



# Southern African BREEDPLAN news

Issue December 2002

## Welkom aan Namibië se 18 Rasgenootskappe



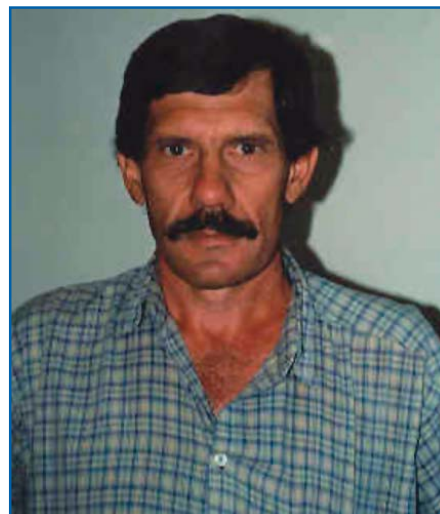
"Ons speel nou op die internasionale speelveld". Dit is hoe die voorsitter, mnr.

Ryno van der Merwe, die aansluiting van die Namibiese Stoettelersvereniging (NSV) aan BREEDPLAN Internasionaal beskryf het.

By 'n spesiale vergadering van die NSV op Windhoek se Landbouskou het 11 vleisbeesgenootskappe, vyf kleinvee en twee perde genootskappe eenparig besluit dat hulle by BREEDPLAN Internasionaal gaan aansluit. Die stelsel gee Namibië volle autonomiteit, want alle registrasie en prestasie gegewens word vanaf die kantoor van die NSV verwerk.

Genetiese koppelings tussen Namibië en ander lande word daagliks sterker, en dit sal veroorsaak dat Namibiese rasse in internasionale analyses ingesluit word. Alle diere se stamboom- en prestasie gegewens (met 'n foto indien beskikbaar) word ook op die web geplaas. BREEDPLAN se web kry bykans 600 000 besoeke per maand soos internasionale kopers en telers diere op die BREEDPLAN sisteem opsoek.

Mnr. van der Merwe sê die besluit is nie ligtelik geneem nie. 'n Paar prestasie en evaluasie stelsels is ge-evalueer, en ons het een gekies wat die beste aan ons genootskappe se behoeftes sal voldoen. Wat veral beïndruk, is dat BREEDPLAN vir ekstensiewe omstandighede soos in Namibië, ontwikkel is.



Mnr. Ryno van der Merwe, voorsitter van die NSV, sê telers is baie gelukkig met hulle besluit om by BREEDPLAN aan te sluit

## Genetiese toets vir sagte vleis 'n wêreld eerste

Dit is die begin van die einde van taai vleis!

Groot opwinding heers in die internasionale vleisbedryf oor die aankondiging dat 'n geen wat 'n baie groot invloed op



vleissagtheid het, vir die eerste keer wêreldwyd kommersieel beskikbaar gestel gaan word.

Die toets, wat as GeneSTAR® Tenderness bekend staan, sal vroeg in 2003 in Suider-

Afrika kommersieel beskikbaar gestel word. Telers sal vir die eerste keer bulle kan identifiseer wat 'n geen vir sagte vleis dra.

Die effek van die geen is enorm. GeneSTAR® Tenderness is onlangs op 5000 beeste van 7 verskillende rastipes in Australië getoets, en 'n 8-10% verbetering in vleissagtheid is gekry tussen diere wat twee afskrifte van die geen dra, in vergelyking met die wat geen afskrif het nie. Diere met net een afskrif van die geen is intermediêr tot die effek.

Omdat dit DNS is, weet ons dat die effek wêreldwyd min of meer dieselfde sal wees. Telers in Suider-Afrika kan dus onmiddellik vir die geen begin toets.

Telers is ook daarvan bewus dat dit deur middel van nageslagstoetsing bitter moeilik en duur was om genetiese verskille in vleissagtheid van bulle te kon bepaal. 'n

Aantal nageslag van bulle moes letterlik geslag word om te kyk of daar verskille was. Hierdie toets is 'n baie goedkoop alternatief.

GeneSTAR® Tenderness is die tweede DNS toets wat hierdie jaar deur GeneSTAR® bekend gestel is. Die ander toets is die GeneSTAR® Marbling toets. Marmering beïnvloed smaaklikheid en geur van vleis.

Die toets is maklik om te doen. Telers kan of stertkwashare of semen na die GeneSTAR laboratorium stuur. Toetshouers kan vanaf die kantoor of genootskappe bestel word. Die toetse kos tussen R300 en R400 (pryse word deur die hoeveelheid monsters getoets bepaal). Telers word aangeraai om ten minste hul kuddebulle te toets.

Dit is 'n groot eer en voorreg om die 2002 Suider-Afrika weergawe van die BREEDPLAN Nuus aan ons telers bekend te stel. BREEDPLAN het meer as 16 000 stoettelers wêreldwyd, wat een keer per jaar die internasionale weergawe van die BREEDPLAN Nuus ontvang.

'n Suider-Afrika weergawe sal nuus vanaf ons eie telers en wetenskaplikes insluit, terwyl die nuutste tegnologie meer volledig bespreek kan word.

Dit is ook aangenaam om te kan rapporteer dat die oorgangsproses van die Brahmane, Simmentaler en Simbra na BREEDPLAN die afgelope jaar vlot verloop het en dat alle prestasie-, registrasie- en evaluasie- funksies nou direk uit die genootskappe se kantore behartig word. Die oorsakeling het volgens kontrak geskied en is binne sewe maande afgehandel. Ons wil graag ons telers bedank vir hulle ondersteuning, en die terugvoering wat ons kry is geweldig positief. Alle registrasie- en prestasie-gegevens vir elke dier is ook nou op die Internet beskikbaar. Telpers word aangemoedig om hulself te vergewis van hul eie data op die internet.

BREEDPLAN tegnisi het die afgelope jaar baie tyd aan dataredigering bestee. Verskeie diagnostiese programme is gebruik om alle abnormale afwykings te identifiseer. Foutiewe data kan nie in 'n analise gebruik word nie want die hele ras se teelwaardes word negatief met sulke data beïnvloed. Dit is vir ons dus bemoedigend om te hoor dat telers baie meer vertroue in die nuwe teelwaardes het.

Die modelle wat gebruik word om teelwaardes uit te werk is ook opgegradeer en verskeie nuwe funksies het bygekom. Basterkrag word byvoorbeeld vir die eerste keer in die Simbra analise in ag geneem. Verskillende kombinasies van kruisings word saam groepeer en die stambome van die Simmentaler en Brahmane word ook in die analise gebruik. Die verandering in modelle het veral die melk teelwaardes beïnvloed.

Prestasie data van kommersiële diere sowel as stoet diere kan ook vir die eerste keer in die analises gebruik word. Kommersiële prestasiedata sal die akkuraatheid van veral die stoetdiere geweldig verhoog indien dit opgeneem word.

We would also like to welcome the 18 Breed Societies from Namibia whom have decided to join BREEDPLAN. It won't be long before you appreciate the quality of science behind the BREEDPLAN system. Through good support structures, good funding and a ferocious appetite for science, we will ensure that you remain on the cutting edge globally.

A significant development this year is the use of Genetic Markers in animal improvement programs. This technology is especially applicable to those traits that are difficult or expensive to measure (meat quality for example). In Southern Africa we have already tested over 300 animals for the marbling gene. The tenderness gene will be launched early next year. There is absolutely no doubt that this is the science of the future and the next step is to incorporate Genetic Marker Information into EBV's. Our scientists are already hard at work including this new technology into BREEDPLAN.

The BREEDPLAN system covers the whole spectrum of economically important traits: These include Reproduction, Growth, Carcass and Efficiency traits. For traits to be included into the evaluation, they have to be economically important and contribute to the selection objective. BREEDPLAN scientists use numerous economic programs to ensure that this is indeed the case. On page five we discuss the importance of traits such as gain and feed efficiency, and their economic importance in the breeding program.

Understanding contemporary and management grouping is very important. Very often, producers inadvertently apply a management practice that negatively affects the accuracy of the evaluation. Some BREEDPLAN producers for



Michael Bradfield - BREEDPLAN

example still have poor linkages in their herd despite the extensive use of AI programs. In the technical section we revisit the importance of management groups in genetic evaluation programs.

Laastens wil ons graag die Landbouweekblad en telersgenootskappe bedank vir hulle versienheid om die Landbouweekblad-BREEDPLAN BLUP-klas te begin. Ons het geen twyfel dat dit binnekort die vernaamste prestasietoets kompetisie in Suider-Afrika gaan word nie. Die Landbouweekblad-BREEDPLAN BLUP-klas weners sal op die Vryburg, Royal, Pretoria en Windhoek skoue bekend gemaak word. Algehele weners (bul, koei en kudde van die jaar) sal op 'n spesiale geleentheid bekend gemaak word.

Telpers is welkom om ons te kontak indien daar enige navrae of kommentaar is. Ons verbintenis met ons telers is dat ons sal pogg om in alle opsigte resultate van uitstaande gehalte te lewer. In BREEDPLAN Internasionaal het ons sonder twyfel die wêreld se beste vleisbees-prestasietoets program. Ons verbintenis met ons telers is om dieselfde standaard van diens in Suider-Afrika te lewer as wat ons internasionale kliënte tans ervaar. Getuigskrifte in hierdie weergawe van die nuus, sal van die diens getuig.

Aan alle telers, 'n baie geseënde kersfees en 'n voorspoedige nuwe jaar.

## Landbouweekblad-BREEDPLAN BLUP class announced



Show performance is to be combined with BLUP EBV's

The Landbouweekblad, South Africa's premier agricultural magazine, BREEDPLAN and breed societies have combined forces to host the Landbouweekblad-BREEDPLAN BLUP show bull award to be presented at the Vryburg, Royal, Pretoria and Windhoek shows. A final award for the BLUP show bull, "cow group" and "herd" of the year will be presented at a special occasion to be held at the end of each year.

Landbouweekblad and BREEDPLAN wants to bring conventional judging and performance testing based on breeding values closer to one another through the selection of the best bulls, cows and herds in the Southern African region, using modern selection methods.

All breed societies will be invited to participate in this very special event. Awards will be presented within a breed.

# BREEDPLAN well established in SA

I am delighted to see the rapid progress of BREEDPLAN technology in Southern Africa. With Brahman, Simmentaler and Simbra joining in the first year, this represents 36% of the membership of all beef breed societies in South Africa. A good start! I wish to extend a warm welcome to all the breeders involved. You are joining a dynamic program of beef recording and genetic evaluation that is the system of choice in most of the major beef breeding countries around the world. Combined databases of over thirty (30) million cattle confirm this claim.

The Namibian Stud Breeders Association has looked carefully at its alternatives and has chosen to introduce BREEDPLAN International as its national recording system. This is a bold decision and I am confident that our company will meet your expectations. Our software analyst for Southern Africa, Marcus O'Sullivan, is looking forward to his third visit to your region.

It has been pleasing to see the rapid uptake of many aspects of the BREEDPLAN technology package in Southern Africa so quickly. For example, the first (across herd) GROUP BREEDPLAN genetic evaluations have been run for Simmentaler, Simbra and Brahman and results posted to our "Internet Solutions" system which permits enquiry from anywhere in the world. Already the internet enquiry level on data for these three breeds has reached over 7000 per month. This is just a start. Across all breeds serviced with "Internet Solutions" the enquiry level is a massive 600,000 per month. It has grown to this level in just two years - the service was first introduced in the year 2000.

