

NEWSLETTER APRIL

Dear clients,

We hope you had a wonderful Easter. In this newsletter you learn more about elephant feet. We also summarized our latest article 'Feeding wildlife during a drought', in where we give you information on how to manage your game during the drought. The full article can be found in the Documentation-section on our website.

All the best!

Kind regards, Ulf and Mariska

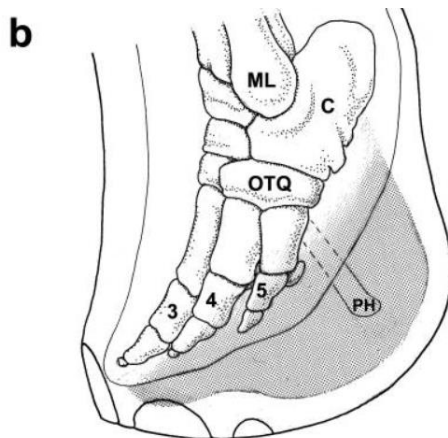
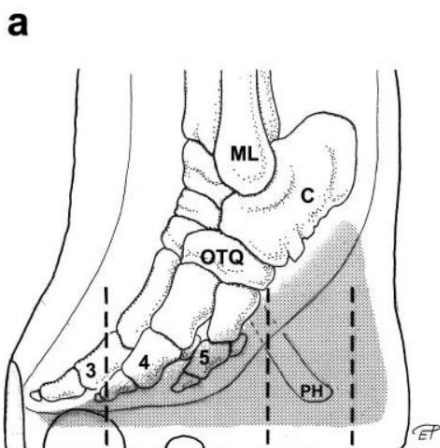
WALK AS QUIETLY AS AN ELEPHANT

The elephant is our largest land mammal, and their feet must carry a weight up to +/- 7.000 kg! The limbs are therefore uniquely designed to support their weight. Elephants are so-called digitigrades, meaning that they walk on their toes. As heavy as they are, elephants are amazingly quiet walkers. This is mainly due to a fat pad in their feet (see picture below). This 'cushion' has elastic properties, which basically acts as a shock absorber. On top of that, the fibro-elastic layer on the foot pad allows the foot to mould (within limits) over objects on the ground. These adaptations cause most noises to be muffled and allow the elephant to move silently.

Interestingly, scientists found that elephants that lived 40 million years ago were much smaller, and had flat toes (as opposed to the upright toes that 'our' elephants have, see picture below). As elephants evolved to be bigger, the toes became more upright, and the fat pads became bigger. It is assumed that the fat pad developed in large animals, like the elephant, as a way to reduce the foot pressure, while still being able to support their massive weight.



The elephant's foot is full of ridges and grooves, giving them more grip in slippery terrains. Maybe surprisingly, the elephant's feet are considered to be one of the most sensitive parts of the animal! Sharp thorns or stones can be painful for them. Photo © [The Conversation](#)



This picture shows the elephant's left hind foot when it stands (a) and when it's lifted (b). The grey part is the fat pad. Picture © [Weissengruber et al 2006](#)

FEEDING WILDLIFE DURING A DROUGHT

Large areas of the country having experienced below average rains since 2013. The 2018/19 season is an exceptionally poor raining season, with vast areas of the country having received very little rain. As a result of this, the pasture conditions country-wide are not looking good. In a world without fences, animals would have migrated to 'greener' pastures. However, when you have a fenced-off game farm or reserve, we believe it is your duty to manage your game in these difficult times.

There is a sparsity of information concerning the feeding and care of wildlife during a drought. Therefore, in our latest article we provide information on how to manage your animal population during a drought. Here we give you a summary, you can read and download the full article on our [website](#).

Proper farm management is key

Every farmer should ask him/herself the following questions on a regular basis:

- 🐾 What is the average rainfall? How prone is my area to drought? Are drought effects getting worse?
- 🐾 What are the soil and topographic conditions like? What is the condition of my topsoil?
- 🐾 What is the status of my farm vegetation? Is it overgrazed, bush encroached or well-managed?
- 🐾 Which animal species are suitable for my area? Keep in mind climate change and reduced rains...
- 🐾 What should be my stocking rate?

In Namibia it is prudent to always have the next drought in mind when making management decisions.



The difference in grass cover between the two camps is very obvious. It is time-consuming to regenerate grass again in overgrazed areas. (photo © [Mark Bishop](#))

Habitat preservation

Overstocking must be avoided at all times! Overstocking → poor habitat health → poor herd health. If the grazing pressure exceeds the rate of grass growth, grass may not reach the stage of seed production, and their root systems deteriorate. Losing your perennial grass species can be permanent! Annual grasses might take over, which produce less food. As grass cover is reduced, bushes take over and predispose the land to soil erosion.

