



Regenerative Rangeland Management in Practice

Evidence from a commercial cattle farm in central Namibia - A case study

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Background

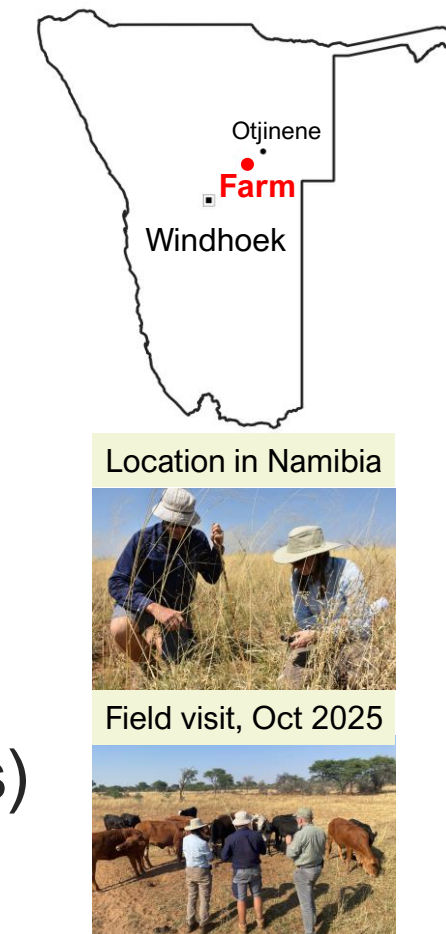
- **42% of Namibia's land:** private farms with savanna rangelands with erratic rainfall & recurring drought
- **Prominent land-use:** beef cattle farming → cattle mainly marketed to export abattoirs or alive to South Africa
- **Common problems:** droughts, bush encroachment, erosion, high input costs, low profit margins, climate change
- **Possible solution:** regenerative management gains popularity¹ – but the concept does not give specific instructions for practical implementation

➤ **Research question:** How do farmers envision *and* operationalise regenerative management?

Case Study

- **Commercial freehold family farm:** cattle production as only regular income
- **Omaheke Region:** 430 mm ± 35 % rain, tree-and-shrub savanna & thornbush savanna
- **11 000 ha rangeland**
52 fenced paddocks
- **1 000 ± 200 head of cattle**
Crossbreds of Bonsmara, Nguni, Simmental, Boran, Brahman (high share of African breeds)

➤ **Method:** Semi-structured interview → Audio transcripts → Qualitative Content Analysis (MAXQDA)

