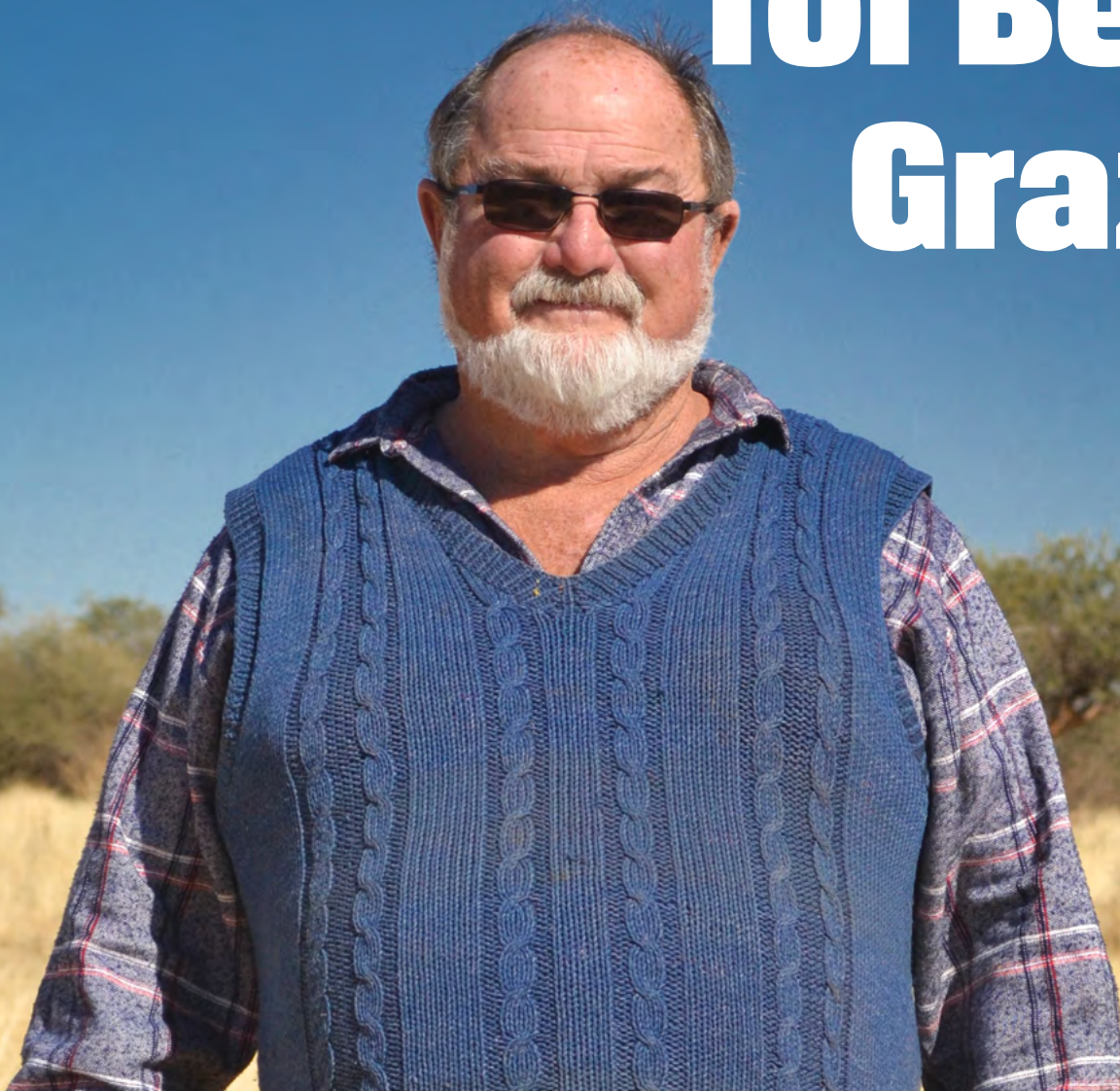




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Holistic Rangeland Management for Better Grazing



Hendrik Botha proudly shows off his grass quality, even in the low rainfall months.

How a Namibian Farmer is Proving the Benefits of Holistically Managing Farmland for Better Cattle Farming Results



Hendrik standing next to one of his rotational grazing camps.

"The more grass you have, the more cattle you can keep", says Hendrik Botha, a Namibian farmer who has been practicing holistic rangeland management and bush thinning, since 1996 on his farm Agagia, north-east of Okahandja.

When Hendrik began, his farm could only stock 670 head of cattle, whereas now that same farm has the capacity to carry 1400 head of cattle, and as Hendrik explains, "more cattle means higher profit margins". Using a combination of rangeland management together with bush thinning, Hendrik has increased his farm stocking rate from 25kg/ha to 45 kg/ha of live weight.