One of the big advantages of BREEDPLAN to Southern African clients is the extensive adoption of this system in many overseas countries. This means that genetic linkages can be readily established for your breed in other countries to enhance your genetic evaluations.

A high priority for BREEDPLAN is the quality of the genetic evaluations. The ongoing development and support comes from a 20-person team of scientists in the Animal Genetics and Breeding Unit (AGBU). Great care is also taken by the ABRI team, to identify data anomalies and resolve those which would adversely affect the quality of results. These are key factors driving the international success of BREEDPLAN.

We are soon to introduce the HerdMASTER on-farm herd management system to Southern Africa. This system is built on the latest Microsoft Windows tools and has excellent facilities for internet transmission of data direct from the program itself together with electronic reading of tags and weights directly into the HerdMASTER database.

HerdMASTER was first developed by our Saltbush team for the American market where it has launched in October, 2001. For this launch, the software was specific to American recording conventions which has made it very popular in that country. In April, 2002 HerdMASTER was successfully launched in Australia using local recording conventions. In 2003, we plan to launch the South African implementation of HerdMASTER.



Arthur Rickards, Managing Director ABRI.

Looking into the future, I am pleased to advise that I have recently taken up one of the founding Director's positions in an exciting new venture called the International Livestock Resources and Information Centre (ILRIC). This is a research company that will combine the expertise of nine existing livestock research groups to develop advanced internet applications for the world's livestock industries. Our initial budget is \$9M (R50M) and this will grow over time as more projects and partners come on line. We look forward to giving our BREEDPLAN clients in Southern Africa access to the benefits of ILRIC developments.

There are many similarities between our countries and so it is only natural to expect strong bonding to develop in commerce, cultural activities and sport. And on that note let me conclude by wishing your teams all the best in the forthcoming World Cups in both cricket and rugby. Of course, the end result will be of considerable interest - but playing the game well is of greatest importance.

## features...

BREEDPLAN eienskappe: ekonomies gebaseer en ver gevorderd .....	bl 5
Prof. Gert Erasmus gee vir ons sy opinie oor vleisbeesteling in Suider-Afrika .....	bl 10
Tegniese brokkies .....	bl 12
BREEDPLAN databasis is op die internet beskikbaar .....	bl 15
DNA toetse: Unistel laboratorium vorm vennootskap.....	bl 16
Onstellers se kommentaar .....	bl 16,17

# BREEDPLAN international testimonials



Doug Fee, CEO of Canadian Angus.  
"Since moving to BREEDPLAN we have moved from 4th to first position in Canada".

"Up to the mid 1990's our business opportunities were being stifled by the limitations of the system offered to us by our previous service provider. The diverse functionality and high capacity of ABRI's software, first installed in 1996, has allowed us to exploit fully the popularity of the Angus breed. Our registrations have more than doubled from around 20,000 in 1995 to over 45,000 in the year just passed - and with this we have moved from 4th spot in the Canadian industry to the industry-leading position."

**Doug Fee,**  
Chief Executive Officer,  
Canadian Angus Association

"In 1995, the American Hereford Association and the American Polled Hereford Association merged organizations to form one unified organization under the American Hereford Association banner. The new association embarked on the enormous task of amalgamating two databases with over 20 million animal records. There was tremendous duplication and confounding in the database that needed conversion. Two firms attempted the task with only partial success. In addition, the new organization went through two programming providers in an effort to become current with new technology. Over a four-year period and after spending hundreds of thousands of dollars, the American Hereford Association developed a relationship with ABRI. This decision proved to be the best business decision the AHA could have made.

The technical expertise of ABRI is unmatched in the pedigree registry business. ABRI personnel had the American Hereford Association registry system running within ten months of the first discussions with ABRI. The project was on schedule and within budget. ABRI technicians identified the inaccuracies in the AHA's very large database and did a magnificent job

cleaning up various anomalies in the data. In all aspects, ABRI delivered service above our expectations.

It is with great enthusiasm that I recommend and endorse the Agricultural Business Research Institute led by Mr. Arthur Rickards. Arthur's team of talented technicians has proven to deliver results under the most difficult of circumstances and their day-to-day service and follow up is excellent."

**Craig Huffhines,**  
Executive Vice President,  
American Hereford Association.

"The advanced technology and power of BREEDPLAN makes it the best available anywhere in the world and the support group at Armidale is one of the most knowledgeable. I have personally looked at similar programs in several other countries as well as everything in the U.S. and BREEDPLAN is the choice!"

**Dr Roger E. Hunsley,**  
Executive Secretary,  
American Shorthorn Association.



# Ekonomies gebaseer en ver gevordered



**Om prestasietoetsing te doen moet vir die teler maklik wees en dit moet natuurlik ekonomies sinvol wees.**

Al klink die stelling logies, is dit een van die groot redes waarom BREEDPLAN vandag meer as 16 000 telers in die vernaamste vleisbeeslande bedien.

BREEDPLAN baseer sy prestasietoetsing op vier hoof komponente (Tabel 1) nl., reproduksie, groei, karkas en doeltreffendheid. Voordat BREEDPLAN enigsins 'n nuwe eienskap in die analise toelaat, word daar bepaal of die eienskap ekonomies belangrik is en of dit 'n betekenisvolle bydra tot die teeldeelwit van die kudde of ras sal maak. Verskeie ekonomiese pakkette word gebruik om te toets of dit aan bogenoemde kriteria voldoen.

Hierdie artikel bespreek van die eienskappe wat met BREEDPLAN gemeet kan word.

**Tabel 1** BREEDPLAN se groei- en doeltreffendheid-, reproduksie- en karkaseienskappe.

Groei en doeltreffendheid	Reproduksie	Karkas
Geboortegewig	Skrotumomtrek	Karkasgewig
200 dae melk	Dae-tot-kalwing	Oogspieroppervlakte
200, 400 en 600 dae gewig	Dragtigheidslengte	Vetdikte
Volwassekoeigewig	Gemak van kalwing	Vleisopbrengs %
Netto-voeriname (NVI)	-	-

## Reproduksie-eienskappe

Terwyl dit van ras tot ras en omgewing tot omgewing verskil, het BREEDPLAN se wetenskaplikes uitgewerk **dat reproduksie in ekonomiese terme, ongeveer twee keer belangriker as groei- en karkaseienskappe is.**

BREEDPLAN se belangrikste eienskap is sonder twyfel die eienskap "dae-tot-kalwing" (Tabel 1). Dit is die datum waarop bulle vir die eerste keer in 'n dekseisoen by elke deksgroep gesit word. Dit is baie maklik om te meet, maar om sinvolle teelwaardes te kry moet alle koeie wat versuim om te kalf, aangeteken word.

Die eienskap "dae-tot-kalwing" identifiseer vroulike diere wat:

- Vroeg puberteit bereik
- Vroeg in die teelseisoen beset raak

- Vinniger gereed is vir dekking na kalwing
- Geboorte gee na 'n korter dragtigheids tydperk (meet dus dragtigheidslengte)
- Koeie wat elke jaar kalf



Dae-tot-kalwing is 'n baie beter aanduiding van 'n dier se reproduksievermoë as tussen- kalfteriode (TKP), omdat dit die genetiese komponent meet. TKP kan baie sterk deur omgewingsverskille beïnvloed word. Koeie in goeie kondisie (bv. op groenvoer) sal byvoorbeeld 'n baie beter TKP as koeie in 'n swak kondisie hê. Omdat dae-tot-kalwing 'n genetiese meting is, word dit glad nie deur die omgewing beïnvloed nie.

Vir telers wat KI gebruik, het BREEDPLAN 'n dragtigheidslengte teelwaarde. Vanselfsprekend meet dit die dragtigheidslengte van koeie. Beide bulle en koeie kry 'n teelwaarde vir dragtigheidslengte.

Skrotum omvang is 'n belangrike reproduksie eienskap omdat dit die puberteit van verse positief beïnvloed. Bulle met groter skrotums produseer gewoonlik ook meer semen. Skrotum omtrek is hoogs oorerflik en in 'n teelprogram word daar maklik daarvoor geselekteer.

Gemak van kalwing word in twee komponente verdeel, nl., die bul se eie bydrae, asook die gemak van kalwing van sy verse. Klein kalwers gee gewoonlik makliker kalwing. Die bul kry dus 'n goeie teelwaarde vir kalwinggemak. Indien die kalf 'n vers is, kan sy moontlik self moeilik kalf waneer sy groot is, omdat sy byvoorbeeld 'n kleiner geboortekanaal en pelvis oppervlakte het. Kalwinggemak van die bul se dogters word dus as 'n aparte eienskap in BREEDPLAN gedefinieer. Ons raai telers dus sterk aan om kalwinggemak te punt, sodat sinvolle data vir hierdie belangrike eienskap gekry kan word.

## Groei-eienskappe

BREEDPLAN moedig alle telers aan om die geboortegewig van kalwers te neem om die sogenaamde "curve benders" te kan identifiseer. Alhoewel die korrelasie tussen geboortegewig en speengewig hoog is (40% - 60%) sal daar bulle wees wat

## Van bl 5

kalwers met lae geboortegewigte en terselfdertyd met hoë speengewigte produseer.

Geboortegewig-maternaal (die invloed van onder andere die koei se uterus op die fetus grootte) word ook in die modelle gebruik om die geboortegewig teelwaarde uit te werk. Geboortegewig-maternaal word egter nie gepubliseer nie omdat dit nie sinvol in 'n teelprogram gebruik kan word nie.

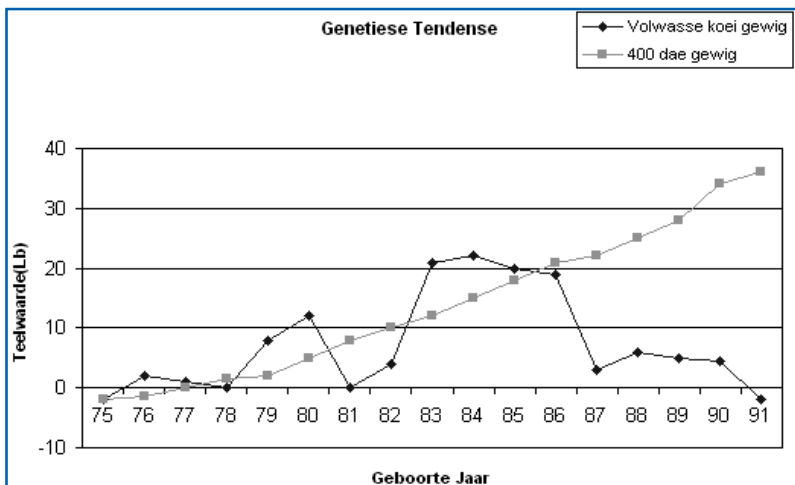
Die 200 dae melkteelwaarde is ook die beste beraming wat tans beskikbaar is van 'n dier se melkproduksievermoë. BREEDPLAN gebruik albei die 200 en 400 dae gewigte om die melkteelwaarde uit te werk.

