BRAUNVIEH SA 2006

AC - CATTLE - CO - SONNESKYN -

50 YEARS OF FOUNDATION BREEDING

PICTURE PERFECT FUNCTIONALLY - SOUND DUAL PURPOSE BRAUNVIEH

KOM KYK SELF OF DIT WAT JY VAN ONS KUDDE GEHOOR HET DIE WAARHEID IS. OORDEEL SELF.
BULLE EN VROULIKE DIERE ALTYD BESKIKBAAR

"MARLO" ONS NOEM HOM "BULL POWER" WANT ONS WEET
HY SAL DOEN WAT ONS VAN HOM VERWAG
40KG GEBORE, 385kg 7 MAANDE, 510kg JAAR, 560kg 14 MAANDE
147 SI 140 GDO 124GDT IN 30 MINUTE NA GEBOORTE DRINK
HYSELF WAT VIR ONS BAIE BELANGRIK IS

15 JAAR OUD, 12DE KALF IS NABY. SO TEEL ONS HULLE AS HULLE
JONK IS - DAN LYK HULLE SO AS HULLE OUD IS

PIET EN ANNA DE VILLIERS
Tel: 053-9830443 OF Sel: 082 670 6089

Content

Inhoudsopgawe

Braunvieh SA
Posbus / PO Box 7864
Bloemfontein
9300
Kantoor / Office: (051) 430 4352
Web: www.braunviehsa.co.za

Editor
Cois Harman
coishar@gds.co.za
083 265 6210

Ontwerp & uitleg: / Design & layout:
Black Pepper Design
Kontak / Contact Christina Harman
blackpepperdesign@gmail.com or
bpd@webmail.co.za
072 327 3244

Braunvieh SA

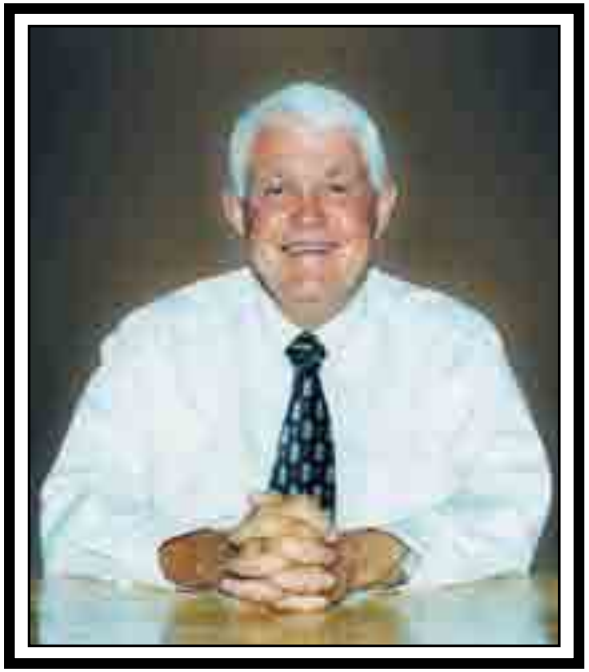
Council 2005 - 2006

Back: Minnie van Rensburg (secretary) Christopher Havenga, Herman Labuschagne, Bennie Coetzer, Mev Pat Wethmar
Front: Piet de Villiers (Vice-President) John Havenga (President) Cois Harman (Vice President)


Bluemli
Braunvieh Stud
The future in progress
bpd 072 327 3244
Contact Pat Cell: 082 558 3320 Tel: (011) 964 1049 Fax: (011) 964 1514 E-mail: patriciamary@mweb.co.za

FOREWORD

President
John Havenga



It is the aim of the Braunvieh Council to publish a Journal every three years, to coincide with our National Championships.

The canvassing of advertisements to cover the costs of the Journal is a mammoth task. Coupled thereto is the fact that interesting articles must be obtained which is no mean feat. With its contents and advertisements, this Journal surpasses any other that I have ever been involved with. I wish to express a very special word of thanks to Cois Harman, who did a tremendous job with this Journal. Also thank you to all advertisers for their support.

Our main sponsor is Landbank and I will go out of my way to thank them on all occasions for their sponsorship of R35 000.00.

While the numbers of many other Societies are dwindling our Society is growing slowly but constantly. There is renewed interest in the breed – not only from breeders but also from commercial farmers who use our breed in their cross breeding programs. This resulted in outstanding prices being fetched for bulls and heifers are virtually unobtainable.

What an improvement compared to what the situation was some years ago !

Performance testing has become more important than ever before. No matter how small your herd is – even if we only get in birth and weaning mass, it will render a significant contribution with regard to the calculation of EBV's, etc. More breeders are now doing Phases C and D and our figures are being noted by breeders of other societies. In the inter-breed competition at the 2005 Pretoria Show we once again clinched the Supreme Champion bull in the section for Phase C tested bulls. Compared to all the other breeds that had been competing for the past 25 years, our breed is now in the first position. Congratulations to Christopher and Jenny Havenga on their outstanding achievement.

A number of courses and events are being planned for 2006. I invite our members to support these events as a token of appreciation for all the preparation that go into it.

In my capacity as President I wish to thank my councilors for the enthusiasm with which they perform their duties which does not always receive the recognition that it deserves. Thank you to all members for their support – it really helped me through difficult times.

We were richly blessed with abundant rain during the past season and we also express our gratitude in this regard.

Enjoy the Journal! Spread the Braunvieh message far and wide and we will all enjoy the prosperity that it will bring. ■

CHRISTOPHER BRAUNVIEH

Where Quality Prevails

Christopher Havenga P.O.Box 8 Petrusville, 8770 Cell: 082 821 1527 Tel: 053 6612 ask for 1831 christopher@cdhbraunvieh.co.za

Braunvieh South Afrika

Vision

To produce an animal that calves easily, grows fast, is generally well adapted with a calm temperament and with above average meat and milk production abilities.

Mission

- To by virtue of selection and performance testing make available to the bull market only the very best performers.
- To select animals that conform to the breed standards and that perform above average in respect of feed conversion and milk production.
- To develop the breed as the best multi functional and most effective breed for meat and milk production as well as for cross breeding in South Africa
- To establish Braunvieh as the fastest growing breed in South Africa

Historic background

The Braunvieh is probably one of the oldest pure beef breeds in the world with records dating back to 800 b.C. The breed originated in the European Alps and is today found in all cattle breeding countries. With Romania having more than eight million and Italy having more than ten million Braunvieh cattle, these countries have more Braunvieh cattle than the total cattle population in South Africa.

The first Braunvieh bulls were imported to South Africa in 1907 as part of a cross breeding program initiated by the National Department Agriculture to breed suitable animals for the cold high lying areas in the country. The Braunvieh Breeders Society was founded on April 2, 1925 with the mission to keep the breed pure and to promote it amongst breeders. The first National show championships were presented in Bloemfontein in 1953.

1936, for the first time, saw 100 male and 100 female animals being registered in one year. In 1939 the membership totaled 56 and in 1945 more than 400 animals were registered. In 1952 registrations for the first time exceeded 1000 for the year. Animals were imported from overseas regularly and some of the best breeding material in the world was eventually brought to South Africa.

During 1964 membership reached a climax with 207 registered breeders affiliated to the society. However this year also saw the turning point in respect of the breed's dynamic growth.

In 1974 the society split in two when breeders concentrating mainly on dual-purpose traits separated from those concentrating mainly on dairy. In 1996 the dual-purpose breeders received official accreditation as a separate breeders society, which is today known as the Braunvieh breeders society. The breed is internationally known as such.

The Braunvieh can be found in every province of South Africa, Lesotho, Botswana, Namibia, Zimbabwe, Zambia, Angola as well as most other African states. The main reasons for the breed being to popular are its calm temperament, ample milk, fast growth, fertility, longevity, hardiness, adaptability as well as the breed's ability to in cross breeding programs with just about every other breed, have a positive impact.

Braunvieh cross calves receive a premium in most feedlots because of its calm temperament, adaptability, even fat distribution and its rapid weight increase. Of all other breeds participating in the National Phase C interbreed performance test class at the Pretoria Show for the past 25 years, Braunvieh is the breed with the most wins in the interbreed competition for Phase C performance tested bulls.

During the period 1970 to the 1990's problems were experienced with heavy calves (dysfocia). The Society and breeders identified the flat rump, which was rather common at that time, as reason for the calving problems. By means of breeding, a more roofy rump replaced the flat rump and the bone structure was refined.

Attention was also given to the heavy forequarter of bulls and protruding shoulder bones. By means of strict selection over the past 15 years the problem virtually disappeared with calving weights decreasing and normal births being reported with rapid weight increase after birth. Birth weight reached its highest peak in 1980 and since 1983 the average birth weight has been less than 40kg. Since 2000 the average birth weight of Braunvieh calves has been 38,94kg.

Characteristics

The Braunvieh is:

- A medium to large frame dual-purpose animal developed for meat and milk production in a 60:40 ratio.
- By virtue of its origin in the Alps this breed has a higher red blood cell count than other breeds and is therefore very adaptable worldwide to a variety of conditions from very cold to exceedingly hot.
- A breed with excellent walking ability, strong legs and very dark hooves.
- A breed with excellent pigmentation, an adapted skin that sheds in summer and grows a thick hair coat in winter to ensure a constant body temperature. Because of the very dark pigmentation eye cancer does not occur at all.
- A breed with a calm temperament, well adapted and that perform very well in feedlots.
- A very fertile breed with excellent longevity. Cows of 12 years and older still produce annually.
- A breed with above average milk production, sound udders and teats, which ensure that calves grow fast, and wean with an above average mass.

Voorbene

Korrek X-benig Krombenig

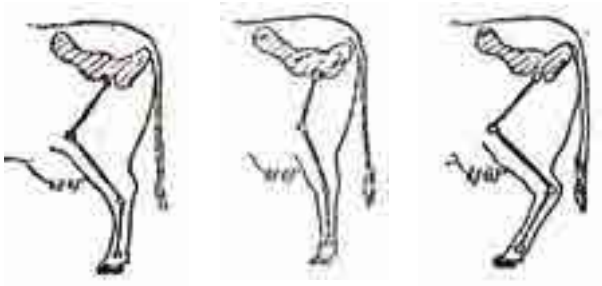
Agterbene

Korrek Koeiehakkig Krombenig

Kootgewrig

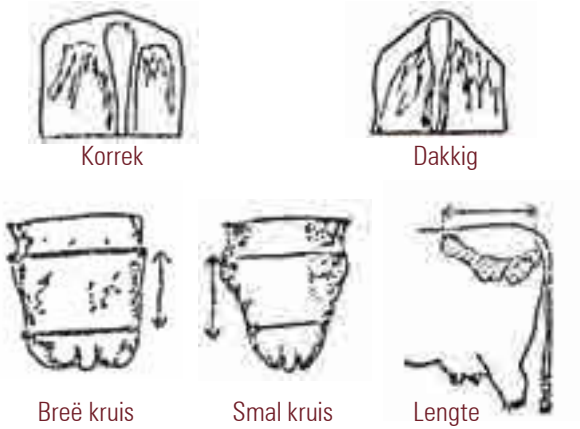
Korrek Te regop Te slap Trap deur

Agterbene



Korrek Regophakkig Sekelhakkig

Kruis

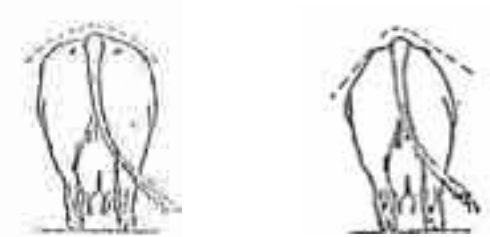


Korrek Dakkig

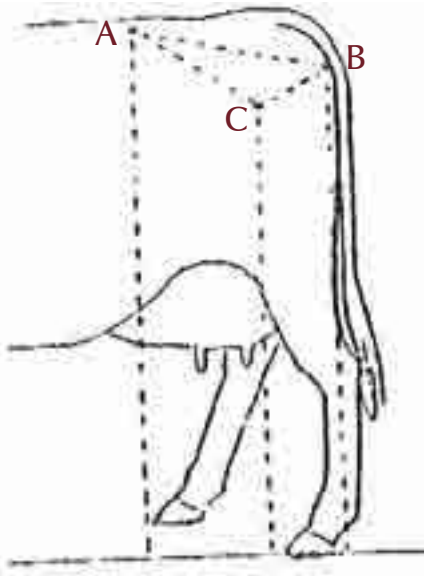
Breë kruis Smal kruis Lengte

Kruis (syaansig en van agter)

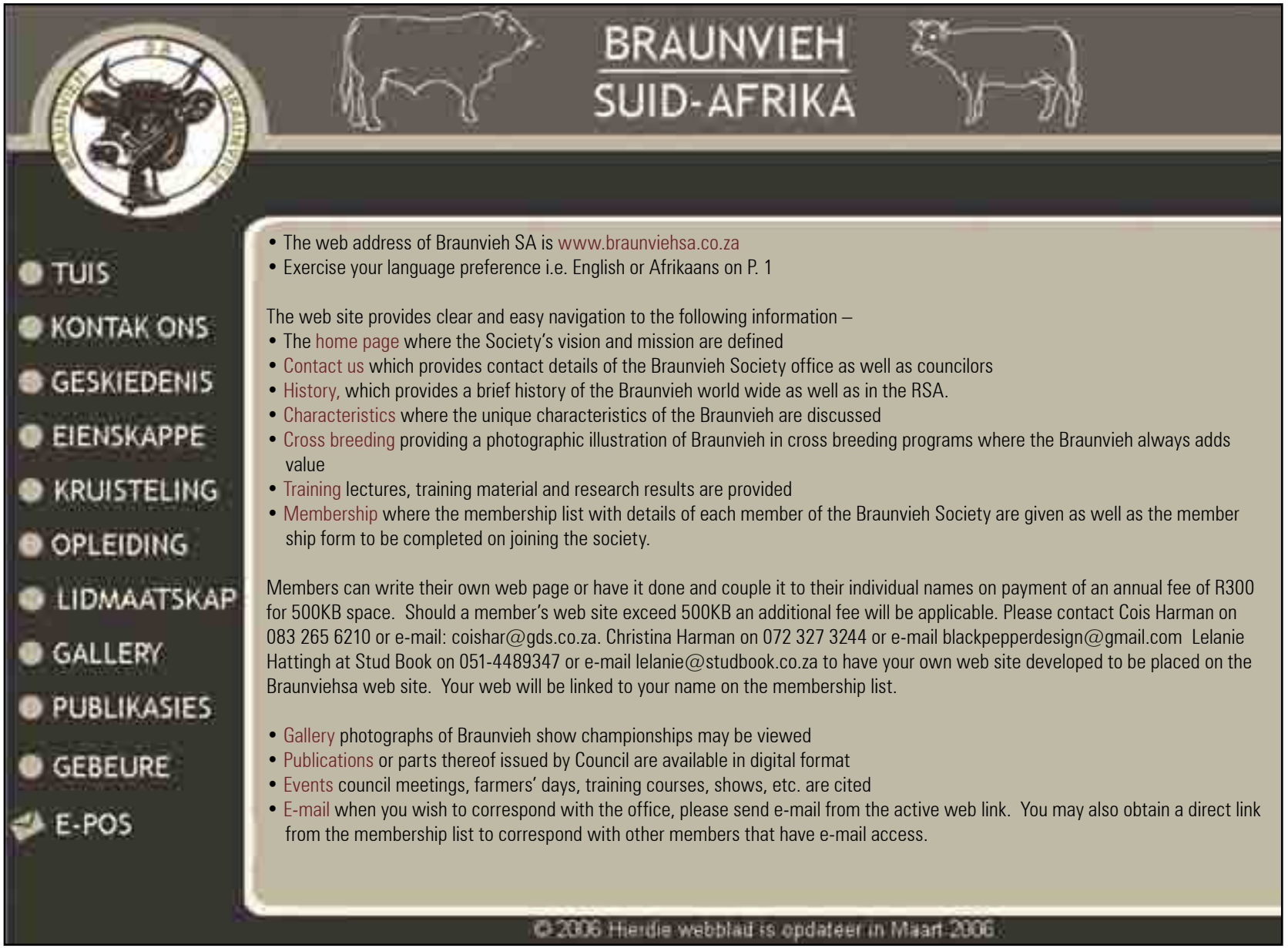
Korrek Hang Plat



Korrek Dakkig



A: Heupbeen B: Sitbeen (Tuber Ischii) C: Draaibeen


BRAUNVIEH
SUID-AFRIKA
TUIS
KONTAK ONS
GESKIEDENIS
EIENSKAPPE
KRUISTELING
OPLEIDING
LIDMAATSKAP
GALLERY
PUBLIKASIES
GEBEURE
E-POS
• The web address of Braunvieh SA is www.braunviehsa.co.za
• Exercise your language preference i.e. English or Afrikaans on P. 1
The web site provides clear and easy navigation to the following information –
• The home page where the Society's vision and mission are defined
• Contact us which provides contact details of the Braunvieh Society office as well as councilors
• History, which provides a brief history of the Braunvieh world wide as well as in the RSA.
• Characteristics where the unique characteristics of the Braunvieh are discussed
• Cross breeding providing a photographic illustration of Braunvieh in cross breeding programs where the Braunvieh always adds value
• Training lectures, training material and research results are provided
• Membership where the membership list with details of each member of the Braunvieh Society are given as well as the member ship form to be completed on joining the society.
Members can write their own web page or have it done and couple it to their individual names on payment of an annual fee of R300 for 500KB space. Should a member's web site exceed 500KB an additional fee will be applicable. Please contact Cois Harman on 083 265 6210 or e-mail: coishar@gds.co.za. Christina Harman on 072 327 3244 or e-mail blackpepperdesign@gmail.com Lelanie Hattingh at Stud Book on 051-4489347 or e-mail lelanie@studbook.co.za to have your own web site developed to be placed on the Braunviehsa web site. Your web will be linked to your name on the membership list.
• Gallery photographs of Braunvieh show championships may be viewed
• Publications or parts thereof issued by Council are available in digital format
• Events council meetings, farmers' days, training courses, shows, etc. are cited
• E-mail when you wish to correspond with the office, please send e-mail from the active web link. You may also obtain a direct link from the membership list to correspond with other members that have e-mail access.
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First National Bank bied korttermynfinansiering wat jou sal help wanneer jy in die knyp is. Ons reeks kredietoplossings sluit in oortrokke, produksie-en kredietkaartfasiliteite. Ons wil seker maak dat jy jou daaglikse finansiële verantwoordelikhede kan nakom, sonder om bloed uit 'n klip te probeer tap. Die persoonlike verhoudings wat ons met ons kliënte het, stel ons in staat om doeltreffende oplossings vir hul behoeftes te lewer. Vra maar vir enigeen wat al met Fanie van die bank gesels het. Of nog beter, vra jou naaste FNB takbestuurder.