Stock with species that can adapt

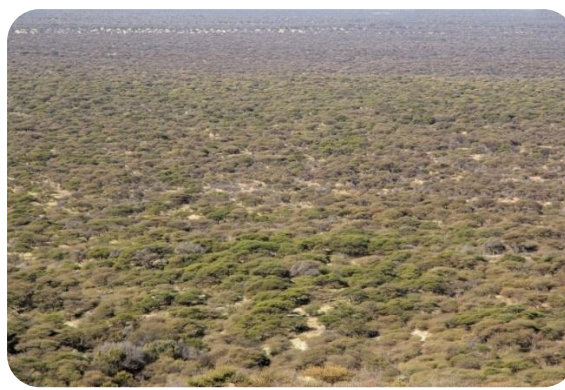
Most Namibian game species are better adapted to aridity and drought than exotic species. Consider which species will do well in your area, and how far you are willing to go to save your species during a drought.

Consider debushing (if needed)

Many areas of Namibia are suffering from tree- and bush encroachment, mostly due to overgrazing and in part due to the absence of mega herbivores (elephant and black rhino). The dense tree- and bush canopy creates fierce competition for water and nutrients, resulting in poor grass germination, growth and thus grass cover.

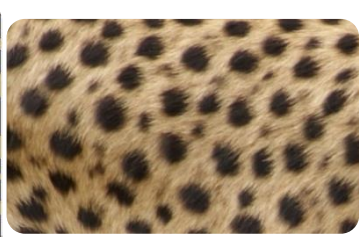
The various methods of debushing (fire, chemical, manual or mechanical debushing) each have their advantages and disadvantages. Before embarking on an expensive debushing exercise, we strongly advise that you discuss the options with professionals.

We often observe farmers doing some very radical debushing, where big areas are left without (or very few) trees/bushes standing. Remember that bushes provide food for browsers, it provides shelter against the elements (sun/rain/wind), and many game species hide their young in these bushes during their first days.



Bush encroachment in Namibia (photo © [Debushing Advisory Service](#) Namibia)





Let nature guide you; debush according to a cheetah or zebra skin. Leave dense spots for animals to hide and seek shelter. Natural patterns look more attractive for yourself, and guests. (photo cheetah skin © M. Bijsterbosch, zebra skin © Pixers)

We recommend doing structured debushing; for example in the form of a cheetah skin. Create open grass plains (the yellow part), interspersed with 1/2 - 1 ha sized patches of denser bush (the black spots), where the animals can find cover from the elements and hide. As an alternative, you could try something in line of a zebra skin pattern, which provides game habitat corridors to move in. Whatever you do, please try to avoid long straight lines. Always leave big trees and evergreen trees standing, and do not debush in river beds.

The bushes and trees that are being cleared should ideally not just be left in place to rot, as it may take many years before these trees and shrubs decay. Consider mulching them in the field; this mulch can be used as a cover to protect against soil erosion, or for the production of feed (boskos). If this is not possible, it is best to flatten the cut trees/bushes to the ground. This will speed up the decomposition process and the bush cover will prevent animals from eating the new grasses that grow underneath. After debushing, (and depending on your situation) it might be worth rehabilitating grasses, either by sowing seeds or indirectly, through natural reseeding after feeding your animals with hay produced in Namibia.

Responding to a drought

As your animals cannot migrate to better places, during a drought you should take the following steps.

Manage your game numbers

Farmers want to obtain the most optimal return. It is proven that this is best achieved through moderate stocking rates. As soon as we overstock, variable costs (e.g. feeding, labour) increase.

When the pasture on a given farm is sub-optimal or the stocking rate approaches (or more likely exceeds the ecologic stocking rate), reducing the number of animals should be the first step. This is obviously a difficult decision to take, but earlier is better than then too late. By selling early your game is still in relatively good condition, you get relatively good prices and you place less strain on your veld. Try first to take out the old, weak and those with poor genetic traits, to ensure your remaining animals are of superior quality.

Feeding roughage

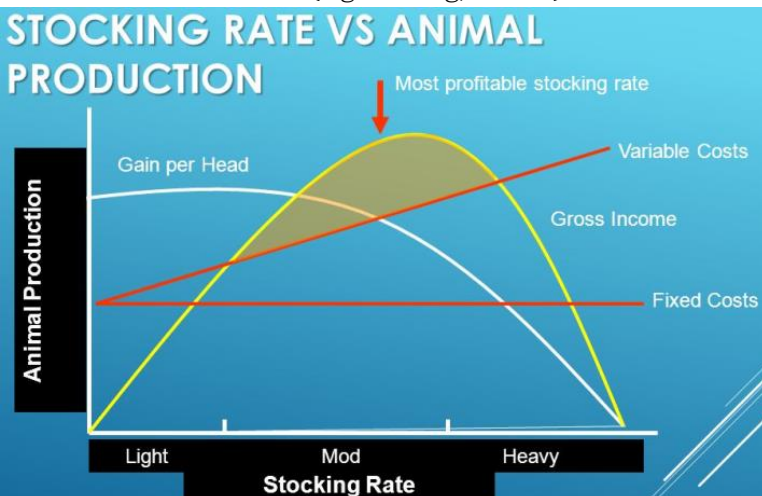
Because wildlife is highly diverse, specialized, and difficult to manipulate, feeding game is not as easy as feeding livestock. Extensively farmed game is usually not used to supplemental feeding and often take weeks before getting accustomed to it. When it is apparent that the grazing won't be able to sustain your game until the next rain season, buy food early (when still "cheap") and start feeding your animals at an early stage, before their body condition drops severely.