BREEDPLAN noem sy groei-eienskappe 200, 400 en 600 dae gewig. Alle gewigte word vir die ouderdom van die dier sowel as moeder gekorrigeer. Terwyl seleksie vir hoë 200 en 400 dae ekonomies belangrik is, het dit meegebring dat koeie terselfde tyd groter geword het. 'n Goeie voorbeeld hiervan word in die Noord-Amerika se Angus analise gegee soos in Figuur 1 geïllustreer word. Van 1972 het die Angus sterk op speengewig-teelwaardes geselekteer, maar terselfdertyd het koeie groter geword. (Die korrelasie tussen speen en volwasse koei gewig is redelik hoog). In 1984 het die Angus van koers verander deur koeie te selekteer wat laer volwasse koeigewig het, en die wat nog steeds hoë speengewigte speen. Uit hierdie illustrasie kan ons duidelik sien dat dit belangrik is om volwasse koeigewig by speen te meet.

### Netto-Voerinname (NVI) in plaas van voeromset.

Die eienskap wat BREEDPLAN gebruik om voeromset te meet, word Netto-Voerinname (NVI) genoem. Waarom NVI inname meet en nie gewone voeromset nie?

- Voyeromset is 'n verhouding van voerinname relatief



**Figuur 1** Dit is moontlik om volwasse koeigewig te verminder en terselfdertyd speen- en jaargewig te verhoog

tot groei d.w.s. voerinname/per kilogram gewigstoename((GDT).

- Ons weet dat voeromset redelik hoog oorerflik is maar dat voeromset ook hoog met GDT gekorreleer is (sien Tabel 2).
- Dit is wetenskaplik onmoontlik om vas te stel of seleksie vir voeromset, GDT of voerinname verbeter.
- Die hoë korrelasie tussen voeromset en GDT verhoog ook volwasse koei- gewig. Proff. Herd en Bishop van Australië en Skotland het onlangs weer resultate in die joernaal "Livestock Production Science" gepubliseer wat wys dat seleksie vir voeromset koeie groter en swaarder maak en dus die laatryp tipe dier bevoordeel.
- Indien die koeie groter en swaarder word, wat gebeur met totale kudde doeltreffendheid?

**Tabel 2.**

Oorerflikheid en genetiese korrelasies (bokant diagonaal) vir groei en doeltreffendheids-eienskappe in Angus Bulle en Verse

Eienskap <sup>a</sup>	GDT	Geboorte- Gewig	Voerinname	VO	NVI
GDT	<b>0.28</b>	0.53	0.54	-0.63	-0.04
Geboorte Gewig		<b>0.04</b>	0.65	-0.01	-0.06
Voerinname			<b>0.39</b>	0.31	0.69
Voyeromset (VO)				<b>0.29</b>	0.66
Netto Voerinname (NVI)					<b>0.39</b>

**Aangepas van Arthur et al. (2001a).**

Om by hierdie probleme verby te kom het wetenskaplikes in Australië die afgelope 10 jaar deeglike navorsing oor voeromset gedoen. Hulle het tot die slotsom gekom dat dit nie die moeite werd is om voeromset te meet nie. 'n Alternatief moes gevind word en die alternatief word Netto-voerinnome (NVI) genoem. Terwyl die voervereistes dieselfde is (bulle moet nog steeds individueel vir voerinname gemeet word), is die eienskap heeltemal verskillend.

### Wat maak NVI 'n beter eienskap?

- NVI meet die hoeveelheid voer wat 'n bees eet nadat sy verwagte groeivermoë en onderhoudsbehoefes gekorrigeer is.
- Dit meet dus die werklike voerinname. Nie die voer wat vir groei of onderhoud gebruik word nie.
- Daar is geen korrelasie tussen NVI en GDT of volwasse koeigewig nie. Deur vir NVI te selekteer word meer doeltreffende beeste geselekteer sonder om koeigrootte te beïnvloed
- Groeivermoë word d.m.v. speengewig verbeter (Die korrelasie tussen speengewig en GDT is hoog).
- NVI is hoogs oorerflik.

'n Amerikaanse navorsers, Dr Gordon Carstens van Texas A&M Universiteit het onlangs 'n baie goeie artikel oor NVI gepubliseer. Alhoewel die eienskap in Australië ontwikkel is, bestudeer Amerikaanse navorsers hoe die eienskap in Amerikaanse

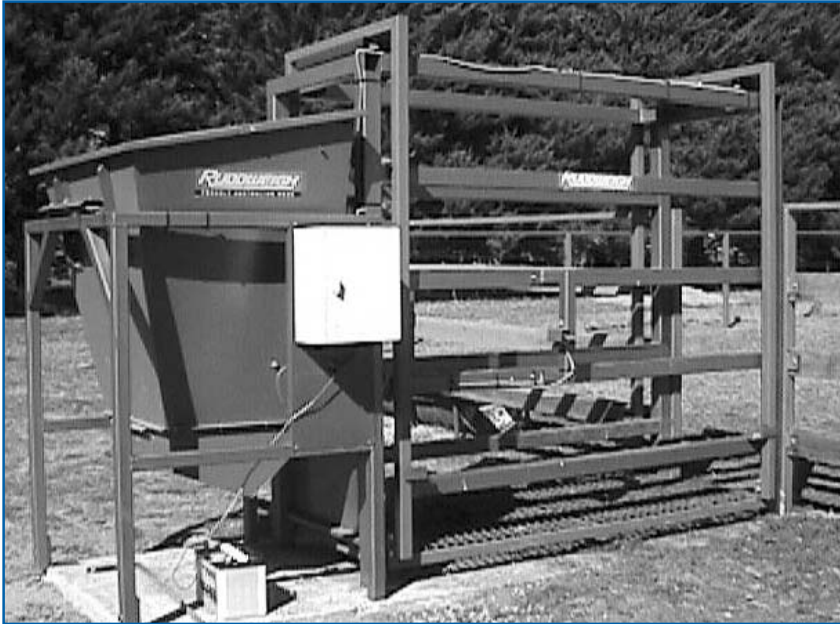
## Van bl 6

rasse toegepas kan word. Dr Carstens se artikel kan vanaf ons webblad aftrek word.

### Vereistes om NVI te meet:

NVI kan of op die plaas (**Figuur 2**) of by 'n sentrale toetsfasiliteit (privaat sowel as staat) bereken word. Indien telers bulle of koeie vir NVI op die plaas wil toets, moet dit volgens BREEDPLAN standarde gedoen word (besonderhede is van die kantoor beskikbaar of kan vanaf ons webblad gekry word).

**Telers wat graag vir Netto Voeriname wil toets kan gerus Mnr Kerneels Derksen kontak. Mnr Derksen het 'n privaat toetsstasie. Telefoon nommer is: 082 415 0515**



**Figuur 2:** Netto Voeriname (NVI) kan of op die plaas met hierdie mobiele voereenheid of by 'n sentrale toetsfasiliteit gemeet word.

Om teelwaardes vir NVI te kry, vereis BREEDPLAN dat bulle binne 'n kontemporêre groep getoets word ('n kontemporêre groep is minimum 4 diere en moet ten minste twee bulle se nageslag verteenwoordig). Die maksimum ouderdomsgrens tussen diere is 60 dae. Bulle (of koeie) wat buite die 60 dae ouderdomsgrens val, word in 'n ander kontemporêre groep ge-evalueer.

### Karkas-eienskappe

BREEDPLAN gee vanaf 1991 teelwaardes vir eienskappe soos karkasgewig, vetdikte, oogspieroppervlakte, persentasie marmering en Verkoopbare-vleisopbrengs (**Figuur 3**). Geakkrediteerde tegnisi doen die skanderings m.b.v. ultrasoniese toerusting. Diere moet tussen 300 en 800 dae oud wees en verkieslik in redelike kondisie wees. Net diere wat 60 dae van mekaar gebore is word saam in die berekenings vergelyk.

'n Groep wat die bedryf verteenwoordig, koördineer Ultrasoniese Skanderings van beeste in Suider-Afrika. Die groep staan as die South African Real Time Ultrasound groep bekend (SARTU). Die eerste akkreditasie van tegnisi sal einde Januarie 2003 plaasvind.



**Figuur 3.** BREEDPLAN gee vanaf 1991 teelwaardes vir eienskappe soos karkasgewig, vetdikte, oogspieroppervlakte, persentasie marmering en Verkoopbare-Vleisopbrengs

### Funksionele-doeltreffendheid

Funksionele-doeltreffendheid is 'n maatstaf wat klem plaas op die vermoë van 'n dier om te reproduseer, te produseer en om in die betrokke omgewing aan te pas. Die eienskappe sal altyd belangrik wees en moet eerste voor geselekteer word. Eienskappe wat deel vorm van funksionele-doeltreffendheid is eienskappe soos hoewe, bouvorm, libido en konformasie. Ten spyte van die feit dat 'n dier goeie produksie syfers het, word 'n dier uitgeskot indien daar funksionele foute is. Funksionele-doeltreffendheids-eienskappe word deur BREEDPLAN wetenskaplik subjektief sowel as objektief gekwantifiseer (Hierdie eienskappe vorm ook deel van prestasiedata). In die BREEDPLAN handleiding (Beskikbaar vanaf die BREEDPLAN kantoor in beide Afrikaans en Engels) word die funksionele-doeltreffendheids-eienskappe uiteengesit en in diepte bespreek.

### Slotopmerking

BREEDPLAN is 'n uiters gevorderde teelstelsel wat meer geld in jou sak sal sit. Die skema is ook so ontwerp dat telers moeitewy hulle eie metings kan neem. Die prestasietoetsskema maak dit vir die teler so maklik as moontlik en terselfdertyd is die eienskappe wat gemeet word op ekonomiese beginsels gebaseer.

### Verwysings

Arthur et al: J Anim Sci, 2001a, 79:2805-2811  
Herd en Bishop, 2000. Livestock Production Science, 63: 111-119

# Commercial performance register

## The Brahman Commercial Performance Register (BCPR)

The Brahman Commercial Register (BCPR) is a facility offered by the Brahman Society of South Africa to enable the recording of commercial Brahman and Brahman influenced crossbred animals on the Society's Brahman SA GROUP BREEDPLAN database.

The BCPR is not designed to be a seedstock register. Consequently, only steers and heifers may be recorded as the progeny of BCPR females. No entire males can be recorded.

Producers of commercial Brahman cattle can use the BCPR, along with Brahman SA GROUP BREEDPLAN, to improve their herd management and marketing. For example, by performance recording, producers can improve their success in identifying superior females, and are able to make more informed mating and culling decisions to improve herd productivity and to target specific market requirements.

Pedigree Certificates will be issued by the Brahman Society for BCPR females. These certificates provide valuable documentation of the genetics of BCPR animals, thereby potentially "value adding" to these animals in the marketplace.

## Who should use the BCPR ?

The BCPR is intended for use by breeders who wish to performance record their commercial cattle. Enrolment of animals on the BCPR provides a pathway for animals to be recorded on Brahman Commercial Performance Register (GROUP BREEDPLAN). This system uses pedigree and performance information to calculate Estimated Breeding Values (EBVs) for the full range of maternal, growth, fertility and carcase traits.

The BCPR is particularly suitable for commercial herds working with Brahman seedstock producers to progeny test bulls for feedlot performance and carcass traits. Performance recorded animals which are enrolled on the BCPR are eligible to be included in Brahman SA GROUP BREEDPLAN, thereby

providing a mechanism for analysis of progeny test data. Breeder's of straightbred commercial Brahman cattle can participate in the BCPR and Brahman GROUP BREEDPLAN immediately. Breeder's of Brahman influenced crossbred animals can also enrol their cattle on the BCPR and submit performance records to Brahman GROUP BREEDPLAN. *However, EBVs cannot currently be provided for crossbred animals which may be compared directly to the Brahman GROUP BREEDPLAN base. Initially all EBV's for crossbred animals will be within herd and should only be used for within herd selection.* Further development of the Brahman SA GROUP BREEDPLAN system is underway to enable the production of comparable EBVs for crossbred animals in the near future.

