

Reading the bush

Grazing in thicket pays dividends

Intervention is needed to restore the overgrazed Subtropical Thicket on the right as it will not regenerate on its own. Photo: Mike Powell

Spending years learning to read the bush and knowing when to move her Nguni oxen to the next camp has paid handsome dividends for Bathurst farmer Leonie Yendall of Nurney farm.

“Today we rarely need to supplement feed for our Nguni oxen. We can leave them in a 100 ha Thicket camp for up to 120 days, but I prefer to move them every six weeks and rest the camp for 220 days, because then the bush recovers more rapidly. Of course, it varies with the season too: we graze the Thicket camps for a shorter period in summer and, if conditions are good, for a longer period in winter.”

Speaking to a packed meeting of Friends of Waters Meeting Nature Reserve at Pike’s Post at the Bathurst Agricultural Museum on 4 February about her farming journey in Thicket, Yendall shared some of the wisdom she has gained over the years and even passed around samples of “green gold” aka fresh cow dung: “You can tell a lot from a pat of cow dung: it tells me when the nutrient availability in the bush has dropped and it’s time to move the cattle. Fresh dung that sticks to your shoe like putty indicates nutrient

levels have dropped. Management must be able to read dung and take appropriate action according to dung pat consistency.”

It’s a far cry from when she arrived at the farm as Rodney Yendall’s young bride 32 years ago. “My journey in the Albany Thicket started when I married Rodney. I knew nothing about cattle. I also had to learn to drive a 4x4, crossing the Kowie River in sunshine and rain to reach the far side of the farm. I also learnt to speak Xhosa with my team of men and they had to get used to working with a woman.”

The dense Subtropical Thicket (also known as Albany Thicket) on the farm intrigued her. “I love exploring, and there was this big forest on the farm. I started learning about it by immersing myself in it. For instance, I saw that spekboom is a shy lady; she keeps her dress to the ground and creates her own microclimate there, then invites other creatures to share it, like the mycorrhiza that connects plant roots to the web of life in the soil.”

“I soon realised I needed to learn more about this magnificent bush and the soil that it grows in. The shale on our farm is the building block of Eastern Cape soils where Thicket thrives and you need the whole big picture – everything grows in symbiosis. And

the first thing a farmer needs to know is what her cattle will graze, that is, what is edible.”

While Rodney took care of the farm infrastructure, Leonie focused on their livestock. The breed of cattle they had on the farm was not suitable for their conditions. “We put them in a 100ha camp of Valley Thicket and within three hours they were back at the gate, complaining there was nothing to eat. So we changed the herd to suit the farm and switched to Ngunis. When we put them in the same camp, three months later they were still happy. Ngunis are more buck than cow!” she exclaimed.

At the time, many people thought they were crazy, but the Ngunis gave them a 36% return on the money invested in them. “We just followed the profit over five years,” explained Yendall.

Their breeding stock runs in pastures planted on old pineapple fields while the oxen browse in the Thicket camps and, if needed, behind the breeding stock in the pastures, cleaning up grass that was not eaten by the breeding stock.

“We do supplement our breeding stock if need be, but our oxen are only supplemented during severe droughts,” said Yendall. “When the going is good, they pack on



Leonie and Rodney Yendall. Photo: Marion Whitehead

weight and when times are tough, they just get a bit skinnier.”

The Ngunis browse to a height of 1.2 metres and Yendall calculated the carrying capacity of their bush as 1200kg/ha/year. If cattle need 18kg feed a day, that gave a ratio of 15ha per large stock unit for oxen in Valley Thicket, compared to 1ha per large stock unit on pasture for breeding cows.

She had to quell her first impulse to bulldoze the bush and plant grass. Instead she started researching Thicket and was fortunate enough to have Prof Winston Trollip of Fort Hare University and retired Prof Aucamp as mentors.

The Yendall's input costs for Ngunis are much lower than with other breeds. They are hardy and breeding stock only need dipping every six to eight weeks, compared to other breeds that must be dipped/sprayed every week. Four times a year is sufficient for the oxen.

Yendall says they seldom need the services of a vet or to buy medicine. They sell their oxen as “grass fed beef” when they reach 450kg at the age of about four years.

“There's a fine line between profitability and sustainability. To meet the sweet spot, you need to explore different methods of harvesting what's on your land, for instance, turning grass or Thicket into beef and hides.”

Marion Whitehead

Article courtesy of Grocotts Mail and Rhodes Restoration Research Group



Spekboom has become the poster child for Subtropical Thicket restoration, but a variety of plants gives a better result in the long term. Photo: Mike Powell

Overgrazing leads to degraded Thicket, which supports far fewer animals. On the other hand, if you don't graze the Thicket, it becomes impenetrable and nothing grows underneath it. Correct levels of browsing let's in enough light for grasses like white buffalo grass (*Panicum maximum*) to grow naturally and prolifically. The cattle's hoof action spreads the seeds and their urine and dung stimulate overall plant growth.