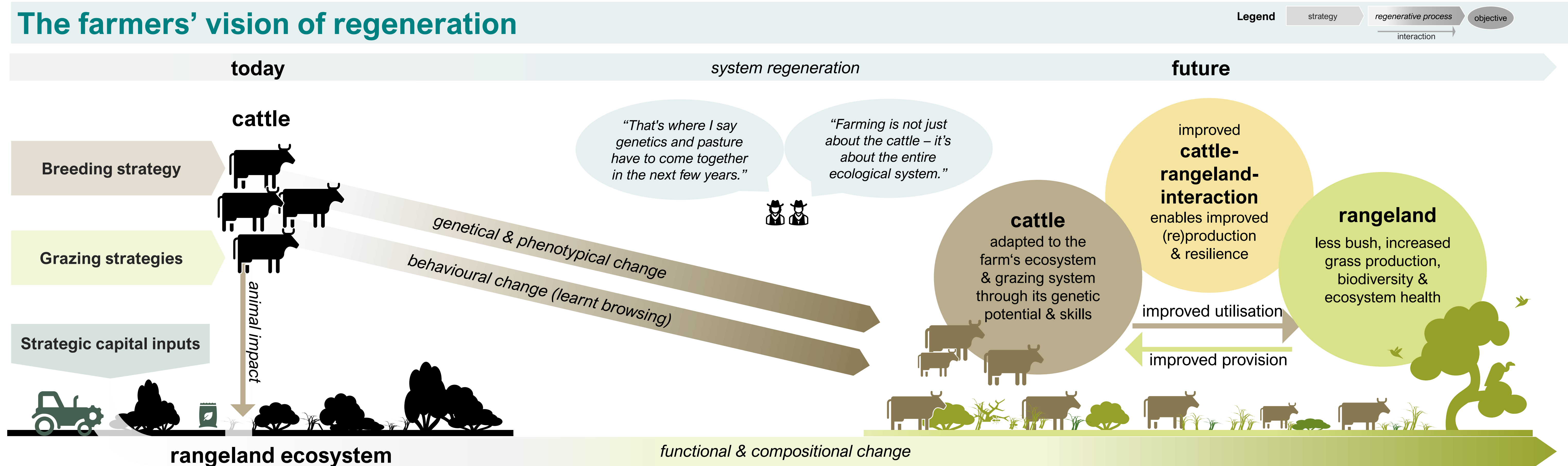


Conclusion

The farmers in this case study...

- Envision regeneration as a **site-specific process & outcome** based on their **holistic system view**
- Apply various practices & an experimental mindset
- Aim to use, manage & improve the **cattle-rangeland-interaction**
 - for positive impact on rangeland development
 - while improving cattle (re)production
 - and reducing capital-intense inputs
- Emphasise site-specific **cattle breeding** for rangeland regeneration and utilisation

The farmers' vision of regeneration



The farmers' operational management

To regenerate rangelands

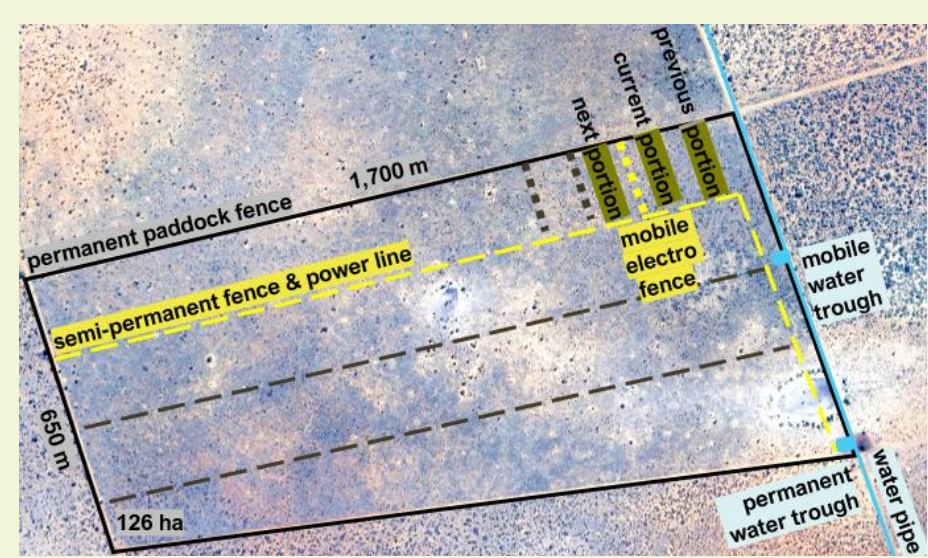
Strategic capital input: Mechanical debushing

- Targeted bush clearing (manually / bush roller / mulcher) → prepare paddocks for grazing
- Followed by grazing regime shift (cf. below) → inhibit regrowth

New grazing strategy: Ultra high density (UHD) grazing

- In 2024 piloted with 1 herd of 200 cows. In 2025: 2 paddocks treated → increase area in future
- UHD grazing with mobile electro fences, opening multiple portions per day, followed by min. 1 year rest
- Forces **non-selective grazing** & learning to **browse**: animals as “tools” for rangeland regeneration

- ➕ concentrates beneficial animal impact on soil and manure deposit
- ➕ uses and reduces bush & less favoured grass species
- ➖ reduces diet quality, risks lower (re)production



