

Brahman

bl. 67 - 95

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Brahman-president neem jaar onder loop

Die gesogtheid van die Brahmanras in ongunstige klimaat- en ekonomiese omstandighede het opnuut sterk op die voorgrond getree met die aantal Brahmane in die nasionale kudde wat die afgelope jaar toegeneem het ondanks uitdagings soos die onlangse droogtejare en die pryskosteknyptang waarin boere vasgevang is.

Dié goeie nuus het Mecki Schneider, president van die Namibiese Brahman Telersgenootskap, aan medetelers oorgedra tydens die Brahman-genootskap se jaarvergadering op 18 Julie in Windhoek.

Hy het die moeilike tye as volg beskryf: "Die Namibiese lewendehawesektor kom uit een van die mees stremmende droogtesiklusse nog en ten spyte van algemene goeie reënval oor die grootste deel van die land die afgelope seisoen het weiveld nog nie optimaal herstel nie. Dit sal minstens nog twee tot drie goeie reënseisoene verg voordat dit sal gebeur. Daarby hou vleis- en lewendehawepryse nie by met die hoër boerderyuitgawes nie. Dit het 'n demper geplaas op stoetvee-verkope wat beide aanbod en prys betref. Die beter speen-kalfpryse is darem 'n positiewe teken."

Mecki het genoem dat, hoewel die geregiastreerde Brahmane toegeneem het, dit die eerste keer in baie jare was dat die getal telers en die kalf-aanmeldings afgeneem het (sien syfers van die Namibiese Stoettelersvereniging in die tabel links onder).



Mecki Schneider lewer sy voorsittersverslag by die Brahman Telersgenootskap se jaarvergadering op 18 Julie in die Brahman-Simmentaler Huis op die Windhoekse skouterrein.

"Dit is duidelik dat die afgelope droogtejare en die dalende winsgewendheid van beesboerdery vir die eerste keer 'n afname in telersgetalle en produksie toon." Vir Mecki is dit egter 'n riem onder die hart dat 82% Brahmantelers vrywillig aan prestasietoetsing deelgeneem het, wat meebring dat meer as 90% van alle Namibiese Brahmane oor 'n groot verskeidenheid teelwaardes (nie net vir groei nie) beskik.

Rasbevordering

Mecki se terugvoering oor rasbevordering en deelname aan die vleisbees-genomikaprojek was as volg:

Brahman Breed Improvement Forum (BBIF):

Die aktiwiteite van die Suider-Afrikaanse BBIF het momentum gegee aan 'n reeks tegnologiese ontwikkelinge. Dié forum is verteenwoordigend van teler-genootskappe in Namibië en Suid-Afrika, gerekende wetenskaplikes en genetici van verskeie

universiteite, die Landbounavorsingsraad (LNR) en sy span jong wetenskaplikes, AgriBSA en Breedplan. Die sinergieë wat hieruit voortvloei, dra by tot die sukses van die BBIF.

Vleisbees-genomikaprojek (BGP): Die BGP, wat jaarliks met N\$10 miljoen vir alle beesrasse gefinansier word, is tans in sy derde jaar en positiewe terugvoer van die fondsbestuurders dui daarop dat finansiering voortgesit gaan word. Die Brahman-genootskap se jaarlikse begroting hieruit is ongeveer N\$300 000 en word op 'n basis van een derde vir Namibiese en twee derdes vir Suid-Afrikaanse Brahmane verdeel. Vyftien Namibiese Brahmantelers neem deel en benewens totale kudde-rekordhouding is die projek gefokus op netto-voerinname (NFI), vleiskwaliteit en genotipering. Tot dusver is 388 jong Brahmanbulle vir NFI getoets, 55 vleismonsters van geslagte diere is in die LNR-laboratoriums vir vleiskwaliteit ontleed en 284 Namibiese Brahmane, stoetbulle ingesluit, is gegenotipeer met mikroskopiese verskillende digthede.

Al 15 BGP-deelnemers het 'n punt van drie of meer uit vyf gekry vir die volledigheid van data in die Breedplan-rekordstelsel. Die NSV en in besonder Jacques Els, wat die bestuurder is, word bedank vir hul ondersteuning met die BGP-projek. Jacques se insette ten opsigte van die opstel van verslae en sy koördineringswerk is goud werd. Daarsonder sou die projek nie so suksesvol vir Namibiese Brahmane verloop nie.

Navorsing: Die genootskap het verskeie projekte in genomika, vrugbaarheid, koppeling en voerdoeltreffendheid van stapel gestuur. Bystand in dié verband word van Australiese navorsingsinstansies ontvang.

NFI-ontwikkelinge: Die LNR het goedkeuring gegee dat alle GrowSafe NFI-toetsstasies 'n korter

	2016	2017
Aantal geregistreerde diere:	19 824	19 955
Aantal telers:	129 (afname van 10%)	116
Aantal kalwers aangemeld:	6 953 (afname van 13,6%)	6 008

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Moeilike tye kry geharde ras nie onder nie

aanpassingstydperk (21 dae) en toetstydperk (70 dae) kan volg. Dit bring mee dat die koste per dier verminder. Verder is goedkeuring verleen dat afgesien van die standaard naspeense NFI-toets (200 tot 300 dae) 'n finale NFI-toets (300 tot 400 dae) ook gedoen kan word. Laasgenoemde hou die voordeel in dat diere direk ná die toetsfase geslag kan word vir die ontleding van vleiskwaliteit.

Dae-tot-kalwing en makheid (docility): Ná verskeie onderhandelinge en studies deur die Agricultural Business Research Institute (ABRI) het die Brahman Rasverbeteringsforum aanbeveel dat dae-tot-kalwing en makheid as teelwaardes beskikbaar gestel word in die nuwe verwerkingsprogram (V6.2) waarby Namibië ook ingesluit is. Die eerste teelwaardes vir beide eienskappe is reeds beskikbaar. Met die toevoeging van dae-tot-kalwing in Suider-Afrika sal die internasionale ontleding van Brahman-genetika heraktiveer word.

Semen van vier Australiese bulle: Semen van die bulle is vir die BGP-projek ingevoer om as koppelbulle te dien, maar ook om internasionale koppeling met Australië, spesifiek met die Australiese BIN-projek, te versterk. Die BIN (Beef Information Nucleus) is soortgelyk aan die Suider-Afrikaanse BGP (vleisbees-genomikaprojek).

Genomika: Dit sal vir die volgende dekade die gonswoord in diereiteling wees. Intussen word genomiese data reeds vir die berekening van teelwaardes vir Australiese Brahmanegebruik – voorwaar 'n deurbraak waarby Namibiese Brahmantelers ook sal baat vind. Benewens die ander fokuspeunte van die BGP-projek (veral vir moeilik meetbare eienskappe soos vrugbaarheid en vleiskwaliteit), het die Brahman-genootskap die afgelope jaar bykomende fondse beskikbaar gestel om te verseker dat meer as 1 000 Brahmandiere in die volgende maande gegenotipeer word – 'n sogenaamde verwysingspopulasie – om uiteindelik genomies ondersteunde teelwaardes (GEBV's) te kry.

Keurders-beoordelaarskonferensie

Die konferensie vir keurders en beoordelaars het in Januarie plaasgevind op die plaas Okongema van Ebbe en Heide Fischer. Alle aspekte van keuring en beoordeling is goed deurtrap om te probeer verseker dat eenvormige besluitneming gehandhaaf word. Die evaluering van keuringsdata is ook onder die loep geneem, waar gekyk word na die punttoekennings van elke keurder om eenvoudigheid te verseker.

Brahman-telersdag

Die jaarlikse telersdag het in April op die Tjihero-familieplaas Okorusengo plaasgevind met die tema *Bestuurspraktyke in stoeiteling vir verhoogde wins*. Teldersdae is 'n belangrike platform vir inligting wat kyk na aspekte van Brahmanteling en waar telers terugvoering kry. Op vanjaar se telersdag het die klem geval op praktiese beoordeling en keuring asook die huidige ongunstige produksieomstandighede en uitdagings.

Die genootskap het verder sy strategiese vyfjaarplan en ideale teelwaardes bespreek. Die klem het geval op Namibiese telers wat moet poog om aangepaste diere te teel en dit as 'n doelstelling in teelwaarde-seleksies weer speël moet word.

'n Opgedateerde verslag van dr Mike Fair van die Universiteit van die Vrystaat oor die verwerking van Namibiese Brahman-keuringsdata sedert 1988 (sien *AgriForum* se Mei-uitgawe) sal eersdaags beskikbaar wees. Dr Fair het reeds gewys op sterk korrelasies tussen data van die 14 strukturele eienskappe en beraamde teelwaardes (EBV's) vir produksie-eienskappe. Die plan is om van hierdie keuringsdata in teelwaardes beskikbaar te stel. Van hierdie ontledings is al deur dr Fair op internasionale kongresse gepubliseer.

Opleiding en kursusse

Verskeie opleidingsdae met 'n sterk fokus op kommunale gebiede is die afgelope jaar in samewerking met FNB Agri gehou. In 2016 in Epukiro en op die plaas Okorusengo van die Tjihero-familie en vanjaar in Aminius en Otjinene asook die eerste keer noord van die rooi lyn in samewerking met die Mangetti Boerevereniging. Op al hierdie dae was die opkoms tussen 100 en 150 belangstellendes.

'n Beginnerskursus vir 18 deelnemers is ook in April aangebied op die plaas Okanjete van Rynand Mudge. Kiep Lepen was die kursuseier.

'n Gevorderde kursus vir 15 deelnemers het in Junie gevolg op die plaas Lichtenstein-West van die Rusch-familie waar Barend Dorfling as kursuseier opgetree het. Hierdie kursusse geniet prioriteit en bied die geleentheid vir bevordering aan deelnemers in die genootskap se keurings- en beoordelingsstrukture.

