

Summary of research results

Short-resting and reseeded

Burder community-based natural resource management committee, Burder Ward, Wajir

Increase in plant cover from before the rains to after the rains (m²/ha)

Season	Rainfall	Resting treatment	Increase under normal grazing (no resting)	Benefit of resting	Increase with resting
Long rains 2018	Flooding + poor rains	1 month rest	110	450	560
		2 months rest	110	830	940
Short rains 2018–2019	Poor rains*	1 month rest	-1,090	410	-680
		2 months rest	-1,090	430	-660

Note: one-month benefits may be underestimated since grazing started earlier than in the two month resting areas.

*As the short rains of 2018–2019 were the 2nd consecutive season of poor rain in Burder Ward, resting effects are reduced due to persistent drought.

Best performance: Burder CBNRM Committee and ILRI

Rainfall	Burder CBNRM	ILRI
Flooding + poor rains	2 months rest with reseeded	2 months rest with reseeded
Poor rains	2 months rest with reseeded	2 months rest without reseeded

Where might resting be more effective in your area?

- Where there was less grazing.
- In more open areas with few shrubs.
- In lower areas when there is no flooding.
- In higher areas when there is flooding.
- In areas far from towns (but not during the second poor short rains).

Which grass species was best for reseeded in your area?

- Baldhoole-cagaar/Ciir dhuuq (*Cenchrus ciliaris*)—the other four grasses rarely survived (*Cymbopogon pospischilii*, *Enteropogon macrostachyus*, *Eragrostis superba*, and *Sehima nervosum*)

What causes benefits from resting?

- Expansion of moderately preferable annual and perennial grasses. The most common perennials were Sayda/Saeda (*Paspalidium desertorum*), Jarbi (*Sporobolus* spp.) and Biila (*Aristida adoensis*) (and also shrubs, but less so).
- Growth of grass seedlings from the seedbank (mostly annuals and some perennials).

What are the advantages of this resting approach?

- Greater plant cover means more pasture for grazing at the end of the wet season and into the dry season.
- Greater plant cover increases infiltration of rain, reduces erosion and improves microclimate, which help grass seedlings of preferred species to germinate and survive, improving rangeland quality in future years.
- Resting provides space and time for reseeded. Here, due to very poor rains in both seasons, only Baldhoole-cagaar/Ciir dhuuq (*Cenchrus ciliaris*) survived in a few sites during the long rains of 2018. Other tough grasses could survive well, e.g. *Aristida adoensis*.

What are the disadvantages of this resting approach?

- Resting reduces the area available for grazing in the early rainy season.
- The forage quality is lower in the resting areas because the grasses are older when grazing begins.

What does this mean for your management decisions?

- Rotational resting: if the resting areas are re-opened to full grazing, you can rest new areas of your rangeland for one or more seasons, which will improve rangeland quality over the long term (5–10 years or longer)
- Resting for two months was the most effective strategy, even with poor rains (with good rains one month is probably enough).
- In droughts, no effects of resting are likely to occur but resting could reduce the death of preferred perennial grasses. At these times, resting is difficult or impossible.
- The size of resting areas is an important decision—larger resting areas will give greater benefit, but smaller resting areas have lower costs.

What would help to make resting and reseeding more effective?

- Fertilize resting areas with manure from nearby bomas, especially goat manure.
- Use resting areas as a boma for animals, e.g. for one night with many animals or 10 nights with few animals before the resting begins. The number of nights will depend on the number of animals—too much manure will kill the grass because of nitrogen burn.
- Using fenced, fertilized plots to grow fodder and seeds for reseeding, especially Baldhoole-cagaar/Ciir dhuuq (*Cenchrus ciliaris*) and maybe Biila (*Aristida adoensis*), among other species.

Research summary

A research needs assessment was conducted in 2017, after which a draft action research trial protocol was prepared and circulated to our research partner in Wajir county, Wajir County Department of Livestock. The protocol was finalized in early 2018 following consultation with community members to be directly involved in the research.

The action research trial involved short duration resting of moderately to heavily degraded rangelands for one and two months at the beginning of the “long rains” season of 2018 and the “short rains” season of 2018 and 2019. Nested plots were reseeded with a mix of drought-tolerant rangeland grass species (*Cenchrus ciliaris*, *Cymbopogon pospischilii*, *Enteropogon macrostachyus*, *Eragrostis superba* and *Sehima nervosum*).

Each of the 7 research areas had three research blocks, with each block 0.25 ha in area with bush-fences demarcating the 1- and 2-month resting areas. Spatial vegetation cover measurements used modified transects from the LandPKS approach (www.landpotential.org). Control transects (no resting; grazing as usual) were established 20 m outside the research areas. Baseline measurements were taken in the late dry season before the 2018 long rains and outcome measurements were taken after the rains in the 2018 long dry season one month after the 2-month resting areas were reopened to grazing (two months after the 1-month resting areas were opened to grazing), and again after the 2018–2019 short dry season.

Contact

Jason Sircely
j.sircely@cgiar.org
ILRI, Kenya
ilri.org



ILRI thanks all donors and organizations which globally support its work through their contributions to the [CGIAR Trust Fund](#)

Patron: Professor Peter C Doherty AC, FAA, FRS

Animal scientist, Nobel Prize Laureate for Physiology or Medicine–1996

Box 30709, Nairobi 00100 Kenya
Phone +254 20 422 3000
Fax +254 20 422 3001
Email ilri-kenya@cgiar.org

ilri.org
better lives through livestock

ILRI is a CGIAR research centre

Box 5689, Addis Ababa, Ethiopia
Phone +251 11 617 2000
Fax +251 11 667 6923
Email ilri-ethiopia@cgiar.org

ILRI has offices in East Africa • South Asia • Southeast and East Asia • Southern Africa • West Africa



This publication is copyrighted by the International Livestock Research Institute (ILRI). It is licensed for use under the Creative Commons Attribution 4.0 International Licence. December 2019