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AGRA CO-OPERATIVE LTD MEMBERS' NEWSLETTER

AGRA KOÖPERATIEF BPK SE LEDE NUUSBRIEF



AGRA STEL BEKEND NUWE PROFESSIONELE DIENSTE AFDELING

AGRA het 'n nuwe afdeling gestig, die Professionele Dienste Afdeling, om in die immergroeiende aanvraag na advies, opleiding en veeverskaffing te voldoen. Die afdeling staan onder die leiding van Pieter Hugo, wat baie jare lank in beheer van lewende hawe bemarking was asook Wessel Visser, Agra Pelssentrum, Kiep Lepen, Stoetveedienste (grootvee), Dr Rainer Hassel & Dr Axel Rothauge. Die nuwe afdeling vat al die kundigheid oor diereproduksie waarvoor AGRA beskik saam in een span om die Namibiese veeboer te help om sy produksie volhoubaar te verhoog.

Dienste wat deur die nuwe afdeling gelewer kan word is die volgende:

- Die Pelssentrum met sy bestaande pels-sorterings- en bemarkingsfunksie is deel van die nuwe afdeling maar verskaf nou ook adviesdienste met betrekking tot Karakoel- en pelsproduksie, byvoorbeeld die ontleding van veiligheidsresultate per individuele produsent om telingsdoelwitte- en riglyne op te stel en aan te pas. Kundiges in die **Professionele Dienste Afdeling** kan die Karakoelboer adviseer oor die aanpassing van sy teelbeleid om by markneigings aan te pas en nuwe opkomende Karakoelboere oplei om die regte soort pels op 'n volhoubare en winsgewende grondslag te produseer.
- Die bestaande Stoetveedienste vir grootvee, wat die bemarking van vee en wild en bemiddeling tussen verkoper en koper behels, val ook nou onder die nuwe afdeling. Die diens word uitgebrei om telingsadvies, die ontleding van teelstate soos BLUP en Breedplan asook die opleiding van boere in nuwe teeltegnieke in te sluit.
- Plaas- en produksiebeplanning gegrond op die veeproduksiestelsel, volhoubare weidingsbenutting en die bestaande of nuwe

plaasinfrastruktuur is 'n nuwe diens wat deur die afdeling aangebied gaan word. Dit sluit fisiese boerdery- en produksie-ontledings in om probleme wat produksie, volhoubaarheid en wins-gewendheid kniehalter te identifiseer en te oorkom.

- Die nuwe afdeling gaan belanghebbendes konsulteer en adviseer oor vee- en wildproduksie in die land, gebaseer op die beginsels van finansiële, sosiale en biologiese volhoubaarheid. Hierdie diens word nie net aan produsente gelewer nie, maar ook aan besluitnemers in die regering, semi-staat en nie-regerings-organisasies en ontwikkelingsagentskappe.

- Opleiding van opkomende boere en die aanbied van opknappingskursusse en inligtingsdae aan bestaande boere en voorligtingsbeamptes gaan 'n belangrike deel van die funksie van die nuwe afdeling wees. Opleiding kan formeel of informeel geskied en verkieslik ter plaatse sodat dit in onmiddellike verband met die alledaagse praktyk staan.

- Spesiale projekte wat die ontwikkeling van die Namibiese landboubedryf in die algemeen en die veesektor in die besonder aanmoedig, sal die nuwe afdeling se verantwoordelikheid wees en die ontwikkeling, implementering, monitering en ontleding van projekte insluit.

Die Professionele Dienste omvat alle gebiede van vee- en wildproduksie asook weidingsbestuur en veeartsenykundige advies. Waar ons self nie oor alle antwoorde beskik nie, sal ons nie skroom om addisionele kundigheid te betrek nie. Dit spreek vanself dat sulke gevorderde dienste nie meer, soos in die verlede, gratis aangebied kan word nie. Kontak ons by 061-2909208 of stuur 'n e-pos aan advies@agra.com.na of faks 'n boodskap na 061-2909327.

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Ons staan aan die begin van 'n nuwe jaar. Ek wil graag alle produsente 'n suksesvolle en geseënde 2009 toewens.

Ons stel met trots bekend die nuwe Professionele Dienste Afdeling, onder leiding van Pieter Hugo. Hierdie afdeling mik daarna om 'n volle pakket van professionele dienste aan die landbougemeenskap daar te stel. Kontak gerus enige van die spesialiste indien u verdere inligting rondom die Professionele Dienste Afdeling wil bekom.

Agra wil graag ook hierdie jaar wedersydse kommunikasie met sy lede bewerkstellig, ten einde maksimum diens en tevredenheid te verseker. Die RING is een voorbeeld en forum wat u hiervoor kan gebruik. Ons nooi u dus hartlik uit om met enige van Agra se bestuur kontak te maak of om ons Kliëntedienslyn te skakel by 290 9222 om u tevredenheid/ontevredenheid uit te spreek of voorstelle aan die hand te doen.

'n Nuwe redakteur van die RING gaan vanaf die volgende uitgawe vir die publikasie verantwoordelik wees. Albé Snyman vorm deel van Agra se bemarkingsspan en sal voortaan vir die Ring verantwoordelik wees. Ek wil ook graag van hierdie geleentheid gebruik maak om totsiens te sê aan alle produsente na 3½ jaar by Agra. Dit was vir my 'n voorreg om hierdie publikasie te hanteer en vir die geleentheid om saakmakende inligting aan Agra se lede te kon deurgee.

Beste wense en groete tot 'n volgende uitgawe!



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Die onderstaande lys van formele opleidingskursusse dien as voorbeeld vir wat die Professionele Dienste Afdeling vir u kan doen:

- Inleidende vleisbeesproduksie (5-dag kursus oor vleisbeesproduksiestelsels in Namibië • vleisbeesrasse • voeding van vleisbeeste • praktiese voer van beeste • praktiese beesversorging en hantering • kuddegesondheidsbestuur • bemarking, produkte en gehaltebeheer • produksierekords wat bestuur inlig).
- Gevorderde vleisbeesproduksie (5-dag kursus oor vleisbeeste op veldweiding • kampstelsels en weidingstelsels • uitdagings van veldbestuur • voedingsuitdagings • toegepaste kuddegesondheid • vleisbees-genetika en die teling van vleisbeeste • voortplantingstegnologie).
- Inleidende vleisskaap- en bokproduksie (5-dag kursus oor vleisskaap- en bokproduksiestelsels in Namibië • skaap- en bokrasse • voeding van vleisskape en bokke • praktiese voer van kleinvee • praktiese kleinveeversorging en hantering • kuddegesondheidsbestuur • bemarking, produkte en gehaltebeheer • produksierekords wat bestuur inlig).
- Gevorderde vleisskaap- en bokproduksie (5-dag kursus oor vleisskape en bokke op veldweiding • kampstelsels en weidingstelsels • uitdagings van veldbestuur • voedingsuitdagings • toegepaste kuddegesondheid • skaap en bok genetika en die teling van vleisskape en bokke • voortplantingstegnologie).
- Karakoelproduksie (5-dag kursus oor Karakoelproduksiestelsels in Namibië • voeding en die praktiese voer van Karakoelskape • bestuur van Karakoelskape op weiding • praktiese versorging en hantering van Karakoelskape en pelse • toegepaste kuddegesondheidsbestuur • pelswinning en pelsbeskrywing • genetika en die praktiese teling van Karakoelskape • bemarking, produkte en gehaltebeheer • produksierekords wat bestuur inlig).
- Melkproduksie (5-dag kursus oor intensiewe melkproduksiestelsels in Namibië • melkrasse: bees en bok • produksiesiklus van melkkoeie • reproduksierekords- en teikens • melkwinning en melkgehalte • mastitis • voeding en bestuur van lakterende melkkoeie • voeding en bestuur van droë koeie • voeding en bestuur van vervangingsverse en teelbulle • metaboliese siektes • kuddegesondheid • teling van melkbeeste • bemarking en produkte).
- Wildboerdery (5-dag kursus oor wildproduksiestelsels in Namibië • eienskappe en vereistes van die belangrikste wildsoorte • beplanning van die wildplaas en fasiliteite • wildbestuur: voeding, bevolkingsaanwas- en beheer • weidingsbestuur op die wildplaas • benutting van wild • wildprodukte, bemarking en gehaltebeheer).
- Kleinskaalse boerdery (5-dag kursus oor kleinskaalse produksiestelsels soos hoenderproduksie in die agterplaas • varkproduksie • konyne • tiliapiaproduksie in klein damme • groenteproduksie op klein skaal).
- Boerdery besigheidsbestuur (5-dag kursus oor doelstellings van die boerdery • finansiële bestuur en take • die besluitnemingsproses • ontleding en interpretasie van finansiële state • vergelykende vertakkingsontledings • finansiële beplanning en begrotingsbestuur • besigheidsplanne en strategiese beplanning • personeelbestuur • leierskap, beheer, motivering en toesig • hoe om gedragspatrone te verander • aanstelling, bevordering, ontwikkeling en ontslag • tydsbestuur en produktiwiteit • beoordeling en waardering van personeel • produkontwikkeling en bemarking).