2016 Nasionale Brahmanveiling en -simposium

Die Nasionale Brahmanveiling en -simposium het soos gebruiklik in Oktober plaasgevind waar twintig bogemiddelde bulle teen 'n gemiddelde prys van N\$45 100 verkoop is. Die veiling bied vir beide die stoet- en kommersiële mark die geleentheid om goeie teelmateriaal te bekom waar nuwe telers deurlopend hul debuut maak.

Op die simposium het prof Norman Maiwashe van die Landbounavorsingsraad (LNR) in Pretoria 'n goeie oorsig oor genetiese beginsels gegee terwyl Dawid Krause van Feedmaster sy indrukke oor speenkalfbeoordeling gegee het. Verder het twee telers uit die toe droogtegeteisterde omgewings van Outjo en Kamnjab hul praktiese ervaring oor boskos gedeel waar die Brahman se vermoë om in moeilike tye te oorleef opnuut op die voorgrond getree het.

Keuring en skoue

Afgesien van drie kuddes was keuring vir 2017 teen einde Junie afgehandel. Keuring bly een van die belangrikste direkte skakelings tussen telers en die genootskap-vertegenwoordiger. Data word getrou in die genootskap se program ingelees waarvan jaarlikse ontledings op die beoordelaars- en keurderskonferensie bespreek word.

Wat skou betref, is minder diere vertoon weens die droogte en swakke ekonomiese toestande. Nietemin het beoordelaars positiewe terugvoering gegee en is goeie kwaliteit diere vertoon. Skoue het op Grootfontein, Otjiwarongo, Gobabis, Rehoboth en in Windhoek plaasgevind, terwyl telers ook aan die Katutura Expo deelgeneem het – almal geleenthede wat 'n goeie toonvenster vir die Brahmanras is.

Finansiële posisie en bemaking

Die geldsake van die genootskap word goed bestuur en is gesond. Verblydend vir Mecki is die bydraes deur borgskappe, die 8% rente op beleggings en dat dieregetalle nie soveel afgeneem het as wat aanvanklik vermoed is nie. Mecki het namens die genootskap sy dank uitgespreek aan alle borge, spesifiek FNB Agri, wat die genootskap jaarliks met N\$200 000 ondersteun vir deelname aan die genomika-projek. Hy het Feedmaster ook bedank, wat die keuringskoste van hul personeel dra.

Mecki het bygevoeg dat *AgriForum* een van die belangrikste advertensie-platforms bly. "Die twee Brahmanseksies per jaar (Mei en September) gee wye blootstelling aan die ras."

Intussen is die genootskap se webtuiste www.brahman.iway.na opgegradeer en alle genootskap inligting kan nou daar gekry word.



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Brahman-telers hou jaarvergadering



Genomika-projek se komitee

Die Brahman Teltersgenootskap van Namibië se jaarvergadering in Julie is opgevolg met 'n vergadering oor die beesvleisgenomika-projek. Die telers wat hierby betrokke is, is voor van links Mecki Schneider (Okabra Brahmane en president van die Brahman Teltersgenootskap), Manfred Izaaks (Kmi-brah Brahmane en raadslid), Uta Redecker (Porta Brahmane), Ebbe Fischer (Wokuma Brahmane en raadslid) en Jacques Els (bestuurder van die NSV). Agter is Fred Redecker (Porta Brahmane), Günther Hellinghausen (Kupferberg Brahmane), Cobus van der Merwe (St Blaize Brahmane en vise-president van die genootskap), Ryno van der Merwe (Wetmer Brahmane en raadslid), Hagen Eggert (Harrobi Brahmane) en Rynand Mudge (Mudge Brahmane).



Die bestuur

Die Brahman Teltersgenootskap van Namibië se raad wat tydens die jaarvergadering aangewys is, is voor van links Cobus van der Merwe (vise-president), Tanja Schmidt (sekretaresse), Mecki Schneider (president), Manfred Izaaks, Ryno van der Merwe, Ebbe Fischer, Henry Mans en Dirkie Uys.



NSV se Jacques gee terugvoer
Jacques Els, bestuurder van die NSV, het 'n kort opsomming aan Brahman-telers gegee oor die stand van dié ras in Namibië. Volgens hom het die Brahman-kuddes wat vir prestasietoetsing ingeskryf word heelwat verbeter, maar hy het telers tog aangemoedig om nouer te let op dae-tot-kalwing.



TKP-toekenning

Die Brahman-telers wat sertifikate ontvang vir koeikuddes van verskillende groottes met die beste TKP. Van links agter is Horsti Gossouw, Ebbe Fischer, Uland Pack, Hagen Eggert en Fred Redecker. Voor is Andries de Jager en Uta Redecker. Die ander wenner was nie by die jaarvergadering om hul sertifikate te ontvang nie.

Die telers wat toekenning gekry het vir die beste TKP vir verskillende kuddegroottes is:

10 tot 25 koeie: Karla Brahmane, JA de Jager, AK Marenga en Kamelberg Brahmane
26 tot 50 koeie: Robyn Brahmane en FW Redecker
51 tot 100 koeie: CW Düvel en AP de Jager
Meer as 100 koeie: H&B Eggert, Farmverwalting Okasewa Ranch en EW Fischer



Voormalige sekretaresse vereer

Die Brahman Teltersgenootskap het op 'n gepaste wyse afskeid geneem van Heilwig Voigts wat 22 jaar lank as sekretaresse gedien het. Hier ontvang sy 'n bos blomme van Cobus van der Merwe (vise-president van die genootskap) vir haar toegewyde bydraes en ondersteuning. Telers het ook eenparig besluit om ere-lidmaatskap aan haar toe te ken.



FNB Agri sterk verteenwoordig

Christo Viljoen, hoof van FNB Agri, het op die jaarvergadering aan telers gesê hulle fokus nie net op besigheid nie, maar is ook daarop ingestel om 'n verskil in die landbousektor te maak. "Vir ons is landbou 'n spansport. Van die meer ervare spelers word verwag om hul kennis met onervare spanmaats te deel." Op die foto agter van links is Frederico van Wyk (FNB Agri), Cobus van der Merwe (vise-president van die Brahman Teltersgenootskap), Jacques Cloete (FNB Agri), Christo Viljoen (FNB Agri) en Mecki Schneider (president van die Brahman Teltersgenootskap).



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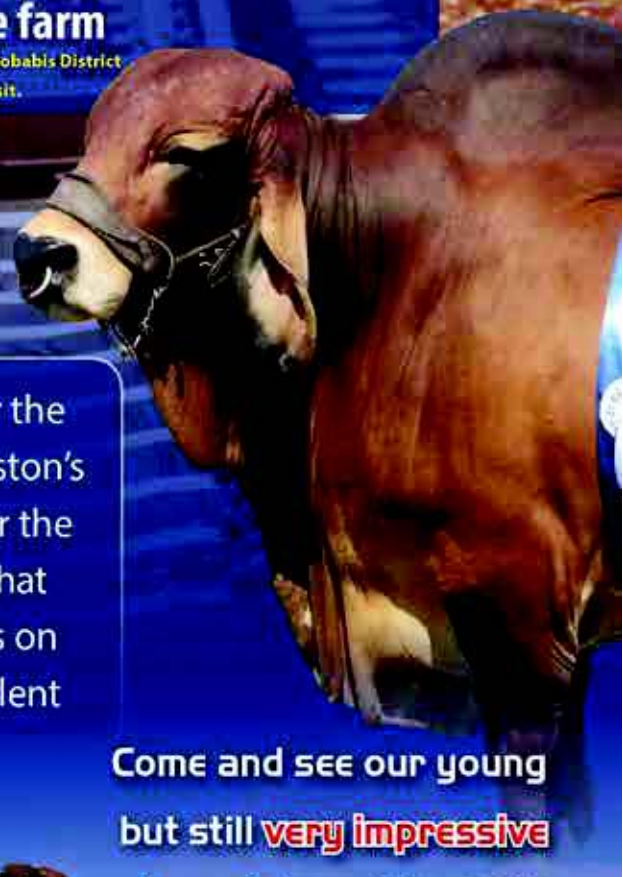
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Brahman woeker met BGP en ander projekte

Jacque Els

Bestuurder van die Namibiese Stoettelersvereniging



Die Brahman bly een van die toonaangewende rasse in Namibië wat die toepassing en gebruik van moderne tegnologie betref. Die Namibiese Brahman Telersgenootskap (NBBS) was van die eerstes wat in samewerking met sy Suid-Afrikaanse eweknie homself verbind het tot deelname aan die vleisbees-genomikaprojek (BGP).

Uit die staanspoor het die Namibiese deelnemers hulle ook verbind tot totale kudde-aantekening in alle aspekte van die projek. Sedert die aanvang van die projek is 15 deelnemers met sowat 2 400 teelbare vroulike diere per jaar betrokke.

	1 Jan 2016 – 1 April 2017		1 April 2017 – 30 Junie 2017	
	Ras	BGP	Ras	BGP
Dae-tot-kalwing	384	350	190	170
Geboortegewig	3 531	1 326	243	80
200 dae	1 560	684	312	16
400 dae	1 764	842	409	233
600 dae	3 104	1 771	1 105	651
Volwasse koeigewig	1 408	849	264	108
Skrotum-omvang	443	285	66	50
Skandering	2 252	1 582	807	660
RFI	273	273	94	94
Vleiskwaliteit	35	35	6	6
Genotipering	8	8	0	0
Totaal	14 782	8 003	2 496	2 068

Tabel 1: Vergelyking van die bydrae van die BGP-deelnemers (15 uit 126 telers) tot die totale data. (Bron: NSV)

Die belangrikheid van die bydrae van BGP-deelnemers tot 'n ras se data kan nie genoeg beklemtoon word nie. Dit blyk uit die data van al die deelnemende rasse dat telers 'n baie groot bydrae lewer tot die data van rasse.

