VELD MANAGEMENT

The Basics

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20 YEARS OF FREEDOM

GSSA

Introduction

Veld management refers to the utilisation and management of forage (grasses and trees) in the veld for animal production and nature conservation.

Practical veld management

Practically, veld management involves the planned movement of animals and the control of animal numbers. Veld management also include practices such as veld restoration, fire management and control of invasive plants.

What is the aim of veld management?

The aim of veld management is to keep the veld in a good condition or to improve poor veld. Keeping a good grass cover is vital as grasses are important for grazing and topsoil protection. The livestock farmer is therefore also considered a grass farmer.

What happens during poor veld management?

Poor veld management, or a total lack of veld management, leads to veld degradation – usually caused by overgrazing. The signs of veld degradation are bare patches, erosion and invasion by poor forage plants. The result is a reduction in the grazing capacity.

Grazing capacity

Grazing capacity is the number of animals that can graze the veld without deterioration of the veld condition. Grazing capacity is expressed in "hectares per livestock unit" (ha/LSU). The grazing capacity depends on rainfall, grass types, soil type and the current veld condition. It is important to do a veld condition assessment in order to determine the grazing capacity of your farm.

What is a livestock unit (LSU)?

A livestock unit is regarded as a grazing animal with a weight of 450 kg. All animals can be converted to livestock units by using the conversion table below:

Animal	Production Phase	LSU
Cattle	Calf	0,32
	Weaners	0,44
	Cow or heifer	1,10
	Steer (18 months plus)	0,75
	Steer (3 years plus)	1,10
	Bull (3 years plus)	1,36
Sheep	Lamb	0,08
	Weaner lambs	0,11
	Ewe	0,16
	Wether (2-tooth plus)	0,16
	Ram (2-tooth plus)	0,23
Goat	Kid	0,08
	Weaner kids	0,12
	Ewe (2-tooth plus)	0,17
	Castrate (2-tooth plus)	0,17
	Ram (2-tooth plus)	0,22
Donkeys	Foal (unweaned)	0,23
	Young animal	0,45
	Mare	0,66
	Stallion or gelding	0,70
Light horses and mules	Foal (unweaned)	0,33
	Young animal	0,67
	Mare	0,94
	Stallion or gelding	1,03

Grazing Capacity in the RSA

South Africa is extremely variable in terms of climate and vegetation and therefore also variable in terms of the grazing capacity of its rangelands. The grazing capacity in the RSA can be anything from 1 ha – 100 ha/LSU. The simplified map below shows the three main grazing zones.

Zone	Grazing capacity
1	1 – 10 ha/LSU
2	10 – 25 ha/LSU
3	25 – 100 ha/LSU

What is Stocking Rate?

The stocking rate is the number of grazing animals a farmer keeps on a farm, expressed in ha/LSU/year. To prevent overgrazing the stocking rate on a farm should be in line with the grazing capacity of the farm.

What is overgrazing?

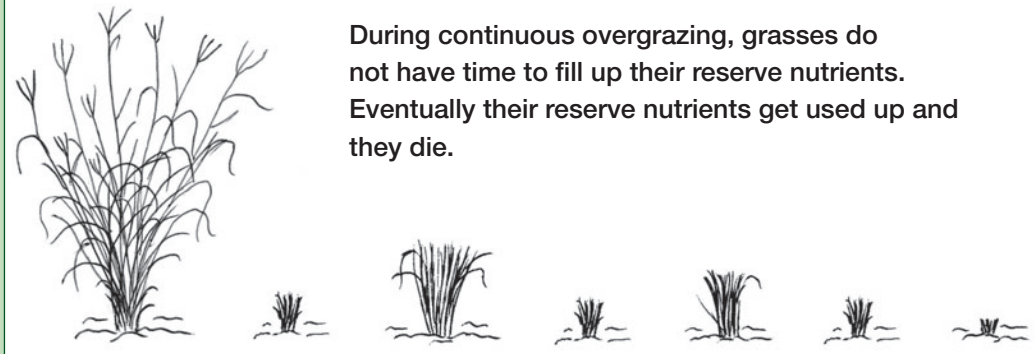
Overgrazing occurs when grasses are heavily grazed without any time to rest. Grasses use reserve energy, stored in their roots, to re-grow after grazing. During overgrazing the grazed grasses are not allowed enough time to produce reserve energy. This causes the reserve energy in the grass plant to become depleted and the plant eventually dies. The first grasses to disappear are usually the good grazing grasses.

What are the signs of overgrazing?

The main signs of overgrazing, and subsequent veld degradation, are poor vegetation cover, increase of poor forage plants, soil erosion and poor animal condition. Veld degradation might be so slow that inexperienced farmers do not realise it in time before veld restoration is needed.

What if there is a drought?

During a drought the grass production drops. It is then vital to reduce animal numbers. This will speed up the recovery of the veld after the drought. A farm with a good grass cover will be less affected by drought due to less runoff and higher rainfall infiltration.



During continuous overgrazing, grasses do not have time to fill up their reserve nutrients. Eventually their reserve nutrients get used up and they die.