Ons staan reg om 'n kursus of inligtingsdag spesiaal rondom u eie behoeftes te ontwerp. Tree met ons in verbinding om uit te vind wat ons vir u kan doen!

Pieter Hugo - Bestuurder: Professionele Dienste Afdeling
 Tel: 081 127 8522

INCREASING THE EFFICIENCY OF KARAKUL PELT PRODUCTION

BY ACCELERATED LAMBING



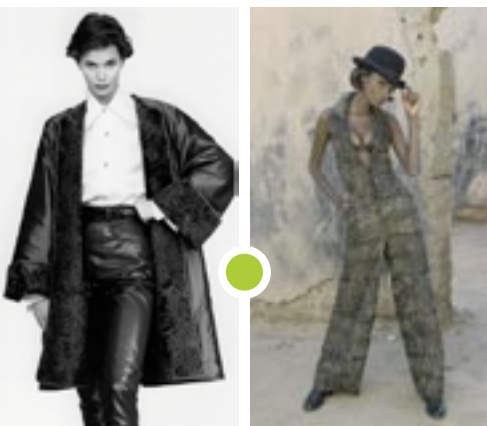
ANIMAL PRODUCTION

The Karakul sheep is called the “black diamond” of Namibia: “black”, because that is the dominant colour and “diamond”, because of the high value of its product, the pelt. Is it time to increase the production of pelts in Namibia?

Pelts – a luxury item

In contrast to other fur animals like mink and fox, the pelt is obtained from a day-old lamb and pelt quality decreases rapidly with increasing age of the lamb. The best pelts are obtained if lambs are slaughtered within 24 hours of their birth. A Karakul pelt is a unique product (see picture 1) and looks quite unlike other types of fur. It is used to make the most beautiful garments like long coats (for which more than 24 pelts per coat may be needed), jackets, vests and increasingly, lighter garments and accessories for easy wear. It is therefore in high demand by fashionable people who want to stand out in a crowd, but fashion changes and with it, the price of the pelt. If, as for the last two decades, there is peace in most parts of the world and the global economy is expanding, then people are content, money is easy and items made from Karakul pelts are fashionable, leading to high producer prices of pelts. But in times of economic downturns, war and disorder, when people are pessimistic or at least uneasy about their future, pelt items are seen as luxury goods

and demand shrinks, leading to a drop in the producer price of pelts. It may be that this is what is ahead of us, due to the sudden financial meltdown which started in the USA but is spreading rapidly to the countries of the developed world, the main buyers of our Karakul pelts.



Picture 1: Fashion changes, also in Karakul wear: then (left) ... and now (right).

swakara – a diamond better than the rest

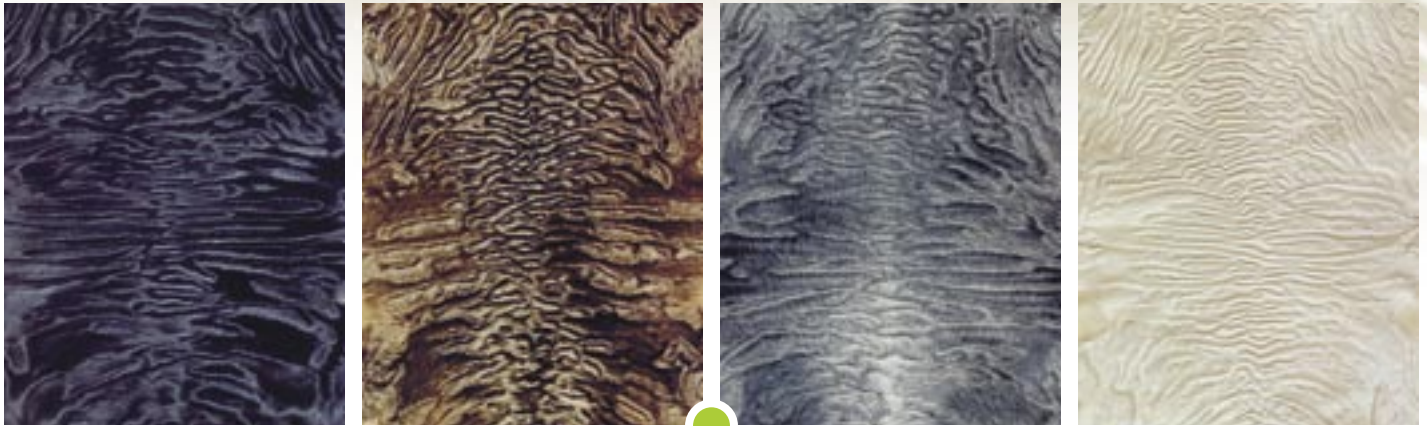
Karakul pelts from Southern Africa (predominantly from Namibia, but also those from Botswana and South Africa) have been branded successfully as “**swakara**” pelts by the Karakul Board of Namibia and are known for their consistently high quality. Quality of the pelt itself: its beauty, lustre (shine) and feel (texture) but also the quality of the pelt offering. **swakara** pelts are sold twice a year at international fur auctions in Copenhagen, Denmark. They are offered in lots of up to 400 pelts each but the prospective buyer does not see the whole lot but only a small sample. If he sees a sample he likes, he buys the lot.

If the complete lot should contain pelts that are not of the same type and quality as the sample he saw, he will be disappointed and will lose confidence in the seller. He might not buy from the same seller again. However, **swakara** lots are well sorted and the sample the buyer sees accurately reflects the remaining pelts in the lot. **swakara** stands for trustworthiness, quality and diligence all round and is thus in great demand!

When the Karakul sheep was imported to Namibia at the turn of the previous century, it was a low-value pelt sheep imported because it was adapted to a desert climate, having originated in the dry central Asian deserts of what is today Kazakhstan and Tajikistan; in a region then known as Bukhara. Thus, it proved to be supremely adapted to the arid conditions of southern Namibia. The value of the pelt was improved by meticulous genetic selection and breeding of desired types with each other, until a “new” pelt type arose, the short-haired, high-gloss watersilk pattern, from which the even shorter-haired galliac was bred more recently. These glossy pelts with a distinct and consistent pattern and good hair quality enabled the Karakul Board to set Namibian Karakul pelts apart from those produced in Central Asia and the brand “**swakara**” was created.

The rise and fall of the Karakul industry

Over nearly a century, **swakara** pelts achieved consistently higher prices than pelts from other regions of the world; they were the “diamonds” of the world-wide Karakul industry! (see picture 2) Great wealth accrued to farmers in southern Namibia and the Karas and Hardap regions flowered and were the envy of other Namibian farmers! Up to the 1970’s, Namibia had nearly 5 million Karakul sheep and produced 3 ½ million pelts annually (see Figure 1). It seemed that nothing could stem the tide of success washing over arid southern Namibia... until the animal welfare lobby branded furs generally as “inhumane” because animals were killed to dress beautiful, rich people. Karakul pelts in particular were targeted because newborn lambs were slaughtered by cutting their throats until they suffocated and bled to death; a slow, painful struggle and cruel indeed. **swakara** pelts were targeted even more because they were linked to apartheid then prevalent in Southern Africa. Pelt prices in the 1970’s and 1980’s crashed and headed for the South Pole, partly because of the influence of double-digit inflation. Farmers despaired; many went bankrupt and most did away with their Karakul sheep and switched to mutton production because, at about the same time, mutton prices were rising quickly. It saved them financially, but the change in production systems initiated an ecological disaster which is gradually turning arid southern Namibia into a desert. Only the most optimistic and far-sighted farmers retained some Karakul sheep and kept them pure, in the hope that one day, the wheel would turn and prices would increase again. Recently, at the lowest point of the cycle, Namibia had only about 200 000 Karakul sheep left and produced merely 50 000 pelts annually. What used to be the envy of other farmers became the laughing stock.



