LAND & LIVESTOCK

Grazing Naturally

BY DICK RICHARDSON

Holistic planned grazing was originally developed based on the old science that soils build from the top down and building masses of soil surface litter is the secret to soil health. However we now know this is not true. Soil is built by biological activity living off root exudate from green actively growing plants. Old litter at soil surface inhibits this process if too thick and plants whose growth rates are slowing down or becoming less vegetative no longer feed the rhizosphere as much as before.

Planned grazing was built around using recovery periods based on the recovery rates of plants results in lighter grazes when plants grow quickly and less and less active plant growth across a growing season. The subsequent stagnation in biological activity leads to less soil development and poorer quality feed production. People perceive the magic bullet to fix this issue to be very high stock densities that further compound the problem by increasing soil surface litter and stressing the animals. This is a lose-lose scenario.

Venter & Drewers Grazing Method

Scientists Venter and Drewers developed and tested a variable grazing strategy in South Africa that comes close to fitting with the variation and extremes of nature. A fire treatment is included in this strategy. The method is based on a 5-paddock or 5-zone plan (multiple paddocks divided into 5 zones). Over a period of 5 years, each paddock or zone, is repetitively, heavily grazed, then used less and less until rested completely in the 5th year. The rest year commences with a wet season and ends with a burn prior to the break of the following wet season. Prior to the burn, the paddock is used for a light graze, e.g. calving cows. The rested and burned paddock (or zone of paddocks) becomes the priority or repetitively, heavily grazed paddock the following year. **(Table 1)** presents the Venter and Drewers grazing method. This strategy covers many of the natural variables and Venter and Drewers found it to result in high levels of change, sustained over time with higher stocking rates and good animal performance.

Note in the Venter-Drewers table that the "short-graze height" in the "priority paddock" is measured as "sole height" and the herd is returned when growth begins to reach "toe height". "Also note that this heavy utilization only happens for one season or in Year 5. The grazing pressure drives photosynthesis, speeds up the mineral cycle, increases plant basal size and thus reduces plant spacing. Although such pressure can result in plants appearing to be over grazed, it is for only the one season in five and the total 5-year succession results in soil and plant health improvement.

Reference: "Benefits of Multi-Paddock Grazing Management on Rangelands: Limitations of experimental grazing research and knowledge gaps," *Grasslands* by Richard Teague et al, 2009 describes Venter and Drewers grazing system.

Grazing Naturally Method

Dick Richardson's Grazing Naturally method **(Table 2)** is a modification

Year	Pad/Zone 1	Pad/Zone 2	Pad/Zone 3	Pad/Zone 4	Pad/Zone 5
1	**Priority**	2nd choice	3rd choice	4th choice	**Sabbath**
2	2nd choice	3rd choice	4th choice	**Sabbath**	**Priority**
3	3rd choice	4th choice	**Sabbath**	**Priority**	2nd choice
4	4th choice	**Sabbath**	**Priority**	2nd choice	3rd choice
5	**Sabbath**	**Priority**	2nd choice	3rd choice	4th choice

Table 1: Venter Drewers Method: 5-Paddock (or zone) Plan for a single mob / herd during Growing Season or Wet Season

Year	Pad/Zone 1	Pad/Zone 2	Pad/Zone 3	Pad/Zone 4	Pad/Zone 5	Pad/Zone 6	Pad/Zone 7
1	**Priority**	2nd choice	3rd choice	4th choice	5th choice	6th choice	**Sabbath**
2	**Sabbath**	**Priority**	2nd choice	3rd choice	4th choice	5th choice	6th choice
3	6th choice	**Sabbath**	**Priority**	2nd choice	3rd choice	4th choice	5th choice
4	5th choice	6th choice	**Sabbath**	**Priority**	2nd choice	3rd choice	4th choice
5	4th choice	5th choice	6th choice	**Sabbath**	**Priority**	2nd choice	3rd choice
6	3rd choice	4th choice	5th choice	6th choice	**Sabbath**	**Priority**	2nd choice
7	2nd choice	3rd choice	4th choice	5th choice	6th choice	**Sabbath**	**Priority**

