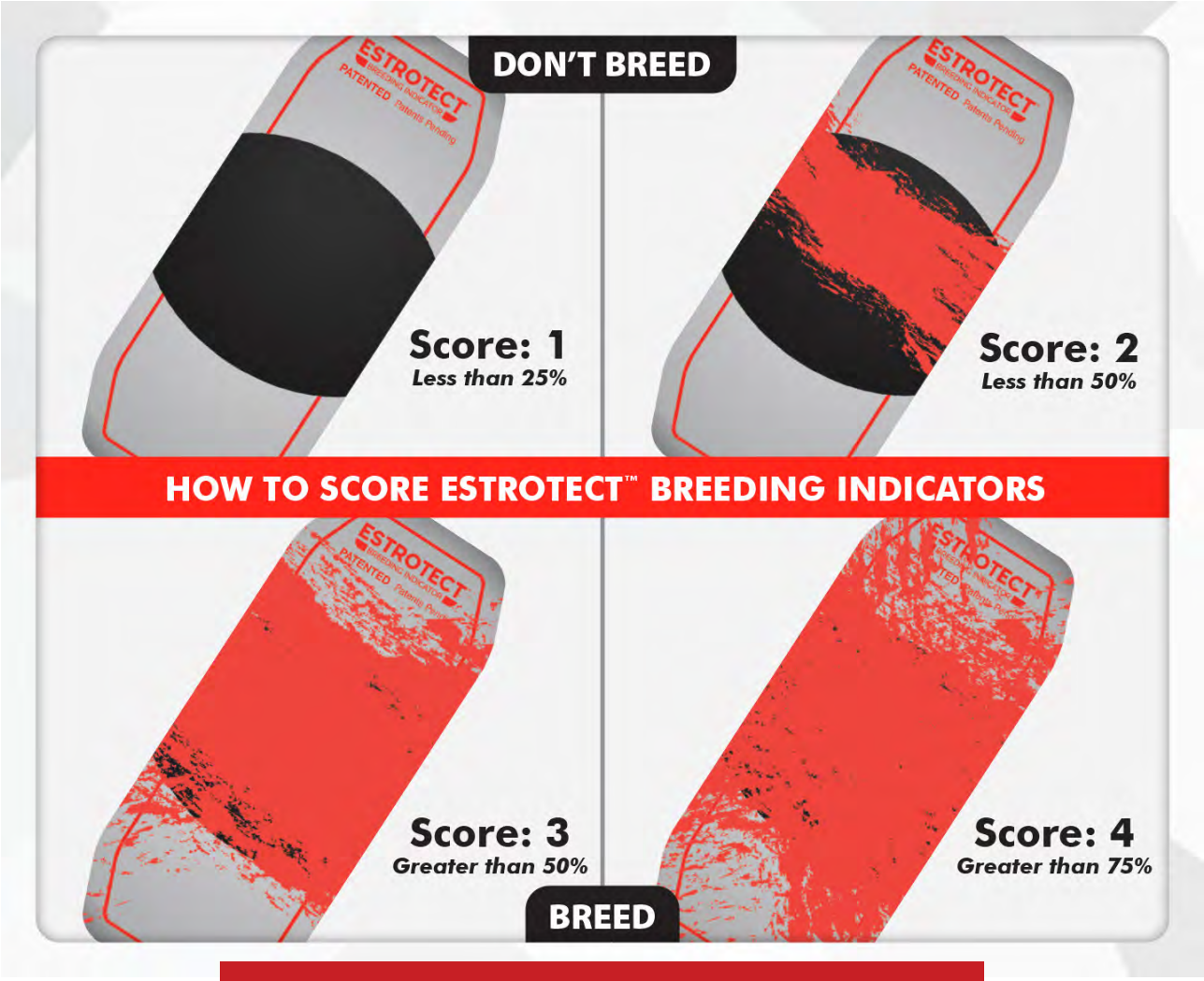
- Additionally, cattle bred in these studies with patch scores of only 1 or 2 had nearly 12% pregnancy loss. Females bred with patch scores of 3 or 4 only experienced pregnancy loss around 3%.

A Canadian study showed similar results when heifers were monitored for estrus with the Estrotect Breeding Indicator and bred with sexed or conventional semen using timed AI. The study found:

- Pregnancies per AI were 66.9% for conventional semen and 56.7% for sexed semen when breeding heifers at the equivalent of a patch score 4.
- The percentage dropped to 29.3% pregnancies per timed AI for sexed semen when heifers were bred at the equivalent of a patch score 1, while conventional semen wasn't as harsh of decline at 44.2%.

For many years, we've observed that females with increased estrus intensity have higher fertility. By pairing an Estrotect Breeding Indicator with a timed AI protocol you can work behind a cow or heifer to make a smart, effective breeding decision the moment cattle go through the chute. The Breeding Bullseye will tell you which cows or heifers have the highest chance of a successful pregnancy, so you can breed accordingly.



When the Estrotect Breeding Indicator has 50% or more of the surface ink rubbed off the female is at or near peak estrus intensity with a patch score of 3 or 4.

1. Pohler et al., 2016; Speckhart et al., 2018; Oliveria et al., 2018; Periera et al., upub
2. Colazo et al. 2018. Evaluation of a modified GnRH-based timed-AI protocol associated with estrus detection in beef heifers inseminated with sex-selected or conventional semen. University of Saskatchewan and Sao Paulo State University.

ESTROTECT™ BREEDING INDICATOR

SLEEWIJK
BRANGUS STOET

SW194

2021 BREEDPLAN BUL VAN DIE JAAR

2021 JUNIOR KAMPIOEN ROOI BUL

NUWE TUISTE: CAPITAL STUD, HENNING PRETORIUS

GENELINK MEMBER

HELGARD TRUTER

Cell: 082 459 6927
helgard@swbluestar.co.za

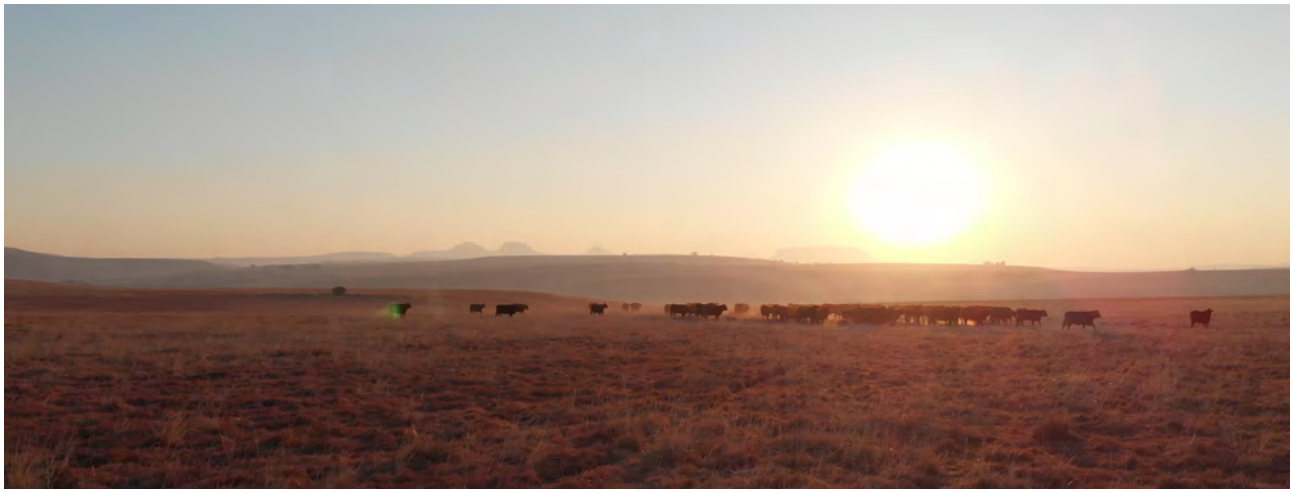
37ste NASIONALE BRANGUS VEILING

Woensdag | 10 Augustus 2022 | 11:00
Afridome | Parys

12de GENELINK PRODUKSIEVEILING

Donderdag | 15 September 2022 | 11:00
BE HUMAN naby Bloemfontein

Snippets on breeding cattle



Christopher D.H.Sparks

Past President of the Brangus Breeders Society
Honorary Life Chairman of the LRF (Livestock Registering Federation)
2018 Landbouweekblad/Breedplan SA Stud Breeder of the year
2018 ARC (Agricultural Research Council) SA Beef Producer of the year

The content of this article is based on lessons learnt over a number of years and observations made, while breeding cattle on the sour veld. Lessons are learnt every day and the process of learning is never ending.

It is important to keep records of these findings to ensure that mistakes aren't repeated. It is believed in some social circles that young people need to pay "school fees". In other words, they need to make their own mistakes and bear the brunt thereof. In principle, it's not a bad idea, as personal discovery is never forgotten. Mistakes unfortunately cost money and should be avoided as far as possible. I am not saying that one shouldn't take risks; but merely that risk should be calculated and manageable should failure occur.

Researching a subject and seeking good advice could save unnecessary loss. If good advice is asked for and then ignored; paying of school fees would be a just reward. Here are some thoughts applicable to both stud and commercial farming practice.

All cattlemen should first be grass farmers, using livestock to manage their available, renewable resource.

Cost of cow per annum

This calculation is done in very simple terms and is based on a cow's physical consumables, excluding any special medical attention as follows:

- Grazing cost calculated by the number of hectares per cow (prescribed for your area) x rental per ha per year. Even if your farm is fully paid for, this cost must be included, as you yourself could have generated income by renting out that very same grazing to someone else.

- Annual Inoculations and dipping.
- Winter Lick for a period of 7 months.
- Summer Lick for a period of 5 months.
- Cost of an average bull at R 60 000 shared between 30 cows over a period of 3 years.
- Cost of 2 Fertility and Trichomoniasis Tests, shared between 30 cows per year.
- Cost of Vet for annual pregnancy test per cow.
- Plus 15% of total cost for fuel and labour. This is a bit of a thumb sucked figure, as the cost of visiting a herd of 50 cows as opposed to visiting a herd of 100 cows would be similar.

Profit drivers

The most important profit drivers are % calves weaned and adaptability of the cow herd to its immediate environment. A cow can only pay for her annual board and lodging by weaning a calf that can either be sold, or retained as capital, to form part of the herd. When a cow doesn't wean a calf, her annual costs need to be shared between the other contributing cows in the herd. It is sometimes better to sell such a cow and recoup her annual cost. A cow herd which is well adapted to its environment, should maintain better condition, should have lower lick intake, should easily conceive, and have little problem in raising a good calf. Remember that the successful weaning of a calf at 7 months, is more important to profit, than weaning weight.

Longevity of a cow

The "Golden Oldies" in the herd are my favourite cows because they have made me the most money. To justify my statement, we need to bear the following in mind. A 7 month old, weaned heifer calf is retained as breeding stock and needs to be carried for a further 17 months, before being exposed to the bull at 24 months (sour veld practice) of age. The heifer is then carried for a further 9 months before she calves. The calf is then suckled until weaning 7 months later, before being sold to bring in the first income. The heifer has thus incurred costs over a period of 33 months before bringing in any income, or 49 months if you include the months her dam was in-calf and the 7 months it took to wean her without cash income if retained. Each year that a cow calves, reduces her initial input costs.

Frame score in bulls

Much has been written about the money-making attributes of medium to small frame cows. If you however decide to use a large frame bull on your well adapted herd of smaller framed in the, he will be working during the best 3 summer months of the year, before being taken out, tested and fed, until the next mating season. Adaptability of the bull himself, therefore, is really of no concern. The problem arises with his daughters as some may be early maturing like their dams and others may be late maturing like their sire. When pregnancy tests are later conduced on his heifers, you may well find that most of the early maturing heifers are in calf, while most of the later maturing, large frame heifers, are not. If conception is used as a selection tool you will find that far fewer of your heifers qualify for retention, than had you initially used a more suitable, smaller framed bull.

Veld Bull Testing

This concept introduced by "Veldbul SA", under the guidance of Dr. Hannes Dreyer, has proved a useful tool in identifying the better environmentally adapted bulls, in a contemporary group. I support the concept that bulls that do well on the veld, should produce daughters who do well on the veld, who eventually go on to form part of a well-adapted and profit-making cowherd. All the bulls we used are selected from a combination of both the Veld Bull Economic Index and Breedplan EBV's.