FNB
First National Bank

Hoe kan ons help?

Stud Book 100 years

Yesterday, Today and Tomorrow

Dr Pierre van Rooyen

"Yesterday"

On commemorating the centenary year of the SA Stud Book Association in 2005 one reflects on a lustrous century and asks the question: "Where did it all begin?" Well, the first stock farmers in South Africa were natives. They were nomadic en roamed with large herds of cattle in a beautiful country teeming with wildlife. Animals and people were totally adapted to their environment and their livestock was by no means purebred. These animals however formed the basis of the first white livestock farmers' breeding animals.

Cattle numbers belonging to the government of the day and colonists, for example, grew from a mere 2297 in 1685 to 1 077 544 in 1900 and today we have 14 million head of cattle in South Africa. It was however important that cattle numbers did not only grow but that the quality of animals also be improved.

A new era dawned in 1760 with Robert Blakewell as the founder of studbook breeding as we know it today. His slogan was: "Breed the best to the best". Even at that time the then Government of South Africa referred to the urgent need for purebred bulls to improve local and non purebred cattle and it was recommended that: "It should never be allowed that a hybrid bull should cover pure "Vaderlandse" cows (meaning purebred Dutch cattle) or that a purebred indigenous bull be put to hybrid cows because it would seriously harm the improvement of the livestock.

This brought with it an era of stock improvement and the development of many herds, which resulted in improved stud stockbreeding. These developments played an important role in the South African stock industry.

Towards the second half of the 19th century cattle breeders especially started to realize the importance of hereditability in the improvement of livestock. They started importing purebred animals from Europe. The first Brown Swiss bulls were imported in 1907 by the then Department of Agriculture to be used in a cross breeding project. The first recorded Brown Swiss bulls are in Vol 9 (1914) of the Stud Book and was imported in 1914 by A Metcalf of Cradock.

These imports gave rise to an appreciation of authentic pedigree registers. Moreover studbook registers became the authentic stamp of superior breeding of specific farm animals and their bloodlines and Stud Book certificates became the guarantee for purebred animals. This paved the way for the establishment of breeder's societies for the various breeds. In this way the Brown Swiss (later Braunvieh) Society was founded in 1925.

In retrospect we can today say that although we are aware thereof that the mere knowledge of the ancestry of an animal is no guarantee of its superiority, such information together with production measurements are essential in order to determine genetic superiority. And that all started as far back as the 19th century!

The arrival of these purebred cattle and others from Europe then necessitated the founding of the SA Stud Book Association. Livestock farmers realized very early on that animals vary in production ability and that apart from improvement by means of selection, progress would be faster if more superior genetics could be imported. Such superior genetics were imported by way of purebred animals. The foundation of animal improvement was then and still is the stud industry!

The first documentation available referred to an organized attempt to establish a studbook organization to serve the country as a whole and is minutes in the minutes of a meeting held on 15 December 1903 and was published in the Transvaal Agricultural Journal 1903 – 1904. This meeting was held under the presidency of Mr HW Struben, president of the SA Agricultural Union and was attended by various Cape Colony, ORK Transvaal and Natal representatives. The following decisions were taken on this occasion:

- That the congress supports the principle of the establish ment of a General Stud Book for South Africa
- The entries of imported stud stock must be accepted as a given. An additional studbook for purebred stock must be maintained where breeding records would be available.

Emanating from this, enthusiastic stud breeders gathered on August 15, 1905 at a conference of the Stud Breeders Association of the Cape Colony, ORK and Transvaal in Bloemfontein. On this occasion the objectives of the SA Stud Book were cited as follows:

- Rules were drawn up and accepted as guideline for the Executive Council of the SA Stud Book
- The Executive Council met on August 16 1905 in the Government building in Bloemfontein with Mr CG Lee in the Chair in his capacity as Chairman of the Board and was also appointed as first president of the SA Stud Book association.

"Today"

The question may justly be put: "Was it worth all the trouble and expense?" As stud breeders we are very much aware of the fact that it costs money to register animals. Could we not have attained the same measure of success by simply mating whatever we liked to any other animal as long as certain basic standards for reproduction and product potential were upheld? The answer is definitely NO!

Without the stud industry and accompanying recording of pedigrees and production performance the national herd of 100 years ago would not have reached the production potential which it has today.

The following are a few examples indicating how animals improved over the years:

Figure 1: Changing of birth mass, weaning, one year and 18 month mass as well as cow mass at birth and weaning of their calves from a sample of 85 000 beef cows for the period 1960 to 2002.

Figure 2: Change in reproduction in the same group of beef cattle from 1973 to 2002

Table 1: Change in average milk production of two dairy breeds

Dairy breeds		1951	2005
Kg Milk/lactation	Breed X	4770	8855
	Breed Y	3240	5585

In Figure 3 you will observe a photograph of a Braunvieh bull that was the Swiss show champion in 1897 compared to the bull that was the interbreed champion in the 2005 Phase C performance tested class at the Pretoria International show.

The famous geneticist Johannson defines a breed as follows: " ... a breed can be defined as a population of animals which differ from those in other populations within the same species in respect of definite genetically determined traits." Breeds within the various species have their own unique traits. Such unique traits have been identified by the animal breeder and improved by means of selection to conform to the requirements for meat, milk, fiber and recreation within a specific environment.

Figure 3

Without the dedicated input of stud breeders guarding over the maintenance and improvement of each breed's unique traits, such traits would have been lost amongst all the other characteristics.

The stud breeder has always been the animal breeder that evaluated and selected for unique traits for the purpose of supplying quality genetic material to the commercial farmer in order that he may improve his production.

Stud breeding had its phases. Initially only births were recorded and the details of parents from which pedigrees were built. In itself very important especially considering the fact that no other information was available.

That then was the origin of animal recording namely when the need for the identification of superior breeding animals was identified and Stud Book was founded in 1905. This data was then recorded in books and Volume I appeared in 1906. This method was followed up to 1953 with Volume 30 being published. At that point an index card system was phased in and in 1983 the old mainframe computer system was born, followed by our present modern computer system, which was officially put into operation 2003.

With the passing of time the realization came that the pedigree of an animal alone did not reflect its genetic superior – neither was show performance on its own a sound yardstick to prove that an animal was superior – a norm which was sometimes abused.

The next phase saw the realization that the measured production potential of hereditary traits, combined with the origin of the animal were the only reasonable prediction of its genetic potential. This integration of information paved the way for the estimated breeding value phase (BLUP) and this is where we find ourselves today.

"Tomorrow"

The present phase cautions us to exercise the necessary care not to over emphasize technology and to forget to also visually appraise our animals. The ideal for the future is therefore a combination of the animal scientist's scientific evaluation of production potential and the stud breeder's expert eye.

All of this places a responsibility on the stud breeder to ensure that for the next 100 years proven superior genetic material be made available to the industry. Animals that we supply to the industry must definitely make a genetic difference otherwise the past 100 years and what was attained over that period was definitely not worth it. Fortunately we have sufficient proof that in respect of appearance, functionality and production, the animals that are being farmed with today, are genetically significantly superior to their ancestors of 100 years ago.

It becomes increasingly difficult to breed better and better. We however have any number of tools and aids to help us – an excellent world standard animal recording scheme (the Intergis), performance testing, BLUP, the Logix enquiry system and expert advisors.

Dedicated breeders may use these aids to genetically improve their animals on an ongoing basis. It is however important that breeders societies should ensure that they keep abreast of the needs of the industry and that their breeding policies be determined in accordance therewith and that the necessary guidance be provided to their members to breed purposefully.

The future of the livestock industry and in particular the stud industry, is promising provided that stud breeder act responsibly and with integrity. ■

RATSHIKANA BRAUNVIEH STUD

bpd 072 327 3244

Adv. Olebile Benjamin Ratshikana and his sister farm on their farm Springvalley close to Mafikeng with a Brahman and Braunvieh stud. Cattle are selected for quality masculine, length and good temperament so that we can enjoy working with them, low birth mass and mothers with enough milk to raise their calves with ease.

Contact Olebile B Ratshikana Cell: 083 777 3512 P. O. Box 295 Buhrmansdrif 2867

Ideal crosses for the feedlot

Chris Jooste Landbouweekblad May 27 2005 No 1402

More than a decade ago this farmer stopped stud breeding and started with a cross breeding program which concentrated on feedlot production and that was when he started breeding the ideal cross – hardy animals with superior meat and milk characteristics

In a cross breeding program using Brahman, Braunvieh and Charolais bulls in a specific sequence, Mr Bruce Hunt of the farm Vaalboschputs, close to Warrenton, is of the opinion that he now has the best recipe for breeding the ideal cross animal.

Young heifers that must calve for the first time. These animals have the characteristics of Braunvieh, typical Brahman ears, are hardy and have sound meat and milk characteristics

Mr Bruce Hunt (left) and his son in law, Mr Brett Sparrow, who is in charge of farming

With these bulls and a standardized herd of breeding cows he can deliver calves that the feedlot requires. He has the experience because, apart from being a farmer, he is also the stock buyer for more than one feedlot.

When Hunt in 1992 swapped stud breeding for a commercial beef farming enterprise, his aim was to breed hardy animals that could survive droughts, with sound hoofs, good meat characteristics and enough milk to raise their calves. In order to ensure sound meat characteristics, he required a good dual purpose and hardy breed.

His breeding program initially consisted of putting Dutch Friesland bulls that are considered to be outstanding dual-purpose animals, to Brahman cows. He then used Brahman bulls on the cross heifers, which gave crosses made up of 75% Brahman and 25% Dutch Friesland. He however felt that these crosses tended too much to the Brahman side. Dutch Friesland breeding at that stage concentrated mainly on milk characteristics, which resulted in the dual-purpose characteristics of the breed disappearing. Because to him the meat characteristics of a breed and especially its milk production are very important he started using other dual-purpose breeds in his herd.

Subsequent to trials with other dual purpose breeds not delivering the desired results, Hunt now only uses Braunvieh bulls. This resulted in animals with the hardiness and walking ability of the Brahman, the somewhat larger frame of the Braunvieh with good milk and meat production. He believes that these cross cows are the ideal breeding animals.

In order to obtain increased mass, which is required by the feedlot, he uses Charolais bulls on the breeding cows. Hunt's cross breeding program follows a sequence starting with Braunvieh bulls on Brahman heifers.

The next group of heifers goes to a Brahman bull. The final link in the chain is the heifers that are mated to Charolais bulls. Thereafter all animals are sold. The purpose of his farming enterprise is purely to deliver calves for the feedlot. Calves are weaned from 7 to 7.5 months. The average weaning weight in a poor season is 243kg while in a good season weaners reach 268kg.

No mating season is applied because it would mean that fewer calves would be begotten in times of drought. Cows calving from October 1 to the end of March are put in separate herds with bulls. During April pregnancy tests are done on all cows that had not yet calved. Those that are not

BEAULIEU BRAUNVIEH STOETERY

1981 - 2005

WARE BLOUBLOED STOETERY

Hampie van Zyl
Posbus 88
DIBENG
8463
Sel: 082 492 8123

Jong 26 maande Potensiële Stoetbul (2005)

Tipiese Koei in Stoet (2005)

VISIE Die mark en die kliënt moet altyd tevrede wees!
Slegs stoetmateriaal word aangehou in kudde.

MISSIE Bevorder die Braunvieh ras
Elimineer wanpersepsies oor Braunvieh
in mark met kwaliteit diere vir mark.
Deurlopende bloedlynnavorsing
Weet deur te meet
Kwaliteit: Nie kwantiteit

Tipiese 12 maande Vers in Stoet (2005)

TEEL UITKOMS DOELWITTE
Optimale dubbeldoeligheid
Medium raamgrootte
Haarkwaliteit
Eenvormigheid
Konstitusie

SUKSESREKORD
Hoogste gemiddelde pryse nog behaal op my produsieveiling in die Braunvieh geskiedenis in Suid Afrika!! Dit sê alles van die stoetery se gehalte!

The Braunvieh has unique characteristics, which makes it the ideal breed in any cross breeding program.

A herd of heifers aged 18 – 24 months

pregnant or in early stages of pregnancy are culled. Animals that do not calve are not retained. Cows and heifers of various ages are kept together in order to facilitate and improve management.

Heifers are put with the bull for the first time when they weigh 350kg – in December and January in order to get the animals in the correct cycle. On average 25 cows or heifers are put with each bull.

450 heifers are normally retained per annum as replacement heifers. Because of drought conditions the previous season, only 350 heifers were retained and this year 600 – 700 heifers will therefore be retained for replacement.

With a breeding policy of breeding animals made up of 75% Brahman and 25% Braunvieh the types are reduced until only groups of 50\50 Brahman and Braunvieh and 72\25 Brahman and Braunvieh are left. Hunt believes that this combination renders the maximum Rand per hectare.

In this way the herd is standardized and very uniform – for Hunt a very important aspect of an orderly farming enterprise. There were more groups and types previously.

In order to ensure that the very best breeding cows are obtained, Hunt has for the past four years been using 70 Braunvieh bulls. Of the three different breeds 140 bulls are used with 20 to 30 spare bulls. Bulls are replaced regularly and he buys new stud bulls from stud breeders on a regular basis.

Hunt says that he has now reached his goal of uniform, hardy animals that can resist droughts, with good walking ability and enough meat (required by the feedlot) and excellent milking characteristic to raise their offspring.

Cross breeding

The Braunvieh has unique characteristics, which makes it the ideal breed in any cross breeding program

The Braunvieh renders an immediate and positive impact on any commercial beef breed in cross breeding. Is it any wonder that in 49 countries of the world the Braunvieh is used in cross breeding programs ?
The first female crosses have much more milk, sound udders and teats and an improved conformation and constitution and wean calves with higher mass than is the norm.
Calves have good meat characteristics, grow fast with a sound feed conversion and are winners in the feedlot

The infusion of Braunvieh blood has a calming effect on any beef breed and increases the growth tempo which in turn ensures more money in the farmer's pocket at weaning

Braunvieh and Braunvieh crosses reach weaning weight as early as 5 – 6 months. Cows may be weaned earlier, which again ensures money in the farmer's pocket at an earlier stage. ■

Brahman, Braunvieh and Charolais cross

RAJAN'S BRAUNVIEH STUD

Quality bulls always available

The Rajan's farm in the Marico Bushveld in a tough heart-water and gallsickness region. We select and breed cattle with a good temperament so that we can enjoy working with them, low birth mass and mothers with enough milk to raise their calves with ease, good length, strong legs and hooves to succeed in a stony tough veld.

Contact Babu Cell: 072 366 7373 or Tel: 014-503 0102 PO Box 13 Groot-Marico 2850

BRAUNVIEH:
The ideal breed for cross breeding

H.S.Labuschagnè

Braunvieh is one of the most underestimated breeds in South Africa, not only for stud breeding but also for cross breeding purposes. Only a few farmers have yet discovered the breed's outstanding cross breeding abilities. One example is Mr. Bruce Hunt of Warrenton, who uses Braunvieh bulls in his cross breeding program in order to produce the ideal cross required by the feedlot.

Adaptability

Research done as far back as 1951 at the Omatjenne Research Station in Namibia on animals running on the veld, proved that the Braunvieh has the potential to become one of the leading cattle breeds in South Africa (Borstlap 1996). This research pointed at various outstanding breed characteristics.

Adaptability was researched and the breathing tempo of various breeds was measured. After a walk of 3 km the Braunvieh's breathing tempo was the lowest of all the breeds, which is a very good indication of adaptability. Added to that, the Braunvieh had the advantage of a short hair coat, dark pigmentation, black hooves, sound teats and low external parasite infestation.

Also as regards eye diseases the Braunvieh had the lowest percentage of all the breeds that were researched (Borstlap, 1996). Eye cancer, for instance, is extremely rare in the Braunvieh breed. It is therefore understandable that in all areas of the country, even in the arid regions of the Karoo, breeders are achieving much success with the Braunvieh .

Reproduction

During the experiment at Omatjenne the same management system was applied for all breeds and again the Braunvieh came out tops – of the 12 breeds that were measured Braunvieh counted among the three best breeds. The Braunvieh had a calving percentage of 79.2% on veld conditions. Nutrition plays a significant role in the fertility of animals and can be improved by virtue of a sound management system (Borstlap, 1996).

Production

According to Borstlap (1996) weaning weight and slaughter weight are highly correlated. Weaning weight therefore serves as a means to measure milk characteristics on extensive conditions. There was no notable difference between the first two breeds of which the Braunvieh was one. Growth ability is very important due to the genetic relation between growth ability and efficient feed conversion (Borstlap 1996).