In 2015-16 kon geen Namibiërs deelneem aan NFI-toetse (netto voerinnam) nie. Fondse is toe gebruik vir die genotipering van diere. Sedert 2016 is die private NFI-toetssentrum GenTecSol van Mecki Schneider en Ebbi Fischer tot beskikking van die ganse teelbedryf in die land.

Die doelstellings van die BGP is om 'n genootskap in staat te stel om in 'n relatief kort tydperk 'n hoogs akkurate databasis op te bou van alle fenotipiese data (gewigte en direkte metings), maar ook om akkurate data te versamel van moeilik meetbare eienskappe (bv. voerdoeltreffendheid, vleiskwaliteit en vrugbaarheid). Die einddoel is om die genootskap in staat te stel om genomies gebaseerde teelwaardes te bereken wat (a) die beste beraming van 'n dier se genetiese waarde as 'n ouer is (saamgestel uit alle beskikbare inligting), (b) hoër akkuraathede vir diere op 'n jonger ouderdom en (c) akkurate teelwaardes vir moeilik meetbare eienskappe.

	Namibië				Suid-Afrika			
	7K	150K	800K	WGS	7K	150K	800K	WGS
Bulle	0	125	20	0	67	36	48	4
Koeie	139	0	0	0	58	0	0	0
Subtotaal	139	125	20	0	125	36	48	4
Totaal	284				213			
Groototaal					497			

Tabel 2: Genotipering van Namibiese en SA Brahmandiere (1 April 2015 tot 31 Maart 2017)

Om dit te vermag moet 'n verwysingskudde saamgestel word. Hiervoor is 'n minimum van 1 000 tot 1 500 gegenotipeerde diere nodig. Tans vorder die Brahmane goed met die opbou van 'n verwysingskudde.

Vir 2017-2018 sal 'n verdere vier invloedryke teelbulle uit die deelnemende kuddes gegenotipeer word met die 150K-mikroskyfie. Suid-Afrika het meer bulle wat met die 800K-skyfie gegenotipeer is as Namibië om-

dat die buurland meer invloedryke bulle in die Suider-Afrikaanse Brahmanbevolking het. Die vier mees invloedryke bulle waarvan semen nog beskikbaar is, is gebruik vir volledige genomiese analise. 'n Toekenning van vier bulle per ras is gemaak teen N\$40 000 per dier.

Die Brahmane beskik ook oor verskeie navorsingsprojekte, elk met sy eie finansiering, wat deel uitmaak van die groter Brahman BGP. Een van die projekte is genomika. Dit stel Brahmantelers in staat om meer diere te genotipeer, wat op sy beurt bydra tot die vinniger bereiking van die minimum aantal diere vir 'n doeltreffende verwysingskudde. Dit sluit 'n studie in oor laktasie-anoestrus (die koeie kom nie op hitte nie). Vir die genomiese projek het die Namibiese Brahman Genootskap reeds in Junie haarmonsters van dertig hoogs vrugbare koeie en drie bulle gestuur. Die koeie word gebruik in beide die normale genomikaprojek en vir laktasie-anoestrus.

Om teen einde Februarie 2018 by die minimum van 1 000 gegenotipeerde diere vir die verwysingskudde uit te kom sal 'n verdere 194 haarmonsters van Namibiese Brahmane ingestuur word. Dit sal bestaan uit haarmonsters van teelbulle, ook van nie-deelnemende kuddes sowel as van koeie en hul kalwers wat die nageslag van reeds getoetste teelbulle is. Die mikpunt is om uiteindelik haarmonsters van 70 bulle en sowat 62 koeie en hul kalwers in te stuur. Die Brahman-genootskappe van Namibië en Suid-Afrika het ingestem om gesamentlik 'n bydrae van ongeveer N\$300 000 te maak om hierdie doelwit te bereik. Dit kan beteken dat die eerste genomies-gebaseerde teelwaardes (GEBV's) reeds teen 2019 beskikbaar kan wees. Die plan is om die 62 koeie waarvan haarmonsters versamel moet word, in die helfte te verdeel tussen die hoogs vrugbares en dié wat aan die minimum vrugbaarheidsvereistes van die genootskap voldoen. Hierdie minimum vereistes help om vrugbaarheid binne die ras te bevorder.

Soms genoem word die finansiële bydrae wat 'n deelnemende genootskap ontvang, bepaal deur die ras se grootte en die aantal kalwers wat in 2013 gebore is. Die Brahman-genootskappe van Namibië en Suid-Afrika verdeel hulle fondse, gebaseer op die getal diere van elke genootskap, onderskeidelik in 'n derde en twee derdes.

Die koste van die NFI- en die vleiskwaliteittoetse is die twee beperkende faktore op die aantal bulle wat jaarliks getoets kan word. Vir 2017-18 kan die Namibiese Brahman-genootskap 48 bulle vir NFI toets en 24 bulle slag vir die bepaling van vleiskwaliteit. Dit bring mee dat slegs vier BGP-deelnemers in 2017-18 bulle vir die BGP kan toets. Die sesde toets sedert die aanvang van NFI-toetsing in Namibië sluit af op 12 September 2017. Dan sal 388 Brahmanbulle reeds vir NFI getoets wees. 'n Totaal van 64 bulle is reeds geslag vir die bepaling van vleiskwaliteit.

Hoewel die aantal bulle wat binne die BGP getoets kan word (d.w.s. wat deur die projek gesubsidieer word) reeds bereik is, kan enige teler nog bulle stuur. Die vereistes vir bulle buite die BGP is die volgende: 'n minimum van vyf jong bulle wat die nageslag van twee teelbulle is. Die teler neem aan die einde van die toets al vyf sy bulle terug huis toe en hoef hulle nie te laat slag nie. Voortaan sal die slagresultate van diere in kontemporêre groepe tussen die ouderdom van 20 en 36 maande ook in die databasis opgeneem kan word. Dit sal bydra tot groter slagdata.

In Julie 2017 het die Brahmane nog 'n mylpaal bereik toe teelwaardes die eerste keer vir dae-tot-kalwing en temperament beskikbaar gestel is.

Vir baie jare is Brahman-semen uit die VSA ingevoer en in Suider-Afrikaanse kuddes gebruik. Sodoende is goeie genetiese koppeling tussen Suider-Afrika en die VSA bewerkstellig. In Desember 2015 is semen van die Australiese bul Arni, wat in Suid-Afrika beskikbaar was, ingevoer om die genetiese koppeling met Australië te verbeter. In 2016, tydens 'n besoek van 'n groep LRF-lede aan Australië, is 'n aantal bulle geïdentifiseer as potensiële KI-bulle wat gebruik kon word om genetiese koppeling verder te verbeter. Die keuse het geval op bulle wat in die Australiese Brahman-genomikaprojek gebruik word. Van hierdie semen is ook na Namibië ingevoer en in die somerdekseisoen is 'n aantal koeie in verskeie kuddes kunsmatig geïnsemineer. Die nageslag behoort teen einde 2017 gebore te word. Om genetiese inligting te bekom moet 'n teenprestasie gelewer kan word. In die geval van Namibië is dit moeilik om genotipes uit te ruil. Wat egter wel beskikbaar is, is 'n datapoel van akkurate fenotipiese waardes van Amerikaanse KI-bulle wat in die land gebruik is. Onderhandelinge is tans aan die gang om te kyk hoe Namibië inligting met die VSA en Australië kan uitruil.



OKABRA BRAHMANS

Meeting the challenges of tomorrow



OKABRA KOBÄ - OKB 08 748

July 2017 Namibian Brahman GROUP BREEDPLAN EBVS

	Gestation Length (days)	Birth Wt. (kg)	200 Day Wt (kg)	400 Day Wt (kg)	600 Day Wt (kg)	Mat Cow Wt (kg)	Milk (kg)	Scrot (cm)	Days to Calving	Carcass Wt (kg)	EMA (cm ²)	Rib Fat (mm)	Rump (mm)	Retail Beef Yield (%)	IMF (%)	Docility
08-0748OKB	-0.2	+4.0	+25	+40	+55	+57	+5	+1.2	+3.5	+27	+2.7	-1.5	-1.9	+1.4	-0.2	+1.5
Accuracy	62%	94%	91%	90%	90%	81%	57%	69%	42%	78%	65%	78%	78%	68%	73%	86%
Breed Avg. EBVs (2015 Born Calves)	-0.7	+1.5	+15	+24	+30	+30	+3	+0.7	-0.4	+17	+0.3	+0.1	+0.1	+0.0	+0.0	+1.7

Traits Observed: BWL, ZDI, WTL, 200, 400, WTL, 2, 600, WTL, F, EMA, M, EEK, K

Statistics: Number of Herds: 6, Progeny Analyzed: 124, Scan Frequency: 81, Number of Dirs: 2

OKABRA KOBÄ destined for **KROONVEE BRAHMAN**s near Vryburg where he will make his next impact as a proven sire. **KOBÄ** is a trait leader for all growth and carcass weight EBVs which are in the top 2% of the breed. His eye-muscle-area and retail-beef-yield EBVs are in the top 1% of the breed. Milk and scrotal size EBVs are in the top 12%

of the breed. He has above average docility EBVs and a Rangeland Grazing Index in the upper 5% of the breed. **KOBÄ** is well muscled and structurally sound! A real power house in the breed!