Veld rest and rotational grazing

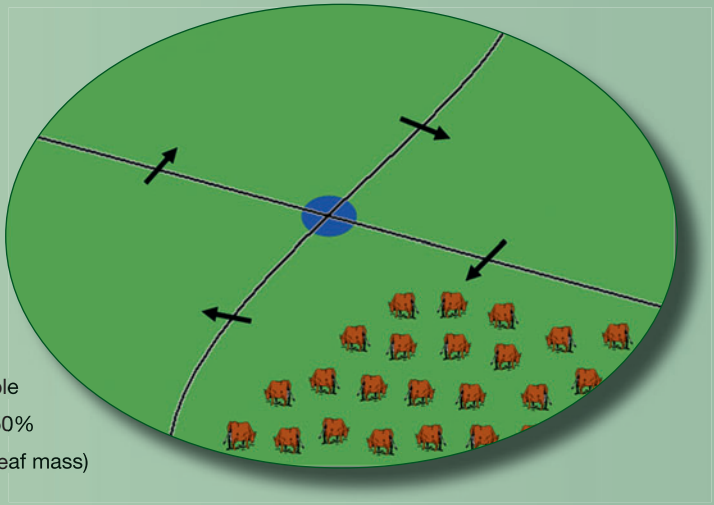
If grasses are continuously grazed and do not get rest, they become weak and they die. For this reason, rotational grazing is used to move animals from camp to camp to allow grasses to rest and stay productive. Except for keeping the correct amount of animals on a farm, veld rest is the second most important veld management principle.

How does rotational grazing work?

Animals are rotated from one camp to another. Animals are allowed to graze a camp only until the palatable grasses have been grazed to about 50% of their leaf mass and are then moved to the next camp. Rotational grazing is especially important during the rainy season when the grasses are actively growing. The aim of rotational grazing is to allow for veld rest. Rotational grazing is particularly important for dry regions.

Rotational grazing principles

- Camp divisions should be according to veld type as well as soil type.
- A minimum of three camps are needed per group of animals.
- Veld improvement can only succeed if the farm is not overstocked.
- Resting a third of a farm each growing season is highly beneficial for dry areas.



Animals are moved when palatable grasses are 50% (half of their leaf mass) grazed.

Infrastructure

Why is infrastructure important?

Infrastructure (fences, water points and roads) supports and promotes good veld management. Without infrastructure it is difficult to control the grazing intensity of animals which leads to area selective overgrazing. The development and maintenance of suitable infrastructure on a farm is very important to promote long-term productivity.

Why camps?

Fences and camps are used to manage the movement of animals from one area to another (rotational grazing). Without camps, animal movement cannot be controlled effectively and therefore grazing intensity cannot be regulated. This may cause some areas to be overgrazed and some areas to be undergrazed.

Water points

Each camp should have access to clean drinking water for the animals. Without water in every camp, the camp can not be utilised effectively. Farms with well developed and maintained infrastructure can usually keep more animals without causing veld degradation.

Veld and fire

An important part of veld management is to prevent accidental fires from destroying valuable grazing. The occurrence of veld fires causing damage to grazing, property and forestry, is increasing every year. Veld burning is, however, sometimes necessary as a veld management tool, to remove old grass material, thereby increasing palatability and production.

What are the responsibilities of the landowner or land user?

(1) Prepare boundary firebreaks.
(2) Have fire fighting equipment, trained people and protective clothing.
(3) Appoint responsible person when not present.
(4) Fight fires on own and adjoining land.
(5) Ensure fires don't start from own property.
(6) Get burning permit from Department of Agriculture if planning to burn (firebreaks excluded).
(7) Notify neighbours of any planned burning (firebreaks included).

What is an FPA?

The Veld and Forest Fire act 101 of 1998 encourages land owners and users to belong to a local Fire Protection Association (FPA). The function of a FPA is to control wild fires more effectively through a coordinated effort. Information can be obtained from the nearest offices of the Department of Agriculture, Forestry & Fisheries.

Firebreaks

Fire breaks slow down a fire and allow quick access to the fire. Recommended methods of making firebreaks are by slashing, spraying herbicides and/or burning. Fire breaks should be at least 10 m wide.

Other useful information

Books

Veld Management in South Africa, Tainton, KZN Press
Karoo Veld – Ecology and Management, Esler, Milton & Dean, Briza Publications
Game Ranch Management, Bothma, Van Schaik
Guide to Grasses of Southern Africa, van Oudtshoorn, Briza Publications
Caring for Natural Rangelands, Coetzee, KZN Press
The Vegetation of South Africa, Lesotho and Swaziland, Mucina & Rutherford, South African Biodiversity Institute (SANBI)

Important legislation

Conservation of Agricultural Resources Act 43 of 1983 (CARA)
National Environmental Management Act 107 of 1998 (NEMA)
National Veld and Forest Fire Act 101 of 1998
National Environmental Management: Biodiversity Act 10 of 2004

Useful websites

www.agric.za
www.daff.gov.za
www.gssa.co.za
www.workingonfire.org
www.agis.agric.za
www.dwaf.gov.za/wfw

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