## How do you enrol animals in BCPR ?

Only Full members of the Brahman Society are eligible to record animals in the BCPR. Commercial members who wish to use the BCPR will have to upgrade their membership status. Current Brahman Appendix A and B females can be downgraded to BCPR status.

However, members should be aware that only female and steer calves can be bred from BCPR females. Any bull calves from BCPR females must be castrated.

Members who wish to enrol new females onto the BCPR can do so by completing an BCPR Base Female Capture Form. Copies of the BCPR Base Female Capture Form are available from the Brahman Society.

The minimum requirements for heifers or cows to be enrolled as Base Females on the BCPR is a unique individual animal identification number, the animal's birth year and its breed composition. If known, actual birth dates and sire idents can also be optionally included to improve the accuracy of genetic evaluation through Brahman SA GROUP BREEDPLAN.

For further details on the Society Regulations for recording in the BCPR see **Brahman Cattle Breeders Society of South Africa Breeding Regulations.**

Following the recording of Base BCPR animals on the Brahman Society database, a "Birth Notification Form" is returned to the breeder. These details include Calf Ident, Sire Ident, birth date, birth weight (optional) and calving ease score (optional).

Following the notification of calf details on the Birth Notification Form breeders are sent further forms for entry of subsequent performance details (200-Day Wt, 400-Day Wt, etc.) for inclusion in the Brahman GROUP BREEDPLAN.

## What does it cost to use the BCPR ?

The fees for using the BCPR facility are outlined in the Brahman Society Regulations. These fees are designed to cover the cost of operating the BCPR facility whilst providing a commercially affordable option for members. The cost of enrolling base (new) females on the BCPR is R2.50 (excludes VAT) per animal. This fee covers the initial entry of females on the BCPR plus the first year's Herd Inventory fee. Following the first year, an annual Herd Inventory fee of R3.50 (excludes VAT) is payable for all females 2 years of age and older recorded on the BCPR. In addition, historic performance data can also be included at a cost of R1.50 per calf (includes VAT). All other costs are according to the Brahman Cattle Breeders Society of SA cost structure. If you require further information on the BCPR, contact the Brahman Society - Phone (051) 448 0603, or Fax (051) 430 4277, or e-mail [bcpr@brahman.co.za](mailto:bcpr@brahman.co.za).

## BCPR Enrolment Checklist:

- Enrol as a Full Member of the Brahman Society of South Africa
- Enrol your herd for Brahman Performance Testing
- List all new females to be recorded on the BCPR on the Base Female Capture Form
- Send the completed Membership Application, Brahman Cattle Breeders Society of South Africa and BCPR Base Female Capture

## Forms to:

Membership Services-  
The Brahman Society of  
South Africa,  
P.O.Box 3360,  
Bloemfontein 9300

# GeneSTAR® tenderness en marbling

GeneSTAR® Tenderness en GeneSTAR® Marbling is DNS toetse vir gene met 'n groot effek in vleisbeeste wat vleis kwaliteit verbeter.

GeneSTAR® Tenderness en GeneSTAR® Marbling toets of die dier 'n geen met 'n groot effek vir sagtheid van vleis en marmering dra. Marmering is die repies vet wat binne in vleis voorkom en die vleis smaaklik en sappig maak.

Die toets is hoogs akkuraat. 'n Dier dra of twee, een of geen afskrifte van die gunstige geen. (Vir gerieflikheidshalwe verwys ons na sulke diere as twee ster, een ster of geen ster diere).



GeneSTAR Tenderness sal vroeg in 2003 in samewerking met die Brahman Genootskap geloods word

'n Enkele toets kos R400. Indien vir beide marmering en vleissagtheid getoets word dan is die prys heelwat minder. Daar is ook 'n prysvermindering vir telers wat meer as een dier toets. GeneSTAR monster-houers kan kosteloos vanaf die kantoor bestel word (Posbus 543, Irene, 0062. Tel 012-6675258)



## Kenmerke van GeneSTAR

- Die toets is hoogs akkuraat.
- Vir sagtheid is daar 'n 8-10% verkil in Warner Bratzler (sagtheids maatstaf) tussen twee ster en geen ster diere.
- Vir marmering is daar 'n 10-13% verskil tussen twee ster en geen ster diere.
- Geen negatiewe assosiasies is met karkas of produksie eienskappe gevind nie.
- Alle rasse dra die gene. Sommige het wel meer van die positiewe gene as ander rasse.
- Seleksie vir die gene sal baie vinnig 'n ras of kudde se vleiskwaliteits eienskappe bevorder.

**Tabel 1:** Die Tabel wys hoe GeneSTAR® resultate geïnterpreteer word:

	<b>= 2-STER -</b>	Dra twee afskrifte van die gunstige vorm van die GeneSTAR geen
	<b>= 1-STER -</b>	Dra een afskrif van die gunstige vorm van die GeneSTAR geen
	<b>= 0-STER -</b>	Dra geen afskrif van die gunstige vorm van die GeneSTAR geen

**Tabel 2:** Die verwagte nageslag as verskillende kombinasies ouers met sekere GeneSTAR® klasse met mekaar gepaar word, is as volg:

Bull	Koei:	Koei:	Koei:
	Alle nageslag:	50% 50%	Alle nageslag:
	50% 50%	25% 50% 25%	50% 50%
	Alle nageslag:	50% 50%	Alle nageslag:

Mnr Lewellyn Angus (Voorsitter van die Simmentaler en Simbra Genootskappe) en Dr. Michael Bradfield, met 2 ster marmering bul, Wisp Will Pert 4.

# Vleisbeesteling in Suid-Afrika

*Professor Gert Erasmus was lank aktief in Merinoteling betrokke. Hy het onlangs, deur van sy studente, ook in vleisbeesteling betrokke geraak. Ons het hom gevra om sy opinie van vleisbeesteling in Suid-Afrika te gee gesien teenoor Merinoteling.*

Daar is 'n selfvoldane kalmte en rustigheid by baie vleisbeesstoettelers in Suid-Afrika te bespeur. Hulle voel hulle is op die regte pad en hulle beskik oor unieke genotipes waarop hulle met reg trots kan wees en waarop die res van die wêreld met reg jaloers is. Vir 'n genetikus wat vir byna 'n leeftyd lank met wat mens 'n totale genetiese rewolusie kan noem, by Merinoskape te doen gehad het, lyk dit tog of ons vleisbeestelers heelwat rede tot onrustigheid het. Hulle het ongetwyfeld uitstekende unieke rasse maar die knoop lê by die feit dat, soos Dobzansky dit stel: "A breed is not a static entity but a process".

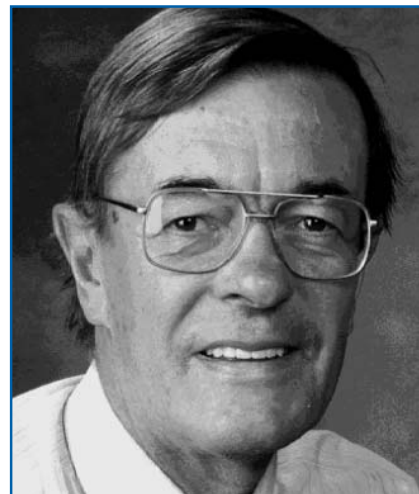
Vleisbeesteling in Suid-Afrika is, om die minste te sê, baie eienaardig. Daar is reeds meer as 30 "erkende" en seker net soveel "nie-erkende" rasse in Suid-Afrika. Die getal styg steeds want kort-kort word nog 'n ras ingevoer of 'n nuwe een plaaslik deur kruisings geskep. Die meeste vleisbeeste in die land behoort natuurlik nie duidelik tot enige spesifieke ras nie. Die SA Vleisbeesteler is duidelik nog ontevrede met wat hy in die land het. Hy is deurentyd op soek na iets nuuts - al is dit net 'n nuwe kombinasie van bestaande rasse. Dit is interessant om daarop te let dat die Merinorasse in Suid-Afrika deur amalgamasie oor die laaste tyd minder geword het.

Waarom nie eerder bestaande rasse geneties verbeter nie, wat na 'n logiese alternatief klink? Feit is dat die meeste bestaande suiwer rasse nie voldoende genetiese variasie besit in al die eienskappe wat geneties verbeter moet word nie. Ons beheptheid met rasstandaarde, rasegtheid en suiwerteling het die meeste van hulle deur genetiese bottelnekke gedruk wat genetiese variasie ernstig geknou het. Ons wou mos altyd eienskappe "vasteel". Ons het miskien mooi koppe vasgeteel maar daarmee saam ongelukkig ook lae vrugbaarheid. Alle aangepaste rasse is (of was) hoogs vrugbaar want natuurlike

seleksie waaraan alle kuddes deurentyd onderworpe is, is slegs vir voortbestaan, derhalwe vir vrugbaarheid en oorlewing. Wat die mens bykomend wil verbeter moet hy self voor selekteer. Dit kan heel doeltreffend in harmonie met natuurlike seleksie gedoen word soos telkens reeds bewys. As hy die uitdrukking van die eienskappe (voorkoms en produksie) waarop hy besluit het verder wil verhoog deur die omgewing te verbeter, soek hy egter moeilikheid. Sy "vordering" is dan nie slegs geneties nie en natuurlike seleksie sal verslap in die meer gunstige omgewing. Die ergste wat uiteindelik kan gebeur is dat, as hy teruggaan na die ou omgewing, voorkoms en produksie glad nie beter is nie, maar vrugbaarheid en oorlewing nou laer is! Dit is waarom genetici bekommerd is oor die feit dat stoettelers se diere dikwels op 'n hoër bestuurs- en voedingspeil as die van hul kommersiële kliënte is. Dit is ook waarom Merinotelers besig is om dramaties weg te beweeg van opgevoerde stoetskape. Stoetdiere moet onder dieselfde toestande aangehou word waaronder ons verwag hul kommersiële nageslag moet produseer en reproduseer.

Net soos met kunsmatige seleksie, hang die sukses van natuurlike seleksie af van die mate van genetiese variasie. Trouens, Fisher se fundamentele stelling sê dit is al wat vordering met natuurlike seleksie bepaal. Met geen genetiese variasie, kan daar geen sprake van vordering met seleksie wees nie. Hierbenewens kan natuurlike seleksie in sulke gevalle baie wreed wees deur heel bevolkings in 'n oogwink uit te wis met enige verandering in die omgewing. Variasie en aanpasbaarheid is eintlik sinoniem, want die omgewing is nooit konstant oor tyd nie. Die doel van seksuele voortplanting is nie slegs voortplanting nie (daar is baie ander vorme) maar om variasie in stand te hou. As daar niks onnatuurliks gedoen word nie sal genetiese variasie in 'n seksuele voortplantende spesie altyd daar wees. Die diereteler moet dit as sy grootste bate beskou en dit beslis nie probeer vernietig nie. Daarsonder kan hy en natuurlike seleksie niks uitrig nie.