The total economic value was calculated by means of the same experiment with calving percentage as starting point, mortality, slaughter weight and average net income. With this research, where all animals were treated in exactly the same way throughout, it may be surmised that the more adapted breeds would give the highest calving percentage with the lowest mortality rate and the highest weight gain. Once more Braunvieh counted amongst the first three breeds, which proves the adaptability of the breed as well as its fertility and production abilities (Borstlap 1996).

Carcass characteristics

The Irene Animal Production Institute (API) did a study (Claassen and de Bruin, 1994) the main purpose being to describe the production and carcass traits (growth, carcass and meat) of the most common genotypes (pure and cross breeds) in South Africa. The evaluation program is useful as indication of the comparative position of a specific breed, as regards production and carcass traits. Such information provides reference points for the selection of the relevant traits, which are not readily available.

This research indicated that Braunvieh maintains a meaningfully high ADG over an extended feeding period as well as the FCR, which improved continuously. These results can only be achieved if more muscle than fat is deposited. At 162 days the carcass had only approximately 14% carcass fat. During a positive feeding margin the extended feeding period with the favorable ADG and FCR as well as low fat percentage, can be used to the advantage of any person finishing cattle extensively (Claassen en De Bruin, 1994)

"In all respects, from growth percentage to the final meat quality traits, Braunvieh was very competitive with the other breeds in the same experiment. "

Braunvieh cattle therefore do not accumulate fat too rapidly. This is especially important with regard to the feeding of breeding animals for sales due to the back fat thickness being negatively correlated to fertility (Coulter, `1994).

Claassen and de Bruin 1994 found that the slaughter percentage of the Braunvieh was respectively 5.7% and 4.3% better than the other dual purpose and beef types in the experiment. Braunvieh will deliver larger carcasses for market with the same carcass fat (finishing) as the average carcass. Due to the low bone percentage of Braunvieh bulls, measured against other breeds, the breed proved to be superior as regards muscle to bone ratio (4.45). The above distinguishes the breed as a compact one (conformation) with fiber distribution (expensive cuts: cheaper cuts), which will realize larger profits due to the Braunvieh growing to a heavier weight sooner.

In all respects, from growth percentage to the final meat quality traits, Braunvieh was very competitive with the other breeds in the same experiment. This points at consensus having been reached with regard to the type of animal to be used in the combination of growth and meat characteristics with the necessary attention to sound milk production and without harming any of the above factors (Claassen and De Bruin, 1994).

Combining all the above factors with heterosis (hybrid vigor), the Braunvieh can be used successfully in any cross breeding program to produce good quality feedlot animals.

Meat quality

The meat quality traits of the Braunvieh were determined both physically and bio chemically as well as by means of taste and smell and all facets compared very well with the commercial group.

The experiment proved that Braunvieh meat was significantly more tender than the average of the other breeds and crosses that were measured at the Meat Science Center at Irene (actual measurements were taken). The general acceptance of Braunvieh meat was, according to an experiment panel, somewhat better than the commercial results (Claassen and de Bruin 1994).

Conclusion

What does a breeder expect of a breed in a cross breeding program ?

- The breed must be well adapted to any environment under all conditions.
- Must be fertile (cows with brief inter calving periods and bulls with a large scrotum circumference)
- The breed must have sound production characteristics (sufficient milk, must wean heavy calves, calves must grow fast, must be able to convert fodder into meat and must not have too large a frame)
- Desirable carcass qualities (heavy carcass weight, high slaughter percentage and carcass meat yield))
- Quality meat (tender, juicy and tasty meat)

It is very clear that Braunvieh is indeed the breed for any cross breeding program. The breed should however be used on a much wider scale and is still not enjoying the recognition that it justly deserves. ■

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Die Braunvieh

Kruis uitstekend met enige ras

Brahman met 4.5 maande oue Braunvieh kalf

Braunvieh X Brahman koei met Braunvieh kalf

Bonsmara koei met Braunvieh kalf

Nguni koei met Braunvieh kalwers

Afrikaner koei met Braunvieh kalf

Jersey X Fries met Braunvieh kalf

- Kry meer vleis & melk met die Braunvieh

Braunvieh X Drakensberger

Braunvieh X Brahman X Charolais

Braunvieh kalf by Angus X Braunvieh koei

Braunvieh X Brahman vers

Braunvieh X Bonsmara koei

Braunvieh X Angus koei

Braunvieh X Nguni

Braunvieh kruis osse onder 'n jaar

The finishing of stock:
Principles and Practices

Prof Izak Groenewald
University of the Free State

1. Introduction to the feedlot industry

1.1 Origin

The intensive feeding of cattle in feedlots originated in the USA during the 1950's. Approximately 85% of all meat currently slaughtered in the USA is obtained from feedlots.

In South Africa the practice of feedlot finishing started in the 1960's when, due to a grazing shortage, stock farmers were forced to leave their stock in feedlots to spend the winter. In South Africa approximately 60% of all meat is slaughtered from feedlots.

1.2 South African Feedlot Association

This Association was founded at the beginning of the 1970's by a number of established feedlot operators at the time. SAFA currently represents approximately 85% of all stock slaughtered from feedlots. The permanent office of the Association is in Pretoria with Dave Ford as the Managing Director. Conferences are presented annually where knowledgeable speakers mainly from the USA officiate.

1.3 The Industry

The slaughtering of cattle reached a climax in 1997 when 2,6 million head of cattle were slaughtered. During the past decade on average 2,1 million head of cattle were slaughtered annually. At 60%, 1,26 million head of cattle are slaughtered from feedlots and that implies that on any given day in South Africa, approximately 345 000 head of cattle are being fed grain rich rations in feedlots.

The nature and extent of the industry is directly determined by the grain:meat price ratio. This ratio is at present (May 2005) very favorable and that is the reason for the number of farm feedlots that have sprung up.

1.4 Geographical distribution of larger feedlots

The economical principle of feedlot finishing is to transport stock to grain producing regions or where the main millers are to be found which are currently the farms of grain producing farmers.

The larger feedlot operators are distributed as follows:

Gauteng	10
Mpumalanga	4
Limpopo	4
Northwestern Province	5
Free State	4
KZN	6
Western Cape	2

1.5 Cost structure

In monetary terms the cost to produce a carcass on the hook is as follows –

Acquisition price	62,8%
Feeding costs	28,8%
Overheads	4,2%
Interest	4,2%

2. Requirements of an intensive system

An intensive system implies an increase in terms of the total energy expended in the application thereof, as manifested in the management of the system, and feeding of the animals.

The PLOC system, being Planning, Leadership, Organization and Control, is very important in the continued operation of a feedlot.

3. The animal in the feedlot

"You cannot feed the wrong calf right"

4. Nutritional values and various raw materials

All raw materials, excluding minerals, can be divided in three groups. Such division has bearing on the basic nutritional needs of ruminants for optimal rumen function. The following graphic comparison with a motor vehicle is by means of explanation:

Fuel	→	Energy	→	Grain
Water		Fiber		Roughage
Oil	→	Protein	→	Ureum & OKM

To move from A to B a motor vehicles requires fuel. Should you wish to reach B faster, higher levels of fuel would be required. The same applies to animal performance. Such energy is provided in the form of energy rich raw materials for example mealies, hominy chop and other small grains.

If there is no water in the radiator the engine will overheat. That happens in the rumen of the ruminant if the ration contains too much energy and too little roughage. The rumen overheats and the animal may die as a result of acidosis. In order to pull up the hand brake somewhat, a specific quantity of roughage must be taken daily. In a feedlot situation any type of roughage, even of poor quality, may be used because it is not supposed to provide nutritional value but only to stabilize the rumen.

With a tank full of fuel and water in the radiator the motor vehicle can now move but without oil to lubricate all the moving parts, the vehicle cannot function optimally. In feeding this role is fulfilled by protein. Animals can very well grow without additional protein but they will not reach optimal performance. Protein may be included in rations in the way of oil cakes, fishmeal and ureum. Many feeding tables indicate the composition of raw materials and table 4.1 is merely an example of typical analysis within the three main groupings being fiber, energy and protein rich raw materials.

Table 4.1 - Typical nutritional values of various feeds (dry base)

Fodder type	Raw prot. (%)	Raw fibre (%)	TVV (%)	ME (MJ\KG)
Roughage				
Wheat straw	2.8	39.0	35	5.2
Mealie cobs	4.5	38.0	45	6.8
Lucerne hay	13.5	35.0	45	6.8
Energy rich				
Mealies	8.5	2.5	74	11.9
Wheat	10.5	2.8	72	11.5
Barley	8.1	6.8	70	11.3
Oats	8.6	12.5	61	9.5
Protein rich				
Oil cakes	44.0	14.5	70	10.6
Fish meal	56.0	0.5	65	9.8
Ureum	56.0	0	0	0

The conclusion is therefore that raw materials each has its place within complete rations and that it should be ensured that it is applied for that very purpose.

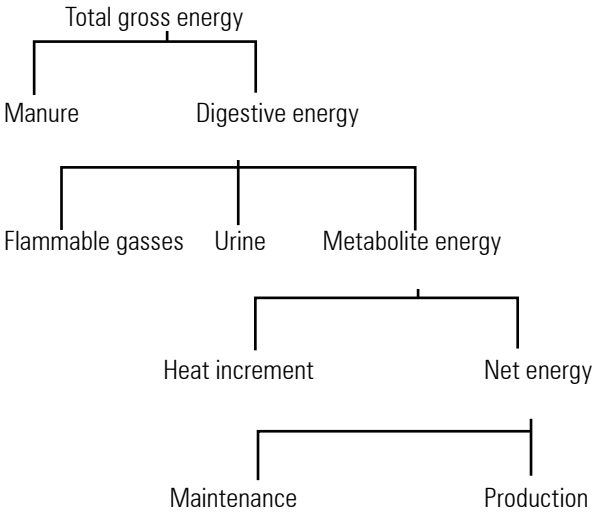
5. Feeding for the purpose of finishing

In order to simplify the composition and formulation of the rations for ruminants, the digestive process within the rumen requires special mention.

5.1 Energy metabolism

Not all energy digested by animals is utilized for production. Substantial losses set in first, which differ significantly from raw material to raw material. Figure 5.1 illustrates the different stages of energy metabolism in ruminants

Figure 5.1 – The utilization of energy by ruminants



Therefore, not all digested energy is utilized for production (finishing or milk production). Significant losses occur as a result of essential functions. This implies that the longer an animal stands at the feedlot the longer energy will be "wasted" on maintenance. This aspect will be frequently discussed further on in this document.

To complicate matters somewhat, the gross energy of all raw materials is exactly the same. That is the reason why raw materials are easily included in rations for the wrong reasons because they seem to be similar. Table 5.1 illustrates that although mealies and lucerne has almost the same gross energy, the metabolite energy level of mealies is almost 50% higher. This will naturally result in better animal performance.

Table 5.1 – Comparative energy values of feeds (MJ\kg dm)

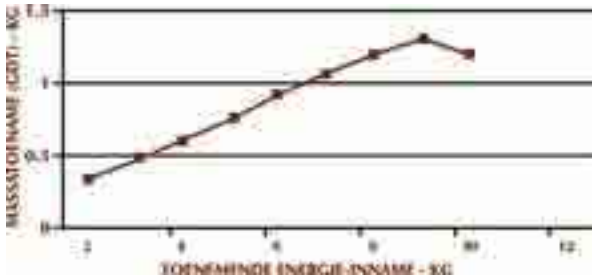
Feed	Lucerne hay	Mealiemeel
Metabolite energy	7.85	14.0
Energy in methane	1.29	11.27
Energy in urine	0.96	0.81
Digestive energy	10.1	16.1
Energy in manure	8.2	2.8
Gross energy	18.3	18.9

The above energy losses during the digestive process is therefore much higher in roughage than in energy rich raw materials like grains. This is another reason why finishing rations must contain the bare minimum of roughage and maximum power feed.

5.2 Power feed :Roughage ratio in finishing rations

The above indicates that a higher energy level (fuel) in the ration will ensure more rapid animal performance and that certain raw materials like grains provide more energy for production and finishing. Figure 5.2 puts it in perspective where the ratio between energy intake and animal performance is illustrated.

Figure 5.2 – The rectilinear effect of increased energy intake on weight gain



This figure illustrates a number of very important principles:

- the more net energy (grains) the animal eats the faster it will grow
- the faster the animal grows the shorter the required feed lot period will be
- the shorter the feedlot period the smaller unnecessary feed losses for maintenance will be

BUT

- the line eventually curves to the bottom which indicates an optimum point beyond which additional energy intake will suppress animal performance. In practice this is the point where the ration contains too little roughage and the animal experiences sub clinical or clinical symptoms of aci dosis. Adapting to feedlot rations and trough management also play a role and this will be discussed later.

While striving towards maximum power feed intake the optimum % roughage should also be taken. Table 5.2 represents very classical research in this regard., The power feed component (mealies and protein) was fed to oxen from ad lib to limited quantities while they could satisfy the rest of their appetite on roughage. The rest of the table reads like a story.

VAALDU BRAUNVIEH STOET

W.P. DU PLESSIS Sel: 082 8011 854

Bewese resultate dui hoë gehalte en kwaliteit aan

PRETORIA-SKOU 2003 -

Suid-Afrikaanse Kampioenskap Skou

- Raskampioen bul: Fathom
  Reserwe Raskampioen bul: Kelvi
  Senior Kampioen bul: Kelvi
  Junior Kampioen bul: Fathom
- Raskampioen koei: Fatima
  Senior kampioen koei: Fatima
- Prestasietoetsklas: Exil

Fathom

Kelvi

Fatima

VAALDU STOET WEN INTERRAS PRESTASIETOETSKLAS 2001 MET DIE BUL VAALDU FURCU

Vaaldu Teelbeleid: Konstitusie, vleis en melk, goeie lengte, fyner beenstruktuur en 'n fyn, kort haarbedekking

bpd 072 327 3244

Fase C Prestasietoetsklas Pretoria

2003 Fatima (kampioen)

2002 Fathom

2002 Exil

2004 Nina

Ons teel met die allerbeste prestasiegetoetste genetika in die wêreld

Table 5.2 – Feed intake, energy content thereof and feeding period of oxen that received different ratios of power feed to roughage.

Voerinname (kg DM / dag)			Energie inhoud (MJ ME /kg)	Aantal dae vir 73kg karkas	Totale voerin-name (kg)	Totale voer-koste (indeks)
Krag-voer	Ru-voer	To-taal				
8.4	1.9	10.3	12.6	70	796	100
6.1	3.3	9.4	11.6	93	966	108
4.9	4.0	8.9	11.0	113	1115	114
3.4	4.7	8.1	10.3	144	1348	122
2.4	5.5	7.9	9.5	200	1763	143

Some of the most important principles emanating from this experiment are the following:

- when power feed and roughage are fed ad lib but separately animals voluntarily select about 80% power feed and 20% roughage
- as power feed is being limited, the roughage intake increases but the total feed intake per day as well as the energy content of this mixture decreases
- the result of this is that animals need more days to gain the same amount of carcass weight
- a kg or daily ration which seems relatively cheap costs about 50% more at the end of the feedlot period

5.3 The role of protein in finishing rations

Although feedlot animals can grow and perform on rations, which contain only grain, and roughage the efficiency of animal performance is notably increased when the ration is balanced with the correct amount of raw protein. The latter is best illustrated on feed intake and feed conversion ratio (figure 5.3)

Figure 5.3 – The effect of raw protein (%) in the ration on voluntary feed intake and the efficiency of feed conversion

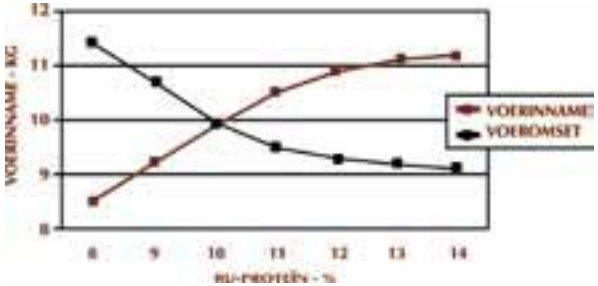


Table 5.2 illustrates how the maximum daily feed intake results in the most optimum animal performance. For that reason it is equally important to study the effect that raw protein in the ration would have on feed intake.

Daily feed intake increases to a level of about 12 to 13% raw protein where after it levels out. The efficiency of feed conversion improves likewise to approximately the same raw protein levels where after it levels out. This is thus the reason for the general guideline of 12 to 13% raw protein in finishing rations.

The source of raw protein is also important. The Act governing animal feed (Act 36\1947) stipulates that no more than 30% of the protein in finishing feed or 40% in complete finishing rations may be derived from ureum or other NPN sources. This means for example that 1 to 1.5% ureum can safely be included in such rations.

As regards natural protein sources, various research results confirm that small stock will gain economically should a part of the total protein content of the ration be derived from oil cake meal or fishmeal. Writer has not yet come across research confirming this practice in cattle.

6. The use of medicaments

The most commonly used medicaments in finishing are the following:

- growth stimulants
- growth boosters
- specifically targeted medication

6.1 Growth stimulants

Ear implants such as Ralgro, Compudose, revalor and others fall in this category. All these products are mainly synthetic hormones. Some products target the male and others the female growth hormones. These products stimulate muscle development and retards fat depositing. The hypothesis therefore exists that feedlot animals can be fed for a longer period without them becoming over fat.

The debate in regard to the use of these products will be with us for some time to come. It has to do with the possible residue in the meat and the effect thereof on the consumer. The product is very powerful. The enlargement of the teats of oxen can easily be observed when they are implanted. The product is also not recommended for use in breeding animals.

6.2 Growth boosters

This product is mixed in with rations as a liquid additive; well known brand names include Romensin, Taurotec, Avotan and others. They are better known as cocsidiostates ?? in chickens. These products are very safe but are often dragged into the forbidden debate dealing with ear implants.

