents progressively changed, along with the gradual change of each continent's climate. The grass family adapted exceptionally well to all of these changes! The Poaceae family, or grass family, is the 4th largest plant family on earth today, following orchids (Orchidaceae), daisies (Asteraceae) and legumes (Fabaceae).

MMMM

As mentioned before, grass plays a vital ecological role in nature – particularly in the grassland and savannah biomes. They serve as a habitat for thousands of species of wildlife, and also provide a source of fuel for fires. When left undisturbed, grasslands are also highly effective in capturing and storing carbon.

Grasses are remarkably welladapted to grazing, burning and mowing, as these activities stimulate regrowth for which the reserved nutrients - produced through photosynthesis and stored in the basal parts of the plant - are used.

As new leaves are grown after defoliation and photosynthesis starts again, reserve nutrients, predominantly composed of carbohydrates, are replenished. Consequently, allowing the grass to rest after grazing becomes a crucial principle in veld (grassland) management to ensure the continued health and vitality of the plants.

Despite their natural adaptability to grazing, improper grazing management strategies, such as overgrazing and undergrazing, remains one of the most significant threats to the health of grasslands and the veld.



Grasses vary considerably in their grazing value, or the quantity and quality of the material produced for grazing. When grasses are not sufficiently defoliated, an excess of plant material, known as "moribund," accumulates, leading to the suffocation of grass tufts from within and, in severe cases, even result in plant death.

While undergrazing is less than ideal, overgrazing remains the most serious cause of veld degradation. This occurs when grass plants are continuously utilized without allowing sufficient time for rest, causing the root system to become so weak that it fails to absorb water and nutrients effectively, ultimately causing the death of the plant. Typically, the most palatable grasses are the first to fall victim to overgrazing, but sustained overgrazing can also affect less palatable species.

Considering the diversity of grasses within a veld and the ecological status of each grass species is of utmost importance for evaluating the veld condition and for effective veld management. Because the grass species serve as valuable indicators of veld condition, they are often used to assess the health and grazing potential of a veld, providing valuable insight when making decisions regarding livestock and game stocking rates.

The ecological or grazing status of a grass is a classification status essentially reflecting how the different grass species respond to varying levels of grazing pressure. Grazing can either lead to an increase (referred to as Increaser I, Increaser II, or Increaser III species) or a decrease in the number of grass species (referred to as Decreasers).

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DECREASERS

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Decreasers encompass those grass species that thrive in healthy veld conditions but dwindle in number when the veld experiences overgrazing or undergrazing. These species are typically preferred by grazing animals due to their palatability. Increaser I species consist of unpalatable and robust climax species. These are strong, perennial plants adapted to optimal growth conditions, and they flourish in underutilized veld where they can grow without significant defoliation.

Increaser II species include pioneer and subclimax species. Pioneer species are hardened, annual plants capable of growing in unfavourable conditions and providing minimal soil protection. Subclimax species are denser than pioneer plants and offer greater soil protection. These species tend to dominate overgrazed veld in regions with lower rainfall.

Increaser III species, also unpalatable, thrive in overgrazed veld. These strong competitors rapidly increase when Decreaser species are weakened by overgrazing. They are typically found in regions with higher rainfall. It's worth noting that some grass species found in South Africa today are not native to the region and are referred to as "Invaders." These invaders can be either annual weeds or invasive perennial species. While some of them may be palatable with high grazing value, many are highly invasive and undesirable.

Classifying certain grasses within a single group can be challenging, as their status may vary from one region to another. Therefore, it is crucial for every farmer to familiarize themselves with the properties and ecological value of the various grass species on their farm. This knowledge enables them to assess veld condition accurately and determine its grazing capacity effectively.

"It has been said that if all other plant life were to vanish from the face of the earth, the survival of humanity would still be possible as long as grasses endure" – Fritz van Oudshoorn, Guide to Grasses of Southern Africa.

Understanding the importance of grasses - their identity, features, characteristics, and uses - and recognizing their ecological role equips farmers, conservationists, and nature enthusiasts to better comprehend the dynamics of natural rangelands. This understanding enables them to contribute significantly to sustainable land use and development. Knowing the grazing capacity and managing animal numbers accordingly will allow a farmer to sustain his animals without risking the deterioration of his veld - a crucial aspect of long term, sustainable agriculture.