Die moderne wetenskaplike benadering tot diereverbetering word dikwels 'n



**Prof. G.J. Erasmus**  
Universiteit van die Vrystaat  
Bloemfontein

"populasie benadering" genoem omdat heel populasies (troppe) die eenheid is waarmee gewerk word. Die doel is dan om deur middel van kunsmatige seleksie die gemiddeld van die populasie te verskuif. Hoe groter die populasie (groter variasie) hoe beter. Dit is wat genetici so opgewonde oor BLUP maak want die populasie waarmee gewerk word kan nou 'n hele ras wees. Dit is werklik eienaardig dat groepteling, voor BLUP, nie werklik by vleisbeestelers wat dit weens klein kuddegroottes meer nodig gehad het, posgevat het nie maar wel by Merinotelers wat dit weens groter kuddes veel minder nodig gehad het.

Dit kan wees dat heelwat vleisbeestelers nog die outydse "suiwertelende benadering" het. Daardeer word gepoog om diere eenders en meer verwant te maak in die hoop dat dit homosigose en daarmee saam ook "erfdwang" sal verhoog. Soos reeds probeer uitwys is dit 'n futiele poging wat slegs tot ondergang kan lei - vra maar ons Merinotelers.

Rasegtheid is glad nie meer 'n faktor in kommersiële hoenders en varke nie. Ons eie Merinos het 'n evaluasiestelsel gebaseer bloot op ekonomiese beginsels, waar enige ander ras ook kan kwalifiseer as hy bestaande Merinos, wat nageslag betref, ekonomies kan troef. Natuurlik kan enige dier wat aan sekere vereistes voldoen nou as "stoet" geregistreer word. Hy hoef nie meer,

# Net Feed Intake EBVs - Feed efficiency

Since its inception, BREEPLAN has progressively increased the range of traits breeders can choose to record. To the initial growth and milk traits, have been added calving ease, fertility and carcass traits, and now Net Feed Intake - a measure of feed efficiency.

Feed efficiency is recognised as one of the most economically important production traits. It particularly affects profitability of feedlots, but is also significant for grazing enterprises. Imagine the benefits of being able to run even 5% more stock in a paddock or to be able to leave the current stock in a paddock 5% longer. The incorporation of feed efficiency tests into BREEPLAN, has had to wait for detailed research on how to measure and interpret the trait. The NSW Agriculture research team at Trangie, with MLA (Meat and Livestock Aust) funding assistance, has been conducting a major experiment since 1993 to gather the required information. Results from the Co-operative Research Centre (Beef CRC) at Armidale, using facilities at its "Tullimba" feedlot, have increased our understanding of the trait and added to the numbers of cattle tested.

## Net feed intake

Following extensive industry consultation, the research teams have recommended that BREEPLAN uses the measure NET FEED INTAKE (NFI). In simple terms, this is the amount of feed an animal eats, under or over, that expected for its weight and gain. This measure has the important benefit of being independent of the animal's weight gain. By contrast for example, the common measure of FCR (Feed Conversion Ratio, calculated as feed intake / weight gain), was rejected because of its close link with gain and mature size. Selection on FCR would rapidly increase mature weight. With NFI, more efficient cattle can be found within any desired cattle size range, and selection will not increase mature size.

## How is NFI measured?

Feed intake tests can either be conducted on farm or, more commonly, at central test stations. Individual feed intakes are currently measured over a set test period of 70 days. (Investigations are continuing into ways of shortening the test. This will depend on the facilities and particularly how often cattle are weighed). While manual feeding systems can be used,

most results have come from automated self feeders and cattle with electronic I/D. A standard, medium energy hay and grain ration (10 MJ ME/kgDM) is offered free choice. Young bulls are most commonly tested, but some steer and heifer data is also used. Test cattle are weighed regularly and their intakes compared with their performance, to determine if they have eaten more (+) or less (-) than expected. Test protocols are set out in an accreditation manual, and only data from accredited systems is accepted by BREEPLAN. This is on the recommendation of Performance Beef Breeders Assoc. the body representing Breed Societies in GROUP BREEPLAN.

## Date used for the first BREEPLAN EBVs - 2001/2002

In recent years some progressive studs have sent young bulls to government and private test stations in NSW, Vic and WA. These results have been combined with steer data from "Tullimba" feedlot and "Trangie" research data using pedigree links. At this stage only two breeds - Angus and Hereford/Poll Hereford have sufficient, well linked data, to have their data analysed by the Animal Genetics and Breeding Unit (AGBU) to produce across herd trial GROUP BREEPLAN EBVs. These are published in these Breeds' Sire summaries and websites. As other breeds accumulate data, they will also be able to publish EBVs

## Reporting and interpreting NFI EBVs

NFI EBVs are reported as Kg of feed eaten per day. Like most EBVs they can be (+) or (-) relative to breed av. The more negative, the less feed eaten and the more efficient. For example, two bulls with these EBVs: -

Bull A + 0.5 kg/day  
(Breed Av is 0)

Bull B - 0.7kg/day

A simple interpretation, is that Bull B having more (-)ve NFI EBVs, would be expected to breed 'more efficient' progeny, than Bull A or a breed average bull. If the two bulls were similar in weight EBVs and joined to average cows, progeny of B would eat 0.6kg less per day than the progeny of A (half the difference of 1.2 between the Sire EBV, as the cows contribute half the genes).



## Research results and correlations with other traits?

The research outlined above is continuing, and will among other things, determine if there are any other traits significantly affected by selecting for NFI. To date the only significant finding is a small link with leanness (cattle with lower NFI EBVs, being slightly leaner). While this needs to be watched, the correlation is quite low eg. less than the birth to final weight link, and can therefore be managed by selecting on both traits. For this 2001/2002 EBV release, AGBU has used a single trait model. As the correlations with other traits become better known, NFI will be incorporated into the full multi trait BREEPLAN model. Several experimental lines of steers, sired by High and Low NFI EBV Sires, have shown predicted changes in NFI in the feedlot. The trait, as measured on young bulls and heifers, is of similar heritability to weight gain. Heifers retained for breeding in research herds have to date shown no effect on fertility or other production traits. As cows, the (-)ve NFI EBVs lines appear to be more feed efficient under grazing. The Beef CRC research group is also looking for gene markers or physiological tests that may be able to assist in testing. One promising test at present being investigated, is the blood hormone IGF1 (Insulin Growth Factor). Preliminary results suggest it is linked to feed efficiency (as it is in pigs). During 2002, 8,000 cattle in BREEPLAN herds will be tested to establish if this will be a usefull. For example, to select which bulls to give the full test, and to increase the accuracy of EBVs on young bulls. In the interim, breeders wanting to progress this trait have to rely solely on the feed intake tests. These are unfortunately quite expensive and time consuming for the studs involved, but detailed economic studies show they will deliver net benefits to the industry.

Brian Sundstrom,  
Technical Specialist, BREEPLAN

# Die belangrikheid van bestuurspraktyke



Net diere wat presies dieselfde behandeling kry word in BREEDPLAN direk met mekaar vergelyk. Let wel, jou bestuurspraktyke beïnvloed jou teelwaardes.

## Bestuursgroepe:

Die volgende word aanbeveel om die maksimumvoordeel uit u BREEDPLAN-ontleding te kry:

- **Maak voorsiening vir 'n kort kalfseisoen.** Dit vermeerder die aantal kalwers in elke groep en verminder die aantal groepe gebaseer op kalfouderdom.
- **Weeg kalwers voordat hulle by bestuursgroepe ingedeel word** (bv. merk, voeding).
- **Weeg alle kalwers van dieselfde geslag op dieselfde dag.**
- **Beplan KI-programme om met natuurlike paring**

saam te val, of sluit 'n vaar uit natuurlike dekking in die KI-program in.

- **Gebruik meer as een KI-vaar in u KI-program.**
- **Dra sorg dat soveel vaars as moontlik in elke bestuursgroep verteenwoordig is.**
- **Moenie alle vaars in een jaar vervang nie.**
- **Elke bestuursgroep moet net enersbehandelde diere insluit.**
- **Hou koeie in groepe so groot as wat prakties is.**
- **Moenie dieselfde koeigroepeerings oor baie jare hou nie** (i.e. *herverdeel u koeie van jaar tot jaar*).



Die gewig van 'n kalf word hoofsaaklik bepaal deur die kalf se eie groepotensiaal en sy moeder se melk

## Vleisbeesteling in Suid-Afrika (van bl.12)

soos wyle Prof Laubscher gesê het, sy status te erf nie - hy kan dit nou verwerf. By melkbeeste is ras stadig besig om slegs 'n stukkie inligting te word om vir bv. heterose te korrigeer. Maar by vleisbeeste is "rassekunde" selfs 'n vak wat op sommige tersiêre inrigtings aangebied word. Ons in Suid-Afrika roem ons dikwels op die wye verskeidenheid voortrefflike plaaslike genotipes. As ons hulle egter as rasegte eilandjies bly vertroetel, gaan hulle seer sekerlik nie lank bly voortbestaan nie. Ons sal bloot rasse moet begin amalgameer soos die

Merinos. Dan gaan ons toelaat dat van die pragtige verskeidenheid waarop so geroem word benut kan word vir vordering. Die ironie van die saak is dat die Merino seker die "ras" met die grootste verskeidenheid is.

Heelwat boere beoefen stoetteling natuurlik bloot as 'n stokperdjie. Daarmee is seker geen fout te vind nie. In die hoogs gefistikeerde hoenderbedryf is daar nog steeds mense wat skouhoenders as stokperdjie teel. Hierdie hoenders sal egter nooit met kommersiële lê-henne en

braaikuikens kan kompeteer wat produksie betref nie. Net so sal laasgenoemdes nooit 'n prys op 'n skou wen nie!

In hierdie onseker wêreld staan een feit uit soos 'n paal bo water en dit is dat die stoetveebedryf ook nie globalisering sal vryspring nie. Omdat diere se teelwaardes met BLUP reeds oor landsgrense vergelyk word, kompeteer telers op 'n potensiele wêreldmark. Die vraag wat kommer kan wek is: is ons vleisbeestelers gereed daarvoor en sien hulle uit daarna?

# So word melk en groei geskei

## 'n Eenvoudige Voorbeeld om die Melk- en Groeikomponente van 'n 200-Dae Gewig te skei.

Die 200-Dae gewig van 'n kalf word hoofsaaklik bepaal deur die kalf se eie groeipotensiaal en sy moeder se melk. Verskille van die gemiddelde 200-Dae gewigte in 'n groep kalwers word verdeel in groei- en melkkomponente. Lg. word verfynd soos wat latere gewigte die groeiberamings verbeter.

Navorsing by BREEDPLAN het getoon dat daar byna geen genetiese korrelasie tussen melk en groei op 200 dae is nie. Dit beteken dat hierdie twee eienskappe onafhanklik van mekaar in die ontleding opereer en beide eienskappe verklaar iets van die genetiese variasie met speen.

Kom ons begin met 'n voorbeeld waar daar geen prestasie-inligting oor die ouers van kalwers beskikbaar is nie. Twee kalwers, A en B het dieselfde aangepaste 200-Dae Gewig van 300 kg vergeleke met die groepgemiddelde van 260 kg. Hierdie 40 kg meerderwaardigheid word aanvanklik onafhanklik verdeel volgens die oorerflikhede van 200-Dae Groei (0.2) en 200-Dae Melk (0.1).