Ultra high density grazing: paddock layout



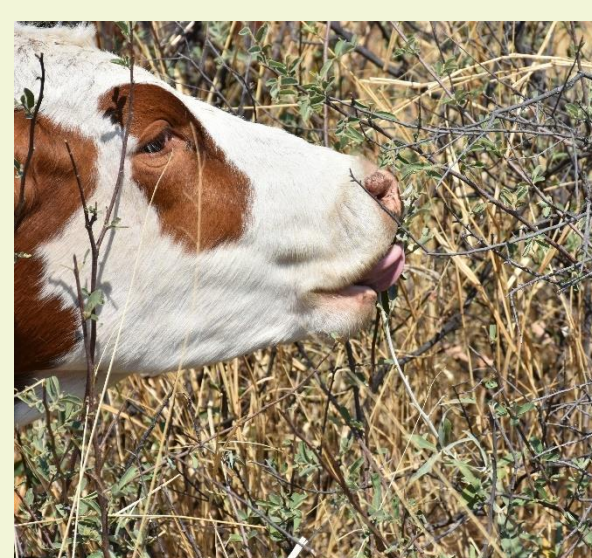
Ultra high density grazing



Bush encroachment



Paddock after UHD grazing



Browsing cow

To assure cattle (re)production

Follow baseline grazing strategy: Rotational grazing

- Customised adaptation of Holistic Grazing Planning™
- Large herds & short grazing duration during rainy season
- ➕ positive animal impact (break up soil, deposit manure, prevent bush)
- ➕ prevents overgrazing, stimulates re-growth of favourable grasses
- Allows **partially selective grazing**
- ➕ beneficial for animal nutrition & (re)production
- ➖ risks overgrazing of preferred grasses, no bush decimation

Adjust UHD grazing for animal nutrition

- Monitor cattle condition & dung → if undesired, increase frequency of opening portions or remove individuals
- Divide herds: remove young cows in calving season → prevent loss of condition

Strategic capital input: feed supplementation

- Provide adequate **supplements**
 - mineral & protein lick → compensate deficits
 - microbial supplement → enhance digestion of ligneous vegetation
 - reduce inputs once genetics improved (cf. breeding strategy)
- Grow (**pasture**) **crops** as temporary additional feed

Challenges in grazing management

- Reconciling **animal nutrition** (production) & **animal impact** on ecosystem (regeneration)
- **Infrastructure** development, recruiting & training **labour**

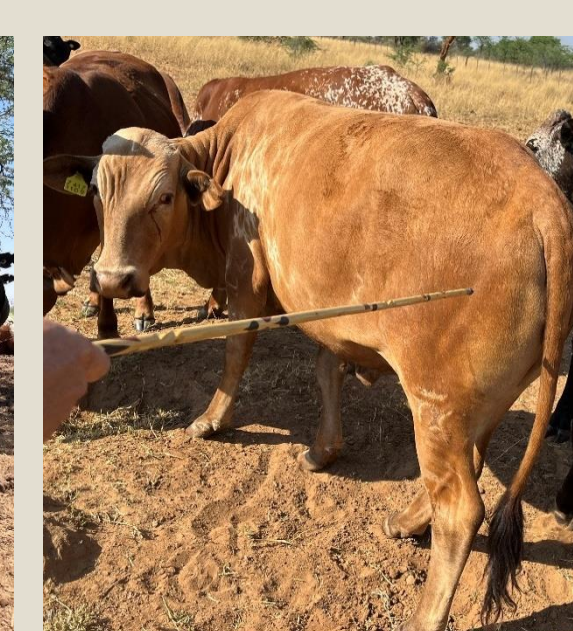
To regenerate cattle's adaptation

Breed cattle capable of (re)producing in this system

- Choose adapted **African breeds** but rather select “a type”
- **Select** for traits promising adaptation and (re)production
 - efficient forage intake & digestion
 - 👁 hoof shape, walking ability, rumen capacity, browsing
 - high testosterone (in males) / oestrogen (in females) levels
 - 👁 body proportions, early maturity signs e.g. short cannon bone
 - performance under current grazing management
 - 👁 body condition: fat and muscles, regular gestation
- Pair early and “**let the bull select** for fertility”
 - 👁 heifers that conceive with 14-15 months
- **Divide herds:** pair heifers / elite-cows / producers with different bulls → different offspring for replacement or sale



Different breeds, same type



Showing desired trait expressions



Different breeds, purposes & pairing

Challenges in breeding management

- **Buyers** prefer different body proportion & breeds that are “too high-maintenance” for this system
- **Purchasing** high-quality breeding stock of African breeds



Contact information

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¹ See case studies by the Namibian Agricultural Union: <https://www.nau.com.na/regenerative-home>