It is important to feed in multiple areas on the farm, rotate these places and to spread the grass hay over a bigger area to ensure that:

- 🐾 All the animals get a chance to eat
- 🐾 To avoid excessive animal density and thus habitat damage limited to one spot
- 🐾 To promote reseeding from the feeding sites. While eating, the animals will break soil crusts, trample hay/grass seeds into the ground, and defecate/urinate in those areas, thereby creating a seed bed for the next rainy season.

During a drought it becomes more difficult to buy good quality grass hay. Poor quality hay may be made more palatable by adding lucerne (sprinkled over the bulk of grass) or flavourants, such as molasses or orange flavor.

Lucerne is an excellent supplemental feed (high in protein and minerals), but it is relatively expensive and, unless there is a sufficient stand of pasture grass on the farm, should not be fed as a sole source of supplemental food.



Stocking rate versus animal production (© [Smith](#))



Boskos

Another option is to use your debushed material as boskos (bush-to-feed). The debushed material is harvested and milled, and then mixed with suitable supplements to increase the nutritional content and/or the digestibility of the feed. Be aware that producing animal feed out of debushed material is a complex process, and when it is wrongly implemented, it can create health risks for your animals! Always consult an expert before starting with such operations. Boskos Demo Days are organized on:

- 3 & 4 May Farm Langbeen, Dordabis
- 16 & 17 May Agra/Hartebeestloop

Information: dagmar@ideal-x.com.na or contact Dagmar 0811491086 or Lutz 0813033586.

Supplements

There are suggested supplements on the market that can be added to supplemental feed. We will only briefly discuss a few of the more important ones.

Licks: Many farmers use licks, but it might be worthwhile to call an animal nutritionist to discuss the possible needs or excesses your animals might experience in your area. A custom-made lick works much better than a standard salt lick.

Browse Plus®: This is a specialized formula designed as an additive to drinking water, feed or lick. It largely counteracts the effects of tannins and thus enhances the animal's digestive process, resulting in better nutrient utilization.

Camel thorn (*Vachellia erioloba*) pods: These pods are very tasty, well digestible and highly nutritious; making them an ideal source of supplemental food. While eating/digesting these pods, your game spread the seeds on your farm, and assist you in reseeding these valuable trees. NOTE: do NOT feed Prosopis pods!!

Maize (millies): When fed in a whole pit form can be a valuable supplemental source of energy. To avoid overeating and a subsequent rumen acidosis start with giving small amounts at a time and mix these into the grass/lucerne hay.

Game pellets: Make an excellent but expensive source of supplemental food and are thus usually reserved for high value species/exotic species in smaller game camps.

Recovering from a drought

Towards the end of every dry season and especially a drought cycle we live in hope of a good rain season. It is important to allow your grazing to recover adequately before you consider stocking up with animals. Neglecting to do this will most certainly result in progressive and severe land degradation. Be aware of the risk of flash floods and soil erosion following the first rains, start taking steps to avoid water just flowing off your farm causing severe erosion damage.

Concluding remarks

Droughts can be devastating for men and animal. Whether you believe in global warming and climate change or not, it cannot be denied that our weather patterns are changing. Farmers must think carefully about the viability of their current farming practices. With the changing climatic conditions, we will only be able to farm successfully if we have a vision and are willing to adapt our management practices.

In summary, make sure your veld is not overgrazed, and debush when you have excessive bush encroachment. During a drought, the most important step is to reduce the number of animals on your land. When there is not enough grazing for your animals, start with supplemental roughage. Start rather sooner than later, as it will take time for the wildlife to accept the feeding, and once the body condition is poor, it will be difficult to get them in a good shape again. In consultation with an expert, assess the viability of making and giving boskos to your animals. Consider other supplements, such as licks, Browse Plus®, camelthorn pods, maize etc.

Managing wildlife during a drought is a vast topic, and you may have different experiences and tips. Please share them with us, and let us help each other facing these difficult times!

Our online article 'Feeding Wildlife during a Drought' contains more information on this topic. Feel free to download it [here](#).



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