Beraamde Teelwaarde = EBV

### EBV Melk

EBV = 40 x oorerflikheid van 200-dae melk

(Melk) = 40 x .1  
= +4kg

### EBV Groei

EBV = 40 x oorerflikheid van 200-dae groei

(Groei) = 40 x .2  
= +8kg

Die ekstra groei a.g.v. melk weerspieël die koei se genetiese potensiaal vir melk; dus word slegs die helfte van die teelwaarde deur die kalf oorgeërf. Die koei se teelwaarde vir Melk is +4kg en die kalf se teelwaarde vir Melk is +2 kg.

	200-Dae Melk-EBV	200-Dae Groei-EBV
<b>Kalf A</b>	+2	+8
<b>Kalf B</b>	+2	+8

Op 400 dae weeg Kalf A 400 kg en Kalf B weeg 380 kg vergeleke met 'n gemiddelde van 360 kg. Dit dui aan dat Kalf A hoër inherente groeipotensiaal as Kalf B het, omdat dit beter as Kalf A na speen gegroei het. Hierdie ekstra inligting stel BREEDPLAN in staat om die hoeveelheid ekstra gewig wat met speen aan groei en melkproduksie van die moeder toegeken is, te herberaam. 'n Herberaming van die teelwaarde is:

	200-Dae Melk-BTW	200-Dae Groei-BTW	400-Dae BTW
<b>Kalf A</b>	+2.22	+8.9	+12.2
<b>Kalf B</b>	+2.19	+7.3	+6.9

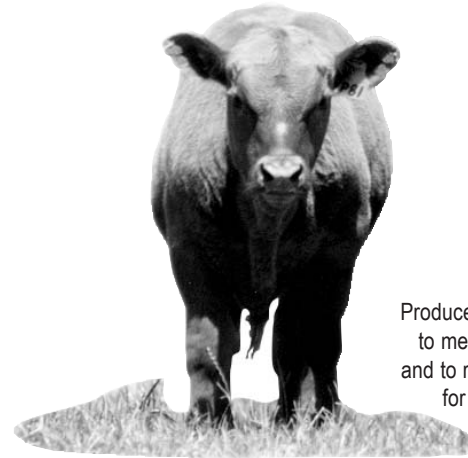
LW: 400-Dae Gewig word ook in BREEDPLAN gebruik om

Melk-teelwaardes te beraam, maar met 'n laer oorerflikheid (5%). Alhoewel beide bulle bo-gemiddelde prestasie op 400 dae het, sal bul A meerderwaardig tot bul B wees.

Sonder 200-Dae gewig sou die 400-Dae teelwaarde +12 en +6 kg gewees het. Die 200-Dae gewigte verander egter die 400-Dae teelwaarde en omgekeerd. Melk-teelwaardes word slegs effens geaffekteer, maar beide verhoog, aangesien ons nou twee positiewe afwykings vir elke bul het (+40 & +40 vir bul A en +40 & +20 vir bul B vir 200- en 400-Dae gewigte onderskeidelik).

As Melk-teelwaardes van vorige nageslag vir die moeders beskikbaar was, sou dit ook gebruik word om die proporsie van 200-Dae gewig a.g.v. groei en gewig te beraam. Die vaar se teelwaarde vir melk sal nie die 200-Dae gewig van die kalf beïnvloed nie, maar sal tot die kalf se melk-teelwaarde bydra.

## Why measure calving ease and birth weights?



Producers are encouraged to measure birth weights and to record calving ease for very good reasons

Calf birth weight is the biggest genetic contributing factor causing calving difficulty in heifers. In order to minimise the risk of calving difficulty it is recommended that you only use bulls over your heifers that have relatively lower birthweights.

Whilst low Birth Wt EBVs are favoured for calving ease they are also generally associated with lower overall growth potential. Consequently, birth weight and growth need to be carefully balanced. Excessive emphasis on low birthweight can lead to smaller (lower growth) heifers in the next generation i.e. the calves from the low birthweight bulls. These smaller heifers may then tend to have more calving problems (i.e. lower maternal calving ease) because their frame size and pelvic opening are not large enough. Hence advantages from selecting low birthweight will be lost by the maternal component of calving ease.

Unless kept in check, birth weight will increase over time as a result of selection for heavier weaning or later weights. A combination of growth EBVs can be used if you want to select

Na bl 14

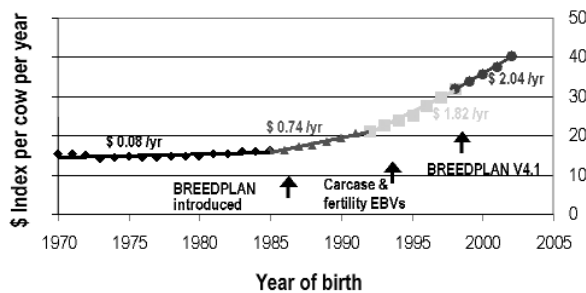
# BreedObject

BreedObject is another tool in the advanced cattle breeder's armory. It is a computerised technique to calculate selection indices that combine costs and returns of production with the genetic merit (EBVs) estimated by BREEDPLAN. The indexes specifically target the breeder's breeding objective.

As genetic evaluations include more traits of economic importance, selecting replacement animals becomes more difficult. By using selection indices that focus on the economics of achieving the breeding objective, the rate of genetic gain increases and also the potential returns from breeding.

The graph shows the average rate of genetic improvement (in AU\$ per year per cow joined) for the Angus breed in Australia. The breeding objective relates to a self replacing purebred herd producing animals for the domestic market. The index has a strong emphasis on calving ease, fertility and moderate cow size while emphasising growth and yield in the progeny.

Notice that the index is based on a range of traits and each trait needs to be adequately recorded in the breed to take advantage of it. Hence if only weight traits are measured, then the index will have a high correlation with the 600 day EBV. As more traits applicable to the index are recorded, the index will better reflect these other important aspects relating to your breeding objective.



Australian Angus domestic supermarket index trend.

## Extra Comments on Recording

While performance recording has occurred in many herds for a number of years, most of the recording has been weights. This means that many herds are just starting to record new traits like fertility, ultrasound scanning, etc.

As herds move to record new traits, it is important that they take the time to do it correctly from the start as this information will continue to contribute to the genetic evaluation for many years.

### Areas of recording that breeders need to be aware of include:

- Traits need to be measured rather than estimated. For example, birth weights need to be taken using scales, not estimated by eye or use "small", "medium" and "large" categories.

- Ultrasound scanning is used to predict carcass variation in breeding animals. However, this needs to be done at around 400-600 days of age when the animals are in good condition. Scanning cows and sires may be interesting to you, but this does not contribute to the genetic evaluation.

- The mature cow weight trait is defined as the weight of the cow when you weigh her calf when it is around 200 days of age. All of the cow mob that have calves should be weighed. Other cow weights are not used in the analysis at this stage.

- Many breeders manage their first calf heifers differently to their cows - at mating, sire selection, calving and post-calving. If you do this, then it is important that you sub-group the performance of the progeny of first calf heifers from the cows' progeny.

When you are starting to record a new trait, you may need to consider recording a larger group of animals than initially anticipated. For example, rather than measuring just the sale bulls for scrotal circumference, record as many of the male calves as possible. Similarly, when scanning, consider scanning heifers as well as bulls - particularly in the early years as the progeny scans give valuable information on their parents. Also, as heifers tend to lay down fat and exhibit intramuscular fat earlier, heifers may give better information on these traits than the bulls.

**Jack Allen,**  
Technical Director, ABRI

## Calving ease and birth weight

(Cont from page 13)

against high birth weight animals and still improve 200-Day, 400-Day or 600-Day weight. Some sires have low or moderate EBVs for birth weight, yet high EBVs for the 200-Day, 400-Day and 600-Day weight traits. These bulls are the "curve benders" that everyone wants. However, these animals will only appear in the analysis where birth weights are recorded.

Gestation length is another factor influenced genetically. Calves carried for shorter terms, are generally born a little lighter and therefore more easily. Gestation length can of course only be easily measured in AI programs, but provides useful information when available.

The BREEDPLAN Calving Ease EBVs are therefore

calculated from three sets of records which can be reliably taken and which exert most influence on calving ease, viz:

- Calving Ease Score
- Birth Weight
- Gestation Length

The EBVs developed from this information allow predictions for:

- The direct effect bulls have on the ease with which their calves are born. ie. CALVING EASE DIRECT
- The calving ease of a bull's daughters ie. CALVING EASE (DAUGHTERS).

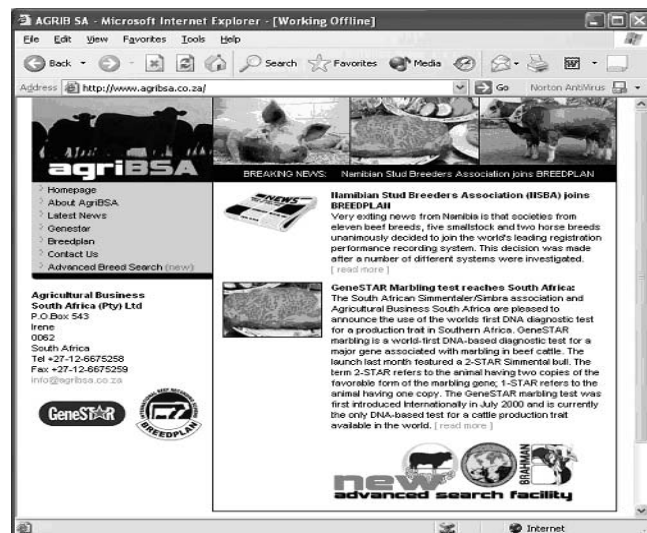
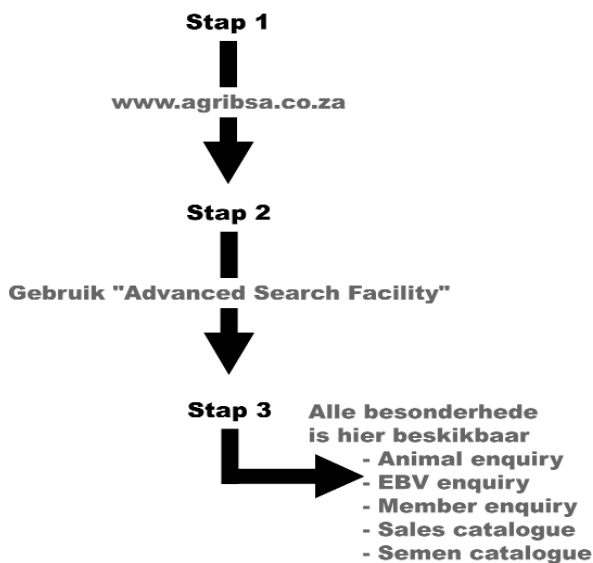
**Note:** the correlation between calving ease and birth weight is not unity. There are thus bulls and cows whom produce large "easy calvers". A calving ease EBV identifies these animals.