These products work in a very simple way. All feed that had been taken are reduced during the digestive process to three fat acids ie vinegar acid, butter acid and propion acid,. The first is more favorable for maintenance while the latter two are more tended towards production.

Elbie Botha 082 800 3859
Wessel de Villiers 082 487 2948
e-pos: aebotha@execnet.co.za
Posbus 361 Parys 9585

VISIE:

Deurlopende volhoubare groeivermoë te verseker.

MISSIE:

Om aan die behoeftes van kliënte te voldoen deur die regte tipe bloedlyne optimaal te benut.

"Vleis, Melk en Moederlike Eienskappe"

These growth boosters merely change the vinegar acid to butter and propion acid and make available more favorable energy for production or finishing. These products are very safe and do not affect reproduction in any way.

6.3 Specifically targeted medication

All strategic feed additives fall into this category for instance chromium, buffers and other medicaments but the most important in this group is Zinc Basitrazyne. High energy rations tend to cause liver abscesses which suppress animal performance. Zinc basitrazyne prevents such abscesses and these substances are equally safe and need not be debated.

Table 6.1 – The effect of Taurotec and Ralgro during the finishing of weaners

Variables	Treatments			
	Control	Taurotec	Ralgro	Combination
ADG kg	1.09	1.36	1.34	1.42
Feed intake kg	7.94	8.76	8.34	8.94
Feed conversion kg\kg	7.28	6.44	6.22	6.30
Slaughter %	52.40	54.30	52.40	54.70
Net margin				
R index	100	331	278	368

The improvement in ADG, feed intake and feed conversion explains why these products are combined by most feedlots in South Africa.

6.4 Improve slaughter percentage

Zilmac is mixed in the feed during the last 30 days prior to slaughter. This increases the blood circulation to fat and muscle fiber. In his way the tempo at which fat is broken down is increased and the tempo at which fat is deposited is delayed. Likewise the tempo of muscle development is speeded up with the accompanying delay in the breaking down of muscle fiber. In short, muscle growth is stimulated at the expense of fat depositing. This results in a higher ADG, lower feed intake and improved feed conversion. The most noticeable trait is a substantial increase in the slaughter percentage.

A 48-hour withdrawal period prior to slaughter is recommended. In practice a period of about 48 hours passes from loading at the feedlot up to the point of slaughter.

7. Mixing facilities and equipment

7.1 Storing of raw materials

- Record keeping of individual raw materials and medicaments
- Protection against rodents

7.2 Mincing and mixing facilities

* Hammer mill: ensures uniform fine texture for homogeneous mixing
* Feed mixer: guard against under mixing or over mixing

7.3 Scale and handling facilities

- Monitor animal performance
- Record keeping

7.4 Pens

* Water troughs clean daily
* Feeding trough must be placed in order to ease regular feeding
* Feeding trough space approximately 30cm per animal
* Pen space approximately 12.5 square meters in wet season

7.5 Adaptation pens and hospital

- Very important for sound management of the enterprise

8. Animal Health Management

Please get advice from a representative of an animal health company for a complete health program. This is a case of sticking to what you do best.

The aim is to act pro actively in order not to harm animal performance. Important aspects in this regard are vaccinations, antibiotics and internal and external parasites.

9. Problem solving and feed trough management

The most common problems in the feedlot are the following:

9.1 Coupled to management

- Injuries and bruises
- Stress
- Poor animal performance
- Down grading of carcasses

9.2 Coupled to feeding

- Low feed intake
- Bloating
- Runny stomach
- Kidney stones
- Stress
- Laminitis

9.3 Coupled to health

- Respiratory diseases
- Liver abscesses
- Measles
- Parafilaria
- Flies and midges
- Internal and external parasites

10. The economy of finishing

Because animals are kept and fed in a controlled environment the finishing of stock can be a very predictable enterprise. Under these conditions animal performance is reasonably predictable.

Herma Braunvieh stoet/stud

bpd 072 327 3244

Die Braunvieh in die bergagtige Gauteng, rooiwater en galsiekte veld

Gemiddelde kalf gewig
Verse 35kg
Bulle 39kg
Janine 13 kalwers
in 17 jaar
IKP = 382
dae

Tweefontein
Posbus 149
Bronkhorstspruit
1020
Tel: 013 93 22839
Sel: 083 267 3620

The following schedule (Table 10.1) makes it possible for an operator to within the limits of biological variation, draw up an operational budget for his branch..

Table 10.1 Operational branch budget of a feedlot

A	B	C	D	E	F
				(i)	(ii)
1	Starting weight	(kg)	x	240	240
2	End weight	(kg)	x	400	400
3	Weight increase	(kg)	(D2-D1)	160	160
4	Feedlot period	(days)	x	110	100
5	ADG	(kg)	(D3/D4)	1.45	1.60
6	Total feed intake	(kg)	x	1000	909
7	Voluntary feed intake\day	(kg/day)	(D6/D4)	9.09	9.09
8	Feed conversion ratio	(kg/kg)	(D6/D3)	6.25	5.68
9	Carcass mass	(kg)	x	220	240
10	Slaughter	(%)	(D9/D2)	55.0	60.0
11	Slaughter price	(R/kg)	x	12.00	12.00
12	Income				
13	Carcass value	(R)	(D9xD11)	2640.00	2880.00
14	Less expenditure:				
15	Acquisition price	(R/kg)	x	6.00	5.80
16	Acquisition value	(R/anim)	(D1xD16)	1440.00	1392.00
17	Price of fodder	(R/tun)	x	720.00	720.00
18	Total feeding costs	(R/anim)	(D6xD17)	720.00	654.48
19	Growth stimulants	(R/ani)	x	5.00	5.00
20	Dip costs	(R/ani)	x	2.50	2.50
21	Dosing costs	(R/ani)	x	2.50	2.50
22	Other medication	(R/ani)	x	5.00	5.00
23	Other costs	(spes.)	x	0.00	0.00
24	Total expenditure	(R/ani)	(D16;18 tot 19)	2175.00	2061.48
25	Profit above specified costs	(R/dier)	(D13-D24)	465.00	818.52

11. Alternative finishing practices

Alternative finishing practices can be compared to the fuel pedal of a motor vehicle. It all boils down to the question how fast you wish to reach your destination., The faster the destination must be reached the more energy the animal must take (step on the fuel pedal). During this process a very critical change occurs in the rumen of the animal. A reasonably neutral pH in the rumen, associated with celluloses (the digestion of roughage) must make way for a lower, more acid pH synonymous with the digestion of carbohydrates. In common language we change the beast into a pig of chicken.

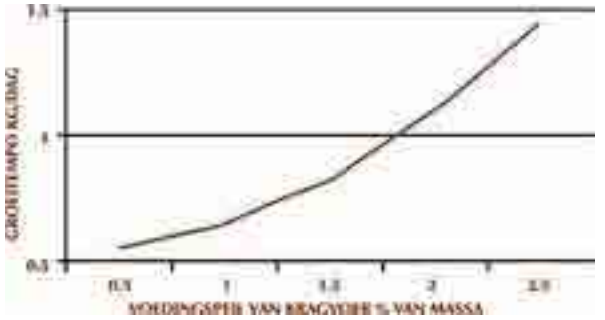
The critical point at which this happens has not yet been thoroughly researched but it would appear as though it is in the order when supplements are given at approximately 1% of the body weight. In practice however replacement feeding starts here and not supplement feeding, in other words, the animals lie next to the lick troughs and graze less often.

One can literally draw up comparative scales (table 11.1) in respect of the provision of additional nutrients.

Tabel 11.1 – Incremental practices of nutrient provision as percentage of the animal's total mass or the total feed intake

	Intake as % of 330kg animal	total intake
Animal salt	0.04	1.5
P6 lick	0.06	2.o
Winter lick	0.13	4.5
Production lick	0.30	10.1
Super 15 supplement @ 2 kg	0.60	20.2
Super 15 supplement @ 4 kg	1.2	40.4
Finishing meal @ 8 kg	2.4	80.8
Complete fodder ad lib	3.00	100.0

The nature and extent of animal performance that will be obtained from each of these practices are dependent on the animal, the grazing and the composition of the supplement. The expected pattern of animal performance is illustrated in Figure 11.1. At lower levels of supplementing, incremental increases in growth may be expected while at higher levels of supplementing a rectilinear response may be expected.



Three typical experiments may shed more light on expected animal performance,. The first experiment (Table 11.2) was done on winter grazing while the next two experiments (Tables 11.3 and 11.4) were done on summer grazing.

Table 11.2 – The effect of various practices applied for the duration of winter

Lick\Fodder	Intake per day (kg Power feed	Roughage	ADG (kg)
Lick supplement	2.0	4.5	0.4
Finishing fodder @ 1.0%	2.0	3.8	0.4
Finishing fodder @ 1.5%	3.0	3,2	0.6
Finishing fodder @ 2.0%	4.0	2.6	0.9
Finishing odder @ 2.5%	5.0	2.2	1.1

Table 11.3 – The effect of various practices applied for the duration of summer

Lick\Fodder	Intake per day (kg)	ADG (kg)
None	-	0.46
Phosphate salt lick	0.164	0.65
Production lick	0.924	0.90
Finishing fodder (%/mass)	0.75%	1.36
Finishing fodder (%/mass)	1.50%	1.66

Ludke
BRAUNVIEH

Ludke Braunvieh is 'n familiesaak, met sy ontstaan in 1986. Ons boer in van die ergste Hartwater, Rooiwater en Galsiekte veld in die land.
Ons diere is uiters:

- Aanpasbaar
- Vrugbaar

Met die volgende voortreflike eienskappe:

- Dubbeldoel
- Vleiskwaliteit
- Kruisteel

Through selection breeding we have bred and selected quality in each new generation. We have sold cows, heifers and bulls to various farmers in South Africa and neighbouring countries. There is a strong demand for our breeding stock as well as bulls for crossbreeding and studbreeding.

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Table 11.4 – Finishing systems with animals that had not yet cut any teeth

Lick\Fodder	Intake per day (kg)	ADG (kg)
None	-	0.93
Production lick	1.4	1.28
Finishing fodder @ 0.6%/m	2.0	1.36
Finishing fodder @ 1.2%/m	4.0	1.66

Some of these results are astonishingly similar while others appear rather strange. This merely illustrates that mechanically, animals do not react the same but that it is dictated by the environment and other factors. The tendencies that do occur can however be regarded as a directive in line with which recommendations can be made.

It is therefore advisable that a producer should start a practice that will more probably than not conform to his expectations. Animal performance must be monitored and only then can adaptations be made in line with the fuel pedal of a motor vehicle.

12. General guidelines for planning

12.1 Cattle of all ages require approximately 1000 kg fodder per animal per finishing period

12.2 The daily fodder intake of a feedlot ration is approximately 3% of the animal's carcass mass.

12.3 The feedlot period of older animals is shorter than that of younger animals because of the physiological growth stage and carcass mass\fodder intake.

12.4 Use the following as guideline for planning purposes:

Type of animal	Fodder intake\day	Feeding period (days)
Light weaners	8.0	125
Heavy weaners	9.0	115
18 month old oxen	11.0	90
30 month old oxen	13.0	75
Old cows	15.0	65

12.5 Plan thoroughly and keep record

13. Different mixing ratios

13.1 Total mixed ration

The above term implies that all fodder ingredients are included ie mealies (energy), roughage and protein.

The following may be used as guideline to adapt animals in the feedlot to receive such high energy rations –

Table 13.1 – Three rations (kg) for implementation in the feedlot

Ingredients	Adaptation	Growth	Finishing
Lotmix 85	50	50	50
Mealiemeel	700	700	700
Roughage	300	250	200

The principle of adaptation is reflected in the initial inclusion of a high level of roughage and the gradual lowering thereof.

In these rations roughage merely helps the digestion process and provides very little nutrients. Poor roughage such as wheat straw and field grass may therefore be added in powder form. More expensive roughage can be utilized more economically in sheep and dairy rations.

Energy is reflected in the form of mealies. It may be replaced with other energy sources in equal parts (see table 4.1). Hominy chop is currently a common alternative, which experimentally and on account of its higher fat content, gives better results than mealies.

13.2 Finishing meel

This is merely the mealie and protein parts of TMR. The roughage is given additionally, separately and freely in a practice known as the "cafeteria system."

In a feedlot roughage is naturally put out on straw shelves. However, it is believed that animals take in roughage from grazing and they then receive only the finishing meel at the feeding troughs. The amount to be given is normally given as a % of the body mass (refer figure 11.1).

A typical mixing prescription (kg) in respect of such finishing meel is

Lotmix	50
Mealiemeel	850 – 950

13.3 Production lick to growth meel

Refer firstly to feeding practices discussed in table 11.1 and figure 11.1. Under specific conditions the producer would want to finish his stock from the veld. Alternatively he would wish to let his heifers grow out or to give supplement feeding to his bulls. All these unique practices have one common denominator ie WHAT SHOULD THE WEIGHT OF THE ANIMALS BE WITHIN HOW MANY DAYS ? That would determine the required ADG and the latter would determine exactly which supplement should be given (See tables 11.2, 11.3 and 11.4). The effectiveness of this form of supplement feeding can only be determined if the intake and growth are recorded.

This would be a determining factor when deciding on a mixing ratio to be used under specific conditions.

Here salt may be regarded as a hand brake and may be discarded provided that the level of intake is not excessive. Monitor the intake first where after adaptations may be made.

Table 13.2 Different mixing ratios (kg) for Production lick to Growth meel and the respective compilations (%)

Ingredients					
Mealiemeel	850	750	650	550	450
Lotmix 85	50	50	50	50	50
Salt	50	50	50	50	50
TOTAL	950	850	750	650	550
Protein content	12.6	13.0	13.6	14.2	15.1
Ureum content	1.5	1.7	1.9	2.2	2.6
Salt	5.3	5.9	6.8	7.7	9.1

Utilise beef cattle AI as an economical tool

Dr Chrisjan vd Vyver

South Africa remains one of the countries in the world that do not utilize beef cattle AI to its fullest potential. Increased economical pressure will cause farmers to again look at aids such as AI to farm more economically.

Preventing sexual diseases

AI in South Africa started as a means to control sexual diseases, which were beyond control. To this day Fibrosis, Thrichomonism, Brucellosis, etc. cause serious financial losses in beef herds. The easiest way to fight sexual diseases is still to eliminate the bull that spreads the disease.

Certain viral diseases may very well be transmitted by way of frozen semen and it should therefore be ensured that the semen to be used be obtained from an institution that do the full compliment of quarantine tests. One of the most negative attitudes towards beef cattle AI is still semen tapped from so-called under-the-tree-bulls because conception is normally very disappointing and possible undetected viruses may be spread.

Genetic progress

Progeny with a better feed conversion ratio is obtained by using the best bulls on the total population in the country. The benefit is naturally permanent and is carried over to the progeny. An outstanding Braunvieh bull such as BS3314, Christopher Fabian Meatwagon, gives small calves with more milk in his daughters and is the ideal bull to breed replacement females. The outstanding type and functionality also has a longevity benefit.

Improve indirect management

By implementing a simple AI program management is improved indirectly as a result of calving seasons, the culling of non-pregnant animals, identification, etc.

Cheaper than a herd bull

Move 100 heifers closer to the house, paint their tails and put them through the crush once per day and paint their tails again. After 3 days they will go into the crush out of habit. After 8 weeks of insemination and using 2% bulls, the costs should be as follows:

- 200 doses semen & sheaths @ R50.00 – R10 000.00
- 2 bulls @ R10 000 bull/replace 50% per year – R10 000,00
- Costs: AI with paint – R20 000.00
- 4% bulls, of which 50% are also replaced annually, would alone have cost R20 000. Synchronization with AI cost a little more.

The economical benefit of AI by using bulls with a breeding value of +10kg at weaning mass will have the effect that each AI calf will weigh 5kg heavier – Remember, 50% of his genetics come from the dam. At R9/kg weaner price, your calves would be 5kg x R9 = R45/calf worth more. If you have 100 calves – R4 500 more for your calves from the feedlot. We can play with these mathematical calculations at lib, AI still remains cheaper than using bulls and adequate quality bulls for natural mating are simply not available.

Access to hybrid vigor with cross breeding

In cooperation with the various breed societies Taurus markets the semen of 27 beef breeds. Bulls are selected in cooperation with the societies as the best in the business. Of these bulls were sold for more than R60 000 but by virtue of AI their semen is available to all in the industry at R30 – R60/dose.

Hybrid vigor for beef production is very high and definitively holds profit benefits by marketing a stronger, faster growing calf. Terminal crossings like the Belgian Blue-breed is also available which improves slaughter percentages with up to 65%. Please do the calculation in respect of economical benefit.

Summary

Beef AI is not fully utilized in South Africa. Heat observation is simplified by using "Kamars" paint or synchronization. AI is a simple technique and holds substantial benefits for the beef cattle farmer. Courses are available countrywide - please contact Andy Rothman on 082 77 00 480.

For more information in respect of the beef cattle semen marketed by Taurus, please contact your closest Taurus consultant or Joël Kotze on 082 578 5724 e-mail promo@taurus.co.za or visit the Taurus web site at www.taurus.co.za ■

HARMAN BRAUNVIEH
STUD | STOETERY

VISIE

Dit is ons visie om met beeste te boer wat maklik kalf, vinnig groei, algemeen goed aangepas & gehard is, met 'n rustige temperament & 'n bogemiddelde vermoë om melk & vleis te produseer op strawwe hartwater, galsiekte & roolwater veld.

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- Om diere te selekteer
  - Wat aan die rasstandaarde voldoen.
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What is Performance testing

Dolf Cloete

Performance testing is a selection and management aid for increased profitability of beef production. As the saying goes "To measure is to know" – in today's economical climate it is more important than ever.

