Wildlife Vets Namibia August 2019 Edition 17

NEWSLETTER AUGUST

In this newsletter:

Dear clients,

We hope this newsletter finds you well. In this edition more about the beneficial effects of maize as a supplement, and we discuss our latest article on sand- ingestion and impaction. These silent killers are not well-known, but especially during the drought can cause great damage under your animals.

All the best!

Kind regards, Ulf and Mariska

HOOF TRIMMING

To improve our ambulatory patient services, we now have a battery-operated angle grinder fitted with a special hoof care disc. This enables us to do proper corrective hoof trimming in the field without the need of a generator. So even when we are far out in the field, its easy and quick to trim an animal's hoof back into shape! Hoof trimming in antelope becomes especially important in areas with soft, sandy soils. Hooves that have grown out too long and abnormally shaped result in hoof fractures and severe lameness. This will obviously have a negative impact on pregnant animals as well as on foraging- and mating behaviour.

To prevent long hooves, stones can be placed around waterholes and feeding places. The rougher surface will help to maintain the normal wear and tear on the hooves.

From left to right: lechwe, impala, sable

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MAIZE AS SUPPLEMENTAL FEEDING

Farmers frequently call to ask why their animals, in spite of being fed grass hay and lucerne, still loose condition and often die. The answer to this is usually that the quantities fed leave the animals with a nett energy deficiency, where both grass hay and lucerne are relatively poor sources of energy. Maize is a valuable and inexpensive supplemental feed one could consider. Maize is full of starch, which will provide the animal with extra energy. The advantages of maize, compared to other grains are:

- It is high in starch, which is a carbohydrate and as such an important source of energy
- It has a high metabolizable energy value (ME), which is the energy available to the animal for all body functions (growth, reproduction etc.).
- Maize fermentation in the rumen happens at a slower rate than other grains

The introduction of maize to a diet should be done slowly, and in low quantities. If introduced too quickly, animals may develop rumen acidosis. Acidosis occurs when the pH of the rumen falls below 5.5 (normally it should be between 6.5 – 7). The low pH causes irritation of the rumen and disrupts rumen micro-organisms. Acid-producing bacteria take over, producing more acids, and making the condition worse. Signs of rumen acidosis are e.g. depression, reduced feed intake, weight loss, diarrhoea, and eventually death. Maize is thus not used as a primary food, but must be seen as a supplement which can be given in small quantities to give the animals a bit of extra energy.

For an average large antelope (e.g. sable or roan) one can give about 150-200 gram maize sprinkled over the hay. Supplementing animals with maize is practical for small breeding camps, where animals are given food in feeding bowls. In more extensive situations is it more difficult, as often the maize will get eaten by e.g. guinea fowl, or the more dominant animals will probably eat it all.

	Unit	Lucerne	*Eragrostis Teff* hay	Camelthorn pods	Maize
Organic matter digestibility	%	63.3	61.8	83.6	88.5
Energy digestibility	%	59.8	58.4	81.3	86.1
Digestive energy	MJ/kg DM	10.7	10.8	15.4	16.1
Metabolizable energy	MJ/kg DM	8.5	8.6	12.4	13.6
Dry matter	%	90.6	91.7	91.6	86.3
Crude protein	% DM	18.3	14.6	13.2	9.4
Gross energy	MJ/kg DM	18	18.5	19	18.7
Calcium	g/kg DM	22.1	4.7	6.6	0.5
Phosphorous	g/kg DM	2.7	2.6	1.3	3.0

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SAND INGESTION & SAND IMPACTION ~ SILENT KILLERS

Most farmers are well aware of the wear and tear effect sand abrasion has on the teeth of animals and how this negatively affects longevity and production. However, few farmers are aware of the more sinister effects that sand impaction can have on their animals. In our latest online article we explain more about what sand ingestion/impaction is, what it can do to an animal, and how you can prevent it.

With the continuing drought and diminishing grazing, farmers are forced to supply their animals (livestock and game alike) with supplemental feeding. As the grazing deteriorates, animals are forced to graze down to ground level, which inadvertently leads to some sand ingestion.

Rhino nibbling on the last straws of lucerne of the ground, thereby possibly ingesting sand as well © M. Bijsterbosch

The sand that gets ingested, is irritating to the intestinal mucosa. As sand is heavier than the normal intestinal content, in settles down and accumulates in the lower parts of the stomach and/or intestines. This will eventually disrupt the normal peristalsis of the intestine, due to swelling, and impaction (blockage).

An animal suffering from sand impaction may show signs of diarrhoea (constant or coming and going). Eventually, animals usually get dull and weak in the hind quarters, and are reluctant to get up or move off when you get closer. They can be listlessness and have a reduced appetite, and may show signs of abdominal signs of discomfort (colic).

It can be difficult to prove sand ingestion and sand impaction. An easy test you can do yourself is to collect some faeces, and put this in water (ratio faeces and water should be about equal). After a minute or two you can observe the sand sedimentation. Since sand is heavy, it will settle at the bottom, while the rest of the faecal matter will settle on top. Please note that this test is easy, but also unreliable! This test can be negative in animals suffering from severe sand impaction and it does not tell us how much sand has accumulated in the intestines.

This is the colon content from a rhino shaken up in water. You can see the content is nearly 100% sand © U. Tubbesing

When you do a Post-Mortem on a dead animal with sand ingestion/impaction, you will notice mucosal irritation and ulcerations in the abomasum (ruminants) and colon/caecum (equids and rhinos). You will notice sand accumulation (can be up to 10 to 50 kg or more!) in the abomasum and intestines in ruminants, and caecum/colon in rhinos and equids. Depending on the species, the involved abdominal organs will be swollen/distended and feel hard or doughy. Occasionally sections of the small intestine may also be blocked by sand, resulting in severe distension of intestines before the blockage.