# BREEDPLAN databases on the web

<p>Het jy geweet, die hele BREEDPLAN databasis is op die Internet beskikbaar?</p>	<p>Did you know, the whole BREEDPLAN database is available on the internet?</p>
<p>Wil jy graag vanaf die gemak van jou huis en sonder om die kantoor te bel:</p> <ul style="list-style-type: none"> <li>- Kontak <b>besonderhede van alle telers</b> opsoek (Telefoon nommers, adresse, kudde name ens.)</li> <li>- Die <b>nuutste teelwaardes</b> van jou gunsteling bulle <b>opsoek</b></li> <li>- Die sogenaamde "<b>curve benders</b>" op die hele databasis opsoek</li> <li>- Navrae doen oor watter <b>semen</b> tans in Suider-Afrika <b>beskikbaar</b> is</li> <li>- <b>Veilingskatalogiste</b> opsoek en bulle volgens prestasie rangskik</li> <li>- Selfs <b>foto's</b> van bulle <b>op die internet</b> plaas</li> </ul>	<p>From the comfort of your own home and without having to phone the office you can now, via the internet:</p> <ul style="list-style-type: none"> <li>- Find <b>all breeders contact details</b> (addresses, telephone numbers, herd names, prefixes etc.)</li> <li>- <b>Search</b> for the <b>performance details</b> of all your favorite bulls</li> <li>- Identify the sought after "<b>curve benders</b>" in your breed</li> <li>- Search for <b>available semen</b> from all the AI bulls</li> <li>- Search <b>up-coming sales</b> for suitable bulls</li> <li>- Even put <b>photos</b> of your favorite bulls <b>on the internet</b></li> </ul>
<p><b>Diens</b></p> <p>Deel van BREEDPLAN se dienste is om 'n verskeidenheid web-gebaseerde funksies, wat maklik verkrygbaar vir enige persoon wat Internet fasiliteite het, wêreldwyd beskikbaar te stel. Hierdie stelsels laat jou toe tot die assosiasie se stamboek sowel as die prestasie databasis, wat oor baie jare se prestasie- aantekeninge opgebou is. Hierdie inligting is 'n waardevolle hulpmiddel vir enige beesproducent.</p>	<p><b>Service</b></p> <p>As part of the BREEDPLAN Service, we have made available an extensive range of web-based services, easily accessible to anyone worldwide who has access to the internet. Everyone has access to the breed association's pedigree and performance database, which has been built up over many years of performance recording. This is an invaluable tool for the serious cattle producer.</p>
<p><b>Vinnige Opname</b></p> <p>Dit is verblydend om te sien dat telers en genootskappe so vinnig die nuwe tegnologie aanvaar het. BREEDPLAN se maandelikse internet navra het vanaf 10 000 in Julie 2000 tot oor die 600 000 in Sept 2002 gestyg. Die Suider-Afrikaanse komponent het 'n ongelooflike 7000 navra verlede maand beleef. Soos die verskeie dienste uitbrei en telers die stelsels begin gebruik en agterkom hoe vriendelik die stelsel is, sal die navrae voortaan net vinniger groei.</p>	<p><b>Rapid Adoption</b></p> <p>Breed Associations and their membership have embraced the new technology whole-heartedly. Overall enquiries have risen from 10 000 per month in July 2000 to over 600 000 in Sept 2002. The Southern African web component received a staggering 7000 hits last month. As the range of services on offer is expanded, and more users are exposed to the system and appreciate its usefulness, these figures will no doubt continue to rise.</p>

## Hoe om die web funksies te gebruik

www.agribsa.co.za



# BREEDPLAN and Unistel vorm 'n vennootskap

Vaderskaptoetse by beeste word reeds baie jare gebruik by telersverenigings om die integriteit en betroubaarheid van hulle stamboekrekords te verseker. Hierdie praktyk dra by tot die genetiese verbetering en vordering van teelprogramme.

Die akkuraatheid van ouerskaptoetse is dus baie belangrik vir die stoetveebedryf. Akkurate vaderskapbepaling is ook van groot waarde vir kommersiële beestelers wat meerbulparings toepas. Vaderskaptoetse stel hulle dus in staat om die korrekte bulle aan die aantel toe te ken sonder die nodigheid om die koeie herhaaldelik te toets. Hierdie kennis stel produsente in staat om die prestasie van hulle bulle te volg en om vaars en vaarlyne te identifiseer wat meerwaardige nageslag produseer.

Vaderskaptoetse deur middel van DNA profiele berus op die identifikasie van sekere / bepaalde "merkers". DNA

"mikrosateliete" bekend as STR'e (short tandem repeats) is die verkose genetiese merkers om 'n DNA "bloudruk" van 'n dier op te stel. Die basiese teorie oor vaderskap toetsing berus op twee basiese beginsels, nl.

- Die identifikasie van geneties geërfde merkers wat onveranderd bly en
- Die kennis dat alle diere twee afsrifte van elke geen (of merker) besit waarvan een vanaf die moeder en een van die vader afkomstig is.

'n Samewerkingsooreenkoms tussen Agricultural Business South Africa (BREEDPLAN) en Unistel Geneeskundige Laboratoriums maak dit moontlik om alle DNA toetse deur een diensverskaffer te reël. Ander toetse sluit in DNA toetse vir Pompe se siekte, toetse vir die marmering en sagtheid geen, vaderskaptoetse en DNA profiel ontleding



Toetse vir die sagtheid en marmering geen, sowel as ouerskaptoetse kan by Unistel laboratorium gedoen word

vir identifikasie doeleindes. Meer inligting is beskikbaar by:

Unistel Geneeskundige Laboratoriums (Edms) Bpk.

Tel: 021-9389213/4

Fax: 021-9320065

e-pos: mpm@sun.ac.za

www: www.unistel.co.za

Kontak: Dr. Munro Marx

Mev. Leonora Theart

## Breedplan as 'n hulpmiddel in Wymar Simmentaler Stoet



Volgens Dr Wynand van der Westhuizen is dit die stoetteler se taak om kommersiële kopers op te lei oor die gebruik van teelwaardes.

BREEDPLAN-teelwaardes is nie 'n waarborg dat 'n sekere eienskap presies so by 'n dier se nageslag sal voorkom nie, maar is wel 'n baie belangrike hulpmiddel in die teling van stoetdiere. In Wymar Simmentaler stoet is ons baie verheug oor die beskikbaarheid van BREEDPLAN-teelwaardes en is dit baie gerieflik dat alle syfers op die Internet beskikbaar is. Dit is selfs moontlik om op voorafbepaalde teelwaardes van alle diere in SA op rekenaar te selekteer.

Teelwaardes sê absoluut niks van die funksionele doeltreffendheid en gehardheid van 'n dier nie. Tesame hiermee kan bouwvorm en strukturele korrektheid net met die

oog waargeneem word. BREEDPLAN- teelwaardes, tesame met GeneSTAR ontleding en ultrasoniese skandering, is egter baie belangrike hulpmiddels wat gebruik word in Wymar Simmentalers se poging om voortrefflike diere te teel. Ons ervaring is dat as 'n bul met 'n swak kalwingsgemak of hoë geboortegewig gepaar word met 'n vroulike dier wat ook 'n swak kalwingsgemak syfer het, sal kalwings probleme verseker voorkom.

BREEDPLAN- teelwaardes is sekerlik die mees bruikbare instrument wat in stoettelers se hande geplaas is in die afgelope 50 jaar om stoetdiere geneties te verbeter. Wat my betref is kommersiële telers en kopers nie baie ingestel om bulle te koop op goeie teelwaardes nie. Dit is dus ons stoettelers se taak om die nodige voorligting aan kommersiële kopers te verskaf sodat bulle nie alleen net op voorkoms gekoop word nie. Beraamde teelwaardes beteken tog meer vir die koper as indekse. Daar word tog ondervind dat wanneer 'n man of vrou 'n bul wil koop en daar word aan hulle verduidelik hoe die teelwaardes werk, die koper verheug is oor die inligting, want sy taak word vergemaklik.

Sonder BREEDPLAN teelwaardes sal ons werklik nie goeie vordering kan maak in ons teelprogram nie. Ek sien werklik uit na die dag wanneer BREEDPLAN- teelwaardes ook in die skouring 'n baie belangrike rol sal speel sodat skoudiere ook teeldiere sal wees in ons ras.

Dr W.J. Van Der Westhuizen

# Telers wat Breedplan gebruik se kommentaar

*Letter to BREEDPLAN from the Okabra Brahman Stud of Mecki and Brigitte Schneider Grootfontein - Northern Namibia.*

Thanks for the opportunity to comment on BREEDPLAN in Southern Africa and how I use the EBV's.

I firmly believe that estimated breeding values (EBV's) are essential tools to use in selection programs. I thus provide EBV's for every bull that I sell by:

- Including them in the sale catalogue
- Sending data in the form of EBV's of my sale bulls to all clients and sales

In a very extensive production environment such as what we have in Namibia, with its harsh, erratic and unfavorable climatic conditions, and where veld grazing is the primary fodder (apart from a lick supplement), we have a different approach to selecting with EBV's compared to many other breeders. In our environments high growth is not always preferred. In fact, this to me is the crux of using EBV's - they are made available and every producer can select for his or her specific preferences.

1. The first EBV I consider is birth weight. In Namibia where most meat Producers do not monitor their cows during calving, birth weight is very important. My clients want easy calvers in this harsh environment and this is their most important trait. I have seen regular calving difficulties on some commercial farms. This is because no attention was paid to the birth weight EBV.

2. The second factor to consider is your clients production system as well as his production environment. If my clients produce weaners for the feedlot market, they usually aim for the high 200 day EBV's (they thus want the high growth values). However they may have a problem with their replacement heifers later on, because the very high growth values are not always the best suited for an environment where grazing is the limiting factor. If however they produce an ox (2 to 2½ years at marketing age) then an average EBV for growth is

recommended - these are the cattle that have a good constitution and have a better grading for the European export market and with a better return on profit.

Some of my clients are from the communal areas or from very harsh sandy environments: Their profitability lies in the reconception of the cow herd under marginal grazing environments and not so much on growth EBV's.

3. The third factor I consider is the accuracy of the EBV - When buying or selling a bull I prefer accuracies above 70%. I then know that the bull has enough information so that I can make a better choice.

## As a stud breeder I have my own approach to breeding:

I must always keep my bull market in mind using the above 3 criteria. I have been selecting my animals using the above criteria and over a 14 year period the results speak for themselves. I have had a significant decrease in the EBV for birth weight and it is now below breed average (0.9 compared to 1.2). I have had a gradual increase in the growth EBV's over the same period and my EBV's are now slightly above average (200day: 11.1 (12); 400day:19.1 (18) and 600day:26.8 (24) with breed average in parenthesis).

My total herd is thus what I would call a "curve bender herd". Most of the recent stud bulls used extensively are trait leaders for birth weight and have good growth as well. We also use the only bull from the 2002 Southern African BREEDPLAN Analysis which is a trait leaders for 4 traits (namely birth and the three growth traits. The "curve bender" bull is HS94/86).

2. When I buy a bull for my stud herd then the number of progeny analysed and the number of herds in which the bull was used is also of importance. If it is a young bull then its sire or dam must fulfill these criteria. Our herd linkage is one of the highest in the Southern African Brahman breed (and the highest for a Namibian Brahman stud). Important to us is the use of artificial insemination annually, even on a limited scale, with



Mecki and Brigitte Schneider, Namibian farmer of the year in 2000

semen of bulls complying with the described requirements. This insures that you are always properly linked to the national database and that you can use the best bulls.

3. For my particular bull market, namely, where my sale bulls have to produce crossbred cattle for the "on the hoof" market (to feedlots in the RSA) or the European export market, the milk EBV is only of secondary importance. I am monitoring my herd average - my cow herd average for the 200day milk EBV = 2.0 which is slightly below breed average but of no concern due to the bull market I supply. I constantly monitor my EBV's however to ensure that my clients are not penalised in years to com.

4. As a stud breeder it is thus of uttermost importance to annually monitor where you are heading and select your stud bulls accordingly.