Purpose of the Scheme

1. To make available to beef cattle farmers objective performance information and breeding values for the identification and selection of the best performing animals.
2. To provide to beef cattle farmers management information for the improvement of their management practices.
3. To use available information to increase the biological and economical effectiveness of beef production.

What does the scheme entail ?

The scheme encompasses all the various phases of an animal's life cycle. From birth to weaning right through to the post weaning growth phase.

After the calf is weaned there are various methods to determine post-weaning growth. The breeder can therefore take 12 and 18-month weights or do a Phase C or D test.

What progress may be expected ?

The two most important traits influencing the biological effectiveness of a beef enterprise are reproduction tempo and weaning weights. In the Scheme reproduction tempo is measured by intercalving periods (ICP's) and weaning weight by the 205-day weight. In all herds participating in the Scheme weaning weight increased by 1,3 kg per annum – a total increase of 55kg or 33% over 41 years. ICP decreased (improved) with 1 day per year – a total improvement of 28 days or 6.3% over 27 years. ■

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Faks: 051 4363689
Sel :082 8004686
e-pos: benzahn@telkomsa.net

The Vleissentraal

National Performance Test Class

Dr. Nico Schutte

The Vleissentraal National Performance Test class has been presented at the Pretoria International Show for more than 25 years. The winner was initially selected on the basis of a points total obtained from the performance indexes of the bull (70%) and his visual appearance based on functional efficiency (30%).

More often than not it was the bull with the highest performance indexes that came out the winner. The aim of this competition is however not to identify so-called "shooters" but rather to show bulls with proven performance (measured in a controlled growth experiment) and exceptional functional appearance. A winner is then appointed based on interbreed norms.

This change had the effect that more bulls with less obvious faults were lured to the class. All bulls naturally still qualify on the basis of their performance being far above the average – a test that they had already passed.

It is therefore not a competition between breeds – an interbreed competition – but a show where the best of all breeds are shown and the most outstanding bull within his own breed standards is selected as the winner

This requirement naturally challenges the judges that must be well informed in respect of each breed that is represented. A panel of three judges has been used for the past number of years.

Being the winner of the Performance Test class in fact means that the relevant bull had competed with the representatives of the other breeds and that, with the position that the bull holds within its breed, he was considered better than the positions that the other participants hold within their respective breeds.

It is a bull performance test for beef and dual-purpose breeds (in fact also competitive in respect of meat) and therefore meat traits, balance, breeding potential, walking ability and especially manliness should be judged. These characteristics normally make up the total picture that the winner should reflect in order to beat the other outstanding representatives. ■

Wenner 2001

Winner 2005

FELIX DIALE BRAUNVIEH STUD

Contact Felix Diale Cell: 072 719 5030 Email: true_crony@yahoo.com PO Box 13 Zeerust 2865

I was impressed by the impact that the Braunvieh has in Crossbreeding in the Marico Bushveld where I grew up. I am a young man inspired by my father and farmers like Ponki Makinita who are very successful cattle farmers in our region. Everyone in our region and Botswana wants Ponki's cattle.

I bought my first Braunvieh stud cattle from Pat Wethmar at Bapsfontein.

Look out for Felix Diale Braunvieh Stud!

Bull selection

Dolf Cloete

Your choice of a bull will be determined by your breeding objectives and such choice will have a very important effect on your herd because the herd sire's daughters will for the next 10 years or so, after you have stopped using the relevant sire, still be in your herd.

Although bulls represent only 3 – 4% of a herd their genetic contribution to each calf harvest is around 50%. 87% of a calf's genetic compilation is determined by bulls that were used in the herd in the previous three generations. Up to 90% of the genetic improvement of a herd is largely due to the correct bull selection.

Selection priorities

The bull must be selected with the purpose of retaining the favorable qualities in the cowherd as well as to improve the poor qualities. One should have a definite and clear purpose and the bull that you select must conform to these requirements.

Don't buy a bull on his appearance alone. Arrange your selection priorities in order of importance. Such list could look like this –

- Fertility
- Length
- Width
- Muscling
- Growth potential
- Milk – weaning mass
- Coat quality

Such a list could be endless and the longer it is the more difficult it would be to find a bull that conforms to all the requirements and the slower your selection improvement would be. For this reason you should concentrate on economically important traits and forget about so-called fancy points.

Hereditability

Hereditability is also important when it comes to the selection of a herd sire. Certain characteristics are more hereditable than others and improvement in certain traits will therefore be faster than in others. According to available literature the hereditability of the following traits are is follows

HIGH	MEDIUM	LOW
Scrotum circumference	Shoulder height	Body height
Mass	Skin thickness	Feed conversion
Growth	Fertility	General appearance
Birth mass	Eye pigmentation	
Sheath \ Foreskin		
Eye muscle		
Leg and claw thickness		

The selection of a bull on appearance only without any aids is futile. There are nowadays enough breeders in each breed that do performance testing that sell bulls with indexes and BLUP values to facilitate your bull selection based on figures that are important to you as buyer.

Traits that should be taken into account

Fertility – Testes – Calving records of the dam – Semen test – Libido – High correlation with gestation percentage – Walking ability – Legs and joints – Claws – Adaptability – Breed choice – Variation within the breed

Don't ever base your choice of a herd sire on either appearance alone or performance figures alone. Always use a healthy balance between the two to select your herd sire. ■

Japie Bornman
Mooidam
Posbus 343
Bultfontein
9670

JABORN BRAUNVIEH

Tel: 051 853 2243 Sel: 082 553 3889 E-pos: bornman1@internet.co.za

bpd 072 327 3244

Sedert 1957 word met Braunvieh op Mooidam geboer. Vandag selekteer ons streng vir vrugbaarheid, funksionele doeltreffendheid en maak ons gebruik van 'n wye genepoel. Nog nooit is vroulike diere ingekoop, maar word daar gereeld bulle ingekoop van bekende telers in ons ras

BLUP

Dr Helena Theron

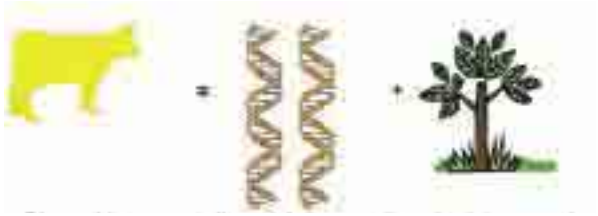
Why do farmers use BLUP breeding values ?

It is the easiest way to select the best breeding animals. This is especially important with regard to the selection of bulls that play a significant role in the production of their progeny.

What is an animal's breeding value?

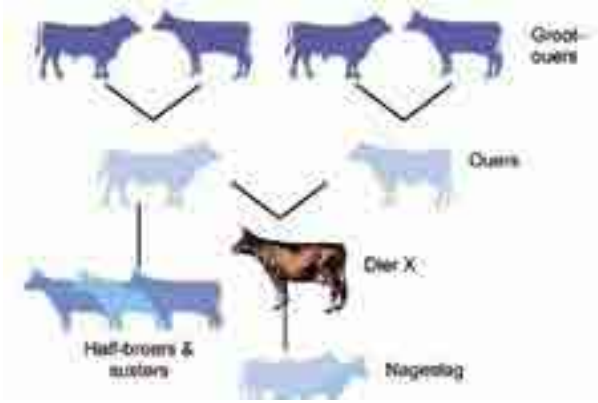
The breeding value of an animal for weaning mass for example is an indication of the genetic value of the relevant animal for weaning mass as well as its value as a parent. In other words, it is an indication of the amount of genetics for weaning mass that the animal will transfer to its progeny.

Production = Genetics + Environment



What makes selection of animals rather problematic is that the environment and more specifically what an animal eats, has a significant influence on the eventual performance of the relevant animal. For example, a dairy cow may be genetically superior but if she is not fed properly she will not reach her full production potential. Conversely, it is very easy to feed an animal with poor potential so that she would eventually appear far better that what she actually is. On comparing the breeding values of animals the playing field is evened out – environmental influences are removed from the equation with only the genetic effects remaining.

Pedigree information plays an important part in the calculation of breeding values because related animals share the same genes and because parents transfer 50% of their genes to their progeny.



The estimation of breeding values

BLUP (Best Linear Unbiased Prediction) is a method used to estimate breeding values. Breeding values are estimated by comparing animals that were exposed to the same environment. Statistical corrections for certain effects such as age of the dam at calving, herd and year of birth, etc. are taken into account. Pedigree information ie the performance of the animals' family like parents, brothers and sisters, progeny etc. are also taken into account. Animals participating in the South African Performance testing schemes are already being measured and the breeders receive breeding values for their animals. Breeding values are being estimated by the Agricultural Research Council 's Animal Improvement institute (ARC-AII.)

Hypothetically speaking, say a dairy cow has a breeding value for milk of +100kg or a beef bull has a breeding value for weaning weight of +6kg. What does it in effect mean?

The breeding values of animals are always relative to each other. In the case of dairy cows breeding values in 2000 were taken as zero. A dairy cow with an EBVmilk (breeding value) of +100kg indicates that the cow's genetic ability is 100kg per lactation better than that of other cows in 2000. An animal with a breeding value of +100kg is therefore a better choice than one with a breeding value of say –20kg. EBV weaning direct breeding values are interpreted in the same way.

Accuracy of breeding values

The more information at hand in respect of the performance of an animal the higher the accuracy of the breeding value. Accurates fluctuate between 0 and 99%.

A feature of quantitative gene working is that most animals have an average production while few animals display extreme traits. It is often the animals bordering on the extreme that bring about genetic improvement of a certain trait.

During the recent past the use of breeding values overseas as well as in South Africa have become very popular. One of the main benefits of breeding values is that it is directly comparable. Breeding values of animals in Gauteng can therefore be directly compared to the breeding values of animals in the Western Cape or elsewhere.

Information to breeders

The Agricultural Research Council's Animal Improvement Institute (ARC-AII) do annual estimations for 17 beef breeds and six monthly estimations for 4 dairy breeds. ARC-AII also participates in international analysis for dairy breeds (INTERBULL). International breeding values or "Multiple across country evaluations" (MACE) breeding values are also available for foreign dairy bulls that do not yet have any daughters in South Africa.

Herd profiles

Breeders annually receive a herd profile with useful breeding information. The herd averages can be compared to breed averages. The breeding values of individual animals are also listed.

One of the many success stories in animal breeding: The milk production of South African Holstein heifers in Milk Recording has over the past 20 years shown an average genetic improvement of 800kg per lactation (for the first lactation).

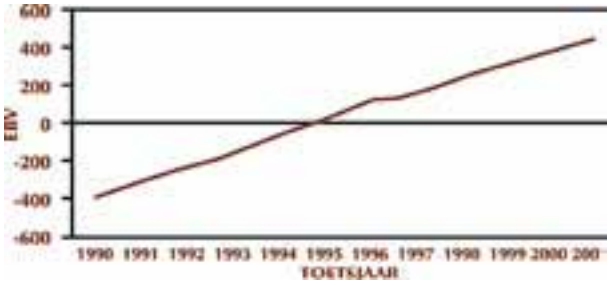


Figure 1: The genetic tendency for milk production of first lactation Holstein cows.

Examples of genetic solutions for in herd problems:

Beef breeds:

For smaller calves at birth: Select parents with low birth direct breeding values. For heavier weaners select parents with high weaning direct and weaning maternal breeding values. Good milk production of cows is indicated with high weaning maternal breeding values.

For increased profit in feedlots, select as follows: High ADG (average daily gain), low feed conversion (kg fodder eaten for each kg mass increase) and high Kleiber ratio (growth efficiency).

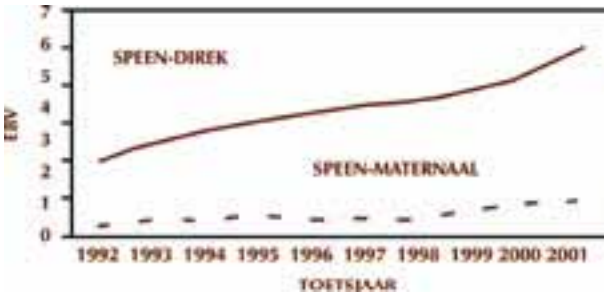


Figure 2: Genetic improvement in weaning mass for one of South Africa's beef breeds. Breeding values (EBVs) for weaning mass indicated in kg

Increased fertility in the herd by selecting bulls with high scrotum circumference and calving tempo breeding values. Breeding values for meat quality will soon be available.

Dairy breeds:

The following breeding values are available for production traits: kg milk, kg and % butter fat, kg and % protein. Conformation and udder traits are like a photograph of a cow in figures. Breeding values are available.

Research in respect of breeding values for somatic cell count, longevity and cow efficiency are currently being done. MACE breeding values (international breeding values) on the South African scale are available on the web at www.arc.aii.agric.za (under Divisions/Quantitative Genetics). ■

For more information please contact:

Dr Helena Theron: Helena@arc.agric.za

Beef cattle:

Bobbie van der Westhuizen: Bobbie@arc.agric.za
Frans Jordaan: Frans@arc.agric.za
Khathu Nephawe: KNephawe@arc.agric.za
Louisa Marais: Louisa@arc.agric.za

Dairy cattle:

Bernice Mostert: Bernice@arc.agric.za
Norman Maiwashe: Norman@arc.agric.za
Cuthbert Banga: Cuthbert@arc.agric.za
Gaby Warren: Gaby@arc.agric.za

Courses:

Zelda Liebenberg: Zelda@arc.agric.za (012-672-9023)

The ABC of breeding values

Leslie Bergh
LNR-Lewendehawe Besigheidsafdeling, Irene / ARC-Livestock Business Division, Irene

Introduction

Let us be frank: Breeding values are not the alpha and omega of breeding. It is – like performance test indexes – however a very valuable selection tool provided it is used purposefully and in a balanced fashion in combination with other aids such as functional evaluation. In this regard it is necessary that breeders should always ensure that their priorities are still right. Reproduction (fertility) must always be number one. If not, you are looking for trouble – the kind that is going to cost you a lot of money – irrespective of the tool that you use (or don't use).

It is however equally important to have a very clear vision in respect of your breeding program ie what are your breeding objectives? (You know the saying that if you don't know where you are going your chances are 100% that you will never get there !) As is the case with other aids such as performance test indexes, breeding values can also be applied incorrectly. It is then not the tool (breeding value) that is of no use – it is the user (breeder) that is at fault – and possibly also his advisor\consultant. Ensure therefore that if you need assistance with the use of breeding values, you get advice from the right people.

Let us once and for all ?? another myth. The fact that you measure a certain trait in your herd (performance test) does not necessarily mean that you must select animals with the highest (or lowest) breeding values for such trait – it will depend on your breeding objectives. Take shoulder height for instance. If it is your breeding objective to breed medium frame animals your will naturally not select bulls with a very high shoulder height just because they were measured in Phase C or D ! The mere measuring of a trait has no bearing on how you will utilize the relevant information. (If that were so it would boil down to saying that if you use a compass you must always walk in a northerly direction).

What is BLUP?

BLUP (Best Linear Unbiased Prediction) is merely the method used to derive breeding values – the so-called estimated breeding values or EBVs.

What then are EBV'S?

- An animal's EBV is a prediction of his genetic ability, i.e. how future progeny of this animal should perform for this trait within the particular breed.
- The following performance data and pedigree data is used in the calculation of EBVs:
  - The performance of an animal relative to its contemporaries (animals exposed to exactly the same environmental conditions);
  - Similarly, performance of all the animal's relatives (parents, siblings, progeny, etc.), taking into account the heritability of the trait;
  - The performance in other traits, taking into account the genetic correlations between traits; and
  - The genetic links between herds, years, seasons, groups, etc.
- EBVs are not static – an animal's EBVs can change and become more accurate as more and more information becomes available from one year to the next.
- EBVs are expressed in the unit of measurement – e.g. kg for weight EBVs;
- The BLUP method effectively separates environmental effects from genetic effects, making it possible to compare the genetic merit or breeding value (EBV) of animals across years, herds, seasons, etc., provided, of course, that genetic links are available. (The lack of genetic links across breeds is the reason why EBVs are NOT directly comparable across breeds).
- EBVs are expressed as a deviation from the base or reference year.
- The accuracy value (varying between 0 and 99%) accompanying an EBV is an indication of the amount of information available for calculating that particular EBV. If an accuracy value is relatively low, it usually is because the animal itself was not tested for that trait.
- EBVs can be calculated for animals not tested themselves for that particular trait (e.g. young animals and sex limited traits), using the animal's performance in other (correlated) traits and the performance of the animal's relatives.
- BLUP methodology makes it possible to separate direct effects from maternal effects. (E.g. for weaning weight the direct EBV is a reflection of the calf's own prewean growth ability, while the maternal EBV is a reflection of the dam's mothering ability).