SELECTION INDEX VALUES		
Market Target	Index Value	Breed Avg
Rangeland Grazing Index (R)	+\$ 162	+\$ 97
Wean Index (R)	+\$ 79	+\$ 62
Feedlot Index (R)	+\$ 90	+\$ 63

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BGP en ander projekte

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Projek oorsig

Die vleisbees-genomikaprojek (BGP) is nou in sy derde jaar van die eerste driejaarsiklus. Rasse van die Lewendehawe Registreerende Federasie (LRF) en die SA Stamboek gebruik verskillende strategieë om hul doelwitte te bereik, terwyl rasgenootskappe se onderskeie strategieë grootliks finansiering van die Technology Innovation Agency (TIA) bepaal. Die totale finansiering vir die eerste drie jaar van die projek was sowat N\$30 miljoen.

Rasgrootte, en meerspesifiek die getal kalwers wat in 2013 gebore is in vergelyking met die totale aantal teelbare vroulike diere in die ras in 2013, speel ook 'n rol in finansiering. In Namibië neem die volgende rasse aan die BGP-projek deel: Brahman, Braunvieh, Santa Gertrudis, Simmentaler, Simbra (LRF-rasse) en die Bonsmara (SA Stamboek). Die Braunvieh en Santa Gertrudis neem eers sedert 2016 deel.

Sterk opkoms kenmerk Otjinene-opleidingsdag



Die ondersteuning van die Namibiese Brahman Telersgenootskap se opleidingsdae in kommunale gebiede gaan van krag tot krag en word besonder goed ondersteun. Op die foto is die sterk opkoms wat op die Otjinene-opleidingsdag einde April ervaar is.



Van links is die meisie-hanteerder Vetjua Murangi en Brahman-telers Lesley Kauandara en Sly Kaitjizemine (assistent-keurder). Sly het saam met Ryno van der Merwe, raadslid van die Brahman-genootskap, die opleidingsdag aangebied. Die klem het geval op die strukturele korrektheid van stoetdiere en die teel van aangepaste diere. 'n Bespreking van die ideale bul en koei het ook plaasgevind. Daarby het die positiewe invloed van reproduksie op winsgewendheid onder die loep gekom toe Feedmaster se Frank Kanguatjivi op die voordele en belangrikheid van byvoeding in dié verband gewys het.



Die afgetrede permanente sekretaris Kahijoro Kahuure, deesdae 'n boer, het ook die Brahman-opleidingsdag bygewoon. Hy het in sy ampstermyn in 'n paar ministeries as permanente sekretaris gedien.



Van die diere wat gebruik is vir die praktiese demonstrasie in aantog.

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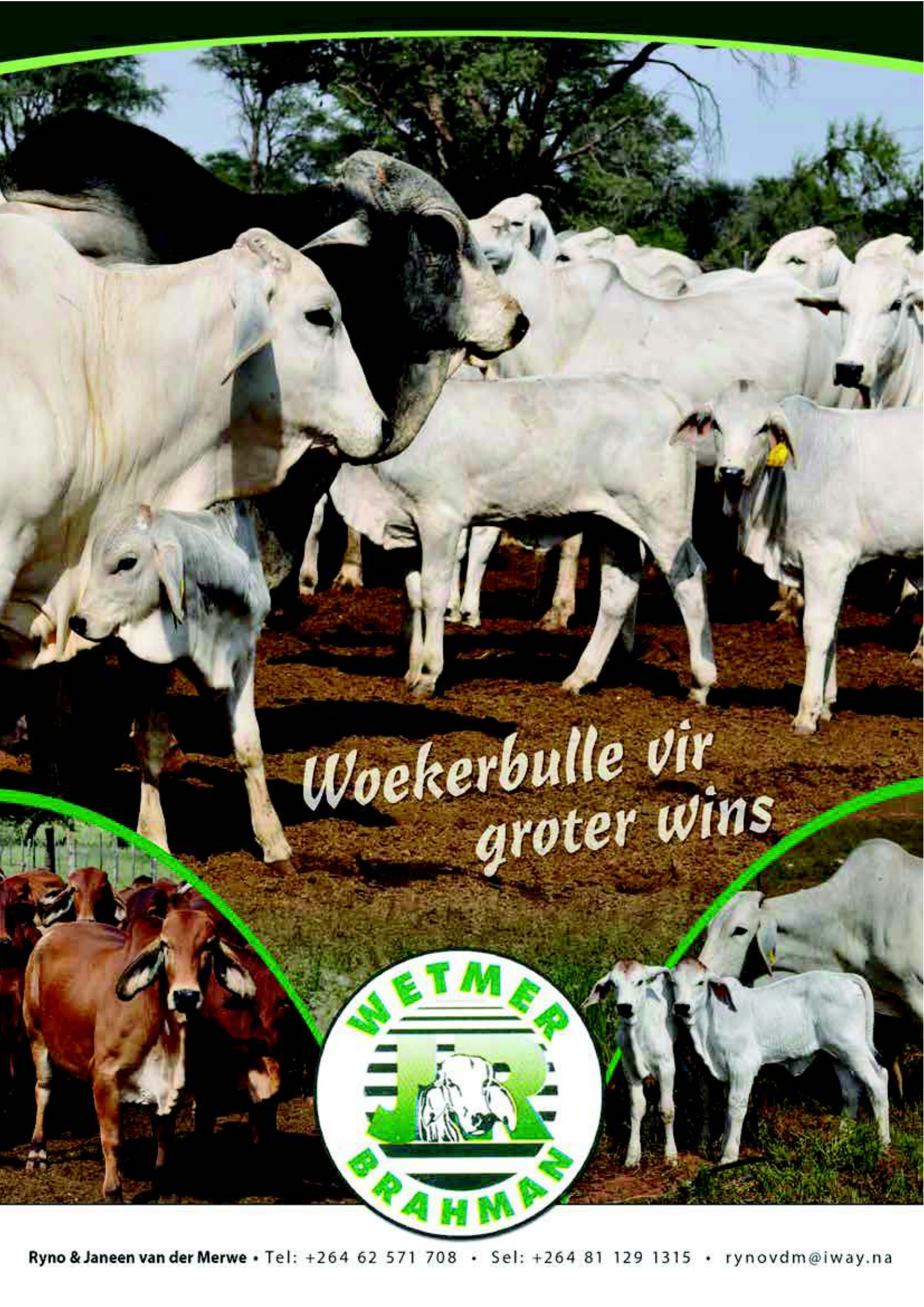


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A better understanding of efficiency

Claims by the agricultural technology company Cainthus at the Alltech Ideas Conference in the US earlier this year to develop a system for beef cattle measuring both feed and water to determine daily weight gain were dismissed by Alison Sunstrum, CEO of GrowSafe Systems. "We are already doing this, also in Namibia at the GenTecSol net feed intake test station in the Hochfeld area where reams of data are collected and processed in real time."

She pointed out that radio frequency identification devices, known as RFID tags, are used to identify cattle at GrowSafe stations, while Cainthus hopes that facial recognition will also identify cattle. "They have a long way to realise their dreams in a practical, affordable and realistic way, and a much further journey to understand what efficiency is."

Alison, who was approached by Agriforum for comment on the Cainthus system to be implemented for beef cattle as soon as next year, said that GrowSafe have been measuring feed and water intake, animal weight gain and feeding behaviour since 1990. "Along the way we have learned to be cautious in making grandiose 'promises' or 'claims' because biological systems are complex. But what we do know is that feed intake, water intake and weight gain that are measured continuously provide the fundamental building blocks to understand the biology and genetics of efficiency, profitability and environmental sustainability."

According to Alison there is a correlation between feed intake and water intake. "It appears that an animal that is efficient in using feed resources is also likely efficient in many aspects of production such as water usage, disease resilience and perhaps overall robustness." She added: "Do we fully understand the biological mechanisms that make up efficiency? I would say not. This is why, on a worldwide basis, large populations of cattle are measured and monitored such as in the beef genomics project."

On progress through phenotypic selection for efficiency she specifically mentioned the beef genomics project of the Namibian Brahman Breeders Society in collaboration with scientists under the co-ordination of the Agricultural Research Council.

Alison regarded the size of the efficiency prize as large. "Feed represents 70 to 80% of production costs in dairy and beef cattle. Water footprint, sustainability and food security is also of utmost importance. I see the need

for efficient cattle in Africa more than perhaps in any other part of the world. Africa must import feed, the continent regularly suffers from droughts and livestock has a high cultural value for smallholder farmers."

The question of feed and water usage in cattle is more complex, Alison said. "Cattle may not be as efficient on a simple feed to gain basis as other livestock, but in terms of their ability to convert protein from byproducts, non-human food sources and less than ideal forage, they excel. When well-managed cattle keep grasslands in check, they are a needed component in wildlife sanctuary, and in Namibia they may be the basis for long-term food security."



"Feed represents 70 to 80% of production costs in dairy and beef cattle. Water footprint, sustainability and food security is also of utmost importance." - Alison Sunstrum



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Thorough overview of feed efficiency

The book *Feed Efficiency in the Beef Industry* provides a thorough and concise overview of feed efficiency in beef cattle. It frames the great importance of feed efficiency to the industry and details the latest findings of the many scientific disciplines that intersect and aim to improve efficient and sustainable production of nutritious beef. The vast majority of production costs are directly tied to feed. With increased demand for grains to feed a rapidly increasing world population and to supply a new demand for alternative fuels, feed costs continue to increase. In recent years the negative environmental impacts of inefficient feeding have also been realised; as such feed efficiency is an important factor in both economic viability and environmental sustainability of cattle production.

Feed Efficiency in the Beef Industry covers a broad range of topics – from economic evaluation of feed efficiency to the physiological and genetic bases of efficient conversion of feed to high quality beef. Chapters also look at how a fuller understanding of feed efficiency is leading to new selective breeding efforts to develop more efficient cattle.

With wide-ranging coverage from leading international researchers this book is a valuable resource for producers who wish to understand the complexities, challenges and opportunities to reduce their cost of production, for students studying the topic and for researchers and professionals working in the beef industry.

Visit www.wiley.com/wiley-blackwell for more information.