Saturday 4 November 2023 - 18:00 Silverlakes Farm Hotel - Pretoria 50 Boran

Stanley Blount: 082 809 6866 • Yolandie Botha: 082 566 5072 Simon Hughes: 082 491 8286 • Johan van der Nest: 082 574 4220

SPACE







Passion for Innovation.



Congratulations

De La Ray Lategan, the winner of our Landini Solis Win a Tractor Competition.

De la Rey Lategan from the farm Platdrift near Aberdeen was the lucky farmer who picked the right key to win the Landini Solis HST with a Belly Mower during Nampo Cape 2023.

Entries for the competition opened in May this year on the first day of Nampo Bothaville and closed at the end of August 2023. Three finalists were picked from the 521 entries and all three were invited to the draw on Thursday 14 September at Nampo Cape. The other finalists were Koert Grobler from Lichtenburg and NJ de Kock from Ventersdorp. Lategan and his family have been on the farm, Platdrift, since 1938 and when his son joins, he will be the fourth generation Lategan on the farm. At the moment De la Rey farms alone, but he is looking forward to the end of the year when his son, Kobus, will join the family full-time.

"Kobus has been working on a soya farm in the US for the past year. He did a degree in Irrigation Management and Soil Science at the University of the Free State before going to the US and when he joins, he will be excellently qualified to take on the irrigation part of the farming operations," Lategan said. Lategan says they just went through a 6year drought and after just trying to cope and get through the tough times during this period, he did not think good things would ever happen again. "When I heard my name, I was at a loss for words and was reminded that good things can still happen."

Lategan's preferred Landini dealer is in George, S Haddad Agricultural Service. "I am very satisfied with the customer service we receive at the Haddad dealership." Incidentally, Lategan took one of his tractors to Haddad Landini in George to replace a windscreen when he saw the competition notification and decided to enter.

He has 200 ha under irrigation at the bottom of the Kamdeboo mountain range in the Karoo where he plants wheat, lucerne and maize in rotation. The lucerne is mainly used for ostrich feed. The rest of the farm comprises typical Karoo veld where they keep Angora goats and Merino sheep.



"With the small stock we keep, pest animals are a nuisance. To address this, we are increasing our focus on planting pastures. To use our water and electricity more effectively, we switched half of the flood irrigation to centre pivots. We installed a 300 mm pipeline for approximately 1,5 km from our biggest dam enabling us to irrigate more effectively through gravitation."

"To farm sustainably is becoming increasingly important, but sometimes nature can throw you a curveball and then you have no other choice than to adapt your plans. I believe nature has its cycles and one must weather the challenges brought on by these cycles by continuously focusing on good and sound farming practices. If one can diversify your operation, it gives one the opportunity to better mitigate the upward and downward fluctuations in each of the individual sectors."

Lategan uses two other Landini tractors on the farm. The Landini Legend 105 is used for soil preparations and cultivation as well as for baling lucerne hay. He also has a Landini PowerMondial 115.

Lategan's father bought their first Landini tractor at the Humansdorp Show many years ago and coincidently, half of the buying price at the time also came from a lotto ticket he won. With history repeating itself, Lategan plans to utilise the Landini tractor he won during Nampo Cape this year in the new vegetable addition to the farming operation. He also plans to purchase a rotavator for this purpose. "My son Kobus is especially keen to use the tractor to cut the grass around the two farmhouses."



Passion for Innovation.



Save the Date

12 November 2023 | 11:00 | Mossel Bay

FS FARMSRACE Photography

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AUCTIONS & EVENTS

7	October 11:00	Afridome, Parys	Boerboel Nationale Skou	Read more
10	October 11:00	Bull Ring Auction House, Davel	Hurwitz Summer Sale	<u>Read more</u>
12	October 11:00	Brennaisance Wine and Stud Estate	Regainer Nguni Auction	<u>Read more</u>
18	October 11:00	Plaas Eastry, Tweespruit	Le Roc Production Auction	<u>Read more</u>
4	November 18:00	Pretoria	Diamond Auction	<u>Read more</u>
//	November 11:00	Mosselbay	Cape Prestige Auction	<u>Read more</u>