EBVs combine an animal's own performance, its pedigree performance and its progeny performance into one figure, making it a powerful tool for accurate selection of animals for economic important traits. ■

BeefPro Professional beef management software

Leslie Bergh
LNR-Lewendehawe Besigheidsafdeling, Irene / ARC-Livestock Business Division, Irene

Important features

- Complete herd management program
- Links animals to management groups (ie farms, camps, treatments, feeding groups, etc)
- Matings
- Pregnancy examinations
- Births
- Pedigrees & registrations
- Embryo flushing and implants
- Weights
- Performance testing (all phases)
- Inspections
- Linear classification (functional evaluation)
- Reasons for culling
- Sales
- Herd health, etc.
- Developed by the Agricultural Research Council (ARC) of South Africa
- Joint project with private software supplier (BenguelaSoft BK)
- Developed for South African needs
- Conforms to the requirements of the ARC (National Beef Improvement Scheme), the SA Stud Book and most societies
- Can also be used as an independent beef management program by commercial beef farmers
- Equally suitable to both stud and commercial herds
- MS Windows operating system
- Language option of Afrikaans or English
- The only beef management program with performance test calculations in accordance with the ARC National Beef Improvement Scheme's protocol, formulas, methods, standard values and correction factors
- Electronic capturing of animal weights from electronic scales*
- Electronic data submission to and capturing from ARC and Stud Book
- Easy and quick
- Format as required by INTERGIS
- Data base population from INTERGIS
- Data base population with data of certain other beef management software
- Birth notifications submitted to Stud Book
- Capturing of computer numbers * Logix electronic users
- Submission of Performance test data to ARC
- Capturing of performance test data of Phases A, B, C & D*
- Capturing of breeding values
- Calculation of inbreeding coefficients for possible matings
- Prevents unplanned inbreeding
- Data exchange with Genus 2000 (matings optimalisation (optimerings ???) program)
- Pedigree information
- Breeding values
- User friendly
- Logical menu
- Quick and easy data import screens – standard and user adaptable
- Powerful search, sorting and selection functions
- Various standard and user adaptable selection and man agement reports
- Reports
- Weighing lists
- Performance tests
- Cow progeny summaries
- Pedigrees
- Inspection lists
- Sales catalogues
- Transfers \ cancellations
- Lists of codes and descriptions
- Management group lists
- Management diary
- Records routine and ad hoc management duties
- Reminds you of tasks to be performed
- Address list
- Name, postal address, telephone, cell and fax numbers, e-mail addresses etc.
- Prints address labels
- Handy for use with marketing of animals, the placing of orders and services to be applied for

- The only beef management software that stores both of ficial (INTERGIS) and BeefPro processed indexes etc.
- Extended data control and fault searching functions
- Warning when invalid data is captured or when important data is missing
- Prevents invalid\incomplete data being sent to Studbook\ ARC ie invalid parent, weight or test data
- Missing computer number
- Invalid age variation of test groups
- Photo of animal may be stored and displayed with animal's record
- General notes may be stored with each animal
- Stock registers
- Medicine and vaccines
- Semen
- The only beef management software with country wide consumer support and marketing by ARC officials and private agents
- Continued consumer driven development and upgrading
- ARC keeps a "wish list"
- ARC coordinates priorities for new development\changes

Coming soon ...

- Integration with "Pocket PC" computers (with Windows Mobile OS)
- Integration with the ARC grazing management program (Stock Manager)
- Integration with a financial management program
- Record keeping of stock numbers and total weight per group and the total herd
- Other wish list priorities

Why BeefPro ?

The purpose of the development of BeefPro by the ARC is to assist stud breeders as well as other beef farmers with the effective management of their herds as regards record keeping, administration, performance testing, registration and general management. In short to help you, the farmer, to increase your profit margin. Thus our slogan – BeefPro – Your Profit Partner

The Animal Recording and Improvement group of the ARC is naturally in the most ideal position to develop a program that would answer to most, if not all, the needs of breeders and beef producers. We merely mention a few aspects –

- The ARC's Animal Recording and Improvement group has direct access to the protocol, procedures, calculation methods, correction factors and standard values used in performance test data calculations.
- The ARC's Animal Recording and Improvement group undertakes ongoing research to further develop and refine these aspects.
- In accordance with the Act such research results remain the intellectual property of the ARC and may not be made available to other concerns or persons. This in effect means that BeefPro is the only software package of which the index calculations, corrected weights, etc are exactly the same as the official calculations of the National Beef Improvement Scheme.
- ARC is a member of ICA (International Committee for Animal Recording) and is therefore on the forefront of international development (and renders valuable contributions themselves) with regard to animal recording, performance testing and breeding value estimations.
- The ARC's division Animal Improvement has a large capacity and wide infra structure (especially via our regional offices and technical staff) which puts us in a very favorable position to render country wide services for a program such as BeefPro in terms of marketing, the installation of programs, to establish what the needs of users are, to render after sales customer service, etc.

What does BeefPro offer the commercial beef farmer ?
As mentioned, BeefPro is equally suitable to stud and commercial herds and may be used as an independent beef management program or as an integral part of stud breeding and\or performance testing by die National Beef Improvement Scheme of the ARC. Most of the management functions that BeefPro provides (example: the linking of animals to management groups, matings, pregnancy examinations, births, weighing, animal health, sales, reasons for culling, etc) are applicable to all cattle – irrespective of it being stud or commercial animals. It is only a small number of functions in BeefPro that have direct bearing on registrations\stud breeding of animals (example: inspections and linear classification) that will mainly be used by stud breeders. (A commercial beef farmer can naturally inspect his animals himself in order to establish which are good enough for breeding and record keeping or the reasons why others were culled.)

As regards performance testing BeefPro is the only beef management software that does all performance test calculations exactly as it is done by the ARC's National Beef Improvement Scheme. Most commercial beef farmers will probably only be interested in the index calculations of traits that can be measured on their cows, calves and replacement heifers (example: weaning weights of all calves and post weaning weights of replacement heifers). Only the few functions in BeefPro that have bearing on the growth tests of bulls (example: feed intake, body measurements and ultrasonic measurements of carcass traits) will probably not be used by commercial beef farmers.

The only other BeefPro functions that commercial beef farmers that are not members of the National Beef Improvement Scheme of the ARC will not use are those in respect of electronic data posting and capturing (example: performance test data submitted to the ARC and calculated performance test data and breeding value capturing.

Computer requirements

Minimum system specifications:

- IBM friendly Pentium II or more powerful computer with:
- 128Mb or larger RAM (depending on the Windows version)
- 100Mb hard drive space
- Windows 98, 2000, 2003, XP or NT
- Recommended system specifications:
- Pentium 4 2GHz computer with:
- 512Mb RAM
- 100Mb hard drive space
- Windows 2000, XP or 2003

Price

The normal selling price of BeefPro is R3500 (VAT included). Members of breeders' societies that underwrite BeefPro qualify for a special discount on the normal selling price. For more information please contact Mr Leslie Bergh (see contact details hereunder) or your breeders society:

The special price includes:

- Free data transfer of tie animals in your herd(s) from INTERGIS and\or certain farm software
- Free upgrading during the 1st year
- Free telephonic user support for the first year

License fee (compulsory)

Includes all upgrading and free telephonic user support. R500 license fee per program per year. ■

More information:

Please contact:

Leslie Bergh
Tel: (012) 672 9145
Sel: 082 801 2026
Faks: (012) 672 9087
E-pos: leslie@arc.agric.za

Johan de Jager
Tel: (012) 672 9054
Sel: 083 305 1042
Faks: (012) 672 9002
E-pos: jjager@arc.agric.za

Website www.beefpro.net

Links - Other websites

Logix: www.logix.org.za
LNR Nasionale Vleisbeesverbeteringskema: www.arc-aii.agric.za
SA Stamboek: www.studbook.co.za
SA Vereniging vir Veekunde: www.sasas.co.za

BeefPro™

Professionele Vleisbeesbestuur Sagteware

Jou winsvennoot!

The influence of Scrotal twisting and other genital abnormalities on the reproductive fitness of breeding sires

Dr Pierre van Rooyen
SA Stud book

Beef breeders are familiar with the fact that one of the most important tools in beef production is the use of healthy, well-developed, reproductively fit breeding sires. This fact therefore emphasizes the concern that many bulls with abnormalities and dysfunctional genitalia are in fact being used as herd sires.

Bearing in mind that it is estimated that, economically speaking, for the commercial farmer reproduction is five times more important than carcass quality, it becomes clear why breeders should be encouraged to pay more attention to the evaluation of the reproductive fitness of their herd sires.

It is essential that breeders should learn to regularly examine the genitalia of their herd sires (palpate) in order to identify the most common testicular and other abnormalities. A further thorough clinical examination of the genitalia by a veterinarian from time to time is also very important. Remember, where a breeding dam represents only half of her calf, the herd sire contributes 50% towards the genetic compilation of the progeny of all the cows that he fertilizes.

1. The most common genital abnormalities

1.1 Testicular hypoplasia:

This is where the one testicle (mostly the left one) is significantly smaller than the other one. This has a proven negative influence on semen production and is hereditary. This could cause ovarian hypoplasia in female progeny. Such bulls are however able to breed and should be strongly discriminated against.

1.2 Cryptorchidism

Due to incomplete dropping out from the torso cavity one or both testes are absent. Such bulls should not be used for breeding due to spermatogenesis (semen production) not being able to occur in a testicle that cannot move freely, which regulates the critical temperature control necessary for spermatogenesis.

1.3 Epididymitis:

Infection of the epididymitis

1.4 Orchitis:

Infection of the testes itself. Such testes can recover but a complete morphological semen test should first be done before the bull is used.

1.5 Degeneration of the testis:

This normally occurs and is easily recognizable when testes are pulpated.

1.6 Abnormal penis.

1.7 Long fleshy sheath

1.8 Foreskin prolapse

2. Scrotal abnormalities

Certain scrotal abnormalities are rather common but does not receive the attention that it justly deserves.

2.1 Scrotal twisting

It was found at some stage in the stud industry that only 46% of all bulls in Phase C at a bull test station at the time had normally hanging scrota. It was also found that in 80% of bulls with a twisted scrotum the twisting was towards the left.

Thorough examination of such bulls indicated that the shape of the testis was normal and that the twisted scrota were caused by the way in which the raphe scroti or joining membrane was joined. It is therefore the scrotum itself that is twisted and not the testis.

When this membrane is joined directly in the middle of the scrota (viewed from the back) the scrota would hang normally (photograph 1). When it is joined to the right half of the scrotum, it pulls the whole scrotum to twist towards the left and vice versa (photograph 2).

On dissecting twisted scrota it was found that the testes were quite normally shaped. Semen evaluation and hormonal tests proved that the semen of the relevant bulls with twisted scrota was not affected as is the case with hypoplasia (one testicle smaller than the other).

Bezuidenhout Broers

SWARTBULT

- Braunvieh -

KOBUS
0823745822

PETRI
0828597023

ONS STREWE IS OM DIERE TE TEEL VANAF DIE VELD
BREEDTE, GOEIE BESPIERING, LENGTE VAN LYF ,
GEHARDHEID, VRUGBAARHEID, BAIE VLEIS;
SO ONTHOU DIE BRAUNVIEH'S MET DIE BE KUDDE KENMERK.

Palmietgat
POSBUS 102,
BRANDFORT 9400
bezmar@telkomsa.net

BRAUNVIEH IN DIE VRYSTAAT

Foto 1

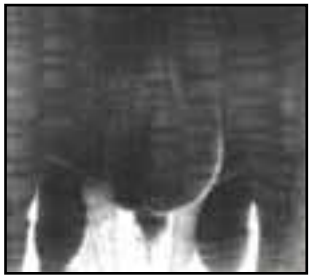


Foto 2

Foto 3

Foto 4

Foto 5

Although a twisted scrotum does not have a negative effect on the fertility of the bull it is relatively heritable. It was found that in cases of morphological asymmetry (the two halves of a body are not exactly symmetrical) the extent of asymmetry (in this case caused by the joining of the external scrotum joining membrane) increased in accordance with the inbreeding coefficient of a population. Although a bull therefore transfers scrotal twisting to his bull progeny it has no affect whatsoever on the genitalia of his female progeny. The analogical organ of the scrotum is not the same as the ovaries in heifers but in fact the external vulva.

Should it therefore not be discriminated against it could in practice have the affect that scrotal twisting in male progeny could increase as a result of its hereditability. This would means that a stage could be reached where the twisting would be so serious that it would definitely have a negative affect on semen production merely because of the physical stress on the blood flow and nervous system leading to the testis through the neck of the scrotum. Scrotal twisting is an abnormality and as such must be discriminated against.

2.2 Interlocking testicles

This abnormality is not clearly visible from the back but very prominent in many bulls when viewed from the bottom as can be seen in photograph 3 which was taken from the bottom.

Research has proved that this abnormality has nothing whatsoever to do with the shape of the testis itself but that it is an abnormality of the scrotum. The septum between the two testis is twisted and pushes the testis into a position resembling a "koeksister".

Testis removed by dissection from the scrotum of a bull with extreme interlocking proved to have quite a normal shape (photograph 4). When the empty scrotum was refilled with water it once again took on the shape that it had with the testis in position (photograph 5). It was therefore clear upon dissection that the scrotum and more specifically the septum scroti, which divides the scrotum in two halves, was twisted which caused the tips of the testis to curl towards each other creating the impression that it was interlocked.

2.3 Other scrotal abnormalities

From a breeding point of view it is essential that a herd sire should have a normal, well developed scrotum. The scrotum with its muscle layers, fiber-like layers and external epidermis, supports the testis, protects them and helps to maintain the lower than body temperature (+4C below body temperature) necessary for active spermatogenesis.

Other scrotal abnormalities, which are merely mentioned in literature, are a split scrotum and a scrotum with horizontal testis. No research has however been done in this regard and the effects of these abnormalities are merely being guessed at.

An abnormality that prohibits the effective functioning of the scrotum should however be seen in a serious light due to the harmful effect thereof on the most delicate organs in the body namely the testis.

In summary it could be stated that where bulls present with any of the above abnormalities, the stud industry was duty bound to discriminate there against. Excellent bulls with scrotal abnormalities should rather be used in the commercial industry where they are not used to breed bull progeny. ■

HARMARí BRAUNVIEH STOET

Ons boer in die Zeerust Bosveld op strawwe hartwater, galsiekte en rooiwater veld. Ons maak reeds vir meer as 25 jaar gebruik van Braunvieh bulle in ons kommersiële kudde waar ons speenkalwers vir die voerkraalmark produseer. Ons verkoop ons speenkalwers tussen 4 - 5 maande met 'n gewig van 200 - 220kg.

15 jaar gelede het ons met 'n Braunvieh stoet begin om juis geskikte en aangepasde bulle vir ons eie behoefte te teel. Sedertdien het verskeie kommersiële telers in ons gebied Braunviehbulle in hulle kuddes begin gebruik met groot sukses.

bpd 072 327 3244

Theuns Du Preez Sel: 082 970 6872 of Tel: 018-6423179 • Harman Du Preez Sel: 073 162 5500 of Tel: 018-6423720 Posbus 544 Zeerust 2865

PIET DE VILLIERS

Reflecting on 50 years

FEBRUARY 10, 1956

I am indeed privileged to reflect on 50 joy filled years as Braunvieh stud farmer in the Stella region in the Northwest Province. I have learned during this extended period to enjoy the good times and to survive the bad times. During this period we have lived through droughts but have also experienced abundant times, as is the case this year. Fortunately we remember the prosperity and joy of good times much longer. I can safely say today that my wife has forever been my only partner in stud breeding. She, the children and the Braunvieh's are my motivation to work and together they are responsible for the joy in my life.

I participated at many shows and have experienced many things – I won many times but also lost sometimes. However, my losses only served as motivation. It normally benefited me far more than harmed me, because each time I had to improve. I like winning – a good competitor definitely participate with the purpose of winning.

To me the activities of the society were a hobby. I kept busy with that while others played golf or tennis. It was in fact my life – to work for the breed that I love. It kept me on my toes and sometimes I had to think fast and improvise.

I bought my first seven cattle from Uncle Flippie Albertyn. I learned from him as well as from Uncle Hennie and Dr Wim Verbeek. Thereafter I got to know Uncle Kemp and Uncle Owen. The one did not want to hear about me and the other one was deaf. He could not hear what I said. In this way I could not hear and understand all that I wished to and my progress was therefore not as fast as I would have wished. However, I wanted to know and for that reason I continued to learn. I came across Dr Jan at Standerton. We became good friends and he taught me to develop my ability to observe and to use it.

Anna and I went to Switzerland in 1968 where we were tutored for 23 days by two world renown masters in the field ie Dr W Engeler and Dr A Schichetti about blood lines, breeding values and how to orchestrate matings to reach specific objectives

There I realised that I have never seen a decent "Braunvieh" animal and it felt as though I knew nothing whatsoever about cattle. It took us three years to absorb the shock somewhat. We decided to try again and things went far better. We brought in the bull Markus from Switzerland. This bull significantly impacted on my herd and I believe by virtue of his progeny also on other herds. Today I know that the Swiss animals advertised on the Internet and in journals do not always reflect the full story. For that reason it is important to visit Switzerland to get some first hand information.

In 1975 it became clear that some farmers were emphasizing milk traits far more while others emphasized beef traits, to such an extend that it caused the Society to move in two different directions. The dairy and the dual purpose. Irrespective of the fight it was a very exciting time. Emotions sometimes ran riot – everyone was of the opinion that his or her view was watertight and hot off the press as is the case when people feel strongly about a matter. Although not pleasant, it also has its place.

Differences of opinion are not wrong provided that it has at its core the best interests of the breed and its improvement at heart. If we can agree on that we will forever be winners. Stud breeding is like rugby – hard but nice. It is important that we should enjoy it.

On reflecting I divide the period of 50 years in various phases.

The first 18 years were certainly the nicest. I was young and inexperienced, irresponsible sometimes, sometimes a little bit naughty. Me and my old friend from Protem painted the Johannesburg show red. It felt as though we always asked the wrong question at the wrong time. We however also listened to well experience older breeders. We wanted to pick their minds as well.

The second phase of 10 years was a more responsible one and we learned that criticism dished out sometimes boomeranged on one.

For the next 10 y ears I was privileged to be at the helm. I had my own office and organised everything. There was money, ample judges, arrangements for shows and sales

were he way that I wanted it to be. Then we had a little slip-up. Three bulls that were first in their class and another two that were second were culled a sale. Everybody wanted to know why and the one was dumber than the other. Then the inspiration came. I will receive the courage to say what should be said. On looking back I must point out that I always had the support of my Council. I remember the 1987 sale at Rob Ferreira, which was a total flop. Prices were very low. I was very upset at the Council Meeting after the sale and I thought it would be better to resign. Lou de Jager jumped up and took me by the arm and said: "You do not resign!"