Table 2: Grazing Naturally Method: 7-Paddock (or zone) Plan Growing Season or Wet Season

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of the Venter-Drewers system to avoid regular use of fire to drive an animal-reliant rather than a fire-reliant community. While Venter-Drewers use fire to prepare a rested paddock for priority grazing, Grazing Naturally uses grazing to prepare a paddock for a spell, a Sabbath. Thus, the priority grazed paddock (or zone) becomes the Sabbath paddock. After a one-year spell, this paddock does not become the priority paddock as in the Venter-Drewers method, it is the least-utilised and grazing gradually increases over six years, becoming the priority paddock, prior to another Sabbath. As with Venter-Drewers, priority paddocks are grazed until short, though not as short, i.e. down to the toe of the boot (or golf ball), not the sole. It is grazed again when the grass is ankle height (cricket ball). In the northern tropics, it is better to at least start by measuring low by using a beer can on its side and high by the can standing upright.

The Grazing Naturally method reverses the paddock selection sequence of the Venter and Drewers method. Fire can be used in the Grazing Naturally method, during the growing season while livestock are present in the paddock. Burning takes the form of patch burning non-grazed unpalatable grass through the paddock (or zone). Such treatment may be more necessary in the first years of implementing this grazing method. We have people practicing this from the far North east tropics of Australia with 2.5m (100 inches) of rain down to the Southern central coast where some of these lands are in very marginal rainfall conditions with rainfall to 250mm (10 inches).

Venter & Drewers System

Priority Paddock/Zone: Burn after break of dry season (storm season) i.e. commencement of the wet season – effectively creating 'green pick'. Graze as soon as the grass reaches toe height; graze short and as often as regrowth allows (8+ times); graze until you can see the sole of your boot from the side and return as soon as it starts to hide your toe.

2nd choice after priority paddock – return to priority paddock as soon as the grass reaches toe height or move on to next choice (3rd).

Stock Number Note: If getting to **4th** paddock more than once, a **stock reduction** should be considered. If not reaching the **3rd** paddock, an **increase in stock** number should be considered.

Sabbath: Rest for 12 months (or 10 to 14 months) – no grazing through the growing season; Graze while waiting for next season to break i.e. calving. Then following a burn this paddock becomes the priority-paddock at the break of season in Year 2.

Grazing Naturally System

Priority Paddock or zone of paddocks: Graze short and as often as regrowth allows (8+ times); graze until you can see a beer can lying on its side and return when you cannot see a beer can standing upright. Note: This paddock / zone becomes the Sabbath paddock / zone in Year 2. Always move from the priority to paddock / zone 2.