A great success story in food production

In the foreword Leo McDonnell from Columbus, Montana, writes:

By 2030 the world population is forecasted to be over 8 billion, global demand for meat is expected to rise by 55% and energy demand will increase by 40%. We must meet this increasing demand constrained to substantially the same cropland the world has cultivated since 1970. This book comes at a time when world beef producers are challenged by many traditional and emerging issues such as:

- Weather
- Rising energy costs
- Increasing non-agricultural use for grazing land and increasing competition for traditional feed sources, and
- Complex government and international structures.

These issues affect feed prices. Feed costs are directly related to 75% of the cost of producing finished cattle. Cattle producers take the vast amount of land only suitable for grazing that God has blessed us with, and through grazing cattle, harvest those grasses, conserving land for future generations while at the same time producing a nutritious protein product. By understanding the many challenges faced by cattle producers in maintaining a sustainable business balanced by a strong commitment to animal welfare, a safe, healthy beef supply and sound environmental stewardship, you will begin to appreciate that beef is one of the great success stories in food production.

For more than 50 years it has been my family's commitment to identify genetics that have eco-

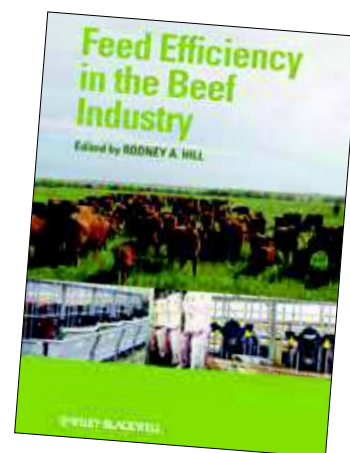
nomic importance to the rancher, feeder and consumer. In 2007 we invested heavily in technology developed by GrowSafe Systems Ltd to measure individual intake in young bulls and heifer calves.

We now test about 1 700 head a year, and the first offspring we fed from one of these high-efficiency bulls performed at the same level with 15% less intake. This improvement took a systematic, measured approach over time, but these results were unprecedented. To those who say we are a mature industry, I say we have just entered a new generation.

As you travel through the chapters of this book, you will better understand the importance of developing genetic traits for selection, such as RFI, that allow cattle producers to produce more effectively with less. Through this book, you will also come to appreciate the positive conservation and environmental impacts that selecting for efficiency traits such as RFI offer. I hope you appreciate

Dr Rodney Hill's commitment to con-

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C: +264 (0)81 223 2298
marius.grove75@gmail.com



ROBYN BRAHMANE

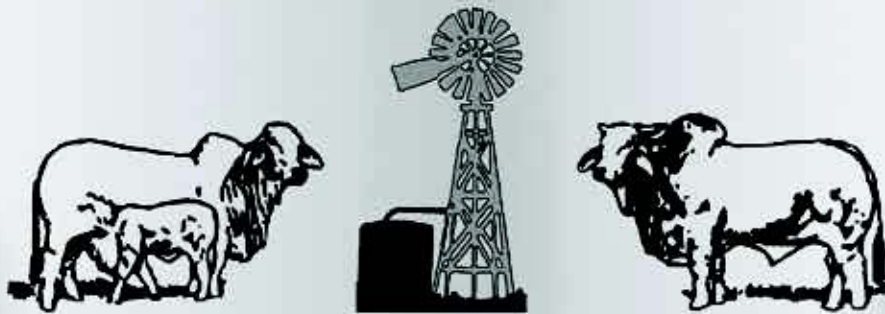
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Gobabis, Rehoboth en Windhoek Shows 2016

Net feed intake tests versus rangeland conditions

Net feed intake (NFI, also called residual feed intake) is a measure of feed efficiency that is independent of live-weight and growth rate. It is calculated as the difference between actual feed intake and expected feed intake for maintenance and growth. Animals that eat less than expected have a negative NFI and are more efficient. Selecting sires genetically superior for NFI has the potential to produce steer and heifer progeny that are more feed efficient, thereby reducing the feed costs of beef production.

Industry guidelines for testing young bulls for NFI require that the animals have ad libitum access to a diet of sufficient energy density that individual differences in appetite and growth potential can be expressed. Genetic merit for NFI is expressed as an estimated breeding value (EBVNI) to be used together with EBV for other production

traits in making selection decisions about potential sires. Since 2002 EBVNI of animals have been published for bulls of the Australian Angus and Hereford breeds.

The first article was on steer growth and feed efficiency on pastures that are favourably associated with genetic variation in sire net feed intake. In this regard Dr Arthur said the objective of an experiment was to investigate whether growth, NFI and feed conversion ratio (FCR) of steers on pasture were favourably associated with genetic variation in NFI of their sires.

The steer and heifer progeny of bulls superior for NFI spend most of their lives on pastures that are frequently of lower availability and/or quality than the test diets upon which their sires were evaluated.

The summary of these tests showed that growth, feed intake and feed efficiency were measured from spring to summer on Angus and Hereford weaner steer progeny of sires with known estimated breeding values for net feed intake (EBVNI). Each year the steers were grown on three different pasture systems and pasture intakes were measured twice using the alkane technique. Final data analysed consisted of 77 and 50 records for steers from years 1 and 2 respectively. They were the progeny of 42 sires (23 Hereford, 19 Angus), three sires having progeny in both years. Signifi-

The question is often asked whether the outcome of net feed intake (NFI) tests under feedlot conditions is a valid outcome for livestock grazing on rangelands. Dr Paul Arthur (from the University of New South Wales at Armidale in Australia) is an internationally recognised expert on NFI having spent most of his research on this topic.

He was approached to share his experience on this topic. Dr Arthur also referred Agriforum to two published research papers on animal production in Australia. Read in the adjacent article more about the new development to improve cattle genetics.



cant regression coefficients for steer performance traits against sire EBVNI indicated that genetic variation in NFI was associated with phenotypic variation in steer performance on pasture. Initial and final live-weight of the steers, and feed intake, were not associated with variation in sire EBVNI. However daily gain by the steers tended towards a favourable negative association with sire EBVNI. Net feed intake and feed conversion ratio (FCR) had positive associations with sire EBVNI. The results show that 1 kg/day lower EBVNI of a sire produced steer progeny that grew 19% faster, with no increase in feed eaten, had a 26% lower NFI, and a 41% better FCR.

The second article dealt with whether pastures limit growth rate of steers bred for low residual feed intake to grow faster. Post-weaning tests of young bulls and heifers from a number of British beef breeds have shown RFI to be heritable (and to respond to selection).

The steer and heifer progeny of bulls

84

Thorough overview

80 solidating groundbreaking research from leading scientists in the field of cattle efficiency, particularly as the scientific community faces reduced agricultural research funding.

As a beef producer, use the knowledge you gain to expand your operation's opportunity to improve efficiency. These are truly exciting times as product quality and production efficiency will be the profitability drivers that sustain our industry. Consider the tremendous opportunity we have in meeting today's and tomorrow's responsibilities to feed the world and enhance our natural resources in a sustainable and meaningful manner.



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Net feed intake tests

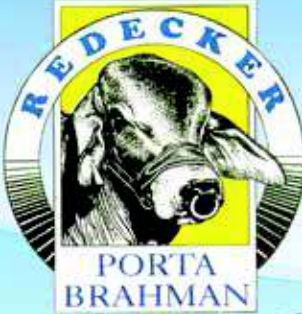
82 superior for RFI are usually reared on pastures that will frequently be restricted in both quantity and quality. The objective of this experiment was to investigate the effect of divergent selection for post-weaning RFI on growth rate, final weight and body composition of steers during backgrounding on pasture prior to feedlot entry.

Growth on pasture and body composition before feedlot entry was measured on Angus and Angus cross steers born over five years from parents selected for low post-weaning residual feed intake (RFI, high efficiency, 271 steers from 31 sires) or selected for high RFI (low efficiency, 250 steers from 28 sires), and 40 steers from an intermediate unselected line created in the previous 2 years. After 1,5 generations of divergent selection least-squares means for initial weight for low-RFI line and high-RFI line steers did not differ, but the low-RFI line steers grew 4,4% faster than high-RFI line steers to be 2,1% heavier at the end of backgrounding (418 v 409 kg). At that time the low-RFI line steers had less subcutaneous fat over the rib and rump (3,2 v 4,2 mm, 4,4 v 5,3 mm). Significant regressions for daily growth rate, final weight and the two fat depth measurements, with mid-parent estimated breeding value for RFI, provided further evidence for genetic associations with post-weaning RFI.



Keurders en beoordelaars trek saam

Die groep van 22 keurders en beoordelaars wat die Namibiese Brahman Genootskap se jaarlikse byeenkoms vroeër vanjaar bygewoon het. Die gashere vir die jaarlikse geleentheid roteer onder telers. Vanjaar was Ebbe en Heide Fischer aan die beurt wat die groot groep op hul plaas Okongema in die Hochfeld-omgewing ontvang het.