Picture 2: Namibian Karakul sheep produce beautiful **swakara™** pelts in black, brown, grey and white.

And then came the age of world-wide democracy, the “American century” at its best, when autocratic political systems opened up, people were freed and national economies expanded and grew consistently. The sunny spirit of the 1990’s made people want to wear fur again and

prices rose, heading for the North Pole at the turn of the millennium (see Figure 1). When earlier Namibian Karakul were culled, only the best were retained and **swakara** was ready with an even better product, the galliac pelt type with a very flat curl, very light and easy to wear and reversible

so that the skin side could be worn outside like a leather garment. Prices rose quickly to unbelievable levels and in April 2007, a record of N\$1 250 per pelt was set for the top lot and the average price approached N\$450/pelt. For a 24-hour old animal, that is just about the highest price per unit mass of any intact (un-extracted) animal product in the world! Good advertising and a change in slaughtering methods, with lambs being stunned electrically before being bled, overcame ethical resistance and buyers were once again competing for **swakara** pelts. Namibians were exhorted to produce more pelts because, just a year ago, there was an “insatiable” demand for **swakara** pelts. Until the bubble burst, a few months ago, turning people pessimistic and pushing pelt prices downwards again. How far, we still have to wait and see.

Today, it is only realistic to expect fur and pelt prices generally to decrease considerably because the rich and beautiful people of the world are experiencing hard times, or are at least shaken in their confidence. The about 150 000 Namibian Karakul pelts produced each year are but a drop in the ocean of the international fur and pelt trade and whether Namibian producers deliver more or fewer pelts will not affect the pelt price. This is therefore as good a time as any to increase the efficiency of pelt production by implementing accelerated lambing and get more pelts from the same number of sheep and from the same farm size than before, without sacrificing the natural resource

base, the veld. As Figure 1 shows, Namibian pelt producers are not really sensitive to price changes, probably because they are in a herd building phase and could benefit financially from increasing their pelt output.

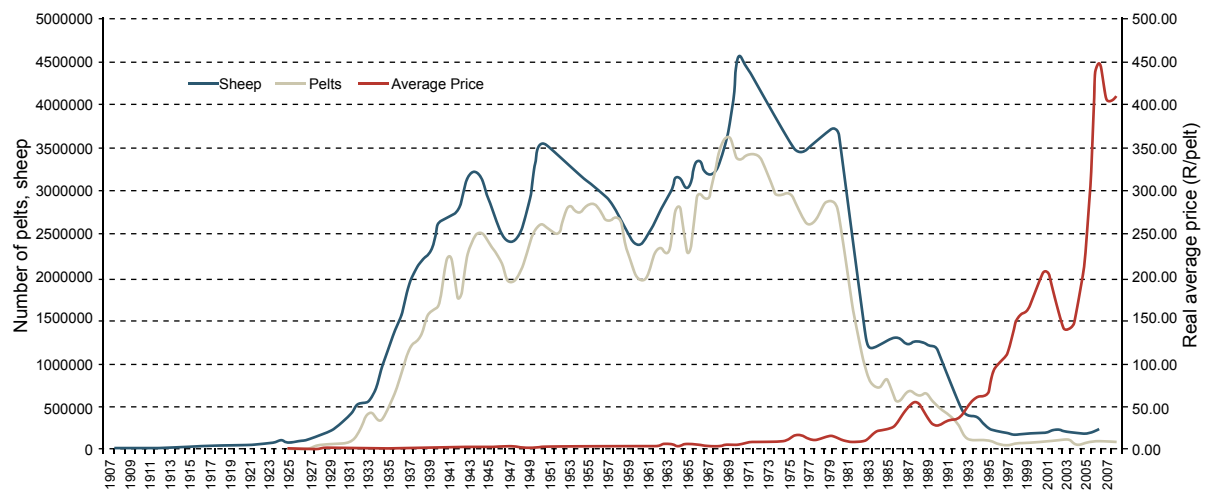


Figure 1: The changes in the number of Karakul sheep in Namibia, pelts produced and average pelt price (real price in R or N\$ per pelt) since the introduction of the Karakul to southern Africa in 1907 (statistics from Bravenboer, B., 2007. Karakul – Gift from the Arid Land. Karakul Board of Namibia, Windhoek). The occurrence of double-digit inflation in the 1970’s and 1980’s made the price decrease more dramatic than is apparent from the graph, but it appears – remarkably! - that Namibian pelt production is not sensitive to changes in the product price.

The “black” diamond

Black is the dominant colour in Karakul sheep and was the early breeding ideal. Almost 90% of the Namibian flock consists of black sheep and the international market is dominated by black pelts. Hair colour in Karakul sheep is determined by a single gene but influenced by a couple of others. This is in stark contrast to other economically important characteristics such as growth rate, body mass and milk production, which are determined by hundreds of genes, and fertility, which is determined by thousands. Ironically, the colour black is carried by a recessive gene which means that black parents will always produce black young. Only the young lamb is black; in adults, the black fades to a dark grey at maturity. Genetically, the other colours are dominant to black but epistatic (equally strong) towards each other. One of the

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genes associated with hair colour in Karakul sheep causes early death. Such genes are known as “sub-lethal factors” because they don’t kill the lamb at birth, but only some time after. In Karakul sheep, sub-lethal factors are associated with the white and grey colours, but not with brown.

Sub-lethal whites and greys

The first batches of Karakul sheep imported into Namibia in 1907 and again in 1909 consisted mostly of black sheep and a few brown and grey individuals, but a white sheep was not amongst them. In their region of origin, Bukhara, Karakul sheep have the most beautiful colours (visible in lambs only, since the colours fade with maturity and wool development), but chance made us miss out on most of this colourful palette. We had to introduce the colour white by cross-breeding the Karakul with white-haired sheep breeds such as the Namaqua, Afrikaner and black-headed Persian in the 1960’s. These breeds passed on the white hair colour gene to the Karakul, along with poor hair quality as their hair is hard and prickly (“steekhaar”) and not soft and silky like that of the Karakul. It took decades of selecting for improved hair quality to address this particular problem and even today, many white pelts are downgraded for being “chalky” or too spotted with black (see Picture 3). For some or other reason, a sub-lethal gene is often linked to the gene for white colour and purebred (homozygotic) white Karakul sheep often die before they reach four years of age. One can thus breed pure white sheep but the flock would have a high replacement requirement.



Picture 3: The influence of cross-breeding Karakul sheep with Afrikaner and Black-headed Persian sheep to arrive at a white Karakul sheep is still clearly visible today, half a century after the event.

The colour grey (see Picture 4) is genetically dominant to the colour black. However, pure (homozygotic) grey sheep also carry a gene with delayed lethal action and die at between 4 and 9 months of age, or at weaning. Death is brought about because pure grey sheep lack some of the enzymes needed to digest solid food. They can digest milk all right but not the fermentation products of grass. Some variability in the strength of the sub-lethal gene exists and some pure grey sheep have survived to four years of age by being fed a special diet of soft, high-quality roughage under experimental conditions but normally do not survive to reproduce under harsh farming conditions. One can

thus only breed with heterozygotic (genetically mixed) grey sheep which, over their lifetime, will always produce 25% black lambs, 50% grey (heterozygotic) lambs of normal vitality and 25% pure grey (homozygotic) lambs that should be slaughtered for pelt production since they carry the lethal gene and will die anyway before reaching breeding age.



Picture 4: Only heterozygotic (“impure”) grey lambs can be used for breeding as the homozygotic (“pure”) greys normally die before reaching sexual maturity. Pure grey lambs can be identified by several smaller abnormalities such as an unpigmented (i.e. red) tongue.