Handling of cattle

When visiting a farm, how the cattle respond to humans, quickly belies how they are generally treated on the farm. The continual cracking of whips, whistles and shouts are not conducive to producing a calm herd. The Australian Brahman Society believes that a positive correlation exists between temperament and meat tenderness. This conclusion was the result of the "Flight Test", where a weaner calf is released from the race and runs through 2 light beams. The faster both light beams are broken, the livelier the animal and the tougher its meat. Genestar testing using DNA proved this in live animals, while laboratory shear-force testing could be conducted on a meat sample from a slaughtered animal. A visual observation of temperament, conducted during Veld Bull Testing, can also give

an indication of which animals are calm and which are lively within the contemporary group.

We don't profess that the method of handling cattle, determines their genetic potential for meat tenderness; but merely that rough handing results in a nervous herd, which could impact on tender meat, due to constant unnaturally high adrenalin levels.

Mating season

A fixed mating season in our summer rainfall area is useful when it comes to contemporary groups, management, and disease control, inoculating and marketing. It is also critical in identifying the most fertile females in your herd, through DTC (days to calving), which is by definition the number of days between the DOB of a calf and the day its mother was first exposed to the bull. The most fertile cows in the herd have the shortest DTC.

ICP (inter-calf period) on the other hand is generally used in herds where no fixed mating season is used, and bulls run with the herd throughout the year. The spread of Trichomoniasis becomes a very real danger, as cows regularly cycling and then aborting could go undetected for long periods of time, resulting in significant financial loss.

Contemporary Groups

A contemporary group is a group of animals of similar age, running under the same circumstances, where performance comparisons can easily be made. Contemporary groups are important when measuring all traits, be it growth, scrotal size, or ultra-sonic carcass scanning. No accurate comparisons can be made between animals without managed contemporary groups.

Genetic correlations

Balance in breeding is of utmost importance, as pushing one particular genetic trait can negatively impact another. We must therefore be careful, not to over focus on a particular EBV trait. Some genetic traits are positively correlated, while others are negatively correlated to each other. A general observation is that focus on short gestation length can reduce birth weight and the downside is that calves born very small, rarely make for heavy weaners, unless they are curve-benders? Focus on growth can result in higher birth weights. Focus on EMA (Eye-muscle Area) negatively impacts on IMF (Intra-muscular Fat). There are however rare exceptions to this rule, where an animal can have both high EMA and IMF. Milk in beef breeds should be an average EBV or lower, as to much milk affects the longevity of the cow. Such cows generally give birth to heavier calves, calf every second year and become maintenance problems in the winter. A cow weaning a heavy calf has more than adequate milk. We are a beef breed and not a dairy breed. A breed is represented by its breed average and the breed average is the breed.

BEEF GENOMIC PROJECT PARTICIPANT

MOUNT Olive GENETICS

Est. 2000

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BREEDPLAN AND ARC

2018

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PROUDLY OWNED BY MASHININI ENTERPRISE

MAKITI VELDBULL SALE
TUESDAY, 19/07/2022
at Frankfort

10TH BASTION BREEDERS PRODUCTION SALE
FRIDAY, 29/07/2022
at Warden

SPARKS "MOUNT OLIVE BRANGUS"

37TH BRANGUS NATIONAL SALE
WEDNESDAY, 10/08/2022
at Parys

EASTERN FREE STATE BRANGUS CLUB SALE
TUESDAY, 23/08/2022
at Frankfort

Christopher Sparks | 083 701 0029 | sparks@mniarchitects.co.za | www.mountolivegenetics.co.za

Implementation of ILR Online

Izaan du Plooy

LRF Tegniese beampte, LRF Technical Officer

As performance data forms the basis of all genetic evaluations, BREEDPLAN like to encourage breeders to submit performance data by making it as stress-free as possible. In addition to summitting data via excel spread sheets or herd management software programs, they also recently introduced a web-bases application, ILROnline, that enables breeders to in real-time register animals, record performance information, transfer animals, dispose of animals, etc. directly on their society's database. As it is a web-based application it can be accessed from any device from anywhere in the world. ABRI/BREEDPLAN has now completed the process of implementing ILROnline for the Brangus society of South Africa.

ILROnline is an upgrade to the registration and performance submission functionality of the Internet Solutions web based system. Previously, through Internet Solutions data was submitted to the society office for upload onto the society database. With the new application, breeders submit data directly onto the society's database. Breeders also now have access to all previously submitted raw weights and traits that were submitted to the society's database. This enables breeders to quickly see which performance data is missing for their animals.

ILROnline is available for use by all societies that make use of ABRI's ILR2 registry software as a breed registry, which is currently used by more than 190 breed societies worldwide. ABRI's vision for ILROnline is to keep the functionalities for the different users as standardized as possible. This will allow ABRI to maximise software development and support efficiencies. The current functions of the Internet Solutions web system will eventually be incorporated into ILROnline.

Some of the features that breeders can look forward to, includes the following:

1. List of all registered and pending animals at the society.
2. Extract a list of all your registered and pending animals in csv. format.
3. See reasons why animals are pending.
4. Register calves on the society database. With all the necessary checks in place.
5. Dispose of animals easily, without a need to fill in disposal forms.
6. Transfer animals to stud or commercial breeders.
7. Keep a list of buyers/sellers. Access to a list of all the buyers that you transferred animals to in the past three years.
8. Performance information:
   - See exactly which weights and traits have been recorded for a specific animal.
   - Record outstanding weights and traits.
9. Access to various BREEDPLAN and society reports.
10. Update breeder contact details.

The system has the same data quality checks in place as currently set up on the society database for society staff, to ensure that breeders enter data of good quality. The system describes each of the errors/warnings clearly, as to inform breeders of the exact problem or which information was incorrectly entered or is missing.

With ABRI's focus on providing a more standard software solution that is configurable for different clients (compared to ILR2 which is programmed differently for each client), they will be concentrating on delivering all new breed registry features via ILROnline. This makes the most efficient use of ABRI programmer's time for both development and support, as well as delivering a more feature rich product for all clients.

Over time, you will notice increasing functionality in ILROnline for the public, members, and registry staff. We are excited about the way this software will allow more efficient capturing and display of data, and a more user-friendly method of interacting with society data.

For more information, please contact the Brangus society of South Africa or the LRF office. You can also visit the ILROnline YouTube channel:

(https://www.youtube.com/channel/UCfFOtGtctpNKMoPOklFm2gA) for short videos on how to make use of the ILROnline software.

Oos - Vrystaat Klub

Veiling: 23 Augustus 2022

Royal Auction Centre - Frankfort

Francois Scholtz - 082 497 8676

Basic Philosophies for Evaluating Livestock

PJ Budler

http://pjbudler.com

When I was invited to judge at the SA Brangus National, I was elated. It was one of 41 shows I'd be judging in 2021, but it was different. What happens at the Brangus National in Harrismith is spoken of across South Africa and sets the pace for the bull sales and breeding decisions for the coming spring. This has been the case for decades. So to be a part of this is something I'll always cherish.

I absolutely loved the camaraderie, the hospitality was amazing and the venue ideal. It was the familiarity of the stories and the sense of humour that I've missed so much being away from home.

The cattle were good, but I knew that they would be. SA Brangus is blessed with generational breeders with cow-sense and profit driven philosophy when it comes to raising livestock. This was evident throughout the two days of judging.

The auction rewarded the good cattle really well and it truly is a world class event in every way - I really mean that. I go to more shows and sales around the world than I need to. This is a standout event.

South Africa has some issues at the moment, and it makes life complicated for trying to raise a family and grow a business. However, there are very few places in the world that I visit that are without issues. There are positive aspects of South Africa, even today that are hard to find anywhere else in the world. I honestly believe that the future of our industry in South Africa is positive in so many ways. Brangus breeders around the world would be jealous and envious of a lot of what SA

Brangus has achieved, the quality of the livestock, the market share, the premium prices and the solid function of the society.

I look forward to staying in touch with all the Harrismith attendees, and I would love to work with SA Brangus again in the future!

Below is a summary of the philosophies I used when evaluating the cattle in Harrismith.

Cattle need to be able to eat, walk and reproduce.

- Eat - Jaws and muzzles
- Walk - feet, legs, and joints
- Reproduce - testicles, sheaths, udders, vulvas, and secondary sexual traits. Bulls need to be masculine, and females need to be feminine.

Focus on the four most important economic traits in a cattle operation. These are fertility, longevity, adaptability, and efficiency.

Milk, muscle, growth, and marbling are very important, but are meaningless if we don't lay the foundation with the aforementioned traits.

1. Fertility - Sexual organs, secondary sexual traits and maturity pattern
2. Longevity - Skeletal structure, feet, jaws, udders, sheaths, testicles
3. Adaptability - Skin, pigment, hair coat, appropriate body type
4. Efficiency - Efficiency of movement, feed efficiency, cow/calf efficiency

Measure appropriate dimension. Length x Depth x Width. Big is not best. Best is best.

Define balance as:

1. Skeletal or structural balance.
2. Hormonal balance
3. Balance between muscle mass and shape and fleshing ability or the genetic ability to put down a layer of fat.

Appropriate maturity pattern:

- cattle need to be early enough maturing to breed or be harvested at the appropriate age
- cattle need to still maintain enough growth to get to the point of harvest and breeding in the appropriate frame and development.

Athleticism, skeletal integrity, clean joints and cushioned pasterns are essential for bulls, females and steers. In breeding cattle this is essential for longevity in a herd. For terminal cattle it is essential too as unsound or foundered cattle don't feed well. Also, every steer has a mother and sisters that have to be working on pasture.

Quality cattle come in all different shapes, sizes and colours. It's easy to make a big one or a little one, a polled one or a horned one. The art of breeding is to make a good one. Then it is up to the individual breeder to evaluate whether that good one suits their objectives, resources, and environment.

Breeding cattle is simple, the difficult part is keeping it simple - Tom Lasater, founder of the Beefmaster breed.

Recipes

Chef Rinette Enslin

Fall off the Bone Beef Ribs in Red Wine and Mustard

Serves 6

Ingredients:

4	Beef Spare Ribs (about 2 kg), cut in half (ask butcher to do this)
As needed	Salt
As needed	Pepper
125 ml	Port
2	Red Onions, thinly sliced
¼ Cup	Sunflower Oil
2 Tablespoons	Soft Brown Sugar
3 Tablespoons	Apple Cider Vinegar
2	Small Red Chilies, seeded and finely sliced
2 Tablespoons	Ground Cumin
2 Tablespoons	Paprika
1 Tablespoon	Wholegrain Mustard
20 g	Unsalted Butter
3 Shots (90 ml)	Espresso
40 ml	Pomegranate Concentrate
1 Tablespoon	Crushed Pink Peppercorns
± 2 L	Beef Stock (Proper Self Made – no granules or concentrate)

Demi Glaze (Basic)

Ingredients:

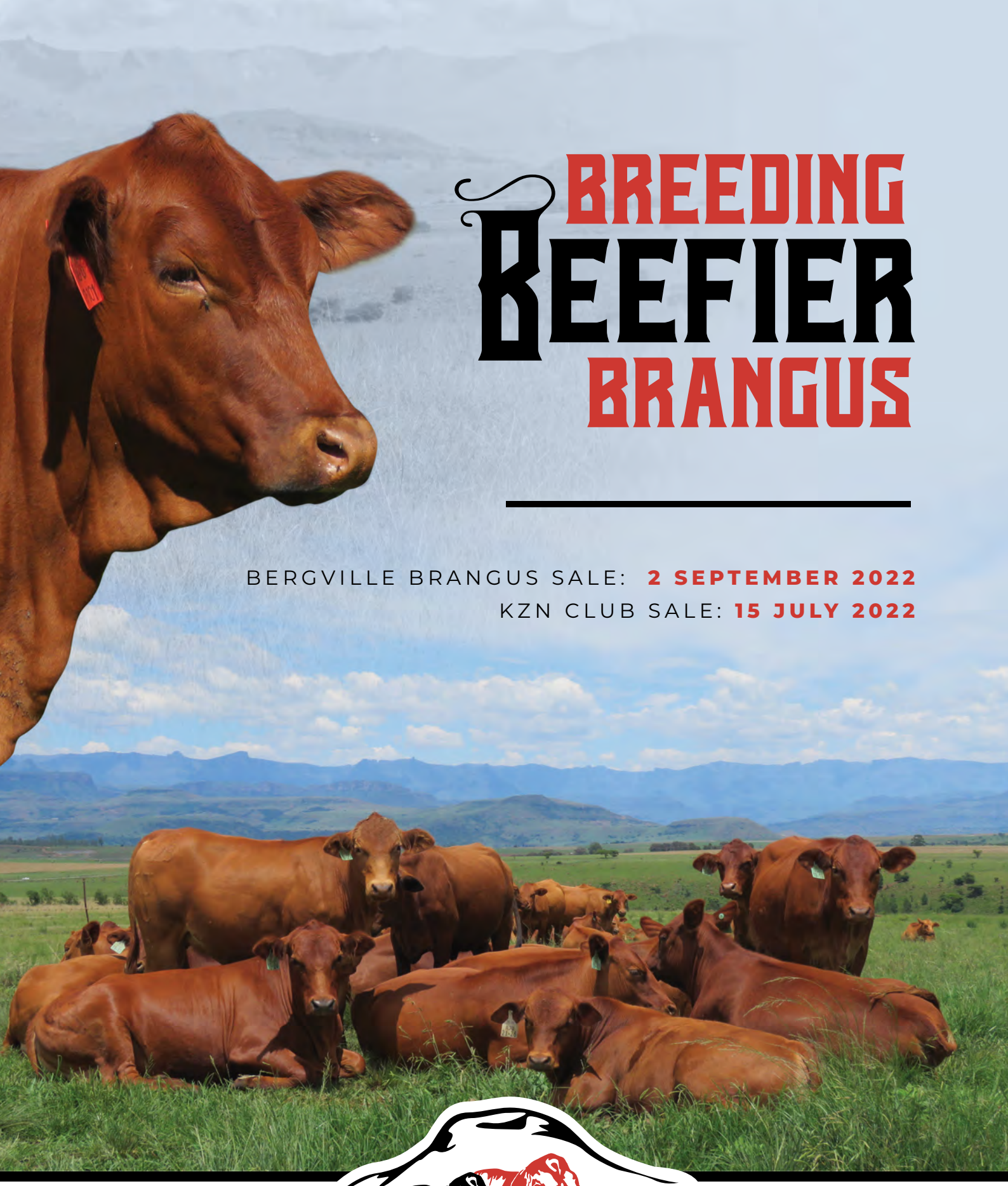
½ cup	Red Wine
¼	Onion, finely chopped
750 ml	Beef Stock (Proper Self Made – no granules or concentrate)

Method for Demi Glaze:

In a saucepan add the red wine and finely chopped onion. Simmer and reduce until a third then strain the onion from the wine, reserving the wine.

In another saucepan add your beef stock. Simmer and reduce until have.

Add the wine to the reduced beef stock and simmer until sauce consistency. Needs to coat the back of a spoon.



BREEDING BEEFIER BRANGUS

BERGVILLE BRANGUS SALE: **2 SEPTEMBER 2022**

KZN CLUB SALE: **15 JULY 2022**

UNSWORTH BRANGUS

ROY: 083 273 5424 | roy.unsworth@ymail.com
ANDREW: 081 038 5265 | andrewunsworth20@gmail.com

Method:

Preheat the oven to 160°C.

Rub the beef ribs with salt, pepper, chilies, cumin, paprika, wholegrain mustard, and the crushed pink peppercorns.

Heat the butter in a frying pan. Fry the onions till soft and golden. Add the brown sugar and pomegranate concentrate and fry together until the sugar is dissolved. Deglaze the pan with the apple cider vinegar. Remove the onions from the pan and set aside.

Heat the oil in the same frying pan and fry the ribs in the pan till well browned on all sides.

Transfer the beef ribs to a deep roasting tray and top if with the onions. Add the espresso and port, then cover the meat with the beef stock. Tightly wrap with foil.

Slow cook in the oven until a butter knife can easily go through without any resistance.

When the beef ribs are cooked remove it from the liquid and set aside. Strain the liquid and transfer the liquid to a saucepan. Simmer and reduce the cooking liquid till half the amount.

Add the demi-glaze to the reduced cooking liquid and reduce until sauce consistency.

Preheat the oven to 200°C.

Transfer the ribs to a roasting rack and render of the fat for ±10 minutes, keeping an eye that it doesn't burn.

Cut the ribs into desired size portions and serve with the rib sauce.

Slow Roasted Beef Brisket with a BBQ

Serves 8

Ingredients:

2 Kg	Deboned Beef Brisket
4	Onions, thinly sliced
¼ cup	Sunflower Oil
6	Bay Leaves
4 Tbsp	Light Brown Sugar
2 Tbsp	Tomato Puree
3 Shots (90 ml)	Espresso
± 2 L	Beef Stock (Proper Self Made – no granules or concentrate)
2 Tbsp	Apple Cider Vinegar
3 cm piece	Finely grated ginger
2	Oranges, juiced
80 g	Dark Chocolate, finely chopped

eikebrangus

HOËVELD AANGEPAS

URBAN UYS | 072 240 6593 | ERMELO

For the Rub

4 tsp	Cayenne Pepper
2 tsp	Mustard Powder
4 tsp	Ground Cumin Powder
2 tsp	Fennel Seeds
Salt	
Pepper	

Method:

Preheat the oven to 160°C.

If you have a thick piece of brisket butterfly the brisket so that you will be able to roll it up and be able to butcher string it.

On both sides season the brisket with salt and pepper. Mix the rest of the rub ingredients together and light fry in a pan until you start to smell the aromas of the spices. Make sure you don't burn the spices. Rub the spices all over the brisket on both sides as well.

Roll up the brisket and tightly secure it with butcher string.

In a frying pan heat the oil and fry of your sliced onions till soft and almost golden brown. Add the brown sugar and cook it with the onion until dissolved. Add your tomato puree and stir through. Deglaze with the apple cider vinegar. Remove the onions from the pan.

In the same frying pan brown, your brisket roll on all the sides till well browned.

Transfer the brisket roll to a deep roasting tray and add the onions on top of the brisket.

Add the espresso and cover the brisket with the beef stock.

Add the ginger, orange juice and dark chocolate to the liquid.

Tightly wrap the roasting tray with foil.

Slow cook in the oven until a butter knife can easily go through without any resistance.

When the brisket is cooked remove it from the liquid and set aside. Strain the liquid and transfer the liquid to a saucepan. Simmer and reduce the cooking liquid till half the amount.

Add the demi-glaze to the reduced cooking liquid and reduce until sauce consistency.

Remove the string from the brisket and slice it into 2cm thick slices.

Serve the sliced brisket pieces with the brisket sauce.

Demi Glaze (Basic) - see on previous page.

Veiling TYD

OVK Lewendehawe

jou betroubare agent

OVK Lewendehawe met sy uitstekende posisionering van Tegniese- en Bemarkingsbeampte infrastruktuur verskaf omvattende diens landwyd. 'n Uitnemende lewendehawe-afslaersdiens word aan beide die koper en verkoper gelewer. Met talle tegniese beamptes en lewendehawe bemarkers in verskeie areas, het hierdie lewenskragtige en doelgerigte onderneming homself met mening in die veilingsbedryf gevestig.

OVK Lewendehawe is bekend vir sy kundigheid as aanbieder van onder meer stoetvee-, landboumasjinerie, algehele uitverkopings, produksieveilings, slagveeveilings asook wildveilings. Volhoubare voorsiening word ook gelewer aan alle abattoirs en voerkrale. Verskaffing van algemene produksieraad, stoetdienste en vervoerkoördineering tot die volledige veilingsbeplanning wat advertensieveldtogte insluit.

OVK Lewendehawe het internet / virtuele veilings ontwikkel en ingestel wat met groot sukses aangebied word. Ons is trots op die alles-in-een-diens wat ons aanbied. Ons beywer onsself om landwyd die veeprodusent se eerste keuse as afslaersgroep te wees.

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Konvensionele spoeling vs IVF-embrioproduksie in eenvoudige terme

Dr Robert Treadwell

Veearts en 'n Direkteur van Embrio Plus.

Daar lê opwindende tye voor in die veld van reproduksie vir Brangus telers. Soos wat tegnologie stelselmatig verbeter, word daar al hoe meer opsies beskikbaar vir innoverende telers om hulle kuddes en genetika te verbeter.

Die nuwe terme en tegnieke skep dikwels verwarring, soos bv. die verskille tussen konvensionele spoeling na super-ovulasie teenoor IVF-embrioproduksie. Die vraag oor watter een van die twee tegnieke dan nou die beste sou wees, duik ook gereeld op.

Hier volg 'n baie vereenvoudige verduideliking van wat elke tegniek behels, die "normale gemiddeldes" wat binne die industrie verkry word en dan 'n vergelyking tussen die voor-en nadele van elk.

Konvensionele spoeling (MOET):

Die tegniek het reeds in die 1980's kommersieel gewild begin raak. Dit behels:

- Die inspuit van sekere hormone (FSH) wat 'n vroulike skenkerdier laat super-ovuleer, of te wel meer eierselle laat ovuleer as die een of uitsonderlike 2 eierselle wat koeie normaalweg sou ovuleer wanneer hulle op hitte kom.
- Die vroulike dier word dan ge-KI tydens hierdie hitte en die eierselle word, soos met

'n normale hitte, bevrug in die fallopiese buise van die skenkerdier.

- Ontvangerdiere word terselfdertyd gesinkroniseer om op dieselfde dag op hitte te kom as die skenkerdier, maar hulle word natuurlik nie ge-KI of gedek nie.
- 7 Dae na bevrugting word daar 'n kateter in die skenker se baarmoeder geplaas en die embrio's word uitgespoel, opgevang en in 'n laboratorium geklassifiseer, voordat hulle vars oorgeplaas word in die ontvangers, of bevries word vir latere gebruik.

IVF-embrioproduksie

'n Prosedure wat oor die laaste 15 jaar regtig begin posvat soos wat die resultate verbeter het en die aanvanklike probleme, soos bv. groot kalwers by geboorte, uitgesorteer kon word deur die regte media te gebruik.

Daar is 4 basiese stappe:

Aspirasie van eierselle vanaf die skenker

Ultraklank word gebruik om 'n naald in die eierstokke van n skenkerkoei te druk en die eierselle te oes deur die vloeistof in die follikels (vloeistofgevulde blasies in 'n eierstok waarin die eierselle geproduseer word) uit te suig.

- **Bevrugting van eierselle in die laboratorium**

Die eierselle word vir 'n dag lank matureer in 'n inkubator, waarna semen by 'n groepie eierselle gesit word om hulle te bevrug.

- **Kweking van embrio's**

Die embrio's word dan vir nog 7 dae na bevrugting gekweek, in 'n inkubator in die laboratorium.

- **Oorplaas of bevriesing van embrio's**

Die 7 dae oue embrio's word dan, net soos konvensionele embrio's, oorgeplaas in ontvangers wat gesinkroniseer was om op hitte te kom op dieselfde dag as wat die embrio's bevrug was, of hulle kan bevries word vir latere gebruik.

Die groot verskil tussen die 2 tegnieke is basies dat by konvensionele spoeling al die "werk" binne in die baarmoeder van die skenkerkoei gebeur, en die 7 dag-oue embrio's word net uitgespoel, teenoor IVF –embrioproduksie, waar die embrio's in 'n laboratorium bevrug en gekweek word.

Voor en nadele van elke tegniek?

Konvensionele spoelings – industrie standaarde tans

- Embrio's per spoeling verkry 6-8
- Konsepsies op vars embrio's 50-60%
- Konsepsies op bevrore embrio's 40-50%
- Kan elke 6-8 weke herhaal word, meestal vir 2-3 siklusse
- Word gewoonlik per spoeling gefaktureer, ongeag van aantal embrio's verkry

Nadele:

- Kan net op nie-dragtige diere gedoen word, so soms word koeie se TKP's benadeel omdat hulle moet wag om in n spoelprogram te gaan.
- Behels meer insette van die teler, soos die inspuitprogram van die skenkers, wat noukeurig en op spesifieke tye gedoen moet word, en die KI van die skenkers, wat krities belangrik is
- Skenkers ontvang hormone wat, as dit nie reg en kundig bestuur word nie, met oormatige gebruik later probleme met vrugbaarheid kan skep.
- Werk duur uit as daar min of geen embrio's geproduseer word nie.
- Net semen van baie hoë standaard kan gebruik word, swakker bevrugting word gewoonlik met sub-standaard of geslagsbepaalde (sex sorted) semen verkry.
- Vereis ook ten minste 3 strooitjies semen per skenker per spoeling.