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Left: Enlarged abomasum of a giraffe, filled with sand © HO Jegede et al (2015).

Right: Sand impaction of the colon in a white rhino © U. Tubbesing

Effective treatment usually requires intensive "hands on" management which is impractical in game. One thing you should immediately do is give as much roughage as possible. But, prevention is always better than a cure! First of all, make sure your animals always get a well-balanced diet. Wherever possible, avoid overgrazing to prevent animals eating too close to the ground. If you give supplemental feeding, make sure you feed off the ground. Some tips to prevent sand ingestion:

- Feed off the ground as much as possible:
  - Feed in hay stacks and use a rubber mat under feeding areas to catch the feed that inevitably falls on the ground. This also minimises wastage of expensive food
  - Feed on rubber covered (conveyor belting) ground away from sandy areas. Please note that these do get very hot in the sun thus place in shady areas!
  - Feed on natural rock surfaces (if available)
  - Provide feeding bowls
- Provide multiple feeding spots spread over a wide area to ensure all animals get a chance to eat.
- A high fibre intake (ideally in unlimited quantity on farms with sand ingestion problems) is a high priority since the high fibre content will assist with sand removal from the gut.
- Since dehydration will exacerbate intestinal impaction always provide plenty of fresh water.

First picture: Conveyor belts or rubber mats underneath a hay stack reduces wastage, and prevents the ingestion of sand. Roans (middle) and rhinos (third picture) feeding from feeding bowls. When you use feeding bowls, always make sure you have enough bowls for all animals, and have enough space between each bowl. © M. Bijsterbosch

Click here to read the full article '*Sand Ingestion and Sand Impaction*', which is freely available on the Documents-section on our website

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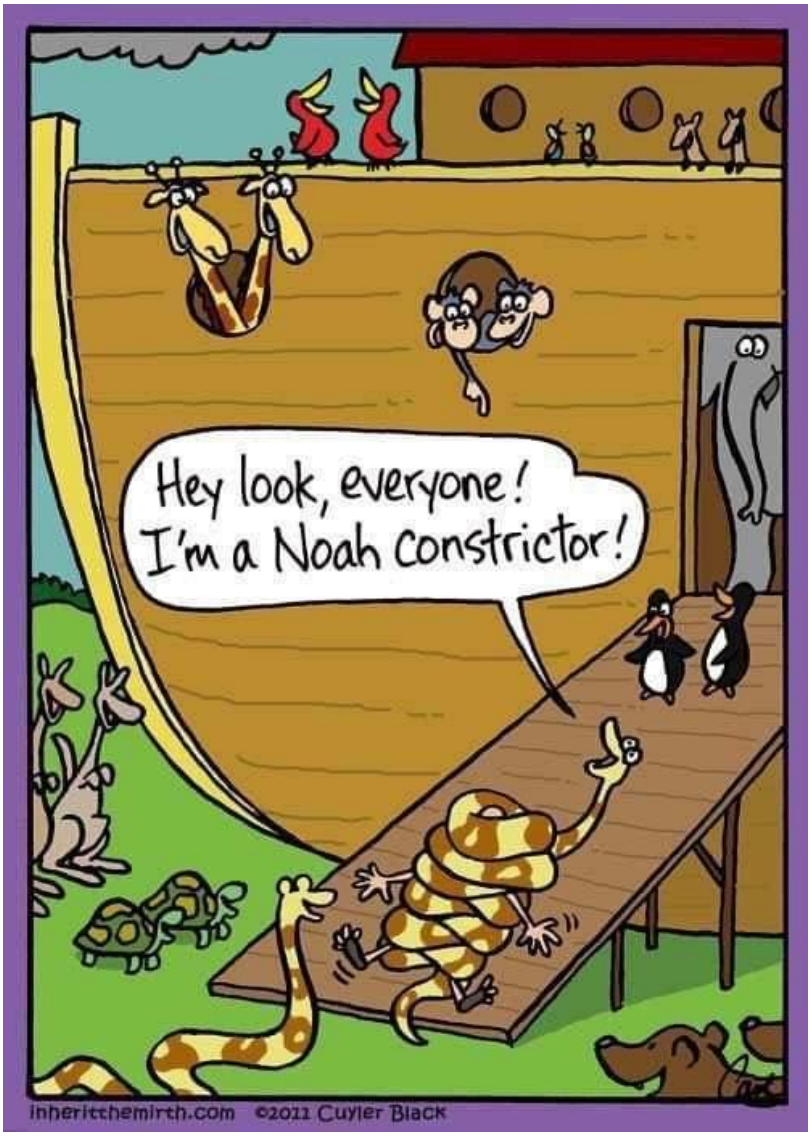
REGIONAL WHATSAPP GROUPS

In our last newsletter we told you about our plan to create regional WhatsApp groups. When we are called out to a certain area, we will notify this group. If you happen to have a job that needs to be done, you can jump in and share kilometre costs. These groups will only be used to notify that we will be working in a specific area. To respect your privacy, we wont mention names or farms, just the area where we will be working in. If you want us to come, or have a question, please contact us directly and do not use this group. We are sure you agree that there are already too many 'chat'-groups taking up our time!

In the meantime, we have set up these groups, and invited several clients. If you have not been invited yet and you want to be added to one of our groups, please contact us and we will put you on 😊 If you do not wish to be on the group, feel free to delete yourself.

We have created groups for the following regions:

- North of Windhoek (e.g. Okahandja/Otjiwarongo/Outjo/Tsumeb etc. area)
- East of Windhoek (e.g. Omitara/Witvlei/Gobabis etc. area)
- South-east of Windhoek (Dordabis/Nina etc. area)
- South of Windhoek (Rehoboth and south)



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