He said that things would be better the following year and the full council supported him. The following year 1988 was indeed the best year. The fist heifer at that sale sold at R5000.00.

The last 12 years were wonderful times. Technology and improvement impacted significantly and I watch performance testing, computers, internet, BLUP, satellites and what not influencing the industry.

With the economy being rather difficult we find more and more part time farmers joining the industry. It is probably the very economic situation that causes new farmers to stand with one foot in a fulltime job and the other in farming. I must say that that is not my way of doing things. There is nothing better for me than to be with my cattle every day and to enjoy the peace that it brings – otherwise I would not want to farm.

The knowledge of the Master breeder and his initiatives is the golden tread running though stud breeding. If I could have 50 years all over again I would again wish to spend it with Braunvieh; I sometimes disappointed them but they never disappointed me. ■

Braunvieh regards
Piet & Anna de Villiers

Groot moeder van Sonneskyn Markus 8. Eerste Afrikaans geteelde SA Kampioen Koei op 7 jr Roosie. Sy was kampioen koei in 1962 en weer in 1965. Die enigste koei wat tot op datum twee nasionale kampioenskappe agtereenvolgens kon wen. Hierdie foto is geneem toe sy 11 jr oud was met haar negende kalf. Sy is dood op 21 jaar.

Sonneskyn David 7 (Makman) was die eerste dubbeldoel kampioen bul op die nasionale kampioenskappe van 1975 op die Johannesburgse skou.

Markus Schönenberg is uit Switzerland na Suid-Afrika ingevoer. Hy was die pa van Sonneskyn Markus 8.

The use of vaccine to promote reproduction efficiency

Dr WA Schultheiss (B.V.Sc. Hons; M.Med.Vet.(Gyn))
Schering-Plough Animal Health
Cell: 082 323 7019

Introduction

One of the most underestimated factors that have an influence on reproduction efficiency is the conceptus (embryonic and fetal) losses that occur during the period between conception and calving as well as from calving to the weaning of calves. Post weaning losses are not dealt with in this article.

As part of the plan to get the maximum sustainable profit per hectare one of the objectives is to have the eventual weaning percentage as close as possible to the conception percentage.

Apart from environmental conditions (climate and grazing factors) infectious conditions also cause losses, which may occur at any stage from conception to weaning.

Reactions associated with fever

Whether the cause is known or not, fever endangers the survival of the unborn conceptus. Fever and stress trigger a premature birth process. Examples of micro organisms that cause fever and abortions for which vaccines are available are the following:

Conditions caused by ticks: Babesiosis, Anaplasmosis and Heart water. Vaccine can be valuable especially in unstable marginal regions. Blood vaccines that provide extended protection are Asiatic Red water blood and Tick gal sickness blood. Both these vaccines may be administered simultaneously to replacement heifers and potential herd sires between the ages of 5 to 9 months.

On the other hand the sustained immunity of the African Red water blood vaccine is dependent, amongst others, on repeated exposure by virtue of contaminated ticks bites. Should cattle be dipped too clean or not have been exposed to ticks for an extended period, the protection against African red water will be lost and the animals will again be susceptible (this can happen within a couple of months). All blood vaccines are frozen and must be defrosted and administered exactly as indicated by the producer.

Venereal diseases: Campylobacter (Fibrosis) and Trichomoniasis. These conditions affect the dam without fever being present and manifest as repeated and extended estrus intervals. Vaccinate all bulls, heifers and cows with Campylobacter routine prior to the breeding season while two Trichomoniasis vaccinations should be done on the females in positives herds prior the start of the breeding season.

Bacterial diseases: Leptosporosis, Salmonellosis, Brucellosis
Viral diseases: Infectious Cattle Rhinotracheitis (IBR), Cattle Respiratory Sinsitial Virus (BRSV) and Cattle Viral Diarrhea (BVD)

The judicious use of vaccinations
Consult your veterinarian for a vaccination program that suits your breeding system. A few guidelines are -

1. Most live vaccines should not be used in pregnant heifers and cows.
2. If freeze-dried, the mixed vaccine must as soon as possible be injected with a sterile solution.
3. Don't bring it in direct sunlight prior to injection but store it in a coolbox with ice.
4. Do not keep unused vaccine for later use.

Uncertainty exists in respect of the use of the following two vaccines which are administered to prevent the under mentioned diseases that cause serious reproduction erosion in South African cattle herds –

A. Brucellosis RB-51 vaccine

a. Only to be used on females 4 months and older. As opposed to S19 vaccine, where vaccinated heifers can only from 18 months be exposed to serological (blood) tests, heifers that were vaccinated with RB-51 only can immediately be exposed to diagnostic serology. This speeds up the identification of carriers with almost one year.
b. RB-51 may be repeated to increase the number of cattle that are protected to more than 95% - without false positive diagnostic blood tests being obtained as is the case with S19 vaccine (where a single vaccination provides only about 65-75% protection against infection).
c. Inject heifers three times with RB-51 prior to first breeding – with the last injection no shorter than 3 weeks prior to first breeding: at 4 – 5, 8 – 10 and 12 – 15 months of age.
d. Older cows may annually be revaccinated with RB-51 from 30 to 60 days after calving and no sooner than 3 weeks prior to expected breeding. It is not always practi-

cal, but is recommended if the female was not sufficiently vaccinated as a heifer (as explained above).

B. Live BVD, IBR, BRSV and P13 – containing vaccines such as Jencine R4

a. Never to be used on herd sires. On bulls use only a non-activated BVD vaccine at six monthly intervals against temporary, natural BVD infection. The fever reaction may cause temporary sterility.

b. BVD permanent carriers, which occur as a result of infection of the fetus during ap proximately the first 125 days of pregnancy, can only be prevented if a live BVD vaccine like JencineR4 is administered no sooner than 21 days prior to breeding. The use of mostly more expensive inactivated BVD vaccines does not prevent permanent carriers effectively and neither does it provide extended protection as is the case with live vaccines.

c. As is the case with the RB51 vaccine the annual administrating of live BVD vaccine such as JencineR4 is not always practical during the open period from calving to concep tion due to extended calving seasons in commercial beef herds. Where breeding systems extend over the length of a year such as in dairies where cows are routinely examined about 30 days after calving, vaccination with JencineR4 is indeed possible from calving to conception. The small packaging (10 doses of 2 ml each) comes in handy.

d. To provide fetal protection again permanent infection (carriers) heifers must at least three times prior to first breeding be vaccinated with JencineR4. From 3 weeks of age, well ahead of pre weaning at 6 weeks (dairy) and 7 months (meat), at 8 – 10 and again at 12 – 18 months – 3 weeks prior to breeding at 12 – 15 (dairy) and 18 – 24 months (beef).

For protection against both Brucellosis and BVD it is essential that apart from a vaccination program the carriers be identified and eliminated. Consult your veterinarian for more information. There are no known harmful effects associated with the simultaneous administering of JencineR4 and RB-51 vaccines to non pregnant females. ■

Pfizer

Bovine Viral Diarrhoea

Affects all cattle (even Braunvieh)

Dr Chris van Dijk MMedVet(Bov) 082 789 4499

For every 100 cattle in South Africa, at least one is a carrier for BVD (bovine viral diarrhoea). Such a "persistently infected" (PI) animal can shed several billion-virus particles a day, serving as a reservoir of BVD in a herd. The frustrating thing is that beef farmers won't be able to pick out the PI animal just by looking at her – laboratory tests are indeed necessary to make a positive diagnosis of BVD.

BVD is present in up to 90% of herds in South Africa without the producer even realising this. BVD is one of the major reasons for the "repeat breeding syndrome" and lost embryos – there are however a number of other reasons but BVD is one, if not the most important reason why producers cannot get their cows pregnant. If it is only to counteract BVD, now is the time to introduce a proper structured biosecurity program to your enterprise.

BVD is a virus. Producers have likely already heard about Type 1 and Type 2 BVD. These are different genotypes, and within each, there are many different strains of BVD virus - that differ significantly in their ability to cause disease. It does however not matter which type or genotype is prevalent on your farm – if the animals are not protected against BVD they will experience disease, especially upper respiratory problems, abortions and even mortalities. Proper vaccination preferably with a modified live vaccine rendering foetal protection as well as a cross immunity between types is the first line of defence against BVD infection. By using a vaccine that stimulates inadequate or incomplete immunity you can think that your herd is protected but in fact you can be sitting with a highly susceptible herd.

BVD can cause one or more of the following problems: Abortion or early embryonic death, pneumonia, fever (a temp of 40°C or greater), diarrhoea, lameness and last but not the least immunosupression, allowing other diseases to rear their heads.

Susceptible animals don't necessarily get sick. Many show no signs of disease. Others can develop a fever with or without signs of pneumonia. Some will have mild to severe diarrhoea. Occasionally some infected animals will have ulcers in their mouths. Pregnant animals may abort anywhere between 1 and 8 months after exposure. It is very difficult to confirm BVD with an ordinary post mortem – specimens from various organs submitted for histopathology are the only way to confirm BVD infection without any doubt.

BVD virus is shed in the manure, into the air through exhaled droplets and in body secretions. It can be brought into a herd by a replacement animal or her unborn calf. Fence line contact with neighbour's cattle can also be a route of transmission.

Mutations happen with every 1000 to 10000 virus particles found in a PI animal. This fact should not be a problem to any responsible producer as a structured biosecurity program is the answer to your concerns over BVD. The three pillars of a BVD biosecurity program are as follows:

- Optimal vaccination against BVD
- Keep a closed herd
- Identify all Permanently Infected animals (PI animals) and cull them immediately

As many as 90% of unvaccinated animals in South Africa are antibody positive – this means that they have been exposed to the natural (field strain) virus at some time. After exposure there was an immune reaction and the exposed animal most probably developed immunity against the specific strain it was exposed to. If exposed to this specific strain at a later stage, the animal could mount an immune reaction, but this animal would not be immune to all the other field strains of the virus out there. Only by vaccinating animals with a trusted and proven vaccine we can ensure an almost 100% protection in susceptible animals, irrespective of the challenge strain.

Now where do PI animals come from? A PI animal develops when an unborn calf between 40 and 120 days of pregnancy is exposed in utero to the virus. If exposed after 120 days of pregnancy the calf will not become a PI animal but may abort, or will be born as a poor doer or even with some birth defects.

A PI animal can potentially be around for quite a while in a herd, stealthily shedding virus and slowly creating more PIs in the herds calves (exposed to the virus as foetuses in those first 120 days). What's more, all of a PI's offspring will also be PI. But, non-PI cows if infected between 40-120 days in utero can also have PI calves. It is important to remember that a PI animal is the only permanent carrier of BVD. The PI animal remains infectious for her lifetime (or his lifetime, if it's a bull), serving as a threat to other cattle. The PI animal is a threat to biosecurity when it is purchased and brought into a herd that has not been properly vaccinated. It's in such herds that major disasters are suffered. Don't count on being

able to pick out a PI animal in a group of cattle – some will fall behind (low average daily gain etc.) but most of them appear clinically normal. The only way to know for sure is to do a blood test or a skin test.

It's estimated that about 65% of the dairy herds in South Africa contain at least one PI animal. Some of the infected herds tested at laboratories have 10% or more PI animals. Producers concerned about the possibility of PI animals being present in their herds should contact their own vets, who'll know the proper samples to send into the laboratory. Any producer having reproductive problems or where animals are not producing milk optimally should test for BVD, a virus that has multiple effects because it can weaken the cow's immune system.

Producers who want to expand will want to test incoming animals for BVD. Isolate all incoming animals from the resident herd for at least 30 days and during this quarantine period test for BVD – if you identify PI animals immediately send them back to the seller or even better, cull the PI animal immediately. During the quarantine period all negative animals can be re-vaccinated. Make sure that the home herd is also properly vaccinated. It should also be noted that on occasion, it's the home herd that has caused BVD problems in purchased animals, versus the other way around.

An inexpensive way to "screen" a suspect herd for BVD - as an alternative to blood testing for the virus itself - is to focus on a group of young heifers between 6 and 10 months of age. Don't vaccinate them prior to six months of age, and then take blood samples from 10 of them. Instead of trying to isolate the virus, the lab should look for BVD antibodies. If the results come back with significant antibody titres, assume that you have at least one PI animal or several acute sick animals in the herd. With a negative test do not immediately jump to the conclusion that you do not have BVD in your herd. It can be that you randomly sampled 10 animals which have not been exposed to the virus or even worse, you are sitting with a highly susceptible herd with a very low immune status against BVD – if BVD enters a herd such as this the end result could be a total catastrophe.

While ideally a farmer needs to test everything on his farm, the bill can add up quickly. If you need to start somewhere, start with the adult cow herd, which after all brings in the money. Calf problems with BVD are less costly compared to major problems in the adult herd.

Even if a herd is well vaccinated, that PI animal can still cause trouble. You can still have reproductive problems, because the other cows foetuses are at risk. If the foetuses don't become PI animals in the first 40 to 120 days, then they can still be susceptible and can be killed in utero. Late-term abortions are often seen in PI herds. Over the years, there will be a build-up of PI animals in the herd.

As soon as you have identified and culled all the carrier animals, all newborn animals should be observed (preferably tested) to establish if they are possible carrier animals. After a period of one year your herd should be "cleared" of BVD providing that you do not buy any PI animals (cows, heifers, bulls) and that you vaccinate on a yearly basis. ■

Braunvieh Sosiaal

Boeredae en beoordelaarskursusse

Bennie Coetzer aan die woord tydens die beoordelaarskursus vir telers

Boere hou lekker boeredag op 15 April 2005

Braunvieh beoordelaarskursus

Die eerste boeredag op Welverdiend in Mei 2004 trek baie boere

by Cois op die plaas

Karel van der Walt van Voermol vertel die boere van die regte lekmengsels

Moretele boere kom kuier

Oom Piet leer die boere en Phillip van NWK Bpk tolk

Oom Piet De Villiers en Phillip Diutlwileng maak seker die boere weet hoe moet 'n bees nou eintlik lyk

Braunvieh telers skou op Vryburg 2005

Daar word ernstig meegeding vir die eerste plek

Die Braunvieh's is darem mooi beeste

Die vers lyk pragtig

Mooi is mooi

Skou op Vryburg is 'n ernstige saak

Beoordelaarskursus by die Wesselse

Almal eet en kuier lekker saam

Almal krap kop maar tot 'n slotsom sal daar gekom word

Die president aan die woord

Baie trek saam by Oom Phillip Wessels op die plaas vir die beoordelaarskursus op 1 Februarie 2006

Alpine Braunvieh Stud

1936 – 2006

My mother, Bettie Wessels, started this stud in 1936 with the acquisition of one bull and two cows. She bought the bull Sterling 607 from JJ Kruger on 17th March 1936. The two cows, Mollly 5th and Betty 2nd she bought from the van Zyl Brothers. Molly's first heifer calf Elsa was born on February 26, 1937.

During 1950 – 1964 two imported bulls ie "Orsino and Olmat" were used in the herd. From 1968 – 1975 the bull Hektop was used which was also imported from Switzerland. The first Braunvieh animals, which my mother imported herself, were the two cows HIRSCH and BIONDA in 1951. In 1964 she again imported a bull and two cows. The bull Kurt and the cow Gabi were from Switzerland while the cow Blumle heralded from Germany. In 1989 two bulls were again imported from Switzerland ie FINO and MILOR.

The aim was always to breed from a large gene pool, a vision which with time proved to have been very rewarding. The imported animals bred many favourable characteristics in respect of quality meat and adequate milk – the ideal dual-purpose animal that we wished to breed. In later years we also used imported embryos and semen in the herd.

Over the years the herd performed very well at shows and animals were exported to most neighboring countries. On May 17, 1950 the first group of bulls and females were exported in one batch to the then republic of the Belgian Congo. (today known as the Congo), Southern Rhodesia (today Zimbabwe) and Southwest Africa (today known as Namibia). These animals were unfortunately not recoded.

For the past 50 years since 1955 I have been actively managing the herd and have been in charge of the breeding program.

At this point I must tell the younger breeders how popular and in demand Braunvieh cattle were in the 1960's and 1970's. My friend, Jan de Bruin, Braunvieh farmer from the OTAVI district in Namibia, invited me each year to hunt kudu on his farm. Back then in wintertime farmers used to present their town friends with a buck as a gift and it was therefore my task to shoot a number of kudu for such a purpose. During my visits my friend would then contact neighboring cattle farmers and

take orders for Braunvieh bulls, which he himself could not supply. Some years I returned home with orders for up to 15 bulls.

One experience that stands out was in August 1974 when I was invited by the SADABANDEIRA in Angola to attend their show as a guest of honor. There to my surprise and joy I came across an entry of 17 animals – all from the Alpine stud. That then had been the reason for the invitation. They honored me with a medal, which is still in my safekeeping (see photograph), which gave me the freedom of the show – even free meals and rinks.

Braunvieh is definitely the best dual-purpose breed in the world and with purposeful promotion and the correct advertising to promote the breed to the new generation of farmers, it will no doubt reach even greater heights than in the past.

As the owner of the oldest Braunvieh herd I wish all breeders a very prosperous future.