Voordele:

- Programme kan volledig op die plaas gevolg word, met net een besoek van die embrioveearts, wat reiskoste spaar en die werk moontlik maak in verafgeleë gebiede.

- Goedkoper per embrio as die skenkers goed spoel. Reiskoste ook minder, omdat verskeie kliente in 'n streek op opeenvolgende dae bedien kan word.
- Minder infrastruktuur nodig vir die laboratorium, so werk goed selfs in afgeleë areas/lande waar nie toegang tot IVF laboratoriums is nie.
- Heelparty lande oorweeg net konvensionele embrio's vir invoere.

IVF-embrioproduksie – industrie standaarde tans

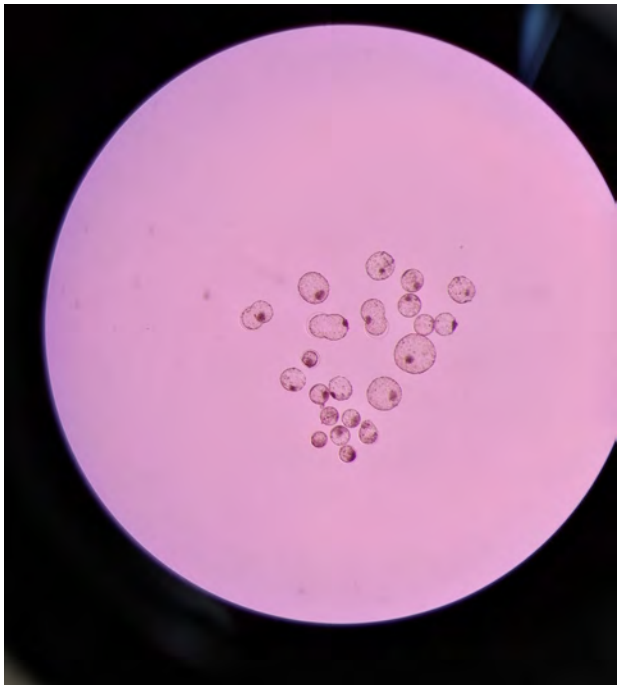
- Embrio's verkry per aspirasie gedoen 3-4
- Konsepsies op vars embrio's 40-50%
- Konsepsies op bevrore embrio's 30-40%
- Kan elke 2 weke herhaal word
- Al die werk gedoen word gewoonlik gefaktureer per embrio suksesvol geproduseer

Nadele:

- Minder embrio's per skenker per rondte as konvensionele spoelings, so gebruik gewoonlik meer skenkers in 'n program, met groter verskille in genetiese meriete
- Konsepsies swakker as konvensionele embrio's, veral met bevrore embrio's (verbeter wel soos tegnieke en media vernuwe)
- Baie duur, sensitiewe laboratorium benodig, gewoonlik nie-mobiel, wat sake bemoeilik in verafgeleë gebiede of lande waar daar nie IVF labs is nie.
- Duurder as skenker baie embrio's lewer per sessie

Voordele:

- Eierselle kan van dragtige skenkers ge-oes word, tot op 3,5 maande van dragtigheid.
- Minimale/geen hormone nodig vir die skenkers.
- Kan meer gereeld herhaal word.
- Skenkers met funksionele eierstokke, maar ander geslagskundige probleme soos fallopiese buise wat geblok is of patologie van die baarmoeder self, kan wel suksesvol gebruik word vir IVF programme.
- Eierstokke van koeie wat geslag word of pas dood is, kan gebruik word om eierselle te oes om vir oulaas nog embrio's te produseer.
- Geslagsbepaalde semen werk goed, asook soms swakker semenstrooitjies wat tydens normale KI nie goeie bevrugting sou gee nie
- Minder semen benodig, 1 kwaliteit strooijie kan tot 7 skenkers se eierselle bevrug.
- Minder "arbeid-intensief" vir die teler, in terme van die skenkers se hormoon-program en KI's wat nie van toepassing is op IVF-embrioproduksie nie.
- Goedkoper vir diere wat min of geen embrio's lewer.



Watter tegniek is dan die beste vir my?

Ek stel voor dat enige persoon wat embrio-oorplasings oorweeg, eers die praktiese implikasies deeglik met hulle embrio-veearts bespreek.

Konvensionele spoelings werk goed vir programme waar embrio's bevries moet word, veral vir uitvoere. Dit sal dalk ook die voorkeur wees vir telers wat net enkele vroulike skenkerdiere het, genoeg semenstrooitjies van goeie kwaliteit beskikbaar het en in verafgeleë gebiede, sonder laboratoriumfasiliteite, boer.

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Die beter konsepsie-syfer maak dit ook meer aantreklik vir mense wat nie die kapasiteit het om 'n groot aantal ontvanger-diere aan te hou nie.

IVF embrio-produksie mag dalk vir jou die antwoord wees indien jy oor 'n groot aantal skenkerdiere van soortgelyke genetiese meriete beskik, of graag geslagsbepaalde semen of baie skaars/duur semen, of semen wat nie goed werk met KI nie, wil oorweeg.

Indien jou skenkers reeds moontlik vroeg dragtig kan of moet wees teen die tyd wanneer die ontvangers gereed is om embrio's te ontvang, kan IVF embrio-produksie steeds op sulke skenkers gedoen word. Deeltydse beesboere wat nie in staat is om die skenkers se hormoonprogram noukeuring te volg nie, mag dalk IVF-embrioproduksie as alternatief oorweeg (of dan eerder hulle diere na 'n sentrum stuur vir konvensionele spoelings)

Baie kliente word deur ons aanbeveel om 'n kombinasie van die 2 tegnieke te gebruik. Ou of beseerde skenkerdiere wat nie weer gaan kalf nie, word bv. deurlopend konvensioneel gespoel en die embrio's gevries, met die oog op latere oorplasings of selfs uitvoere. Wanneer die dekseisoen aanbreek, word hulle konvensionele spoelings dan met n IVF-embrioprogram op ander skenkers gekombineer en vars embrio-oorplasings gedoen. Die bevrore embrio's is in die fles beskikbaar, sou daar op die dag ekstra ontvangers gereed wees.

Dit maak ook finansieel sin om skenkers met 'n goeie spoelgeskiedenis eerder konvensioneel te spoel en terselfdertyd ander diere, wat nie in die verlede goed reageer het op die konvensionele program nie, of ander geslagskundige probleme het wat hulle verhoed om goed te spoel, in 'n IVF program te plaas. Die embrio's kan dan steeds op dieselfde dag in ontvangers oorgeplaas word.

Hoe dit ook al sy, met soveel nuwe moontlikhede is daar 'n opsie en 'n plan vir elke klient se unieke omstandighede.

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What does the RPO do for the primary producer

Gerhard Schutte

Hoofuitvoerende Beampte
Nasionale RPO

One of the most frequently asked questions to the RPO is "what does the RPO do for the primary producer?".

This question is asked in light of the fact that the primary producer pays a voluntary levy to the RPO, as well as a statutory levy.

The RPO's most important role is to help the primary producer to be more profitable so that he/she can make more money. Therefore, it is important that the RPO creates an empowering environment for them. This is in many ways related to the government of the day and legislation. Furthermore, the RPO must communicate with the primary producer, while technology transfer is of critical importance. Without technology, the red meat industry will stagnate, and it would be impossible to be internationally competitive.

The 40/60-principal comes into play in terms of empowerment. It is a fact that 40% of the farmer's economical survivability is in his/her own hands. The other 60% is unfortunately locked into the macro environment – macro-economy, macro-sociology, and the international trade environment. This is where collective bargaining is important.

The RPO's approach to collective bargaining is one of a value chain approach. The value chain consists of the RPO, the developing producers, the hides and skins sector, feedlots, auctioneers, importers and exporter, consumers, and the abattoir industry. Labour will always be part and

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parcel, while the trade is of special importance because they take our product to the consumer.

The RPO follows an inclusive approach. There are nine provincial RPO's but on national level, wool- and milk producers are also accommodated. Organised agriculture (Agri SA and TAU SA) is also handled here, as well as the stud breeders. It is important to remember that the RPO was instrumental in establishing NERPO (National Emergent Red Meat Producers' Organisation) and cooperation between these two organisations is still close.

The RPO does not have a direct influence on prices, but an indirect one. It is clear that prices moved in a fairly positive direction from 2020 until 2022. This is an indication that all is well with the industry as well as the fact that the demand for red meat is high.

There are various game changers in which the RPO is involved:

• Animal health

The foot and mouth disease (FMD) outbreak of two years ago resulted in South Africa losing its FMD free zone status with the international organisation for animal health, the OIE. This has a serious impact on trade and our trade partners. Everything possible must be done to regain our status.

Bruccelosis is also currently a serious problem amongst cattle. The state has a responsibility to combat diseases, but farmers also have a responsibility. The availability of vaccinations is problematic. The RPO is of the opinion that Onderstepoort Biological Products (OBP) should not close its doors, but the industry will have to move in a direction where the risks can be discounted. Therefore, the private sector must in future be much more involved in order to ensure there is more than one service provider.

Interventions which the RPO undertakes on behalf of farmers include the fact that the RPO is involved with the National Animal Health Forum, and the fact that the RPO is the driver behind the nine provincial Animal Health Forums.

Furthermore, the issue of vaccinations has been taken up with the Minister of Agriculture, Land Reform and Rural Development, after which she appointed a biosecurity task group. Various actions have also been undertaken with the director-general and OBP and hopefully it will lead to some progress. The situation is critical because the red meat industry already had to sacrifice nearly a year of herd immunity due to a lack of vaccinations.

• APAC-rules

APAC (Agricultural Produce Agency Council) introduced biosecurity measures at auctions. These measurements must be implemented to ensure that we have a higher level of biosecurity at auctions in the future.

• Exports

There is a lot of potential for an increase in red meat exports. In the case of beef, it is possible to raise the current level of 5% of local production being exported, to a level of 20%. Small-stock exports to the Mid-East can be increased to 6% of local production. As these are live exports, it is important to have a protocol for animal welfare measurements in place and the RPO is currently busy with this action.

In the past South Africa mainly exported beef to Sub Sahara Africa, but it is now exported to countries like China, Jordan and the United Emirates. Exports of sheep meat is on a low level, but South Africa's prices are 30% under the world norms and there is potential for growth.

As far as import monitoring is concerned, an ad valorem tariff of 40% is currently applicable to red meat. It puts South Africa on an equal level with countries who reward their producers with huge subsidies. Unfortunately, the authorities do not have the capacity to police our borders and many cases of under-declaration occur. The industry has to perform this action for itself and the RPO appointed Agri Inspec as service provider in this regard.

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• Traceability

A long road remains until a system of traceability is established, but the industry will have to be successful with this endeavour. The state is currently undertaking certain actions in this regard, but the RPO have reached a point where the system can be rolled out on ground level. The RPO recommended that service providers already delivering services across the country, must be utilised. Such a system can at a later stage be incorporated with the LITS system (livestock identification and traceability system South Africa). The RPO is involved with the various committees and is therefore able to provide good inputs into the LITS-process.

• Technology

The local red meat industry currently has an advantage in terms of world prices and this advantage must be maintained with the use of technology. Red Meat Research and Development SA plays an important role and at any given time, 60 research projects are being conducted. More attention is now given to the developing part in order to render it more practical.

• Liaison with the government

The red meat is regulated by 66 acts and the RPO is continuously commenting on new legislation in order to ensure the primary producers' interests are not damaged. The Minister of Agriculture, Land Reform and Rural Development is currently writing a masters plan for agriculture and the RPO is very involved in the process.

• Inclusive growth

At this stage, 40% of the country's livestock is owned by the emerging sector and the industry is therefore moving more towards enterprise development. The RPO not only provides training to emerging farmers, but also established an institute for production development where good work is being done with statutory funding to draw these producers into the value chain.

- Consumer development

A total of 95% of beef and 99% of sheep meat are still consumed in South Africa and the red meat industry is competing for a place on the consumers' plate. The consumer wants to be informed and the image of red meat also has to be promoted.

- Stock theft prevention

A National Stock Theft Prevention Forum and nine provincial forums work hard to establish a macro-environment for stock theft prevention, while the RPO roll out actions on ground level.