Grey and especially white pelts are in very high demand in an industry dominated by black pelts, but because there are so few pelts of colour on offer, their price normally is lower than that of black pelts. Remember that it takes up to 24 pelts to produce one long coat (see Picture 5) and that there is thus a threshold minimum number of coloured pelts needed before their price reflects their true value. The Namibian Karakul industry does not yet produce that minimum number of grey, white and brown pelts. It used to be that black was the desired breeding objective,



Picture 5: White pelts can easily be dyed any colour and are thus in high demand, but their production is fraught with difficulty and they thus seldom achieve their price potential.

but in an increasingly colourful world where Karakul pelts are dyed all shades of green, pink and yellow, producing high-value brown, white and grey pelts might be an option to weather the expected downturn in prices. Such a decision would require group action to produce more than the critical minimum number of coloured pelts and is thus an industry decision and not one for the individual farmer.

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Accelerated lambing in Karakul sheep

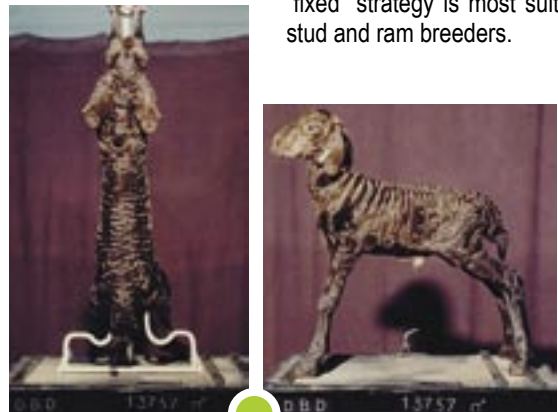
So, now to the part of improving the efficiency of pelt production by practising accelerated lambing of the ewes. Since most Karakul lambs are slaughtered within 24 hours after birth, the ewe does not need to raise a lamb and has a relatively low feed requirement compared to a ewe that is nursing a lamb until weaning at 3-4 months of age. That is also the reason why an ecological disaster was induced in southern Namibia in the 1970's when many Karakul farmers switched to mutton production: they exchanged their Karakul ewes for mutton ewes 1:1, not considering that a mutton ewe eats a lot more than a Karakul ewe because she has to produce milk to rear a lamb and that the lambs themselves eat a lot more grass than a Karakul lamb slaughtered a day after being born. Thus farms that had carried x number of Karakul sheep and maintained excellent veld condition, all of a sudden became overgrazed when carrying the same number x of mutton sheep. In addition, multiple lambs are encouraged in mutton sheep to maximise meat production per hectare but discouraged in Karakul sheep because the smaller pelt carried by twin lambs carries a hefty price discount. Speak of unintended consequences!

Depending on the Karakul flock's replacement rate and breeding policy, about 14-20% of the ewes are replaced each year. Since at birth, half the lambs are rams, the farmer has to reserve 28-40% of his flock to produce replacement ewes. The remainder experience pregnancy, but not lactation and thus recover very quickly and are able to re-conceive again shortly after giving birth. These "pelt-producing" ewes can be subjected to accelerated mating to produce three offspring in two years, whereas the "replacement-producing" ewes stay on a once-a-year breeding cycle. Accelerated lambing means that Karakul ewes are mated every eight months, thus giving birth three times in 24 months (= two years). Like with all productive farming enterprises, good veld management is a prerequisite for accelerated lambing even if no lambs are reared, because the ewe is under additional production stress and thus requires a constant supply of quality feed. Accelerated lambing is highly likely to fail on degraded veld in poor condition and will be interrupted by drought. But it can be taken up again after the drought.

Strategies to achieve accelerated lambing

Two strategies can be followed to produce pelts or replacement ewes in an accelerated lambing system. In the first, the "fixed" strategy, the best 28-40% of ewes that had the most desirable pelt characteristics when they were lambs themselves (remember lamb description or boniture?) are put in a separate flock and bred to the best rams to produce superior offspring. Since most have to raise their offspring, they are mated only once a year. The lambs born to this select group are kept as own replacements (all ewe lambs), or either raised to sell as breeding rams (the best 10% of ram lambs) or slaughtered for their pelts (the remaining 90% of ram lambs). The remaining 60-72% of ewes produce pelts only, don't raise their offspring and are mated three times a year; every eight months. In theory, this strategy enables the farmer to make rapid selection progress because only the genetically elite individuals are allowed to raise the next generation. In practice, it is difficult to identify the genetic elite accurately and impossible to do so without a thorough boniture, including photography, of the lamb (see Picture 6). Few Karakul farmers still bother with a thorough boniture of their lambs because of the time and effort involved. Without this effort, though, the

fixed strategy is likely to fail as superior ewes have as good a chance to be found in the "pelt" than in the "replacement-producing" flock. The "fixed" strategy is most suited for stud and ram breeders.



Picture 6: Photographing the lamb's dorsal side (left) and its left side (right) is part of an intensive boniture that records the lamb and its pelt characteristics in great detail.

The "flexible" strategy is better suited to commercial pelt production. It is based on the cyclic nature of ewe fertility and the fact that lambs born in the dry season have better pelt quality than lambs born in the rainy season. There is only one ewe flock on the farm and it is mass-mated by enough rams to cause a sex ratio of one ram to 30-40 ewes.

Cyclic ewe fertility

In contrast to cows, ewes are not equally fertile throughout the year. They are more fertile in "autumn", that is the late rainy season, March to May, and least fertile in "spring", that is the early hot dry season, September to November. Conception rate and fecundity (litter size) would be highest in March/April and least in September/October, except that twins are discouraged in Karakul production because of their smaller pelts. Start with the season of highest ewe fertility and mate all ewes in March to April. That automatically puts them in an eight-month cycle where they will be mated again in November/December of the same year and in July/August the next year (see graph below). Since ewes are pregnant for roughly five months, lambs will be born in August/September of year one and in April/May and December/January of year two. After every lambing, the ewe has one month time to recover before being mated again.



Effect of environment on pelt quality

The best pelts are produced if the ewe was pregnant during the dry season (winter). Pelt quality depends to a large extent on the length of the hair and the thickness of the skin, with modern trends demanding short, glossy hair and thin, light skins. A ewe that is pregnant in the rainy season eats plentiful green grass with a high protein content. This nutritious diet stimulates skin and hair development in the unborn foetus and the summer lamb will be born with a relatively overgrown coat on a thick, heavy skin; the exact opposite of what the fashion market demands and thus subject to a severe price penalty. Highest

pelt quality and thus pelt price will be obtained with lambs born in the first and third lambing season, in August/September and in December/January. With these lamb crops, it is difficult to distinguish between genetically superior lambs and those that only have good pelts due to poor nutrition of their dams and all lambs should be slaughtered for pelt production to make money. The lambs born in the second lambing season in April/May will have the poorest pelt quality, fetch the lowest prices and this lamb crop should be used to rear replacements by selecting the 14-20% best ewe lambs (with the most desirable pelt characteristics) to serve as future replacements. Many of the other lambs can be used for meat production as the Karakul breed is actually a dual-purpose breed with excellent meat. Any lamb born in April/May with short, glossy hair is probably genetically superior because it exhibits the desired traits despite an unfavourable environment (actually, good feed availability to the ewe) and should certainly be retained for replacement and breeding purposes.

Lambs retained in April/May are easy to raise as they suckle ewes with good milk production since lactation coincides with the late rainy season. Lambs grow well and can be weaned in winter, when the parasite burden is low due to the cold. They are ready to be mated before one year of age in their first autumn, in March/April. Their dams will probably skip the July/August mating because they are still nursing a lamb and will only conceive together with their daughters in March/April. Thus, ewes lambing in April/May and raising their lamb should be purposefully excluded from the next mating in July/August by separating them from the flock during mating time to give them a chance to complete their reproductive cycle, whereas all "pelt-producing" ewes

are expected to conceive every eight months. Nick an ear of all ewes that fail to lamb every eight months unless they raise a lamb and cull the nicked ewes from the flock at the first possible opportunity.

Accelerated lambing of Karakul sheep – an option for Namibia?