Braunvieh regards
Phillip Wessels
Winburg ■

Vir interessantheid

Melk rekords van Braunvieh koeie oor 300 dae

1932-1933 G. Taylor, "Strong Fountain Muriel"
11,101 Lbs Melk, 460,781 Lbs Bottervet 4.15%

1937-1938 W.A. Copeman's "Bellboys Dairybell"
10,668 Lbs Melk 439,465 Lbs Bottervet 4.11%

1946 M.M & O.R. Dell's "Karsie Kloof Girlie"
11,639 Lbs Melk 455,835 Lbs Bottervet 3.92%

1951 M.M. & O.R. Dell's "Texas Bonnies"
11,750 Lbs Melk 497.8 Lbs Bottervet 4.24%

1952 D.A.G. Taylor's "Strong Fountain Mary Ann"
15,447 Lbs Melk 592,169 Lbs Bottervet 3.8%

~ALPINE~

Phillip en Katie Wessels
Posbus 150
Winburg 9420
Tel: 05242-1902
Sel: 0832542189

1936 — 2006

Die Braunvieh Stoet wat die toets van die tyd deurleef het

Ons strewe is steeds om vleisbeeste te teel wat baie melk produseer. Diere word op ekstensiewe veld toestande bedryf. Ons selekteer vir gehardheid op die natuurlike veld. Diere uit die kudde is baie aanpasbaar en vrugbaar met maklike kalwing. Daar is al na verskeie aangrensende lande uitgevoer & alle diere word prestasie getoets deur die LNR. Alpine is bekend vir vele nasionale kampioenskappe op skoue. Besoekers altyd welkom!

Strategic lick supplement for the breeding cow

Ulrich Müller, Voermol Feeds

The basic requirement for a breeding cow is to reproduce. The reproduction tempo (weaning and\or calving percentage) is therefore also the best gauge with which the cattle farmer can measure the success of his management skills.

Body mass

It is a well-known fact that there is a strong link between the body mass of a cow at mating and her ability to become pregnant. The heavier the cow, the better her chance to become pregnant (See Figure 1).

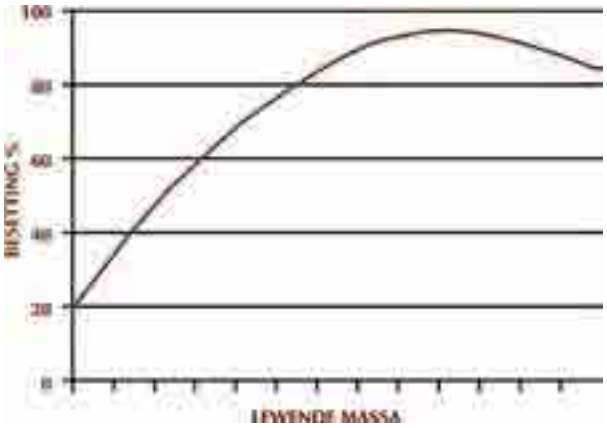


Figure 1: Link between pregnancy and body mass at mating

Calf interval

It is important when determining the calving percentage to take the calving interval into account as well. The ideal calving interval (intercalving period) is 365 days, in other words a cow that produces one calf per annum. With an extended mating season it is not possible and productivity decreases. It is therefore critical that the time and length of the mating season be so determined that the calving percentage and weaning mass be optimalised under specific conditions (mainly determined by the rainy season).

The basic food available for the breeding cow is natural grazing. The quality and quantity of natural grazing varies according to the seasons, rainfall, soil fertility, etc.

With increasing input costs and relatively low meat prices, a well-planned lick program is essential for the stock farmer. The purpose of supplement feeding is to utilize available grazing as effectively as possible. This is done by preventing excessive weight loss during the dry months when natural grazing is dry and to maximalise mass increase during the wet months, when the quality of natural grazing is good. Further, the excessive weight loss of grazing cows just after calving must be limited by providing a lick supplement.

A sound lick program as opposed to providing no lick supplement is worth approximately 35% in reconception and about 20 – 50 kg in weaning mass per weaner. Herewith a few ideas in regard to the planning of a lick program.

Lick program

The clever use of lick supplements will be very cost effective. It is of utmost importance to follow a well planned lick program, which, as opposed to no lick supplement, holds a reimbursement ratio of about 1 : 3. That is the input costs of the lick program in relation to the income from a higher weaning percentage and weaning mass as a result thereof.

As broad guideline the lick program may be divided into three phases, ie summer, winter and late winter. This three-phase lick program may be summarized as follows.

Phase	1	2	3
Season	Summer	Winter	Late Winter
Period	+/- 5 Months	+/-5 Months	+/-2 Months
Grazing	Green, high in Protein, animals increase in weight	Dry, low in protein, low disgest-ability and intake Is low	Dry, low in protein, disgest-ability, low volume and low intake
Purpose	Optimal mass Increase	Prevent weight loss	Prevent weightloss
Supplement	PHOSPHOR	PROTEIN	PROTEIN & ENERGY

This three-phase lick program serves as a broad guideline and must be adapted to suit specific conditions on each farm.

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bpd 072 327 3244

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Quality bulls always available

Contact: Phineas Motlogelwa
Cell 083 551 6576
PO Box 25
Sinoxana 2868

Phase 1 – Phosphor

During this phase natural grazing is green and animals increase in weight. Under these conditions growth is however limited by phosphor and should be supplemented at a minimum of 6 g/P/day.

Recommendation

Product	Recommended intake/day
Rumevite P6 / P12	120g – 200g
Voermol Phosphate block	120g – 200g
Voermol Superfos	150g – 300g

Phase 2 – Protein

Protein should be supplemented to prevent weight loss of grazing animals. Protein licks are also known as winter licks, ureum licks, maintenance licks or as a rumen stimulating lick.

As the name indicates, the protein content of the lick is critical because it must supplement the lack of protein in natural gazing.

Reaction to protein supplements

Dry natural gazing is low in protein, its digestibility is low and it is mostly tasteless. Intake is therefore low and animals loose weight. This can to a large extent be prevented by providing protein supplements, which will result in cattle being more productive.

The following figures are quoted in literature ie weight loss as a % of the maximum summer mass of cattle.

22 – 25% in the Eastern Highveld
13% in the Western Highveld
7% in 12 weeks in KZN bushveld
6% in 8 weeks in the sour veld of KZN
12% in the Eastern Cape

The effect of protein supplementation during the winter in the Potchefstroom region on recalving % is indicated in the under mentioned table. The table also contains figures of a similar experiment done in the Dundee area.

Year	Control		Protein lick	
	Potch	Dundee	Potch	Dundee
1	58	81	75	93
2	38	73	62	94
3	46	65	60	71
Average	47	73	66	86

Recommendation:

Product	Recommended intake/day
Premix 450/Sour veld lick	350g – 600g
High veld lick	375g – 700g
Rumevite cattle block / Cast block	375g – 550g
Dundee lick concentrate	See product guide

Phase 3 – Late Winter

During this phase natural grazing is still of a poor quality and in short supply. Protein and energy are therefore limited. This is a brief phase (+/- 60 days) but very strategic because it would, to a great extend, determine the condition of the breeding cow for the breeding season (see page 22). The suitable supplement in this respect is therefore a production lick.

Recommendation:

Voermol Production lick
Voermol Super 18 or a production lick where any of the following products are mixed with grain

- Premix 450/ Sour veld lick
- High veld lick
- Dundee lick concentrate

The recommended intake for a production lick is 1,5kg/cow/day.

Mating/Calving season

A lick program can only be successful where a mating season is in place in terms whereof calving can be scheduled approximately 3 months prior to natural grazing reaching its peak. In a cow's production cycle her feeding needs as well as that of her calf peak when the calf is about 3 months old.

In closing

For a cost effective lick program the lick, the production status of the cow and the quality of natural grazing must be coordinated. ■

Ulrich Muller C: 083 414 5928
E-mail: utm@mweb.co.za
Fax: 086 – 684 1628

Parasite control
For optimal production

Dr. Andy Hentzen 082 372 0307
Veterinary Feedlot Consultant

Parasites are part of all livestock production systems. In this article we will deal with the effect of parasites (both internal and external) on weaners and the results thereof for the feedlot.

Parasites that have a very real effect on production and which this article will address are internal parasites such as worms and liver snails and external parasites such as ticks, mites and lice. The effect of parasites on milk production, pregnancy figures etc will not be dealt with in this article.

It is common knowledge that parasite infested animals have a negative effect on production. Research in South Africa and in other countries proved that even sub clinical infestations impact negatively on production. Here I refer in particular to poor feed conversion, lower growth tempo (ADG) and poor grading.

The treatment of weaners (product of the primary producer) against internal parasites will result in the optimalisation of pre-weaning growth and the genetic potential is therefore used to the maximum. As a result of the optimal supply of nutrients in a worm free weaner, there is no damage to internal organs and\or negative effect on the metabolism. This benefits the farmer in that he can supply a product that promises the best mass/production up to the date of sale. The primary producer/farmer markets his product (the weaner) to the next member in the production chain ie the feedlot.

The feedlot is interested in the growth of the weaner. As the feedlot increases the weight of the weaner it comes into a more favorable position in that more meat can be produced for the consumer. The feedlot is absolutely depended on the feed conversion ability of each animal and it is here in particular where internal parasites have a definite negative impact. According to American researchers internal parasites affect feed conversion to the rate of 68% while weight increase is affected by 17% and the carcass by 15%. These are important factors for the feedlot. The effect on the carcass (qualitatively and quantitatively) are maybe not very well known in South Africa but should no doubt be taken into account. As internal parasites lower the immunity of the infested animal, they do not respond as well as they should to the vaccines administered by the feedlot with the result that mere sub optimal protection is obtained.

External parasites have a more direct affect. It causes mortalities and carrier conditions. Weaners with ticks, when exposed to a stressful situation, are prone to tick transmitted diseases. Carrier conditions cause mortalities when animals are exposed to stress and\or serve as source of infestation at the feedlot. Equipment such as needles, ear tags, irons, etc can be responsible for transmission of tick diseases from one animal to another. Although the chances are slim it had been observed at feedlots where animals are suddenly, after 8 or more weeks, identified with gal sickness.

Ticks bits cause damage to the skin, which is an impotent source of income for the feedlot. Biting lice and mites also cause direct damage to the skin. Itching and the accompanied scratching and rubbing cause the most damage however.

Parafilaria is also classified as an external parasite. The parasites cause tremendous damage to the skin as well as to the carcass. False bruising is observed on the carcass and big parts of the carcass are then removed. It takes a long time (up to 90 days and longer) to recover. The traditional distribution of this parasite in Limpopo is changing and incidents have lately been reported over a wider area.

It is clear therefore that internal and external parasites have a very negative effect on the weaner as well as on the carcass. For better production both must be treated. The responsibility rests with both the farmer and the feedlot to apply parasite control measures in order to provide the best product, economically speaking, to the consumer. ■

A good example hereof is the special packaging of 200 liters of Blitzdip Pour-on, which makes it a very cost effective product. Also Dipper, an automatic dip applicator that is a Bayer initiative. This product is being successfully used by most feedlots.

The product Veriben in its special packaging of 40 doses, which is used by feedlots against red water, is also very popular. This packaging considerably eases the use thereof by feedlots.

The feedlot-marketing unit of Bayer also supplies two options for the implantation of the three Synovex type growth stimulants free of charge to consumers. As part of its excellent after sales service Bayer also maintains the apparatus. The double concentrate Oxfen C dosing product means that only 5 ml/100kg is necessary to combat roundworm and milk lint worm in cattle.

Bayer's complete range of vaccines from Onderstepoort also provides wide coverage against the most common diseases at feedlots. Combinations of Anthrax and Clostridium (Sponge sickness) and Lame and Sponge sickness are available.

Pyramic MLV4 virus vaccine against IBR, BVD, BRSV and Pi3 is an international feedlot product, which receives wide recognition and is successfully used both locally as well as overseas and is available without prescription.

Bayer Animal Health also provides a choice of four different formulas of vitamin A, D and E. The package products contain a variety of ethical substances available on prescription from a vet ie a long working penicillin, a sulfa substance and an anti inflammatory substance. A Quinoline group of antibiotics and a combination of penicillin /streptomisine as well as supporting treatments for recovering animals.

Furthermore a choice of three formulas of ocsitetrasicline in the Hi-Tet-antibiotic group is available namely with a limited reaction, prolonged reaction for three days and ultra long for six days.

Cydectin's patented mocsidectine molucule is generally known to provide protection against a wide spectrum of internal and external parasites (including parafilaria) with a prolonged effect. It is the only endectoside that can be administered together with vitamin A and for which no generic supplement is available. For sheep feedlots Bayer provides a choice of 15 anti-parasitic remedies.

Enquiries: Mr Dawie Fourie C 082 651 9024
E-mail: dawie.fourie.df@bayer.co.za
Bayer Animal Health Division, tel. 011 921 5390
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Lede / Members

Ben Spies Familie
Posbus 28807, Danhof, 9310
Tell: (051) 436 1286
Sel: 083 282 3996
E-pos: benzahn@telkomsa.net

Bergland Koepel Stoetery (E.Botha)
Posbus 361, Parys, 9585
Tel: (016) 940 2698
Sel: 082 800 3859
E-pos: aebotha@execnet.co.za

Bester J.J.
Posbus 269, Vrede, 9835
Tel: (058) 913 1998
Sel: 083 469 1258
E-pos: hansbester@internext.co.za

Bezuidenhout Broers
Posbus 102, Brandfort, 9400
Tel: (051) 821 1920 / (051) 821 2061
Sel: 082 374 5022 / 082 859 7023
E-pos: bezmar@telkomsa.net

Bornman J.B.
Posbus 543, Bultfontein, 9670
Tel: (051) 853 2243
Sel: 082 553 3889
E-pos: bornmanj@internext.co.za

Bosduiwekop Boerdery
(A de Villiers)
Posbus 9, Petrusville, 8770
Tel: (0536612) Ask 1931
Sel: 083 276 4720

Buelaland BK (I.D. du Plessis)
Posbus 274, Dewetsdorp, 9940
Tel: (052) 112 3902
Sel: 082 804 2300

Coetzer P.J.
Posbus 559, Heilbron, 9650
Tel: (058) 852 1188
Sel: 083 766 6557

AC De Villiers Boerdery BK
P.D.W. De Villiers & Seun
Posbus 34, Kameel, 8603
Tel: (053) 983 0443
Sel: 082 670 6089

De Villiers H.B.
Posbus 332, Stella, 8650
Tel: (083982) Ask 3322
Sel: 082 920 7309
E-pos: devillierse@lantic.net

Du Plessis G.J.
Posbus 2345, Thabazimbi, 0380
Tel: (014) 777 1255
Sel: 082 863 6060

Du Plessis W.P.
Posbus 114, Warrenton, 8530
Tel: (053) 497 3799
Sel: 082 801 1854

Du Preez R.A.H.
Posbus 544, Zeerust, 2865
Tel: (018) 642 3179

Erasmus J.C.V.
Posbus, Steynsburg, 5920
Tel: (048) 884 0094

Fabel Stoerery
(Francois en Belinda du Plessis)
Posbus 941, Nigel, 1490
Tel: (011) 814 8500/084 500 0471
Sel: 084 500 0471
E-pos: fabel@absamail.co.za

Felix Diale
P.O. Box 13, Zeerust, 2865
Cell; 072 719 5030
Email: true-crony@yahoo.com

Dueler - Fitzgerald P.
Posbus 67762, Highveld, 0169
Tel: (012) 663 2115
Sel: 082 445 4456

Harman F.J.N.
Posbus 316, Zeerust, 2865
Tel: (018) 642 1596
Faks: (018) 642 1596
Sel: 083 265 6210
E-pos: coishar@gds.co.za

Havenga C.D.
Posbus 8, Petrusville, 8770
Tel: (0536612) Ask 1831
Sel: 082 821 1527
christopher@cdhbraunvieh.co.za
Web: www.cdhbraunvieh.co.za

Havenga J.D.
Posbus 111, Van der Kloof, 8771
Tel: (053) 664 0173
Sel: 082 578 5556
E-pos: kloofsig@cybertrade.co.za

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Posbus 25, Louis Trichardt, 0920
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Sel: 083 264 7130

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Marani Ernst Familie Trust
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Tel: (018) 468 1874
Sel: 082 743 4122
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Posbus 252, Olifantshoek, 8450
Tel: (053) 331 0137
Sel: 082 217 1793

Scheepers J.J.
Posbus 22, Laersdrif, 1065
Tel: (0132722) Ask 412
Sel: 082 853 5532

Swart J.J.
Posbus 73, Kestell, 9860
Tel: (058652) Ask 1230

Van der Merwe K.C.
Posbus 186, Oudtshoorn 6620
Tel: (044) 272 2700
Sel: 082 457 6130

Van Doesburgh J.M.P. (Mrs)
Posbus 744, Frankfort, 9830
Tel: (058) 813 3419
Sel: 072 211 5935

Van Zyl J.J.H.
Posbus 85, Dibeng, 8463
Tel: (053) 311 4437
Sel: 082 492 8123

Wessels C.M. (Mrs)
Posbus 139, Luckoff, 9982
Tel: (053) 204 0069

Wessels H.J.
Posbus 149, Bronkhorstspruit, 1020
Tel: (013) 932 2839
Sel: 083 267 3620

Wessels P.R.
Posbus 150, Winburg, 9420
Tel: (05242) Ask 1902
Sel: 083 264 2199

Wethmar P.M. (Mrs)
P.O. Box 914-1196, Wingate Park, 0153
Tell: (011) 964 1049
Cell: 082 558 3320
Email: patriciamary@mweb.co.za

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Now is the time that you should do one of the following –

1. Go to the web: www.braunvieh.co.za and complete the application form to become a member of the Braunvieh Cattle breeders society or
2 Contact the office in Bloemfontein (Tel: 051 430 4352) and ask that an application form be posted to you.
3. The most important is that you should complete it as soon as possible and submit it to the office at Box 7864, Bloemfontein 9300 to finalize your registration process timeously
4. Contact councilors and\or members in your area for assistance, advice and support and make sure that your become a member of the WINNING TEAM


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PIETER & ERIKA DE VILLIERS PO BOX 332 STELLA 8650
Cell: 082 920 7309 e-mail: devillierse@lantic.net