- Predation management

The Predation Management Form is continuously working on legislation and a toolbox which the producer can use to help himself.

- Image of the industry

The RPO developed its own code of best practice. The industry's water and carbon footprint will be of critical importance in the future and the approach will have to be one of "how can we make it better?". The RPO also developed various production manuals, while communication with members is conducted via an electronic newsletter, a Whatsapp group and the Red Meat magazine.

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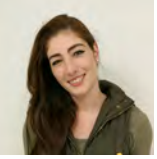
The Value of Genomic Testing in the Cattle Industry

Charné Rossouw-Claassen

Afdelingsbestuurder vir dieregenetika.



The phrase: genomic testing, has started gaining traction over the past several years, with more and more countries encouraging their farmers to have their animals genetically tested.

But what exactly does this technology entail and more importantly, what information can be gained from such tests. Traditionally, genetic testing has looked at a handful of markers or genes at a time, either to validate a parentage, or to determine whether an animal carries the mutation for a specific trait, such as coat colour or polledness. As traits of economic interest are usually under the control of several genes simultaneously, being able to look at only a few genes at a time was of little value to producers. Genomic testing moves away from the one test, one gene concept; and instead, focuses on thousands of mutation points, spread throughout the entire genome, simultaneously.

It all starts with a single DNA sample, obtained through the extraction of a few pulled hairs or a small tissue sample sent in by the producer. The DNA is then loaded onto a chip the size of your palm, which contains thousands of pores. Each of these pores houses a different mutation point within the genome. Once the chipped is

scanned, the software logs more than 50 000 data points for every animal. These data points can be utilized in the following ways:

- If the calf, dam and sire have been genotyped, the genomic data can be used to validate parentage.
- We can look at several traits under the control of single genes simultaneously.
- The data can be used to look at complex traits in order to work out the animal's genomic breeding values.

The entire genetic code of any organism is made up of only 4 letters: A (adenine), T (Thymine), G (guanine) and C (cytosine), which combine in billions of different combinations and orders throughout the animal's genome. Genomics looks at which specific letter (A, T, G or C) is present for the animal at specific points in the animal's genetic code. Using this information, we can then compare the animal's data to that of its prospective parents or the rest of its population to see how it measures up. Parentage validation is based on the laws of inheritance: any organism will receive half of their genetic code from their mothers; and half of their genetic code from their fathers. To therefore validate a parentage, we need to prove the presence of both maternal and paternal DNA within the calf's genetic code. This is done by comparing a large number of single nucleotide polymorphism (SNP) markers from the mother, father and calf (Table 1).

Table 1: Representation of parentage verification using SNP markers. Maternal inherited marker copies are indicated in red. Paternal inherited copies are shown in blue.

SNP Name	Calf	Dam	Sire
AY842473	A/G	A/A	G/G
AY842474	G/C	G/G	C/C
AY842475	A/G	A/A	G/G
AY844963	A/G	A/A	G/G
AY849380	A/A	A/A	A/T
AY849381	A/G	G/G	A/A
AY850194	C/C	C/C	C/C
AY851162	G/G	G/C	G/C
AY851163	T/C	T/T	C/C

In order for the parentage to be valid, the calf must have one copy of the marker from the dam and one copy of the marker from the sire for each and every marker in the testing panel. Parentage validation within the herd is important for the following reasons:

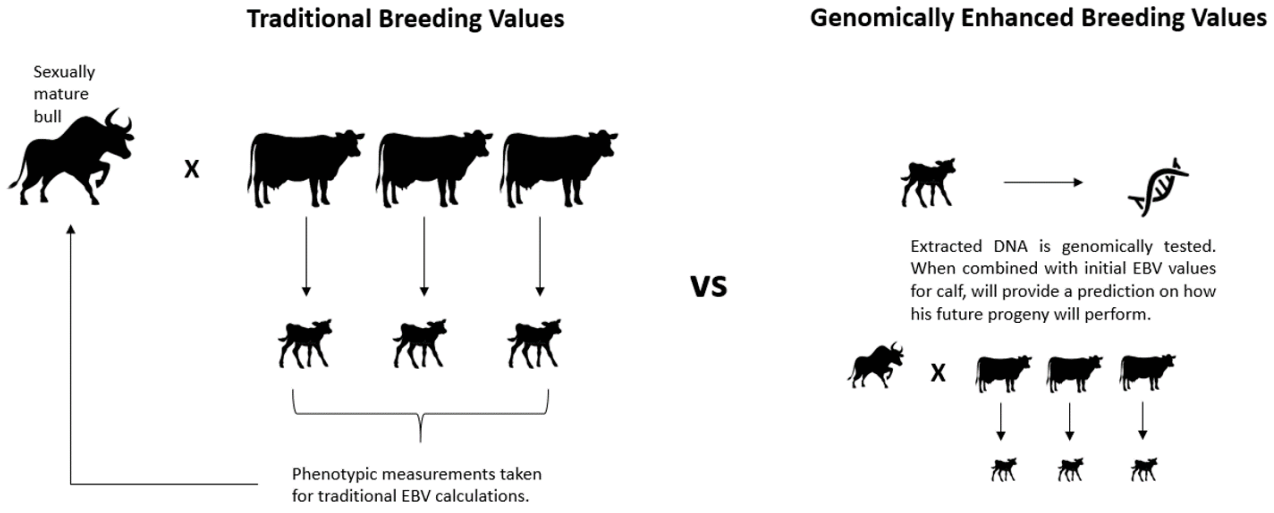
- It allows for more accurate breeding selections.
- It leads to more accurate economic breeding value (EBV) estimations as you are using the correct parental data for your calculations.
- It allows you to identify under and over performing bulls within your breeding program – which will help you distinguish between the bulls that sire several progenies vs. those who hardly sire any.
- It allows you to identify problem bulls within your herd – the bulls who cause birthing problems or who introduce mutations into your herd.
- It allows you to identify bulls within your herd who produce quality heifers.
- Being able to prove an animal's lineage will allow you to sell the animal at a higher price when they come from proven, good bloodlines.

High-density genomic testing also allows us to focus on single gene traits we would like to breed for, such as specific coat colours as well as detrimental traits we would like to keep out of our herds. Traits commonly tested for are listed in Table 2 below:

Table 2:

Trait tested for	Description
Red coat colour gene	Controls black and red pigmentation in cattle.
Black coat colour gene	Controls black pigmentation in cattle.
Dilution of coat colour gene	Causes dilution of black hair pigment to shades of dark brown to golden. Red pigmentation is not affected by this allele.
Osteopetrosis (Marble bone)	Affected calves are typically prematurely stillborn. Bones are easily broken.

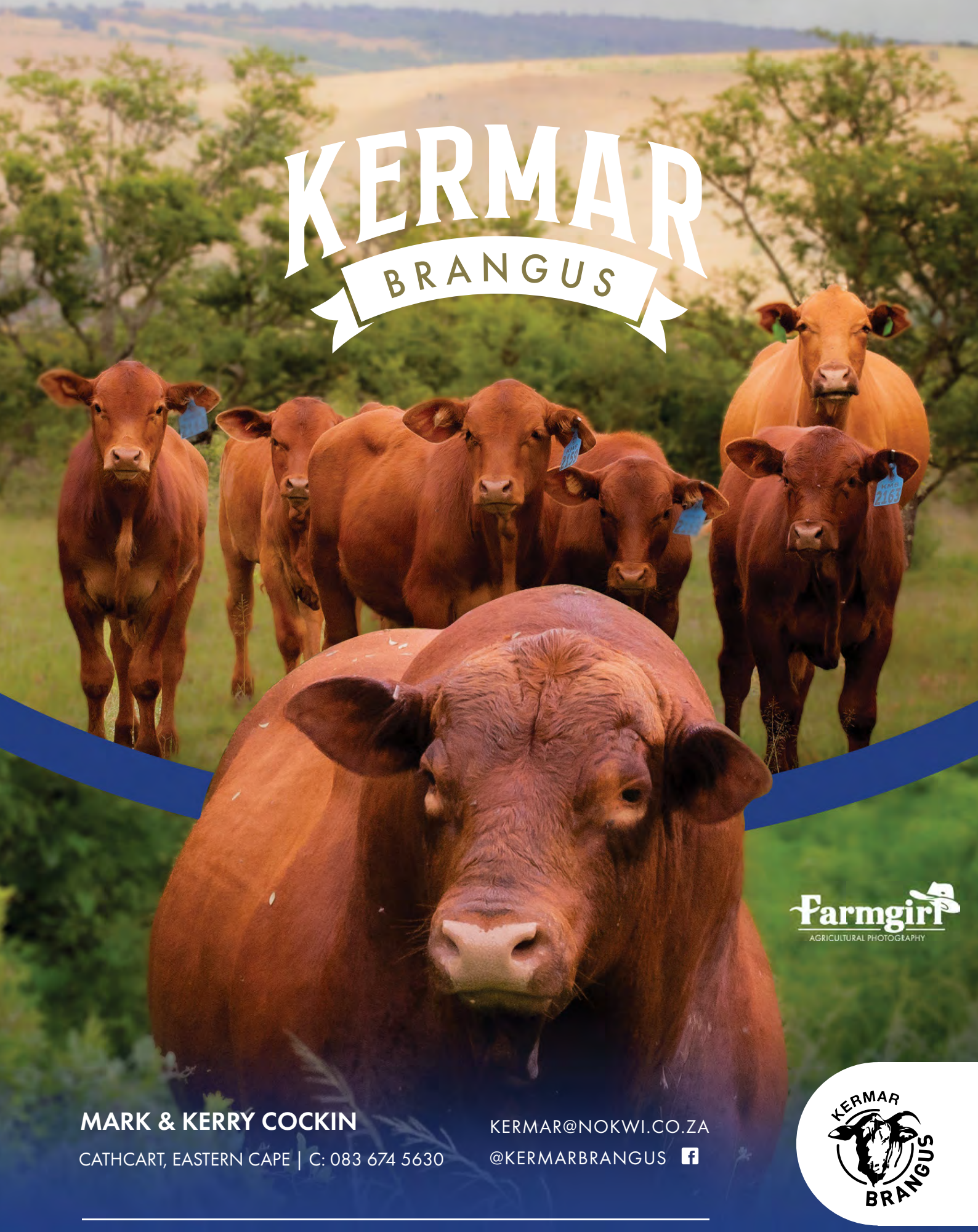
Trait tested for	Description
Pompe disease E7, E13 & E18	Recessively inherited lethal disease resulting in glucose build-up inside the nerve and muscle cells.
Polled Celtic	Poll alleles causes animals to have an absence of horns.
Infectious Bovine Keratoconjunctivitis: Pinkeye	If left untreated, pinkeye can cause inflammation of the cornea and eventually lead to blindness. Animals carrying 'G' mutation have reduced risk of developing an infection.
SLICK	Leads to shorter coats which enables the animal to have better body temperature regulation during periods of heat stress.
Myostatin (Double Muscling): C313Y, D182N, E226X, E291X, F94L, nt419, nt821DEL11, Q204X & S105C	Mutation which represses the myostatin protein, leading to augmented muscle growth.
Calpain1: 316, 4751, 530	Calpain 1 protease breaks down muscle fibres post-mortem, leading to more tender meat.
Calpastain: 282, 2870, 2959	Calpastain acts as inhibitor to Calpain 1, reducing the tenderness of the meat post-mortem.
ABCG2	Can lead to increased concentration of milk fat and protein, while decreasing the volume of milk.
AcylCoA:Diacylglycerol Acyltransferase	Can lead to an increased percentage of fat and protein as well as fat yield, while reducing milk and protein yield.
Casein Beta: 245 & 411C	Major protein component of milk which determines many of the physical characteristics of milk, which are important for stability during storage and for milk-processing.
Casein Kappa: 352, 467, 470, 506 & 526	Important gene for protein yield and percentage in milk.
Growth Hormone Receptor F279Y	Can increase milk, lactose and casein yield as well as decrease protein and fat yield.
Growth Hormone: 2141 & 2291	Two genes may have an effect on milk traits. Can be associated with decreased milk protein and fat yield as well as increased milk fat yield, fat, and protein percentage.
Trimethylaminuria	Metabolic disorder causing abnormally high levels of aliphatic amine trimethylamine leading to a fishy odour in the milk.
Alpha Mannosidosis 961	Lethal neurological disease, usually leading to death before the animal reaches sexual maturity.
Neuropathic hydrocephalus	Recessively inherited. Affected calves are still-born with a large cranium with little to no spinal cord or brain matter. Large percentage of calves will be lost in utero, causing the defect to go unnoticed.
Developmental Duplication	Recessively inherited. Calves born with two mutated copies have a high probability of early embryonic death or can be born with multiple limbs. Calves born with extra limbs can lead a normal life if limbs are removed soon after birth. Carriers show no phenotypic signs.
Mulefoot (Syndactyly): G1199S, G907R, NG1621KC & P1647L	Recessively inherited. Fusion of the claws (cleats or digits). This may occur in one, two, three or (rarely) four legs.