Genetically, the "flexible" system has an advantage over the "fixed" system as no ewe is excluded as a potential mother and all genotypes have an equal, objective opportunity to prove themselves. This is an important attribute if farmers do not practice lamb boniture. Environmentally, accelerated lambing of Karakul sheep is sound as it is still 20% less demanding of the veld than conventional (once-a-year lambing) mutton production (same flock size) and can be converted to a once-a-year system during a drought, and back again after the drought, with ease. Every 100 Karakul ewes that are subject to accelerated lambing and have a replacement rate of 15% (replace ewes at 7-8 years of age) are equivalent to 19.5 Large Stock Units (LSU) and produce 120 pelts per year on average, compared to 85 pelts if subject to normal, once-a-year mating practices. The 41% increase in efficiency and earnings should certainly compensate for the increased effort, labour and nutritional requirements! Good stock and veld sense and a market that requires large numbers of **swakara** pelts are all that is needed to successfully implement an accelerated lambing system and maintain the Karakul's reputation as the "black diamond" of Namibia!

Dr Axel Rothauge
Special Projects Consultant




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NUWE STRUKTUUR VIR LEWENDE HAWE IN PLEK

Om aan te pas by 'n veranderende besigheidswêreld, het Agra tot die slotsom gekom dat die herorganisering van die lewende hawe afdeling noodsaaklik is vir die suksesvolle voortbestaan van lewende hawe binne Agra. Die herstrukturering van die lewende hawe afdeling is gefinaliseer en die nuwe struktuur het reeds op 1 Januarie 2009 in werking getree. Die nuwe lewende hawe struktuur sal dus voortgaan met normale werksaamhede soos in die verlede en ook meer daarop toegespits wees om dienste aan kliënte uit te brei en 'n meer winsgewende afdeling te wees.

Die nuwe lewende hawe struktuur word saamgestel uit 'n senior lewende hawe bestuurder met streekskoördineerders vir die Suide en Noorde streke. Hulle word bygestaan deur afslaaers en administratiewe personeel, veilingsdataklerke en verskeie strategies geplaasde kommissie agente wat verteenwoordigend is van die streke. Wat betref die Sentraal streek, is Windhoek Lewende Hawe Afslaaers cc as 'n onafhanklike besigheid aangestel om die lewende hawe funksie namens Agra in hierdie streek te vervul.

Die volgende aanstellings is dus gemaak na 'n deursigtige keuringsproses onder leiding van 'n eksterne konsultant:

Arnold Klein sal waarnaem as Senior Bestuurder: Lewende Hawe vir 'n aanvanklike periode van 6 maande of tot 'n nuwe permanente aanstelling vir die pos gefinaliseer sal word. Arnold beskik oor die graad B.Sc. Agric (Hons) in landbou ekonomie asook uitgebreide ondervinding op die gebied van landbou. Met sy kennis en liefde vir boerdery is Arnold die aangewese kandidaat om in die pos waar te neem. Bykomend tot sy nuwe verantwoordelikhede as Senior Bestuurder Lewende Hawe, sal Arnold voortgaan met sy werksaamhede as Hoofbestuurder Kleinhandel en Groothandel. Op die lewende hawe administratiewe kant word Arnold bygestaan deur Marieta Grobler wat u kan kontak by telefoon 061-290 9208. Die posisie van Senior Bestuurder: Lewende Hawe sal eersdaags weer geadverteer word.

Streek – Suid

Streekskoördineerder: Adolf Klein ——— 081 284 8811
(*waarnemend*)

Die vakante pos van Streekskoördineerder is nie gevul nie en sal weer adverteer word. Adolf Klein neem dus waar in die posisie tot aan die einde van April 2009. Hy word bygestaan deur Riekie Leeb en Evie Klein wat die administratiewe funksies hanteer.

Lewende Hawe Agente: Marco Klein ——— 081 221 6679
(*Marialtal/Kalkrand/Maltahöhe/Gibeon/Asab*)
Ina Kotze ——— 081 127 0028
(*Stampriet*)
Swannie Swanepoel — 081 127 4600
(*Aranos*)

Jasper Stoop ——— 081 333 3659
(*Aroab*)

Nico van Zyl ——— 081 332 1026
(*Gochas*)

Joepie von Wielligh — 081 294 4839
(*Karasburg*)

Dirk Lochner ——— 081 217 8470
(*Bethanie & Aus*)

Gerhard Vermeulen — 081 124 0775
(*Leonardville*)

Gerhard is ook aangestel as die kleinvee stoetvee-agent. Enige navrae dus rondom kleinvee stoetveedienste kan direk aan Gerhard gerig word by bogenoemde kontaknommer.

Afslaaer: Dallies Greeff ——— 081 122 3305
Veilingsdataklerk: Mercer Leeb ——— 081 226 3561

Streek - Noord

Streekskoördineerder: Henno Badenhorst — 081 257 7020

Lewende Hawe Agente: Ferdie Kühn ——— 081 243 7928
(*Otjiwarongo/Otavi*)

Rudolf Brandt ——— 081 122 3304
(*Outjo/Khorixas/Kamanjab*)

Wulf Halberstadt — 081 127 3402
(*Grootfontein / Noordelike Kommunale Areas*)

Uwe Bertram 081 127 1110
(*Omaruru*)

Afslaaer: Frans Steyn ——— 081 124 7358
Veilingsdataklerk: Jors van den Berg — 081 299 8587
(*Outjo*)

Veilingsdataklerk: Maria Garises ——— 081 206 0628
(*Otjiwarongo*)

Streek - Sentraal

Sentraal streek wat bestaan uit Windhoek, Rehoboth en Gobabis sal voortaan bekend staan as **Windhoek Lewende Hawe Afslaaers cc**. Hulle sal as 'n onafhanklike besigheid funksioneer met insette vanaf Agra se senior bestuur via die Senior Bestuurder: Lewende Hawe. Windhoek Lewende Hawe Afslaaers cc bestaan uit die volgende persone:

Bestuurder WLA: Chris Steenkamp — 081 124 0649

Afslaer: Johan Smith — 081 127 0870

Lewende Hawe Agente: Carel Coetzee — 081 124 2405
(Gobabis)

Ellis Mbuende — 081 129 6249
(Gobabis Kommunale Areas)

Frikkie Booysen — 081 124 7509
(Okahandja)

Tiaan Steenkamp — 081 122 3320
(Windhoek)

Andries Steyn — 081 122 2882
(Rehoboth)

Arne Strenger — 081 122 3313
(Slagvloer Spesialis by Meatco fabriek
Windhoek)

Veilingsdata Analis: Rynard Steynberg — 081 285 5170

Die administratiewe funksies van die lewende hawe kantoor in Gobabis word deur Arnalda Louw behartig en in Windhoek deur Monica Dentlinger.

Enkele personeel wat nie opgeneem is in die nuwe gestruktureerde lewende hawe afdeling, het inkorting/skeidingspakkette ontvang.

Pieter Hugo, voorheen Senior Bestuurder: Lewende Hawe het besluit om op vroeë aftrede te gaan aan die einde van November 2008. Pieter sal steeds by Agra betrokke wees in 'n ander hoedanigheid as Bestuurder van die Professionele Dienste Afdeling. Hierdie afdeling sal bestaan uit Wessel Visser - Agra Pelssentrum, Kiep Lepen - Stoetveedienste (grootvee), Dr Rainer Hassel en Dr Axel Rothauge.

Lees meer breedvoering oor die **Professionele Dienste Afdeling** in ons hoofartikel wat op bladsy 1 en 2 van hierdie uitgawe van die RING verskyn.

(R)

SPAAR GAS - SPAAR GELD



KNOW YOUR PRODUCT

Die wêreldwye energiekrisis het die afgelope paar jaar gelei tot nuwe idees en produkte om die energiebronne tot ons beskikking optimaal te benut. Verbruikers van fossielbrandstowwe is maar al te bewus van stygende oliepryse, dit raak ons almal se sak. Sodra die olieprys styg word alles duurder, nie net petrol en diesel nie maar ook onder andere gas of LPG soos die meeste van ons dit ken. Net soos ander fossielbrandstowwe is dit nie hernubaar nie en raak dit al hoe duurder om te ontgin en voorsien. Dit maak dus sin om 'n produk te ontwerp om gas te bespaar of optimaal te benut.