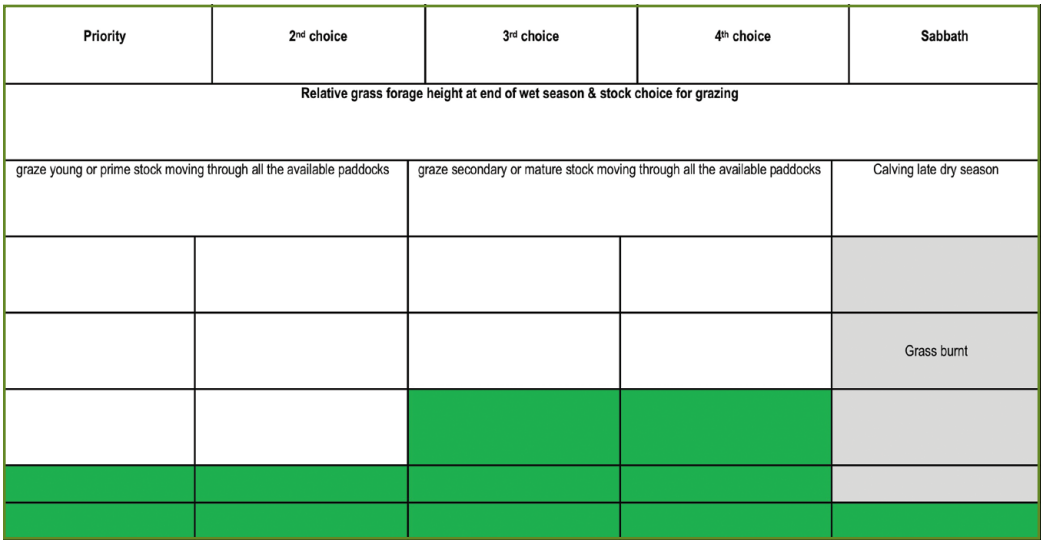

Figure 2: Venter and Drewers Method: Non-Growing or Dry Season: Previous Growing Season Use of Paddock or Zone

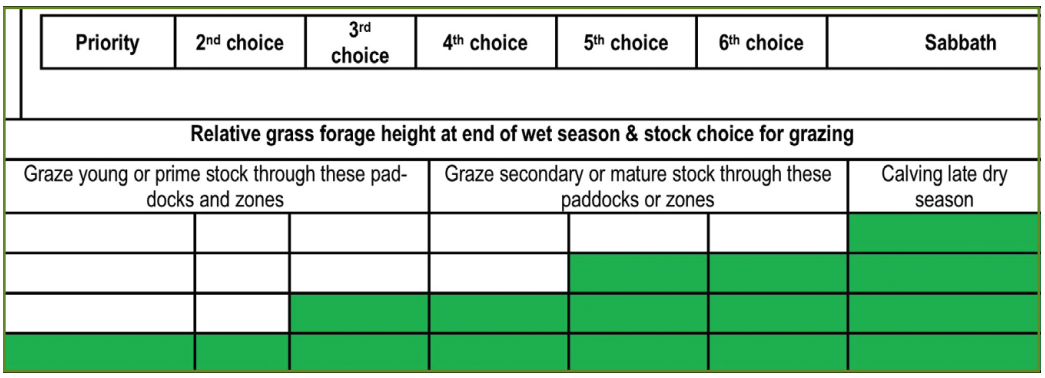

Figure 3: Grazing Naturally Non-Growing or Dry Season: Previous Growing Season Use of Paddock or Zone

2nd choice paddock / zone after priority paddock: return to priority paddock / zone as soon as it gets to beer can height or move on to 3rd choice. Note: This paddock becomes the priority use paddock or zone in Year 2.

3rd to 6th choice paddocks – used progressively as needed until priority paddock / zone requires grazing again.

Stock Number Note: If getting to **5th** paddock / zone more than once, a **stock reduction** should be considered. If not reaching the **5th** paddock, an **increase in stock** number should be considered.

Sabbath: Rest for 12 months (or 10 to 14 months) – no grazing through the growing season; can use for calving in the late dry season. This paddock or zone becomes 6th use paddock at the break of season in Year 2, i.e. is the least used in Year 2.

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Non-Growing or Dry Season:

Depending on the number of paddocks available, the Grazing Naturally method can work on a four to seven-year cycle, though a seven-year cycle is preferred. If only three paddocks are available, then one of the paddocks can be wet season spelled, one treated as a priority paddock in rotation with the other. The paddock used as priority is spelled the following wet season. When paddock numbers exceed seven then paddocks can be divided into zones of paddocks. Where multiple mobs are run each mob can have its own set of paddocks.

In any method of grazing, it is advisable to avoid stock densities getting too high, to avoid fouling of forage and to allow animals to choose when and how to graze. For example, animals graze into the wind to avoid reduction of forage intake by emission of plant toxins (e.g. tannins). High densities can be used with heavy landscaping events. The ideal graze period for animal performance is two to three days.