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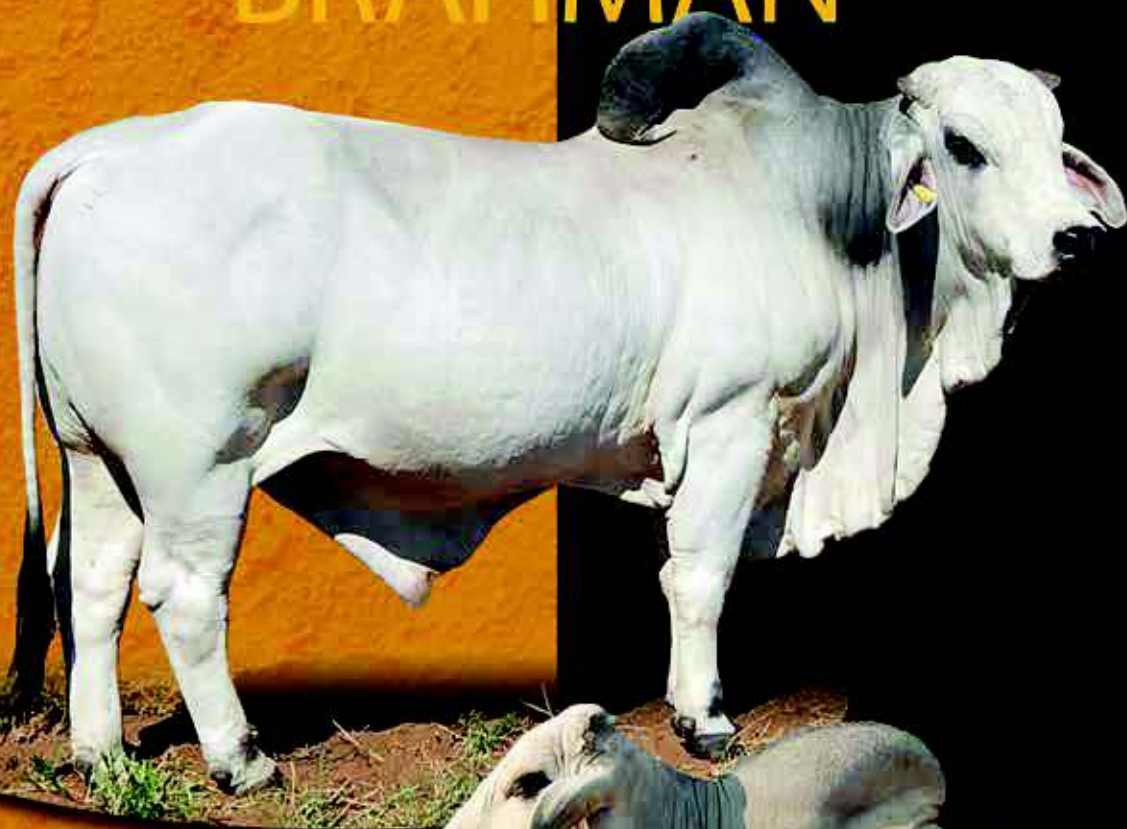
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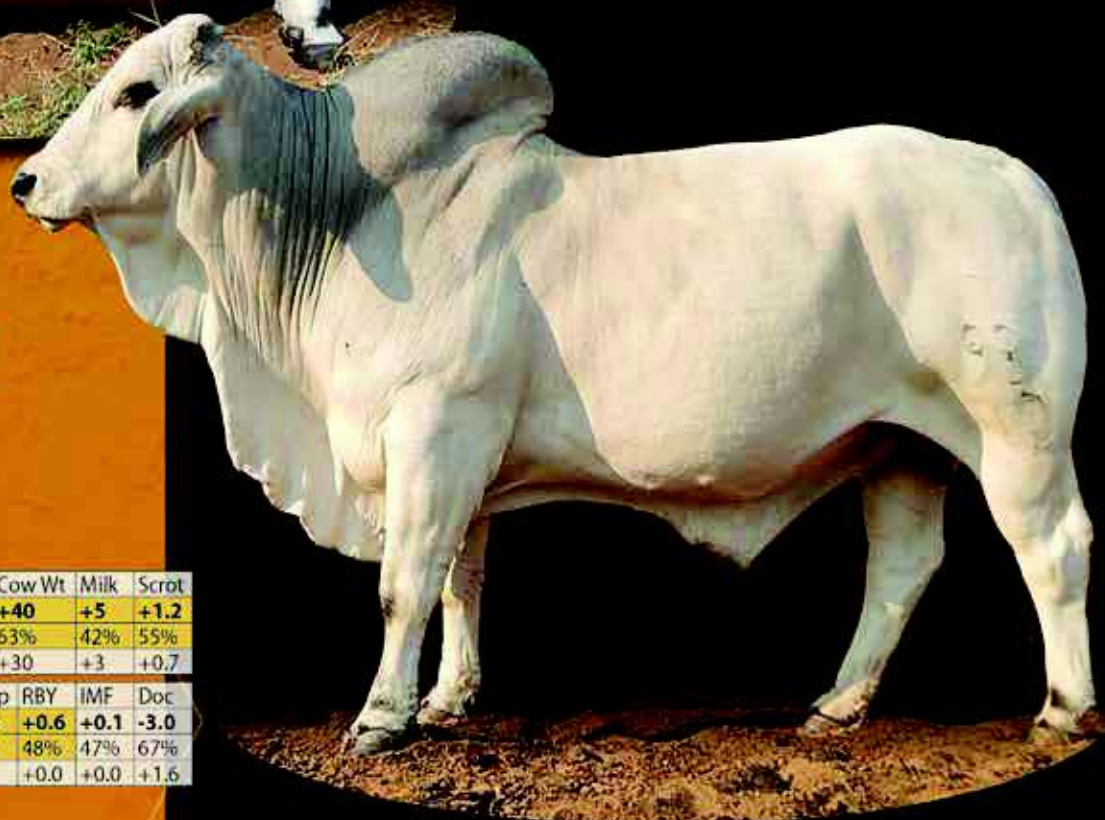


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Accuracy	60%	74%	73%	73%	63%	42%	55%
Breed Avg.	+1.5	+15	+24	+30	+30	+3	+0.7

	Carc Wt	EMA	Rib	Rump	RBV	IMF	Doc
EBV PC12-93	+26	+2.3		+1.0	+0.6	+0.1	-3.0
Accuracy	62%	47%	56%	56%	48%	47%	67%
Breed Avg.	+17	+0.3	+0.1	+0.1	+0.0	+0.0	+1.6

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Selecting for carcass marbling and muscling benefits and pitfalls

Jim Gosey

**Extension Beef Cattle Specialist
University of Nebraska, Lincoln**

Marbling may only account for a small share of the variation in palatability of cooked beef products and is less important than tenderness, but it serves as an "insurance policy" for eating satisfaction and is more easily measured. Thus breeders have responded to increased consumer demand for beef quality and consistency by selecting for marbling as it is one of the few tools available to them. Undoubtedly success of programmes such as Certified Angus Beef has drawn attention to quality grade as a tangible component of many grid based programmes. As long as single trait selection for either marbling or muscling is avoided and balanced multiple trait selection is used, small but positive gains in carcass traits should be realised.

The difficulty lies in achieving the optimum balance of traits especially considering the powerful impact of reproduction and production traits on ranch profitability. Producers should match their cattle (cows) to ranch resources first and adjust carcass traits only as much as ranch resources reasonably allow. There is a need to explore the antagonisms that exist between carcass traits and other reproduction and production traits. The number of bulls, within a given breed, that have genetic estimates (EPD) for carcass traits has grown rapidly in recent years. Commercial DNA tests exist for a component of marbling and tenderness. Ultrasound has contributed greatly to the carcass database and will likely increase even more because it is a direct, non-invasive measure that can be used directly on seedstock. The advent of sophisticated identification procedures and greater traceability of cattle will enhance the collection of even more carcass data. Although not all ranchers will choose to track carcass quality and quantity traits, it is clear that many of their competitors will.

- Joint improvement in marbling and lean muscle growth will be limited by the negative genetic correlation between the two traits.
- The number of sires with genetic estimates for carcass traits will continue to increase due mainly to data collected via ultrasound.
- DNA markers for major gene effects hold promise to supplement traditional selection tools (EPDs) to yield more precise selection for carcass traits.
- Crossbreeding can be used to temper antagonistic carcass traits through complementarity or the matching of breed strengths and weaknesses.
- Heterosis is the best tool to maintain cow reproductive performance and fitness to the environment while attempting to change carcass traits.

Heritability of carcass traits

Heritability is a measure of the proportion of variation in a trait that is due to genetics or genes. Highly heritable traits (.50 to .70) are greatly influenced by genetics and to a lesser extent by the environment. Lowly heritable traits (<.20) are greatly influenced by environment. Table 1 shows carcass traits as a group are more highly heritable than production traits and much more heritable than reproduction traits. Highly heritable traits are usually best changed by direct selection for that trait and lowly heritable traits usually respond best by using crossbreeding to take advantage of heterosis and complementarity. Just because a trait happens to be heritable doesn't mean that breeders should automatically select for that trait. Other factors, such as the amount of variation in the trait, the potential selection intensity, the economic importance of the trait, the cost of measuring the trait and the genetic correlation with other traits have to be considered carefully.

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Selecting for carcass marbling and muscling benefits and pitfalls

TABLE 1. HERITABILITY (h^2) OF BEEF CATTLE PERFORMANCE TRAITS

Trait	Number of Studies ^a	Weighted Mean h^2 ^b
Reproduction Traits		
Age at First Calving	7	.06
Calving Date	7	.08
Calving Interval (Cows)	3	.01
Calving Interval (Heifers)	7	.06
Calving Ease (Direct)	19	.10
Calving Ease (Maternal)	11	.09
Calving Rate	9	.17
Scrotal Circumference	25	.48
Heifer Conception Rate (Direct)	9	.05
Cow Conception Rate (Direct)	21	.17
Production Traits		
Birth Weight (Direct)	167	.31
Birth Weight (Maternal)	34	.14
Weaning Weight (Direct)	234	.24
Weaning Weight (Maternal)	38	.13
Yearling Weight (Direct)	147	.33
Yearling Weight (Maternal)	6	.06
Mature Cow Weight	24	.50
Feed Efficiency	25	.32
Feed Intake	21	.34
Relative Growth Rate	12	.22
Yearling Frame Score	27	.61
Carcass		
Backfat	26	.44
Ribeye Area	16	.42
Slaughter Weight	52	.41
Carcass Weight	19	.23
Dressing Percentage	13	.39
Cutability	12	.47
Lean: Bone Ratio	4	.63
Marbling Score ^c	12	.38
Warner-Bratzler Shear Force	12	.29
Sensory Panel Tenderness	3	.13

(Adapted from Koots et al., 1994a and Green, 1999).