'n Indiese maatskappy het dan juis so 'n toestel ontwerp en vervaardig wat 'n besparing van 25 tot 40 persent op gasverbruik gewys het. Die resultate is deur 'n onafhanklike laboratorium geverifieër.

Die toestel word vervaardig deur uiters sterk, sirkelvormige magnete binne in 'n koperbuis te plaas. Sodra die gas deur die toestel vloei, kom dit in aanraking met die magneetveld en die molekulêre struktuur van die gas word verander. Volgens die vervaardiger word die gasmolekules "georden en ge-ioniseer" wat lei tot optimale verbranding en dus toename in "thermal efficiency". Dit beteken bloot dat minder gas gebruik word om dieselfde hitte te verkry en vandaar die besparing. Die toestel is eenvoudig om te installeer en is 'n geseëlde eenheid en verg dus geen onderhoud nie.

Huidiglik bemark GasSaver Namibia twee tipes, 'n huishoudelike toestel vir gebruik in verwarmers, stowe, yskaste en waterverwarmers. Daar is ook n reeks kommersiële toestelle en is ontwerp vir lodges en hotelle waar gastoerusting se verbruik aansienlik hoër is en slegs deur gekwalifiseerde persone geïnstalleer mag word.

Die huishoudelike toestelle is landwyd beskikbaar by Agra en indien enige iemand vrae het of verdere inligting wil bekom, kan hulle Nic Hendrikse kontak by 081 247 5120.

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AGRA PROMOTES & APPOINTS

SENIOR PERSONNEL MEMBERS



Birgit Hoffmann –
Senior Manager Corporate Affairs

Birgit Hoffmann has been appointed as Senior Manager Corporate Affairs with effect 01 December 2008. Agra's human resources and marketing functions have been merged under a new Corporate Affairs division. Birgit holds several qualifications in the fields

of industrial & organisational psychology, general management, marketing, communications and human resources management.



Arnold Klein –
Senior Manager: Livestock

Arnold Klein has been appointed as Head: Livestock for an initial period of 6 months until the appointment for this position will be finalised. Arnold will also continue with his duties as General Manager Retail & Wholesale.



Letsie Nell –
Operations Manager Human Resources

Letsie Nell, previously Senior Human Resources Officer, has been promoted to Operations Manager, Human Resources with effect from 01 December 2008. Letsie has 18 years of extensive experience in the fields of human resources management.



Tobie Barlow –
Retail Operations Manager

Tobie Barlow, previously Manager of Agra's Windhoek branch, has been promoted to Retail Operations Manager with effect 01 January 2009.

WENNER STAP WEG MET

GROOT PRYS

IN SAFARI DEN KOMPETISIE



Safari Den het gedurende Desember 2008 'n Kersfees promosie aangebied waarin kampeertoerusting ter waarde van N\$5000 gewen kon word. Aankope ter waarde van 'n N\$1000 of meer by Safari Den het jou deelname verseker.



Die gelukkige wenner van hierdie kampeertoerusting wat onder meer 'n tent insluit, is Romie van Wyk van Rehoboth.

Op die foto ontvang hy sy prys van Hennie Bergh, bestuurder van Safari Den.

Ons nooi u graag uit om Safari Den te besoek vir 'n wye reeks van safari- en kampeertoerusting, jagtoerusting en ammunisie teen uitstekende pryse. Geskenk koopbewyse is ook by Safari Den beskikbaar.

(R)

SCIENTIFIC STUDY ON THE SUSTAINABILITY OF COMMERCIAL CATTLE FARMS

Reference is made to the scientific study advert on the sustainability of commercial cattle farms and the natural environment in Namibia which appeared in the September 2008 issue of RING. We are now pleased to publish an extract from a letter received about the survey:

"Dear Mr Kazmaier

We are looking back at a successful year 2008 and wish to thank you and your staff very much for your co-operation in the context of our research project on sustainable commercial cattle farming in Namibia. Our survey of farmers which we started in July/August has resulted in a return rate beyond our expectations. Additionally, after a first inspection of the returned questionnaires it appears that the quality of the responses is excellent. Your support and advise was very important for this success and also for other parts of our project, and we are very grateful."

Roland Olbrich - Leuphana University of Lüneburg



“Skakel ons gerus.”



Agra verbind hom daartoe om 'n landswyse goeie dienservaring aan ons kliënte te bied en die implementering van 'n kliëntedienslyn is die eerste stap in die vestiging van ons kliëntedienseenheid.

Hierdie kliëntedienslyn bied aan u die geleentheid om u ervaring van Agra se diens met ons te deel. Toegewyde personeel sal met u kommunikeer, probleme en oorsake van probleme identifiseer, oplossings vind en implementeer. Skakel ons gerus en help ons om die beste diens aan u te bied sodat Agra u eerste keuse sal wees.



Vir meer inligting: (061) 290 9111, marketing@agra.com.na, www.agra.com.na



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TRACEABILITY - FUTURE CHANGES IN NAMIBIAN CATTLE IDENTIFICATION

National livestock traceability systems primarily serve to assure a fast and efficient tracing back of meat or livestock to the holding or individual of origin in response to a biosecurity alert, such as the outbreak of a livestock disease or the detection of residues of prohibited veterinary drugs in the tissue of slaughtered animals. In 2000, the Namibian livestock industry represented by the Meat Board and the government represented by the Directorate of Veterinary Services introduced the FAN Meat Scheme of which the animal identification and traceability are key components. Starting during the first quarter of 2009, the Namibian Livestock Identification and Traceability system will further evolve by adopting international standards. Major goals are to improve the performance of the traceability system and also to meet requirements from importing markets, such as the European Union. Requirements for the identification of all cattle south of the Veterinary Cordon Fence will be extended to on-farm double ear tagging and individual animal registration. The Meat Board is involved in the selection of the future supplier of official cattle ear tags and assists in the implementation of the future regulations. Below the producers will find answers to the most frequently asked questions on what they will have to expect:



Why do we have to apply two ear tags?

The applying of two ear tags highly guarantees that the individual identification of an animal is retained throughout lifetime even in the case of the loss of one ear tag. This is one of the fundamental features of a livestock traceability system. Namibia is not, as often perceived, entirely adapting regulations from the European Union. Instead, all efforts were made to maintain our export status by improving the traceability system with respect to the livestock producing conditions specific to Namibia.

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What information will be on the tags ?

The primary and the secondary tag will have the same information printed on them. While in the past, the ear tags were identified by the producers and a serial number, it is most likely that in the future there will only be one serial number unique to the entire system. The allocation of the cattle to their owner will be processed on the central database. Farmers wishing to in addition put their own marks (stud related information, stock brand code or others) onto the tags are allowed to do so, as long as this does not alter the print or impairs the legibility.

When and during what time-span will cattle have to be tagged?

All cattle will need to be double-ear tagged the latest at the age of 6 months or when movement occurs, whatever happens earliest. There will be 'n implementation time to give enough time to the farmers to apply the ear tags and coordinate the tagging with their own farm management.

What happens to cattle that are now tagged with a single ear tag?

This will most probably be decided once it can be roughly estimated how many cattle will still have a previous single ear tag towards the end of the implementation period. Depending on the number of these cattle the procedure will be chosen having the least impact on the producers by still assuring the integrity of the system.

What is meant by animal registration?

All cattle tagged according to the new registration will have to be registered on a central database. During the application of the tags producers will be required to fill in an animal registration card for each animal and to send these cards to the central database for data entry. Individual animal passports as being used for instance in member countries of the European Union will not be introduced in Namibia.

Will there be electronic ear tags?

Radio Frequency Identification Devices (RFID tags) are being discussed as an option for the future cattle identification. In the case of their introduction a set of ear tags would consist of a primary visual and a secondary RFID tag.