The majority of the generated genomic data can be used alongside the phenotypic data (traditional EBV data) in order to create an index with more reliable estimations on how this animal will perform. The power of traditional EBVs lies in their predictive power gaining more accuracy over time. The calf starts off with the phenotypic data collected shortly after birth, as well as the EBV values from parents, grandparents, full siblings, and half siblings. As the calf matures and more data is gathered, these values get added to the calf's EBV calculations, until the point where the animal starts producing offspring of its own. Once the animal has sired offspring, their phenotypic data is also added to their EBV in order to increase its prediction accuracy.

The downside to traditional EBVs is that it takes a long time to generate the data needed to increase prediction accuracy. By this time, you will have invested time and money in the animal's development, with no guarantee that the animal will be profitable. Being able to add the genomic dataset to your animal's EBV calculations, means that you will reach that higher level of prediction accuracy of your animal's performance much sooner – before you invested time and money and before this animal has had the opportunity to contribute its genes towards your herd.

Used alongside traditional EBV predictions, genomic testing can become a powerful tool in helping you manage and make decisions surrounding your breeding program. Genomic data should, however, not be used by itself. It should be seen as an additional tool to use alongside your breeding objectives, traditional EBV calculations, feeding programs and management strategies; in order to make informed decisions earlier and thereby increasing your profitability.



Why Brangus?
From The Perspective of a Commercial Breeder

Kenny Biggs

I have been a commercial beef farmer at Cedarville since 1994, and my family moved to Cedarville in 1979. My late father used Angus and Brahman bulls on angus type females and then we started using Brangus bulls from around the mid 1990's until present. Those early bulls came from John Baxter, the Greens, Jeff Rosewall, Fraser and Mc Murry.

I market weaner calves mainly and have had good demand for my weaners even when market conditions are tough. But to understand why Brangus works so well for me, I must expand on the conditions under my system.

I run up to a total of 600 head of cattle on 975 ha. 100 ha of maize and 60 ha of permanent pasture for hay leaves about 800 ha of grazing land, some of which is mountainous and difficult to graze. The point is that my cattle are run under pretty tough conditions especially when one considers the severe cold winters. The range in veld types (from tall dry grassveld in the flats to montane sourveld) presents challenges also. Tick loads and insect borne diseases are a challenge in wet summers and an abundance poisonous plants are a challenge especially under high stocking rates. To cut costs I run with minimal staff ranging from 1 to 3 depending on time of year. I have no staff living on the farm. With that background it is clear that my breed needs to be well suited in order for such a balancing act to succeed.

First and foremost, I need a medium framed naturally polled breed. Medium frame because of steep ground, and harsh winters (my cattle must have a relatively low proportion of maintenance requirement per unit). Polled because I do not have labour for dehorning, and such operations fall inside busy times of the year, bearing in mind I do all of my own tractor work. Brangus fits the bill. There are obviously many other composite breeds, but few are 100% naturally polled. Also, the consistent uniformity of Brangus is very attractive to me and comes from its "fixed formula" as compared to breeds that originate from a philosophy rather than a fixed formula for example. I also need a breed with a wide genetic base. Brangus has been around long enough to meet this requirement worldwide and the numbers are proof thereof.

I also need ease of calving and have been satisfied over the years with the performance of my Brangus bulls in this regard. That being said, I must emphasise that one can choose genetics from coarser to finer boned within available Brangus bulls, and I have been choosing Brangus bulls marginally on the coarser side in recent years. These are bred to all my cattle including heifers and depending on the season I do assist a few heifers with calving.

Of course, the argument against composite breeds has always been perceived lower hybrid vigour. For me that argument is irrelevant because the nature of my farming setup, limited management time and labour means that running two separate pure herds is a non-starter. Given the range of genetics available I think one can mitigate this in any event. I find bio security is hard enough to manage on boundaries – I don't need the additional challenge of managing separate breed herds inside my operation.

Marketing is the crux of the matter. At the end of the day, my Brangus weaners have always been popular with the feedlot buyers. Of course, the market downside comes in the price of Brangus genetics. While I have been using Brangus for nearly 30 years, of late the breed has taken off in popularity driving up prices. This is a clear indication that more and more commercial breeders are seeing the benefits of Brangus. While my herd is and has been closed on the female side for decades, I believe buying bulls from registered stud breeders is the only way to go. One gets the peace of mind of proper screening, selection, and biosecurity. The Brangus breed society must be commended on this aspect as they go to great lengths for example to eliminate double muscling with genetic tests (an issue that is important when it comes to ease of calving). I know that the participants are passionate about their breed and all round they are great bunch of like-minded people, many of whom I have known well from the early days of Brangus. I am also lucky enough to have a Brangus stud breeder down the road who gives me tremendous support and advice.

I see no reason to change away from Brangus for my operation.

Veehanteringstoerusting

Jonathan Toxopeus

Algar Ind
Sel: 082 324 6256 | Epos: algar@algar.co.za
www.algar.co.za

Algar Veehanteringstoerusting is op die voorpunt in die mark met innoverende produkte van top gehalte, wat aan elke veeprodusent se individuele kraal-behoeftes voorsien.

By Algar is dit vir ons belangrik dat boere gemaklik en veilig met hulle diere kan werk met so min as moontlik stres vir die hanteerder en die dier. Met meer informasie en data nou beskikbaar rakende newe-effekte van stres op diere mik die mark daarna om diere meer effektief en doeltreffend te hanteer. Ons bring unieke produkontwikkeling na die veebedryf wat fokus op vinnige hantering en korter tyd vir die dier in die drukgang of krat, hierdie het die domino-effek van 'n rustiger en kalmer dier wat beter kondisie behou as gevolg van minder stres meer vertroue in die hanteerder.

Algar produkte is ontwikkel deur ons eie veeboer en ons ken die behoeftes van die veeboer. Ons vervaardig veehanteringstoerusting vir albei kleinvee en grootvee. Algar het drie reekse beskikbaar vir bees hanteringstoerusting - Hierdie gee die boer opsies om sy kraal te bou volgens sy spesifieke behoeftes. Standaard reeks, hierdie reeks is markverwant en word uit 50x2mm ronde pyp gebou. Die Lae-diens reeks is bietjie sterker as standaard en word uit 50x2mm vierkantige pyp gebou met ekstra hoogte en pype in. En die swaardiens reeks

JAGTDRIFT BRANGUS







Bulle **altyd** beskikbaar

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word uit 50x3mm vierkantige pyp gebou wat jou 'n leeftyd sal hou. Hierdie hoë-diens reeks word aanbeveel vir voerkrale en intensiewe kudde bestuur, met langsdurentheid tot gevolg. Algar se kleinvee hanteringstoerusting is ook beskikbaar met 900mm of 1200mm hoogte opsie vir skape, varke en bokke.

Een van Algar se uitstaande, enig in sy soort produkte is veral die verstelbare-drukgange, vir groot- en kleinvee. Die gange is ontwerp met tydbesparing in gedagte, om die werksverrigting met jong diere te vergemaklik. Die gange gee vir jou 'n standaard wydte op jou drukgang, en dan geniet jy die opsie om dieselfde gang te vernou na 350mm vir beeste of 200mm vir kleinvee.

Hierdie nou gang waarmee jy nou jou jong diere kan hanteer verhoed dat die diere omdraai en 'n opeenhoping veroorsaak. Ons patente is goed deurdink, prakties en besonders ontwikkel asook aktief beproef.

Vir Algar bestaan daar nie iets soos 'n gewone kraal nie, elke kraal en plaas het sy eie uitsonderlike uitdagings om diere te hanteer en 'n vooruitstrewende boerdery te bevorder. 'Ons streef daarna om altyd produkte aan te bied wat effektiwiteit en doeltreffendheid tot gevolg het.'

Met winsmarges wat kleiner raak as gevolg van hoër inset kostes en uitdagings in die mark en ekonomie is dit noodsaaklik dat daar doeltreffend gewerk word op enige plaas, hierdie veehanteringstoerusting is so ontwerp om te spaar op arbeidskostes en by Algar glo ons ook dat kwaliteit toerusting en na-verkope diens moet vir die boer tyd en geld spaar.

Die Nek-en-Lyfklamp is beskikbaar in die LD en HD reeks. Hierdie krat gee die boer toegang tot die hele bees met 11 toegangshekke terwyl daar

gewerk word. Loer gerus na die video deur die skakel in jou aanlyn blaaier te tik, om die Algar-Lyfklamp in 'n aksie te sien: https://www.youtube.com/watch?v=csPczXyRS6U

Algar se HD Nek-en-Lyfklamp kan ook volledig bestel word met versekervanghek vooraan en agter KI toegangshekke met skuifhek. Jy kan ook kies of jy jou werkings handvatsels links of regs van die klamp wil hê.

Vir meer inligting besoek graag ons webblad op www.algar.co.za.

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Dr Faffa Malan

Bestuurder van RuVASA (dokfaffa@nashuaisp.co.za)

Veeartse wat aan die Veegesondheid Produksie Groep (VGPG), onder leiding van dr. Danie Odendaal behoort het, het in Mei 2012 die eerste maandelikse siekteverslag uitgebring. Die aantal praktyke en konsultante wat die eerste verslag beskikbaar gestel het, was 26. Huidiglik word maandeliks ongeveer 150 verslae van oor die hele land ontvang vanaf veeartspraktyke.

Maandelikse siekteverslae is beskikbaar op die Herkouer Veterinêre Vereniniging (RuVASA) se webblad (www.ruvasa.co.za). Klik op Disease reporting) asook op die Nasionale Dieregesondheidsforum se webblad (www.nahf.co.za). Rapporte word ook aan die Landboumedia beskikbaar gestel.

Die belangrikheid van die inligting is om saam met jou veearts uit die inligting vas te stel wat die risiko vir siektes en ander gesondheidsprobleme op jou plaas en in jou gebied is. Daar moet gereeld besin word oor watter tye van die jaar die probleme voorkom en dan die belangrikste, watter voorsorgmaatreëls betyds getref moet word om verliese te beperk en te voorkom. Beheerprogramme (endoparasiete, ektoparasiete, entstowwe) moet gereeld opgedateer word na gelang van seisoene en reënvalpatrone.

Van groot belang is ook om vas te stel watter siektes dalk ingekoop kan word vanaf ander areas.

Indien daar onverwagse siektes uitbreek, sal u ook onmiddellik ingelig word soos bv. Slenkdalkoors en bek-en-klouseer.

Sien ook kaart van 'n samestelling van die belangrikste beessiektes wat in 2021 voorgekom het, op volgende bladsy.