“Thicket is difficult to fix once it's degraded. It's very unforgiving and doesn't like being abused.

“We've changed how we look at our Thicket and now see it as a part of our farm's heritage. It often grows in steep, readily erodible land and it holds the soil together, even on shale banks which are easily disturbed. So it's in our interest to look after the Thicket that we so often refer to as 'just bush'.

“In farming, the only constant is change and we have to move with it. We've got to do things differently, but also make sure the environment is not damaged in the process. Because like the kiepersol, the Thicket can't 'keep us all' if we keep messing with it,” Yendall said. ■

New Thicket restoration brochure series now available

Farmers and landowners will welcome a free brochure series to help with the difficult job of restoring overgrazed and degraded land in Subtropical Thicket

Overgrazed, degraded land is unable to support the web of life and is of no use to man or beast. Farmers and landowners in this tricky situation will welcome a new series of free brochures from the Rhodes Restoration Research Group (RRRG) that offers hands-on advice and tips on how to go about restoring Subtropical Thicket, also known as Albany Thicket.

The Eastern Cape is the heartland of this biome which covers more than three million hectares. It boasts an exceptionally high level of biodiversity, which makes it more resilient in the face of climate change. Intact Subtropical Thicket is capable of withstanding prolonged droughts and provides forage for animals if sustainably utilised. It also provides a range of ecosystem services, such as helping replenish the water table and preventing erosion even in steep river valleys so that dams do not silt up.

Unfortunately, close to one million hectares of this Subtropical Thicket biome is degraded and needs restoration.

“Unlike other biomes, degraded Subtropical Thicket areas do not recover on their own and will stay in a degraded state or get worse with soil erosion,” says Mike Powell, director of RRRG.

Obviously, it's best to prevent the land becoming overgrazed by moving cows and goats to different parts of the farm before this happens, say RRRG interns Kelly Bernard and Kamva Zenani, who compiled the brochure series. “And you can fill in dongas and plant indigenous plants to hold the soil together. Educating learners in school about the importance of protecting nature and the

environment, and getting the community involved in cleaning up rivers and the land is also important.”

Spekboom (*Portulacaria afra*) has become the popular poster child for Subtropical Thicket restoration, but a more holistic approach yields better results in the long term, says Powell. “We've been working on cracking the code for successful restoration with a variety of woody plants at our research sites as this results in greater tolerance of extreme conditions.

“It is important to restore the lost natural capital of our landscapes and have ecosystem services functioning optimally. Robust and scientifically tested restoration protocols are key,” says Powell.

There are 44 recognised types of Subtropical Thicket, but they can be divided into five main groups: dune, arid, mesic, valley and mosaic. Restoration of the vegetation needs to recognise what is appropriate in each specific area. That means vegetation-specific restoration protocols are needed.

Local trees and plants are the best to use to prevent Subtropical Thicket being degraded and to restore it. This brochure series details a selection of useful plants, with details on how to plant them and what the benefits are. It is always good to first cover the soil with grasses, herbs and wild flowers to hold the soil together and increase water retention. Then you can plant:

- Small plants that hold the soil together e.g. couch grass/kweekgras and sheep bush/ankerkaroo
- Larger shrubs that provide forage and enrich the soil e.g. spekboom/igwanishe
- Spiny trees and shrubs that make good hedges and wind breaks e.g. small-leaf honey-thorn/kleinblaarkriedoring, needle bush/spelddoring, blue kuni bush/bloukoeniebos

- Medicinal plants e.g. Aloe ferox/bitter aalwyn

One of the brochures covers seed collection and storage, propagation and planting of these species.

When planning restoration projects, it is vital to be aware of local environmental knowledge and community resource use and practices. “This not only helps to protect nature and the environment, but ensures that local practices and rituals can continue for many more years to come,” says Zenani.

For instance, many Subtropical Thicket plants and some animal products are used medicinally (amayeza esiXhosa) to treat lots of different illnesses, and are also used in rituals (amayeza okwenza amasiko). Examples are African wormwood (umhloniyane) for treating fever and the roots of African potato (inongwe) for skin rashes.

In the Eastern Cape, Subtropical Thicket is referred to as ihlathi lesiXhosa and this is where many important community practices and rituals happen. Ihlathi lesiXhosa is respected not only for resources but as a sacred space to connect with the ancestors (izinyanya). A popular Xhosa saying explains this sacred space and connection nicely: uThixo ulihlathi lam – God is my forest.

“Restoring degraded Subtropical Thicket will provide food and water for animals and humans for many more years to come,” says Zenani. “We are all in this together as we all depend on the land for our survival. We can all help make a difference,” adds Bernard.

The brochure series covers the challenge of climate change and the biodiversity crisis, as well as giving a broad understanding of what Subtropical Thicket is and strategies to restore it. The brochures are written in layman's language and are available to download for free in English and Xhosa from www.rrrg.co.za.