RFID button tag

RFID tags provide for the option of automated, faster reading (scanning) of animal IDs. The advantages are numerous. While the current visual reading and manual recording is a source of transcription errors, automated reading will exclude those. Especially at places where bulks of cattle are handled (cattle auctions, abattoirs) the entire process can be speeded up and the accuracy of recorded information would increase significantly. The intense handling of animals would be limited drastically since cattle can be read while being lined up or

walking past the reading devices instead of being head clamped. This would improve animal welfare standards and is expected to positively influence the quality of meat at slaughter which is known to be affected by pre-slaughter stress and intense handling which can cause bruising and injuries. Producers themselves can benefit from RFID ear tags if making them part of their own management system. Cattle IDs can be read and transferred onto a computer and integrated into herd or breeding management software. RFID ear tags are more expensive than visual ear tags but their overall benefits do outcompete the initial costs.

The decision of when implementation starts and when the implementation/transition period will end lies entirely with the Directorate of Veterinary Services.

Producers who wish to have more information are welcome to contact Dr. Susanne Thalwitzer at the Meat Board under 061 – 275841 or per email at thalwitzer@nammic.com.na

(E)

NOTICE

ice notice notice

AGRA PUBLIC LECTURES FOR EMERGING COMMERCIAL FARMERS

(In partnership with Emerging Commercial Farmers' Support Programme)

2009 PROGRAMME

02 FEBRUARY _____ OUTJO
25 FEBRUARY _____ OTJIWARONGO
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18 MARCH _____ TSUMEB
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23 APRIL _____ OMARURU
24 JUNE _____ WINDHOEK
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29 JULY _____ MARIENTAL

For enquiries on any of the above public lectures, please contact Albé Snyman, Agra's public relations officer at telephone 061-290 9273.



ANIMAL HEALTH

IMMUNOLOGY & VACCINES

AN EFFECTIVE FARM MANAGEMENT TOOL

Introduction

The vaccination of cattle, sheep, goats, horses, pigs and poultry by way of practical and appropriate vaccination programs is very important.



Example of a single antigen vaccine.

It is a very useful management tool to safeguard animals against infectious diseases, which are important because they may be life threatening, have severe economic implications or can be transmitted to humans. The aim of vaccination or immunization is to prevent diseases, rather than to wait for an animal to get sick and then try to treat it. Preventing

diseases therefore prevents economic loss, in the form of reduced or lost production or loss of life.

Take care of health today and you don't have to take care of disease tomorrow.

Each farmer should, in co-operation with his veterinarian, develop a vaccination program, which suits his farming enterprise and is relevant for his region or even specific for his farm. The prevalence of infectious diseases is different in different parts of our country and influenced by a variety of factors. Vaccination is a very effective and cost effective insurance against infectious diseases, but it is not prudent to propose rigid vaccination programs covering all diseases for the whole of Namibia. Vaccination should also not be used to make up for neglect or deficiencies of other farming practices, like nutrition, supplementation, selection, control of internal and external parasites, etc.

Definition: Immunity

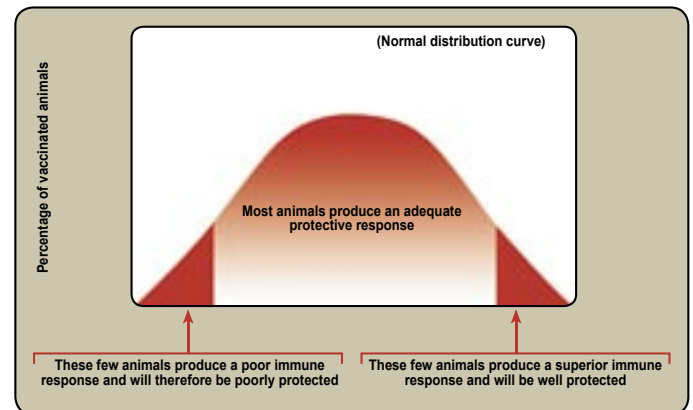
Immunity is a protective mechanism of the body against infectious diseases. An animal develops an immunity when its immune system produces specific substances or cells to recognize and inactivate invading, potentially disease forming micro-organisms or their toxins, either after natural exposure to such an organism or after artificial introduction of such a micro-organism into the body. This is also referred to as the immune response. The immune response results in the production of antibodies produced by plasma cells, referred to as humoral immunity, as well as the production of specialized cells like memory cytotoxic T-Cells, mature cytotoxic T-Cells, memory helper T-Cells and non-specific killer cells, referred to cell mediated immunity (CMI).

Active immunity: The animal produces its own antibodies and cells;

Passive immunity: The animal gets antibodies produced by another animal, for example a newborn via the colostrum from the vaccinated dam. Immunity must be distinguished from natural resistance of an

animal against certain infectious diseases, like young calves have against Anaplasmosis. The protection afforded by the maternal antibodies lasts for about 10 – 12 weeks post partum. The antibodies then disappear and the young animal becomes susceptible.

IMMUNITY DEVELOPMENT IN ANIMALS AFTER VACCINATION.



Natural Immunity: This results from the natural exposure of an animal to the original pathogenic or disease forming infectious agent or micro-organism, in other words natural infection can lead to natural immunity of varying degree and duration.

Artificial Immunity: This is the result of the administration of a vaccine (active) or antiserum (passive).

Vaccine

A vaccine is a product which contains either an inactivated (dead) or live attenuated (weakened) disease causing micro-organism (antigen) or its weakened toxin (toxoid), which, when administered to an animal will elicit an immune response, which means it will stimulate the immune system to develop an immunity against that specific disease forming organism. The organisms or toxins contained in vaccines are altered in the laboratory to such an extent, that they can no longer produce a disease, but are still able to produce an immune response. An antigen that is able to elicit an immune response is said to have immunogenic properties. Vaccines can either contain single or multiple antigens. Multiple antigens can either be for different diseases, eg. Multivax P, One Shot Ultra 7, Covaxin 10 or Supavax, or for different strains of the same organisms, like African Horsesickness and Bluetongue.



Example of a multiple antigen vaccine.

Vaccination (Immunization)

Vaccination or immunization is the process of administering a vaccine to an animal in order to achieve an immunity.

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continued from page 15...

Development of Immunity

Following vaccination it takes 14 - 21 days for the body to develop antibodies, protecting the animal against the specific infection. If a second vaccination, also referred to as a booster vaccination, is administered 3 - 4 weeks later, there will be a dramatic increase in antibodies 24 - 36 hours later. This is as a result of memory cells in the bloodstream which "recognize" previous exposure, and is called the booster effect. So the basic aim of the booster vaccination is to achieve much higher levels of protective circulating antibodies in a much shorter time. Annual revaccinations can also be regarded as booster vaccinations.

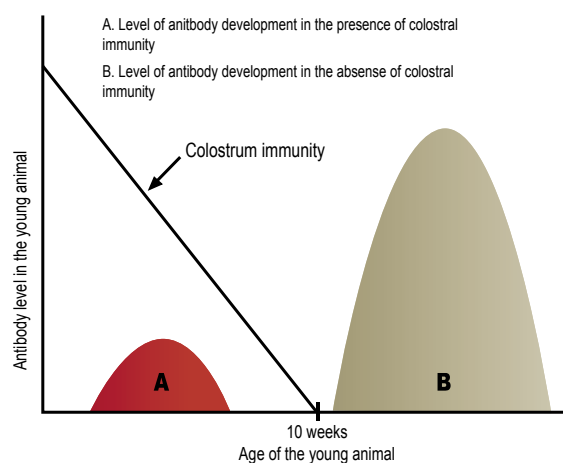
Colostrum

Colostrum is a rich source of Biologically Active Molecules (BAM). These are divided into:

- a) Immune Factors: Immunoglobulins (antibodies), Lysozyme, Lactoferrin, Non specific white blood cells, and Cytokine chemical messengers. The function of these is to transfer cell mediated immunity, and antibodies to the calf, kill bacteria in the digestive tract, phagocytose harmful substances in the digestive tract and increase the activity of white blood cells, which all help to protect the newborn.
- b) Nutritional Factors: Fat, Lactose, Protein, Vitamins, Minerals, Water.
- c) Growth Factors: Insulin-Like Growth Factors 1 & 2, Epidermal Growth Factor, Transforming Growth Factor, Growth Hormone, Insulin, Cortisol.