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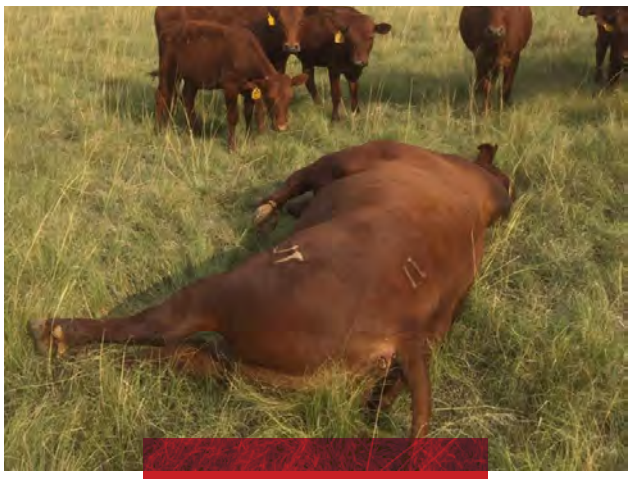
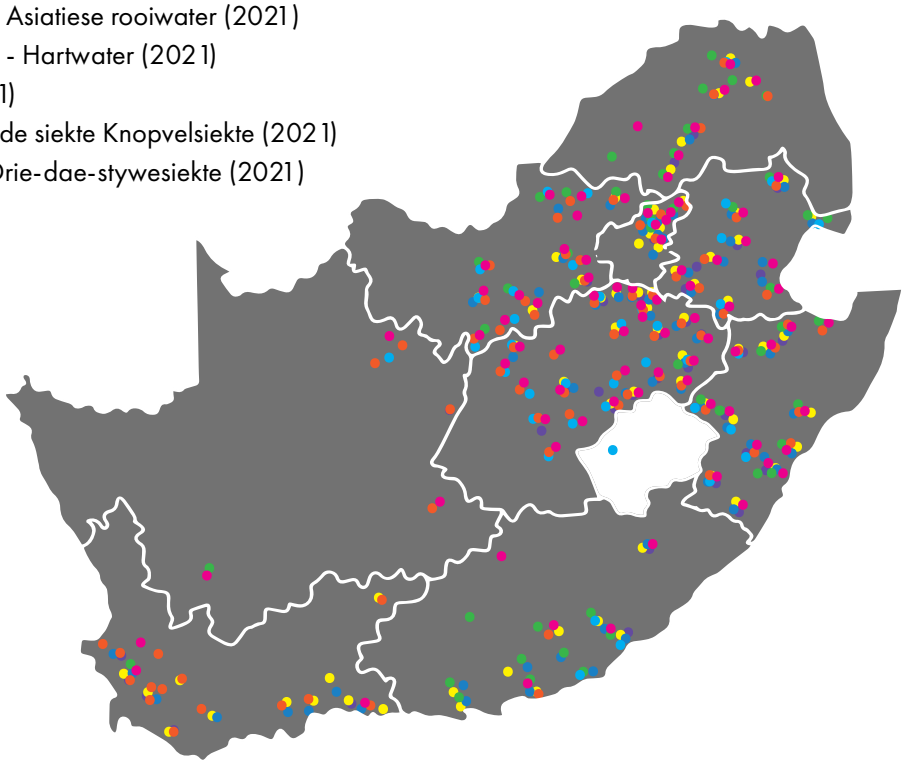


Rooiwater

Sweetsiekte

- Intwendige parasiete – Lewerslakwurms (2021)
- Bosluisoorgedraagde siekte Afrikarooiwater (2021)
- Bosluisoorgedraagde siekte Asiatiese rooiwater (2021)
- Bosluisoorgedraagde siekte - Hartwater (2021)
- Geslagsiekte Vibriose (2021)
- Insek en bosluisoorgedraagde siekte Knopvelsiekte (2021)
- Insekoorgedraagde siekte Drie-dae-stywesiekte (2021)



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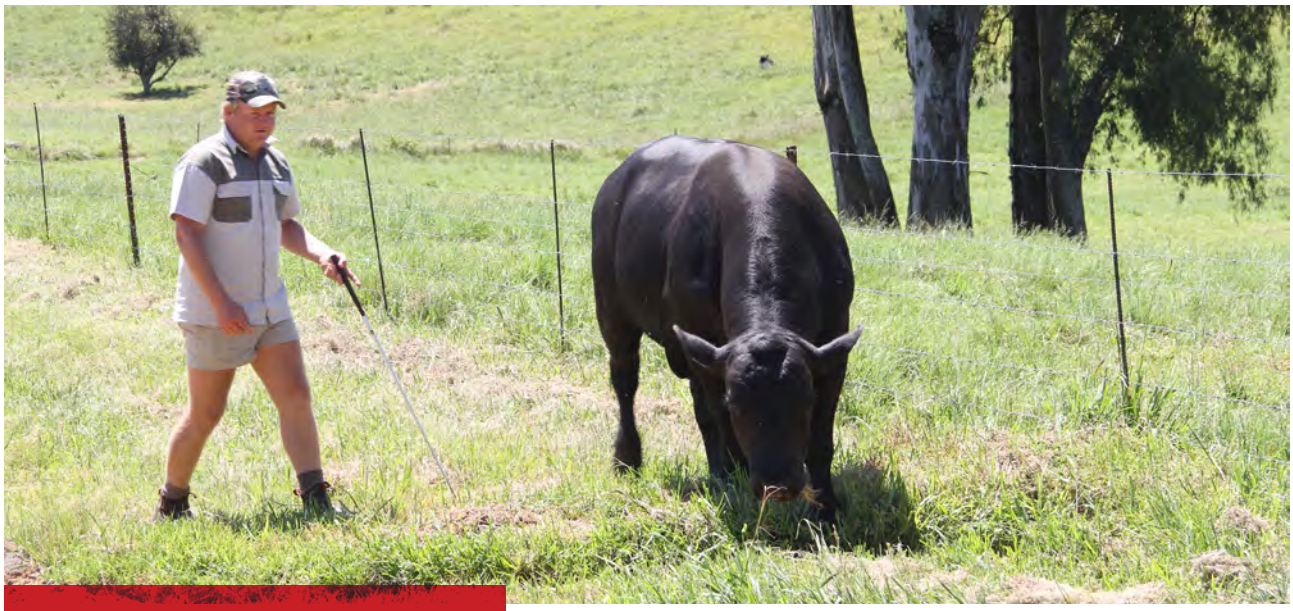
Duncan Watson: For the love of the game



Duncan Watson in his natural habitat

Izak Hofmeyr

Redakteur : Stockfarm, Plaas Media

For SA Brangus to consider a young breeder worthy of the title "Young Breeder of the Year", there has to be something special about that breeder. It takes but a little while in the company of Duncan Watson, the 2021 Young Breeder of the Year, to realise that he thoroughly deserved this title.

Duncan grew up in the Underberg-area, where his grandfather, Jock Watson, started farming in 1948 with black Angus cattle. In 1988 Duncan's dad, Russell, took over the farms. Over the years Jock and Russell used to buy their Angus bulls from Humphrey James and Philip Barnard's dad, Col Barnard of Mequatling Angus. Later on they acquired bulls from Keir Hall from Mooi River, John Armstrong in the Kamberg and Piet Lourens from Kokstad.

"Our Black Angus herd, therefore, has been going for a long time. In the early 1990's, Dad started buying Brahman bulls from James Prinsloo in the Volksrust area to bring a bit of hardiness and heterosis into the herd. He specifically chose short, think-set Brahman bulls, for those were the ones that worked best in our sourveld environment."

Duncan finished school in 2008, and while joining his dad on the farm, he also played

professional polo for a few years, mostly in the USA. This meant that he was away from home for long spells. In 2012, he made the decision to quit the international polo circuit and come back to farm full time.

"I had a special interest in the beef side of our operation. Initially, my dad gave me 24 cows to start with, so, although I worked for him, I had my own little herd that I managed on the side."

In 2013 the original home farms in Underberg and Lotheni were sold, and the family relocated to the Dargle area near Nottingham Road. Younger brother Martin joined them in 2017 to take over the dairy and they formed a company, RDM Farming (Russell, Duncan, Martin) to accommodate the various enterprises. Apart from their commercial cattle herd, consisting mostly of the Brahman-Angus crosses, they also have an Angus and Brangus stud as well as the dairy.

His grandfather Jock, says Duncan, passed away when he was still in high school, but they were very close. "I had a very close relationship with my Granddad, so it meant a lot to me that I could name the Brangus stud after him – JOC. He was a very good stockman and also a patient man, so I learnt a lot from him."

His cousin, Chippie Watson, says Duncan, had a huge influence on his development as a stockman and Brangus enthusiast.

"At the time, Chippie still had a Brangus stud and many of our initial Brangus bulls came from him. One of my first stud bulls, VC1309, came from Chippie, and he has sired numerous stud females for me, which I believe are the core of my current stud cows. He has also sired eight bulls for me on which I averaged over R100 000 on bull sales. I still consider Chippie to be one of my most important mentors."

It was only natural, therefore, that Duncan, when he decided to start a Brangus stud in 2015, would go to Chippie for advice.

"He obviously knew our cattle all his life and he told me to choose the best of the best from our own commercial herd and start upgrading them with the best bulls that I could afford. Remember, both my dad and my grandfather used to buy excellent bulls over the years, both Brahman and Angus. So, we had good cattle. With the help of John Baxter, we went through all the commercial cattle and selected 22 cows for the nucleus of the stud. They were all brought in as Appendix B cows."

If the proof is in the pudding, then Duncan and his advisors are good chefs.

"Those cows each have had six calves since we started, and they are all still in the system. Five of those cows have also produced stud bulls for me and the daughters of those original cows also have had calves of their own."

"I love the cattle. My goal is to have nice looking cattle that are efficient and give me pleasure."

Type

The type of cow that works best in the sourveld area of Nottingham Road is a short, broad, thick-set type of animal with tremendous constitution. Interestingly, says Duncan, he is observing a slight increase in weight among his young cows compared to those raised in the Underberg area, even though they are of the same genetics. The Dargle, he says, is a softer area than Underberg, with winter a good six weeks shorter. Where the Underberg cows would average around 480kg in body weight, the Dargle cows reach around 500kg to 510kg.

Widening the gene pool

With those initial 22 cows selected from their own herd, Duncan took pains to add to his gene pool by bringing in the best heifers that he could afford from other breeders, such as Craig Sclanders and Morné Verster. He also bought the National Champion open heifer of 2019 and again last year both the red and black Grand Champion Cow.

"I am always looking to buy in good quality stock, but I am also very content with the females that I started with. I think I have been very lucky. The quality of especially the Angus influence in our commercial herd comes a very long way, representing some of the best genetics of the time for over 70 years."

Aims

Although half the commercial cows are red, Duncan has his focus set on the black genetics.

"Even though the market is overwhelmingly pro red cattle in South Africa, I think worldwide the Black Angus is better than the Red Angus, purely based on numbers. It is therefore easier to access superior black Brangus genetics from other parts of the world. But I don't do it for money in the first place, I do it because that is what I like. The money that comes along with doing something I like, is obviously a bonus."

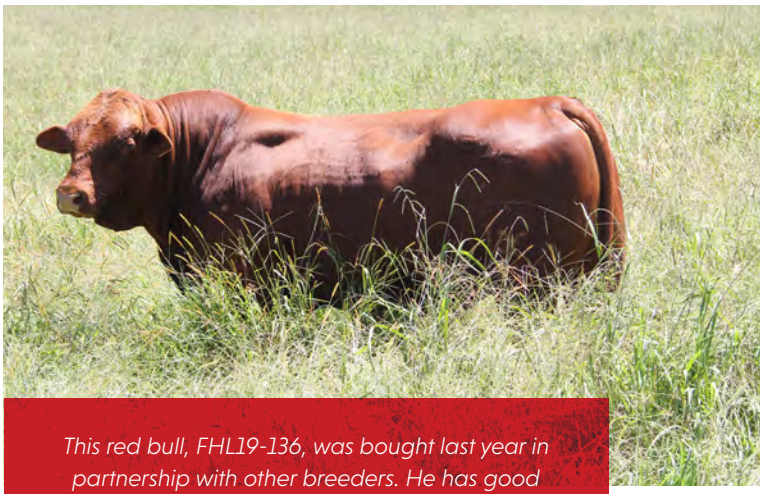
Registering his stud in 2015, Duncan sold his first bull in 2018 at the KZN Club sale in Mooi River.

"The KZN Club members are really like a family. I was accepted with open arms and supported right from the start. So, I took my first bull to their sale in 2018 and was offered R80 000 for it. That was tremendous. It was the shared top price for a black bull on the sale."

The year after, in 2019, Duncan sold three sons by a bull he bought from Rian van Wyk from Ermelo in 2016, RVW 13303, out of three of his original cows from the commercial herd. The average price of these bulls was R132 000. Last year he sold five bulls at Mooi River for an average price of R122 000.

HH14-54, a bull that Duncan bought from the Kings in Tarkastad. One of the sons from his first year's progeny was sold for R120 000. The buyer was Revell Saint in Haga Haga.

Selection



This red bull, FHL19-136, was bought last year in partnership with other breeders. He has good American genetics.

Duncan admits that his selection criteria are very strict.