Standing among wide stretches of tall grasses, interspersed with indigenous trees on farm Agagia, a sight often very different on many neighbouring farms, Hendrik explains, "I win the Meatco Producer of the Year Award, every year in March and April. This is because I still have grass on my farm in these months when other farmers do not."

How Hendrik Developed His Rangeland

With low rainfall in most of Namibia, rangelands are constantly under pressure, as a result many farmers have adopted various rangeland management approaches to

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Hendrik showcases the findings of the survey mapping of Farm Agagia.

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their land. Hendrik uses two key strategies, bush thinning and a four to six camp rotation to allow for recovery of the land. "The holistic management of land is a process, it does not happen overnight", says Hendrik who adds that "bush thinning involves the selective removal of invasive or encroaching tree species such as *Acacia mellifera* (Blackthorn or Swarthaak) and *Prosopis* in order to allow the grass to grow, but this does not mean however that the grass will grow overnight".

As Hendrik adds, "you do not just need grass, you need palatable grass", as cattle are selective grazers that prefer the annual to the perennial grasses, but they also need grazing during the annual grasses dormant phases. "Cattle will eat selectively until the grass species they prefer are grazed to the ground. This removes all the growing energy from the grass. Annual grasses are usually not able to recover from this", says Hendrik explaining the dangers of bare ground and how it can lead to the land needing many years of recovery time.

Hendrik practices rotational grazing by dividing his farms up into 200 x 200m camps and rotating his cattle between the camps. This allows for grass which that has been grazed to recover and recuperate.

The Science of Holistic Rangeland Management

Survey mapping provides a clear picture of the benefits of Hendrik's approach, especially during times of drought, where aerial mapping showed farm Agagia carrying better rates of herbaceous biomass than neighbouring farms. As the owner of Agri-Ecological Services, Dr. Cornelis van der Waal explains, "Hendrik was part of a test group where we tested satellite technology to estimate the quantity of grazing at the end of the rainy season. I think Hendrik's success is attributable to his successful bush control and outstanding, continuous observation of grazing conditions, on which he bases his management decisions."

According to Dr. Van der Waal, "If farmers want to copy Hendrik's grazing management approach, there is not a ready-made recipe. He developed his approach over decades and frequently adapts his management plan. If you wanted to start, the steps would include, getting to know the natural resources on your farm, as well as ecological constraints such as level of degradation (loss of perennial grasses, bush encroachment and other unwanted-plant invasions, soil erosion, etc.).



Hendrik and his prize-winning cattle.

Then setting up a monitoring system so that you can track improvements and setbacks of rangeland and animal production. Then determine if the farm's infrastructure is adequate for the grazing strategy applied (number of camps, camp sizes, water provisioning). I also recommend choosing a mentor to help with decisions such as stocking rate adjustments, animal production system to use and obtaining a realistic view of the farm's potential. Then identify the weak links and threats in the production system chain and proactively address these within the financial means of the farm. These may include addressing problem areas on the farm requiring special treatment, a marketing strategy during drought, addressing bush encroachment etc. Every year one must then adapt management as monitoring data and new information becomes available. The National Rangeland Management Policy and Strategy would also be a good starting point, as it explains the principles involved in good rangeland management."

Finding a Responsible Balance

According to Hendrik, "to succeed in livestock farming you need a long-term vision for what you want your farm to look like. To realise the vision you need a long-term plan that is constantly reviewed. It takes hard work to be successful."

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Hendrik advises farmers to "imagine what your farm can look like. By developing an image of what your farm can look like, you create something to work towards and you can start putting steps in place to achieve that. Evaluate grazing regularly, know the rangeland management principles and apply it consistently."

Hendrik believes that educating farmers on the concepts of bush thinning combined with holistic rangeland management will change many views and intentions and improve Namibia as a whole. "If farmers work with a mindset of conservation they will be much more successful as their practices will become sustainable rather than destructive," says Hendrik.

As Dr. Cornelis explains, "the soil-applied herbicides (actually tree-killing herbicides are called arboricides) that Hendrik is using are considered not very environmentally friendly. There are looming questions about their use on land where meat is exported from. For too long bush control only aimed at short-term grass production gains and ignored other aspects such as ecosystem stability, biodiversity and the keystone role of large trees in landscapes. But these soil-applied herbicides work and there are ways to use them responsibly, as Hendrik is doing. This is done by applying it selectively and following label instructions.

Dr. Cornelis advises that if someone wants to follow the Holistic Management fraternity a good starting point would be the Africa Centre for Holistic Management, and also recommends as a good resource to help you start, the Bush Control Manual available on the De-bushing Advisory Service website.

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Further sources:

- ▶ [Bush Control Manual](#)
- ▶ [Africa Centre for Holistic Management](#)
- ▶ [National Rangeland Management Policy and Strategy](#)