Only calves which receive 2 liters or more of colostrum within 24 to 36 hours will receive sufficient amounts (10g/l serum immunoglobulins) of antibodies to survive and grow optimally.

The effect of colostrum antibodies on the development of immunity in the young animal following vaccination.



Maternal Antibody Interference

An accepted belief until recently was, that passive immunity obtained from maternal antibodies would suppress immune responses from vaccination in the offspring. Recent studies have shown, however, that immune responses are possible when modified live vaccines (MLV) were used, showing that maternal antibody interference with vaccines is not absolute. This means, that when designing vaccination programs where maternal antibodies may be present, we must base the decision on the immune status of the animal, the specific antigen and the

presentation of the antigen. In many cases animals can be vaccinated at a very early age.

Duration of Immunity

Not many vaccines produce lifelong immunity, like Orf, Bovine Brucellosis. With others, the antibody levels drop, and the vaccinations need to be repeated on a regular basis, as prescribed by the manufacturer or by law. Some examples of diseases that require annual revaccination include Anthrax, Botulism, Black Quarter, Lumpy Skin Disease, African Horsesickness and Tetanus.

Management Practices

A vaccination program must be adapted to animal husbandry activities like lambing and calving seasons, shearing of sheep, deworming of sheep, diet change and transportation. Special consideration must be given to vaccines which can affect production, like Rift Valley Fever, Blue Tongue, Redwater or Anaplasmosis. Ewes should be vaccinated with a live Rift Valley Fever vaccine 3 - 4 weeks before mating and not during pregnancy. Pregnant ewes should not be vaccinated for Blue Tongue during the first two months of pregnancy. Tick borne diseases can cause pregnant animals to abort and therefore animals should be vaccinated before the breeding season to prevent abortions. It is also prudent to vaccinate animals before high risk procedures, like shearing which increases the risk of Black Quarter and abscess formation, or before drastic changes in the diet of sheep or before deworming sheep, which both carry a great risk of Pulpy Kidney. In situations of severe drought or phosphate deficiency animals should be vaccinated in time against Botulism. From the above it is quite obvious that breeding seasons for live stock are a prerequisite for the implementation of a practical and successful vaccination program.

Precautions and Directions for Use

The directions contained in the information pamphlet of the product regarding its handling and administration should always be followed precisely and the warnings and contra indications observed, since inappropriate use of a vaccine can cause adverse reactions or severe losses, like abortions. Likewise it is important to adhere to the withdrawal periods as prescribed by the manufacturer.

- 1) Equipment: Sterilize syringes and needles by boiling in water for at least 15 minutes, better for 20 - 30 minutes. Do not use disinfectants like alcohol to sterilize syringes and needles. As far as practically possible, a separate needle should be used for each animal, because diseases can be transmitted by injecting a number of animals with the same needle. At least a new needle should be used each time a new syringe full of vaccine is drawn up. This will at least prevent all the vaccine in the vial being contaminated. Important diseases in this regard are Lumpy Skin Disease, Rift Valley Fever and Anaplasmosis. When animals are vaccinated during such disease outbreaks, it is imperative that separate needles are used for each animal; otherwise the disease can be spread by contaminated injection needles.



Example of a vaccine consisting of 2 factions containing different strains of one virus.

2) **Vaccine:** Vaccine bottles should be shaken vigorously to mix the contents properly. Vaccines which first have to be reconstituted by adding a diluent, must be used immediately and cannot be kept for later use, even if it for a day or two. After reconstitution, make sure the powder has dissolved completely and the contents mixed properly.

3) **Sunlight:** Prevent exposure of vaccine to direct sunlight and high temperatures during storage, transport and use. Both ultra violet light as well as high temperatures damage or destroy the infectious agent of the vaccine, rendering the vaccine less effective or totally useless, resulting in poor immunity or no immunity at all.

4) **Mixing of vaccines:** Different vaccines should not be mixed in the same syringe for injection, since constituents can react together which can lead to precipitation or clumping, rendering the vaccines less effective or completely useless or even harmful. For the same reason vaccines should not be mixed in the same syringe with antibiotics, vitamins, minerals, anthelmintics or any other drugs, except where

these different constituents have been included in a single dose by the manufacturer, like Cydectin Eweguard, Cydectin Eweguard with Selenium and Vitamin B 12 or Cydectin Weanerguard (Bayer Animal Health), which contain a number of different Clostridium and Corynebacterium antigens combined with an injectable



Example of an inactivated vaccine.

antiparasitic agent, Moxidectin. Different vaccines can be administered simultaneously with separate syringes to the same animal. Combination vaccines, containing a number of different antigens, are being used more and more commonly. These vaccines are safe, effective and practical.

5) **Protecting the operator:** Persons administering vaccines should carefully avoid accidentally injecting themselves or accidentally coming into contact with vaccines via skin wounds or the mucous membranes of the mouth, nose and eyes. Vaccines which can cause disease in humans are Anthrax and Brucellosis vaccines.

6) **Disease Outbreaks:** If animals are vaccinated during a disease outbreak, this may not immediately halt the spread of the disease, since the body requires 2 - 3 weeks to develop antibodies (see above). For the same reason animals vaccinated while already incubating an infectious disease (incubation period), may still become sick and develop symptoms.

7) **Booster vaccination:** If prescribed by the manufacturer or by law, booster vaccinations must be given, to achieve a protective immunity. This is the case for most inactivated vaccines. Even if not prescribed, a booster vaccination given 3 - 4 weeks after the initial vaccination will generally greatly strengthen the immunity.

Dr Rainer Hassel
Animal Health Consultant

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SERVICE RANGELAND-COUNTYWIDE

Dagboek die volgende datums!

Datum:	Veiling:	Aanbod:
Donderdag, 29/01/09	2de Gesamenlike Produksieveiling van Nico Binneman & Freddie Dreyer met Getverkopers Kobus van Wyk & Dreyer Boerbekatses - Boereverenigingskrale, Aranos @ 10:00	70 Dorper Ramme 30 Dorper Oeie 30 Boerbok Ramme 30 Boerbok Oeie
Donderdag, 05/02/09	Kaais Dorper Streekveiling @ 10:00	41 Dorper Ramme 32 Wit Dorper Ramme
Donderdag, 12/02/09	Windhoek Summer Sale - Agro/Bank Windhoek Ring @ 11:00	40 Bulle & 40 Vroulike diere van verskillende rasse
Wensdag, 18/03/09	Reuse Karakoel Veiling van Raimor van Hise - Agro Voerkrale (ALCO) Maritzburg @ 10:00	+ 2000 Swart Karakoel Oeie + 800 Wit Karakoel Oeie + 300 Grys Karakoel Oeie + 800 Geregistreerde Karakoel Oeie + 15 Top Karakoel Smaat Ramme

Navas:
Grootvee Steefvelings: Klep Lepen - 081 124 0648
Kleinvee Steefvelings: Gerhard Vermeulen - 081 124 0775

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Februarie **agra** **2009**
SERVICE RANGELAND-COUNTYWIDE

Maandag	Dinsdag	Woensdag	Donderdag	Vrydag	Saterdag	Sondag
						1
2 Windhoek Eales	3 Outja Arnos (Kommunale) Gibeon	4 Bethane Grootfontein	5 Kaais Dorper Sekerhof (Kommunale)	6 Solbos @ 09:00	7	8
9	10 Schobeth Grootvee Arnos	11 Oxas Fins Aranos	12 Kaais Dorper Oxjwaringe (Kommunale)	13 Gots	14	15
16	17 Leonville	18 Obahandja Grootfontein Stompriet	19 Aub Arnos & Somsaling Bass	20 Solbos @ 09:00	21	22
23	24 Schobeth Eales Eastmouthe	25 Kamstburg	26 Windhoek Grootvee Oxjwaringe	27 Omanuru	28	Historie Nag'n emgige Verreke Maak!

Navas:
Grootvee Steefvelings: Klep Lepen - 081 124 0648
Kleinvee Steefvelings: Gerhard Vermeulen - 081 124 0775
Kommunale Veilinge: Neelke Agretek

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Grootvee Steefvelings begin op 11:00
Kleinvee Steefvelings op 10:00 &
Kommunale Steefvelings op 09:00
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