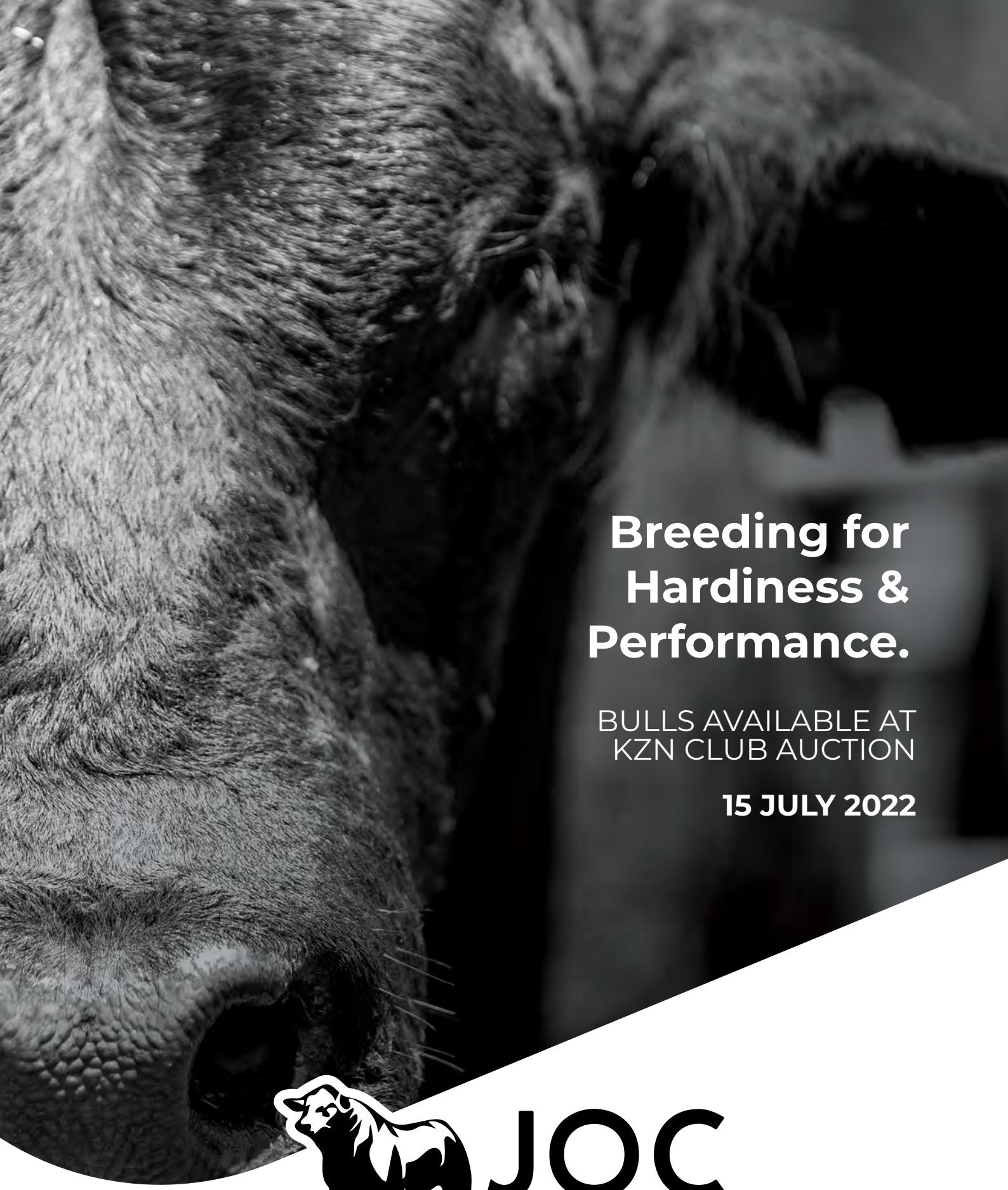
"I have learnt that cow families are very important. Keeping bulls from the cow lines that have been successful seems to be the way to keep your hit rate up. A bull candidate must be a good weaner, has to have eye appeal, has to be correct, has to walk correctly, has to have a good sheath. If any issue crops up before the age of 30 months, I will cull that animal without a second thought."

All his prospective stud bulls work at least once, and the better bulls two seasons in the commercial herd at age 14 months and again at 24 to 28 months before they go to auction as 3 year olds."

Cow lines

Of the original 22 cows, four have produced high quality offspring very consistently, and Duncan considers them the matriarchs of new cow families.

"The first to come to mind are JOC1177, JOC1121, JOC1307 and JOC1325. When I started, two of them were first calvers and two second calvers. Through DNA analyses, it turns out that all four of these cows come from an Angus bull bred by Piet Lourens in Kokstad, who was a son of OCC Emblazon, a very successful American Black Angus AI bull! I will obviously focus on those four lines. It also just goes to show the value of using quality genetics, even if you only breed commercially, as my family have done over the years."



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Bull choice

This heifer, JOC21-16, is the daughter of JOC18-32, who is the daughter of VC13-09. She was sired by the AI bull DMR Climax.

How he breeds, says Duncan, he has learnt from his father.

He uses a single sire system by forming separate breeding groups of 35 cows that run in 90ha camps for the whole of summer. A single bull will be put in that camp from 22 September to 22 December. In the last 8 years he has had a 93% conception rate, even in the sour veld and steep hills of Dargle. Weaning weights average on 262kg.

"In choosing a bull, I think, there are certain traits that you cannot miss. Those form the basis. On top of that, you can use a corrective approach. If, for example, the last three bulls you used lacked a bit of skin, now you can choose a bull that may bring that to the party."

The basics, however, may never be compro–mised, and that is fertility, which come from the dam line, hardiness, constitution, efficiency, and performance.

"One can talk the whole day about these traits, and there may be many more, but these are the basics for me. I put a lot of value on efficiency, in that a cow must be able to wean a calf of at least 50% of her body weight."

Performance, he says, is all about bull power. As a stud breeder, if you find the right bull, you have to buy it, no matter what. As a commercial breeder, any one of the top five on your choice list would probably be acceptable. "For me, however, the EBV's and the paperwork behind the bull is critical to underpin the performance that you are looking for."

Food

Vitamin F(ood), says Duncan, is the be all and end all of a successful cattle operation. RDM Farming farms on 2000 hectares, including irrigated pastures for the 400 dairy cows, and 75 hectares of maize silage. After the silage has been cut, Duncan plants cover crops in its place to feed the beef cows in winter. The rest of the farm consists of natural veld and a bit of dryland pastures.

JOC Brangus is 100 registered cows strong. They live in three veld camps at a stocking rate of 2,7 to 3 hectares per working unit, which is a cow and her calf. The stud cows get the best veld, as the farm varies in veld quality, from 3,5ha per working unit in the steep areas higher up, to around 2,5 down in the flats.

"The camps are between 75 and 120 hectares in size and over the last 8 years we have been able to establish fairly accurately how many animals to put in a camp. If there is a year that a particular camp does not do as well, then we ease off a bit in the following year by moving a few cows to another group in a camp that has done better in the previous year."

Their approach, which he got from his father, says Duncan, is that they are in the first place grass farmers, and only in the second place beef farmers. Wildlife in the veld, to them, is a valuable gauge to measure veld health.

"Since we have been here, the WWF has been conducting veld tests here on the farm. They have marked 19 locations in 2012 where they did veld assessments. In 2015 and in 2018 they came back and did the same tests at the same locations.

This young bull, JOC19-21, shows much promise, says Duncan. He is a HH14-54 son out of a VC13-09 daughter, JOC16-17.

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According to these assessments, the veld cover on our farm has gone up from 56% to 72% in 6 years. This is all due to good veld management - correct stocking rates, correct rotation, burning at the right time of the year, and so on."

"Previously, there were large camps of around 400 hectares. We started to split camps and provide water points in all the new, smaller camps. This was a huge capital investment, but it is paying off big time in terms of the increasing carrying capacity that is slowly developing."

Commercial

Duncan manages the commercial herd in exactly the same way as the stud cattle, including single sire matings.

"Every now and again you see an outstanding heifer in the commercial herd. Because I know her mother and father due to the single sire system, I can confidently bring that heifer into my stud herd. Single sire matings are also a handy tool to judge the sire."

Because all the bulls are first used in the commercial herd, he can avoid making mistakes with the stud cows by being able to evaluate the breeding merit of the young bulls that he has used in the commercial herd. He does this not only with his own young bulls, but also with any new bull that he buys in.

"I mate my heifers at 22 months for the first time, for I think our environment is not suited for 14-month mating. I also tried to mate them at 18 months and then give them a break before joining the cow herd, but that meant that their inter calving period went over 400 days. Buyers don't like that."

By mating his heifers at 22 months, he observes, it forces him to look after these heifers better because he is cautious that they may be bullied by the mature cows. Therefore, they are run in a separate group until they have matured fully before they join the mature cow herd.

Curve benders

Duncan used to be a bit cynical about so-called curve bender bulls, but after using a bull from Craig Sclanders for AI last year, he has changed his mind.

"The bull is a Dream Forever son and I used him on some heifers. Those calves came out tiny – they looked like rabbits! Yet, their growth was phenomenal. Some of the biggest weaners this year were among those calves. That bull, without a doubt, is a curve bender, and so are the calves."

The future?

His main aim is to just keep on improving and to enjoy the journey.

"I love the cattle. My goal is to have nice looking cattle that are efficient and give me pleasure."

For more information, contact Duncan on 081 880 0499.

A picture to make any cattle breeder's heart goes jelly, says Duncan, good cows giving excellent calves.

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Lewerslak

Dr Caro Labuschagne

BSc (Vet biol), BVSc - Product and Technical Manager, Managing Microbes

Met die nat somer reën seisoen waarin Suid-Afrika homself tans bevind, het dit vir die eerste maal in 'n lang tyd goed gereën in dele van die land wat vir lank gebukkend gegaan het onder die impak van droogte. Maar alhoewel die reën verligting bring, kom dit nie sonder uitdagings nie, en een van die grootste probleme wat opduik gedurende die nat omstandig–hede en hoë reënval, is die feit dat parasiete floreer.

Een van die parasiete in Suid-Afrika wat ernstige probleme kan veroorsaak in 'n nat omgewing, en veral in areas met stilstaande of stadig-bewegende water, is lewerslak. Dié platwurm is uniek wanneer hy vergelyk word met die ander tipes wurms wat kuddes affekteer. Sy habitat, lewensiklus en die tipe ontwurmingsmiddels waarvoor hy sensitief is verskil, wat sy behandeling en beheer ook uniek maak.

Twee soorte lewerslak word in Suid-Afrika aangetref, die gewone lewerslak (***Fasciola hepatica)*** en die reuse lewerslak ***(Fasciola gigantica)***. Die parasiet benodig 'n tussengasheer sowel as 'n gasheer om sy lewensiklus te voltooi en die varswater slakkie van die ***Lymnae*** spesie dien as die tussengasheer. Die slakkie word aangetref in areas soos vleilande, spruite, gronddamme, lande onder besproeiing of selfs in areas om lekkende krip bakke.

Soos met enige parasiet, is dit belangrik om die lewensiklus te verstaan vir effektiewe beheer.

Die varswater slakkies word geïnfekteer wanneer die primêre gasheer (beeste, skape of bokke) mis uitskei wat lewerslak eiers bevat in die areas waar die slakkies aangetref word. Gedurende die nat, warm somermaande broei die eiers uit en die varswater slakkie word geïnfekteer waarna verdere ontwikkeling plaasvind. Wanneer ontwikkeling in die slakkie voltooi is, beweeg die lewerslak cercaria weer uit in die omgewing in, en die infektiewe stadium – metacercaria – word deur die primêre gasheer geëet saam met gras of vry-drywende water.

Die deel van die lewensiklus neem ongeveer twee maande.

Na infeksie van die primêre gasheer, migreer die onvolwasse lewerslak na die lewer waar hul hulself in die lewergalbuise vestig. Die migrasie, wat 6-7 weke vat, veroorsaak ernstige lewerskade en kan tot sekondêre kliniese tekens soos geelsug, anemie en kwak-kele lei en kan selfs sterftes tot gevolg hê. In die lewergalbuise lê die volwasse lewerslak eiers, en die lewensiklus word van hier af weer herhaal.

Die tyd vanaf infeksie van die gasheer tot die lewerslak weer begin eiers lê in die omgewing, neem tot 3 maande.

Gunstige omstandighede, wat warm en vogtige weer insluit, is nodig vir die oorlewing van lewerslak, en om hierdie rede is die toename in die parasiet lading in die gasheer gedurende die periode tussen lente en herfs. Tot 500 cercaria