5. The next step I am desperately waiting for are fertility EBV's as well as carcase EBV's. This will open up a whole new field for my stud market.

6. We have defined our first breeding objective for our stud as follows: using balanced selection on EBV's, based on economic and production data relevant to the commercial enterprise!

I would like to use this opportunity to thank BREEDPLAN for an efficient service, not only to breed societies as a whole but also to individual concerns that I have experienced over the past year. Congratulations, keep up the good work!

Further details on our stud can be found on the webpage:

<http://www.agra.com.na/okabra/index.htm>

# Landbouweekblad / Breedplan BLUP-Klas

## 'n Uitnodiging vir deelname aan die telersgenootskappe van alle vleisbeesrasse.

Daar is nou 'n gulde geleentheid om by die toekennings aan uitstaande diere en kuddes op 'n nasionale vlak en wyer betrokke te raak deur die beste diere in u ras vir die Landbouweekblad / Breedplan BLUP-klas op skoue by Vryburg, Pietermaritzburg (Royal), Pretoria en Windhoek in te skryf.

Landbouweekblad en Breedplan wil konvensionele beoordeling en teelwaarde gebaseerde prestasietoetsing nader aan mekaar bring deur die beste bulle, koeie en kuddes op grond van moderne seleksiebeginsels te identifiseer.

Baie stoetboere betrokke by landbouskoue neem aan prestasietoetsing deel. Vir die meeste rasse in Suider-Afrika word BLUP-teelwaardes bereken wat sonder twyfel die beste aanduiding van 'n dier se teeltvermoë is. Op eie inisiatief het sommige rasse prestasiedata in die vorm van teelwaardes met visuele evaluering in die skouring begin kombineer om 'n sogenaamde BLUP-skouklas vir bulle te begin.

Hierdie klas is besig om groot aansien onder stoetboere te geniet en bevoordeel die vleisbeesbedryf en skoue op twee maniere:

- Die BLUP-skouklas maak skoue meer belangrik omdat boere bereid sal wees om hul beste bulle vir evaluering in te skryf. Ook om die genetiese meriete en voorkoms van hul bulle met dié van ander telers te vergelyk.
  - Die BLUP-skouklas beklemtoon die belangrikheid van prestasiegegewens in die vorm van BLUP-teelwaardes. Boere wat op prestasiegegewens konsentreer, word dus as gevolg van hul deelname aan skoue bevoordeel.
- Hierdie verwikkeling het meegebring dat beoordelaars verkies om prestasiegegewens in die skouring in te bring. Elke bul word volgens strukturele norme gepunt en daarna word sy prestasiegegewens ook in ag geneem. Gewoonlik is die verhouding tussen die twee norme 30 : 70. Die punte word saamgevoeg om 'n finale punt toe te ken.

'n Ander toekenning wat op eie inisiatief deur



Landbouweekblad en BREEDPLAN wil konvensionele beoordeling en teelwaarde gebaseerde prestasietoetsing nader aan mekaar bring met die BLUP-Klas.

telersgenootskappe begin is, is 'n reproduksiemaatstaf vir koeie. Die Simmentalers het byvoorbeeld die Simdex. Op 'n soortgelyke manier identifiseer rasse ook die top-kuddes binne elke ras. Vir die Landbouweekblad / Breedplan BLUP-klas word aanvanklik vier skoue betrek, naamlik Vryburg, die Royal, Pretoria en Windhoek. By dié skoue sal afsonderlike toekennings binne elke ras vir die BLUP-skoubul gemaak word. Pryse word by elke skou oorhandig en punte word oorgedra na die Suider-Afrikaanse toekenning wat een keer per jaar op 'n gala-geleentheid ná die Windhoek-skou in Pretoria oorhandig sal word.

Ook rasse soos die Bonsmara wat verkies om nie te skou nie, word aangemoedig om deel te neem omdat indien hulle verkies, kan die diere net op grond van hul prestasiedata in aanmerking kom.

*Reëls vir die vier afsonderlike skoue is soos volg:*

- Dit is 'n binneras-kompetisie
- 'n Minimum van tien (10) bulle mag deelneem
- Bulle mag nie ouer as 36 maande wees nie
- Beoordelaars punt bulle vir funksionele- doeltreffendheid
- Tegersgenootskappe punt diere volgens prestasiegegewens en besluit oor die aantal punte wat teelwaardes moet tel. (Kundiges kan vóór en tydens skoue bystand verleen).
- Die eerste drie bulle per ras word vir die finale toekenning ná afloop van die skousiklus genomineer.

By die finale Gala-geleentheid van die Jaar (aanvanklik in Pretoria) word die volgende vier Suider-Afrika toekennings gedoen:

### Landbouweekblad / Breedplan BLUP-bul van die Jaar (binne ras):

- Dit is 'n binne ras-toekenning en telersgenootskappe nomineer 'n eerste-, tweede- en derde plasing.

### Landbouweekblad / Breedplan BLUP-koeigroep van die Jaar (binne ras):

- Individuele telers nomineer hul tien (10) beste koeie vir dié kompetisie. (Tegersgenootskap kan hiermee help).
- Elke koei in die groep het 'n minimum van vier (4) kalwers.
- Reproduksie- sowel as prestasiedata word gebruik om die koeie te punt.

### Landbouweekblad / Breedplan BLUP-kudde van die Jaar (binne ras):

- Rasse gebruik prestasiegegewens om wenners aan te wys soos byvoorbeeld genetiese tendense van die kalwers vergeleke met die ras; die genetiese tendens van die koeikudde vergeleke met die ras; die aantal top-presteerders in die kudde en seleksievordering oor 'n bepaalde tydperk.

### Landbouweekblad / Breedplan BLUP-kudde van die Jaar (Algeheel):

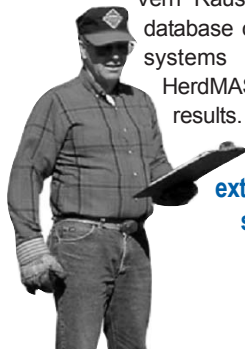
- 'n Komitee saamgestel uit die bedryf en navorsers kies die algehele wenner aan die hand van voorgenoemde norme.

Fyner besonderhede word deur telersgenootskappe uitgewerk en algemene riglyne sal binnekort beskikbaar wees.

# HerdMASTER launch approaching

HerdMASTER is a modern on-farm herd management package. It is written in the latest tools from Microsoft® and so combines all the best features of Windows with ease of use and a transparent interface to the Internet for data transmission.

HerdMASTER was launched in North America in October, 2001 where it has been a huge success. Leading Hereford breeder, Vern Rausch of South Dakota has an on-farm database of over 22,000 cattle. When other PC systems "ran out of steam" he turned to HerdMASTER and has been delighted with the results.



**"I have trialled HerdMASTER extensively and believe it is the right solution at the right time for the on-farm recording needs of American Hereford breeders".**

HerdMASTER was launched in Australia at the World Brahman Congress in April, 2002 with a welcome response.

Donna Angel of Glengarry Brahman Stud, Rockhampton says "HerdMASTER has made our Stud Recording a breeze. It is so easy to use, and allows us to really pin-point the performers!

With Saltbush's excellent Technical Support backup, we have an entire package, well worth the investment.

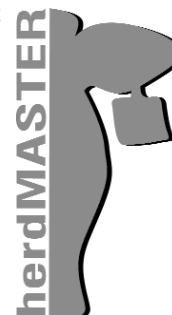
HerdMASTER's worksheets and filters and its BREEDPLAN interface make the entry and retrieval of information straight-forward. There are numerous standard management reports, with a report writing option on the way.

Direct interfaces with electronic identification readers, scales and data collectors, means that double-handling of animal records can be eliminated, increasing efficiencies on farm.

Email and web addresses can be stored in HerdMASTER, allowing you to send emails from within the program. You can even email animal information to a potential customer!

HerdMASTER is being customised for the Southern African market with a release scheduled in the first half of 2003.

There is a ten-person team behind the development and support of HerdMASTER. ABRI has committed a budget equivalent to R3M to ensure that HerdMASTER becomes a world leading product for on-farm data capture and herd management. All this is good news for beef breeders in Southern Africa.



## Brangus - BREEDPLAN success

**Mr Bruce Burnham, Australian Brangus breeder, comments on his experience with BREEDPLAN**

Bimbadeen Brangus Stud was started in the late 50's by Mr Bruce Burnham. Bruce observed that Angus cattle won most of the carcass and prime cattle competitions, but were struggling to do well in the central Qld environment. Observing the effect of using the then new Bos Indicus cattle he decided to try the cross with Angus and was delighted with the results.

In 1959, the Australian Brangus Cattle Association was formed, and Bruce was a Foundation member of fledgling Association. The stud he founded is the only original one still actively breeding and selling stud Brangus cattle.

Bruce and Barbara married in 1965 and like most young people with a family, had to work hard to consolidate and make progress. In developing a breed, especially on like Brangus, where the two parent breeds are so widely divergent, there was a great deal to be learnt. At the same time, coping with beef depression and trying to stand on their own feet, they were on the lookout for any tools that would improve returns.

Here are some other comments from

Bruce and Barbara

- "When the current BREEDPLAN started in the early eighties, we changed over to it, with a few headaches with matching fairly large database. However with the help of our friendly BREEDPLAN staff, we finally managed it".

- "We have been reaping some of the benefits of our perseverance in recent years. It is gratifying to have bull buyers actually interested in the BREEDPLAN figures on our animals, and even using them as a selection tool as the message is being spread further in the industry.

- "BREEDPLAN has achieved more than just improving turnoff weights for our cattle. It has been instrumental in helping us identify our best and most productive and fertile females". This environment is fairly typical of the southern part of Central Queensland - without some of the very extreme heat, but fairly warm nevertheless! We also experience some rather severe frosts at times and there is always at least one period of extreme stress during the year. Females in this situation have to calve,

rear the calf and re-breed within the twelve months without assistance. This is a most important selection tool in our environment as well as weaner weights. So our females are selected on their milk plus calving intervals.

- "We are looking to measure more traits this year, principally EMA and fat cover. Bulls have a yearly check for reproductive soundness and scrotal size and heifers are pregnancy tested before the end of the breeding season. In recent years we have been selecting for EMA and fat cover to improve yields. More work is intended on marbling this year".

"Bimbadeen" now turns off about 250 heavy steers for the Japanese markets per year plus about 60 bulls off pasture, mostly improved. They use the best performance bulls in the commercial herd. About 60-70 steers are lotfed each year to get complete carcass feedback particularly on EMA and marbling.

Ever enthusiastic performance recorders, the Burnhams have participated in "Brangus GROUP BREEDPLAN", since its inception in 2000.

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The Star...Friday November 29 2002

Perfect steak is in the genes

Scientists have announced a breakthrough in the hunt for the perfect steak: a DNA test that identifies cattle carrying a special tenderness gene. "The steak knife is destined for the scrap heap", said the article in The Star news paper.

The "GeneSTAR tenderness test" will permit farmers to selectively breed cattle that consistently produce tender beef.

"There is keen interest in using this tool to selectively improve the quality of beef herds in Australia as well as in the Americas and South Africa," said Dr. Jay Hetzel, the Scientific director. The test, which will cost farmers between R 360 and R 400 per animal, uses DNA extracted from live cattle. All we need is a hair or semen sample. - Sapa-AFP

**TOETS JOU BULLE VANDAG!**

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