^aNumber of research studies represented.

^bAverage heritability of trait, weighted by number observations in studies. Expressed as a percentage.

^cRecent review of Marston et al. (1999) reported average of 43% heritability for marbling.

^dAll traits are expressed on an age constant basis where applicable.

Table 1 (where h^2 is the heritability e.g. 0.06 = 6% heritable).

86 Genetic antagonism between traits

Genetic correlation estimates the impact that selection for one trait would have on a second trait. Genetic correlation occurs because some genes have multiple effects and change does not occur in a vacuum, inevitably other traits are affected. Sometimes genetic correlation between traits can benefit selection, such as the beneficial correlation between growth rate and feed conversion. Feed conversion is difficult and costly to measure but the beneficial correlation with growth rate means selection for growth rate will also result in improvement in feed conversion.

Some carcass traits are negatively correlated to each other (marbling and leanness) and to other traits of economic importance. These antagonistic genetic correlations make selection more difficult and the response to selection will be smaller and slower to achieve.

Table 2 shows genetic correlations between many carcass traits and other productivity traits as summarised from a large number of research studies. Reflection on this table quickly points to some important antagonistic correlations between traits. For example, the positive genetic correlation between birth weight and weaning weight (.50) means that unlimited selection for weaning weight would produce increasing birth weight and eventually unacceptable calving difficulty.

TABLE 2. GENETIC CORRELATIONS BETWEEN VARIOUS PERFORMANCE TRAITS^a

Traits ^b	Genetic Correlation
Calving Ease / Birth Weight	-0.74
Birth Wt / Feed Efficiency	-0.46
Yearling Wt / Feed Efficiency	-0.60
Feed Intake / Feed Efficiency	0.71
Wean Maternal / Feed Intake	0.80
Scrotal Circumference / Feed Efficiency	0.61
Birth Wt / Weaning Wt	0.50
Birth Wt / Yearling Wt	0.55
Weaning Wt / Yearling Wt	0.81
Weaning Wt / Mature Wt	0.57
Weaning Wt / Slaughter Wt	0.79
Yearling Wt / Slaughter Wt	0.56
Yearling Wt / Scrotal Circumference	0.39
Backfat / Feed Intake	0.44
Backfat / Scrotal Circumference	0.78
Carcass Wt / Birth Wt	0.60
Carcass Wt / Yearling Wt	0.91
Cutability / Yearling Wt	0.87
Marbling / Yearling Wt	-0.33
Marbling / Feed Intake	0.90
Marbling / Cutability	0.35
Ribeye Area / Weaning Wt	0.49
Ribeye Area / Yearling Wt	0.51
Ribeye Area / Slaughter Weight	0.43
Ribeye Area / Cutability	0.45
Ribeye Area / Marbling	-0.21
Tenderness / Marbling	?????
Tenderness / Cutability	?????

^aEstimates shown are taken from Koots et al. (1994b) and represent the weighted mean of available literature estimates.

^bTraits represented are expressed on an age constant basis where appropriate and represent direct genetic effects.

More specific to this discussion is the genetic correlation between ribeye area and marbling (-.21) and that between marbling and yearling weight (-.33). Although both pairs of the above traits would be desirable, the unfavourable genetic correlation will slow response to selection for both traits in each pair.

There are few studies reported that estimate genetic correlations between carcass traits and reproduction traits.

However, MacNeil (Table 3) found low fat trim in steers was associated with higher age at puberty, lower conception rate, 90

TABLE 3. GENETIC CORRELATIONS BETWEEN CARCASS TRAITS AND REPRODUCTIVE TRAITS.

Female Trait	Postweaning Gain	Carcass	Fat Trim Wt.	Retail Product Wt.
Age at Puberty	.16	.17	-.29	.30
Wt at Puberty	.07	.07	-.31	.08
Conceptions Service	1.33	.61	.21	.28
Gestation Length	-.10	.03	-.07	.13
Calving Difficulty	-.60	-.31	-.31	-.02
Birth Weight	.34	.37	-.07	.30
Mature Weight	.07	.21	-.09	.25

MACNEIL ET AL., (1984)

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Die volgende bulle word 25 Oktober 2017 op die Nasionale veiling aangebied

12-0046 BSC se pa is die beroemde JDH Woodson de Manso. In die top 1% vir groei en oogspier. Sy ma eerste kalf op 24 maande met TKP van 365 met 9 kalwers en is weer groot dragtig – baie goeie uier en spene.



12-0029 BSC is 'n kleinseun van Makalani Mr. Tralon. Met groei en oogspier in die top 20% van die ras. Sy ma het TKP van 392 met 7 kalwers. Sy is in top 20% vir melk – goeie uier en spene.



Die volgende bul word 27 Oktober 2017 op die Gobabis bulveiling aangebied

13-0212 JAJ kan op verse gebruik word. Sy ma het TKP van 359 dae met 7 kalwers. Sy is in die top 5% vir melk – baie goeie uier en spene.



**Al 3 bulle het
uitstekende temperament**

Selecting for carcass marbling ...

88 higher calving difficulty and larger mature weight in half-sib females.

The promise of DNA technology

Identification of quantitative trait loci (QTL) for some traits and the development of commercial DNA tests for certain carcass traits (marbling, tenderness) provide additional tools for including carcass traits in selection programmes. Although these DNA tests only explain a portion of the variation in marbling and may be cost prohibitive for some commercial producers, they offer breeders the option to screen young bulls for further progeny testing. Such "markers" for major gene effects can be coupled with traditional selection using EPDs to result in the long-awaited reality of "marker assisted selection".

Conquering antagonistic traits with heterosis and complementarity

Beef breeds have been well characterised by research at the US Meat Animal Research Centre and other stations for a wide spectrum of reproduction, production and carcass traits. Although there is important variation within breeds as evidenced by the range in genetic merit found in beef breed sire evaluation programmes, there are clearly major differences between breed means for almost every trait measured.

Selection to improve jointly antagonistic carcass traits like marbling and muscling within a single breed is difficult. However, there are "curve-bender" bulls that defy some of the antagonisms between traits, but they are rare and short of artificial insemination don't exist in sufficient numbers to have immediate impact on the commercial segment of the beef industry.

Complementarity or the matching of strengths of one breed to weaknesses of another breed may be the best way to conquer antagonisms between traits, especially carcass traits. This concept is best demonstrated by the improvement in net merit of British x Continental crossbred steers that benefit from the marbling input of a British breed and the lean muscle growth of a Continental breed.

Heterosis through crossbreeding reduces the risk of adapting beef cows to the many varied resource environments in which beef cattle are expected to produce. Heterosis is also the best counter-balance to any potential negative effects that carcass traits might have on reproductive traits.

Environmental impact: The truth about cats and dogs

US cats and dogs cause 25 to 30% of the environmental impact of meat consumption in this country. The nation's 163 million cats and dogs eat as much food as all the people in France, a researcher finds. According to geography professor Gregory Okin of the University of California meat-eating by dogs and cats creates the equivalent of about 64 million tonnes of carbon dioxide a year which has about the same climate impact as 13.6 million cars. His study, published in the beginning of August in the journal *PLOS One*, was sparked by wondering how much feeding pets contributes to issues like climate change. "If Americans' 163 million Fidos and Felixes comprised a separate country, their fluffy nation would rank fifth in global meat consumption, behind only Russia, Brazil, the United States and China. America's pets produce about 5.1 million tonnes of feces in a year, as much as 90 million Americans. If all that were thrown in the trash, it would rival the total trash production of Massachusetts from humans," Okin said.

He does not see a simple solution. Pets provide friendship and other social, health and emotional benefits that cannot be discounted, Okin, not a vegetarian, said. People concerned about meat intake could consider vegetarian pets, like birds or hamsters, he suggested. The pet food industry, he noted, is also beginning to take steps toward sustainability, and could work to reduce overfeeding and consider alternative sources of protein. But it is a complicated issue, and where pets are concerned, Okin knows it is important to have a sense of humor about it. "Maybe we could all have little ponies," he said, half-jokingly. "We would all get more exercise taking them for walks, and they would also mow the lawn." (www.sciencedaily.com)

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 LAREE SHIRAN
 Dams: SAVANNAH SUGA MUSIC 52
 SAVANNAH RUMBLE
 SAVANNAH SUGA SOUND 52
 SAVANNAH AUDIO

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63%	57%	56%	56%	38%	34%	45%	44%	37%	44%
Breed Ave									
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Savannah Alex 14-0505 U Born 06/07/2014

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71%	70%	70%	71%	63%	48%	67%	61%	49%	59%	59%	49%	55%
Breed Ave												
+1.5	+15	+24	+30	+30	+3	+0.7	+17	+0.3	+0.1	+0.1	+0.0	+1.6

Learn from Australia's CashCow project

The results of a four-year study into factors affecting the performance of commercial beef breeding herds in northern Australia are set to help producers boost their production and bottom line.

Until recently very little large-scale research had been undertaken on productive performance of commercial beef breeding herds in northern Australia, or the major factors affecting breeding performance in these herds. There were no practically achievable performance or production benchmarks for producers in various regions and environments to aim for to ensure commercial viability. Similarly producers were unsure about which factors contributed the most to herd reproductive outcomes and therefore where to focus management changes and investment to gain the biggest bang for their buck.

With this in mind, the University of Queensland, in collaboration with agencies including Queensland's agricultural department, attracted financial support from Meat and Livestock Australia to initiate this beef fertility project, CashCow. About 78 000 cows on 72 commercial beef cattle properties distributed across the major beef breeding regions of northern Australia were enrolled in the CashCow project. The project made use of electronic ear tags and a crush side data capture system to measure and record data. Blood tests and vaginal swabs were also carried out in the 142 participating mobs to determine their disease status before the project began. Workshops and training sessions were conducted on the participating properties both at the beginning

and during the project, to ensure uniformity of data collection.

Beef production

A key message from the CashCow project in relation to business performance was answering the question: Is your herd producing at an achievable level for the environment?

To analyse their breeder herd, producers were encouraged to first measure production (kilograms produced) and then assess performance (usually percentages of pregnancy, calf loss and mortality) to explain production results.

Overall live weight production was measured for the participating breeding mobs using weaner production (live weight of weaner produced per cow) and annual net live weight production per (retained) cow (kg of weaner produced plus any live weight change from the cow). The ratio of annual net live weight production to average live weight of cattle in the paddock over a cattle year (live weight production ratio) was also used as an efficiency indicator. An achievable level for weaner production (kg of weaner produced per cow) can be established by measuring the annual growth of a yearling steer/heifer for the paddocks the breeders are grazing. This yearling growth (which does vary with seasons) becomes a unique on-farm reference for achievable weaner production.

There was a marked variation in weaner production from participating mobs according to which country type mobs ran on. Achievable weaner production averaged between 112 kg and 240 kg per year in the four study regions.

Main measures

To assess reproductive performance of the CashCow mobs, the researchers looked at the impact of environmental, nutritional, management, animal and infectious disease factors on:

- How efficiently cows became pregnant
- The likelihood of pregnant animals rearing a calf, and
- The likelihood of females going missing, either through death, loss of their electronic tag or eluding a muster.

All participating heifers and cows were assessed at the annual branding, weaning and pregnancy-testing musters, with anywhere between 12 and 20 pieces of data being collected and electronically recorded against individual animal identifications.

These data included weight, body condition score, age, udder condition, hip height, pregnancy status, disease status and whether the cow was wet or dry.

Foetal aging was used during the pregnancy test to define both the calving and re-conception months. One of the key overall measures determined at pregnancy testing was the percentage of cows pregnant again within four months of calving, termed P4M. This equated to the percentage of cows likely to wean a calf in consecutive years.

Other key measures were the annual pregnancy rate of the mob, the percentage of foetal/calf losses between pregnancy testing and weaning and the annual percentage of pregnant cows missing, which was an indication of relative cow mortality rates.

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Dr Mike Fair (Free state University): Genetic parameters of type and production for Namibian Brahman

Peter Zensi (commercial farmer): Herd management under extensive farming practices

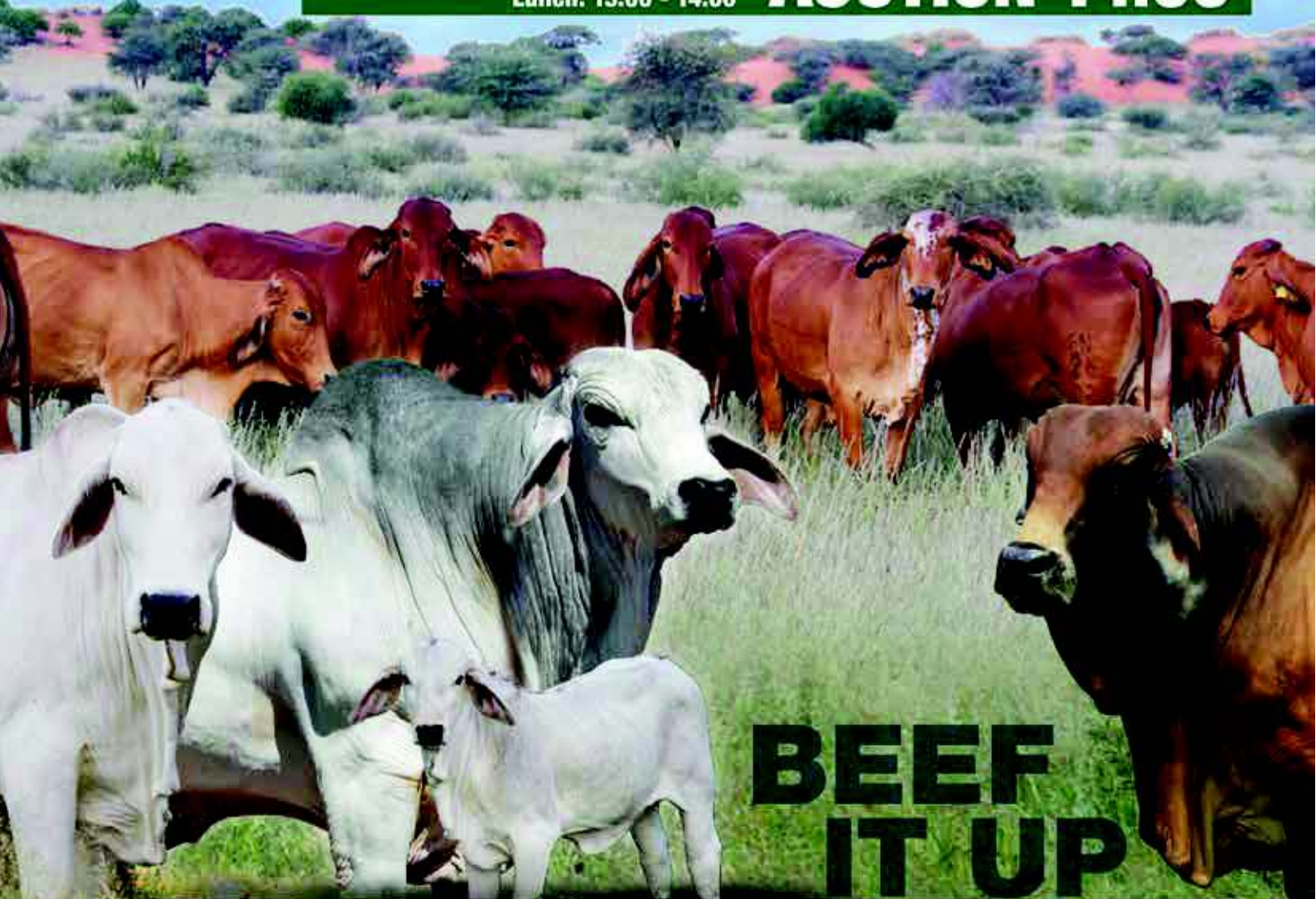
Dr Jasper Coetzee (veterinarian): Optimal rumen management of beef cattle

Dr Martin Ferreira (veterinarian): Factors that influence semen quality of bulls

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Lunch: 13:00 - 14:00

AUCTION 14:00



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Learn from Australia's CashCow project

92 What's achievable

The impact of 83 management, environmental, nutritional and infectious disease factors were assessed against the recorded data to determine which had a significant effect on mob reproductive performance. These results enabled tables to be drawn up to show what was commercially achievable in terms of these key reproductive measures under various environmental, management and nutritional conditions.

Country type was probably the main factor causing variation in the reproductive performance of the participating mobs.

The project results showed that the 75th percentile (top 25%) was a good indicator of what a commercially achievable level of performance is.

For measures such as foetal/calf losses and missing cows, the 25th percentile (lowest 25%) was deemed a commercially achievable performance level.

Other factors

Some of the other factors affecting the P4M percentage in each mob included the age of the cow and calving time. First-lactation females across the mobs were on average likely to have a P4M 13-16% less than the mature and aged cows in the herd. Young cows need preferential management to replace the energy they use in their own growth if high conception rates during lactation are to be achieved, something mature cows don't need. P4M was 20-50% lower in cows calving July to September compared

to December/March across all country types. The average crude protein (CP):drymatter digestibility (DMD) ratio available to cows during the wet season (November to April) also influenced P4M. Cow condition is another factor affecting P4M and was increased by 8% if cows gained weight between the preg-testing and weaning musters rather than lost weight.

Lesser impact

Some factors found to have a lesser impact on reproductive performance, or more of an impact on one region or one class of cows than another, included body condition score at time of pregnancy testing. The phosphorus status of cows during the wet season also had an effect on reproduction, but more so for the first lactation females and to a lesser extent the aged cows (more than nine years old), rather than the mature ones (four to nine years old). Cow breed and size (measured hip height) further influenced reproductive performance. P4M was 13-15% less in cows that had 50% or more Bos indicus breeding, compared to those with less than 50% Bos indicus. A 5% increase in P4M also occurred on average in shorter cows than taller cows.

Calf losses

Foetal and calf loss was found to range up to very high levels in all regions, with nutritional and environmental factors being of most significance, though disease did have irregular large impacts. The research points to low milk production and reduced suckling ability of calves as major rea-

sons for new-born calf mortality. Factors affecting the loss of calves between the preg-testing and weaning musters again included country type and cow age, but also things like the productive history of the cows, whether there was adequate protein available in pastures during the dry season (May to October) before calving, wet season phosphorus status of cows and their condition score at preg-test. Mustering within two months of calving was also found to increase calf losses, especially in heifers. If heat stress was experienced during calving, this could lead to 4-7% increases in calf losses, making mothering ability and distance to water and paddock shade critical factors. However there was no real impact in the Northern Forest region where it was generally always hot. Calf losses were greatest where wild dogs were a recognised problem. The recent spread of pestivirus in a herd also resulted in a decrease in P4M by 23% and an increase in calf losses of 8%. A high prevalence of vibrio infection also increased calf losses by 7%. Only low levels of leptospirosis were detected, with a negligible influence on herd reproductive performance.

Using the results

The CashCow project provides a valuable resource to help show what can be measured, what should be measured and what can be achieved for particular regions. If producers have a good understanding of how their beef breeding business is performing, the cost-benefit of applying changes can be accurately gauged and efficiently implemented. For more information visit www.futurebeef.com.au. (www.farmingahead.com.au)



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