

Grazing for Soil Health

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Grass lands are important for our life

1. Holds soil in place
2. Store water
3. Store carbon
4. Feed Billions of life forms



What grasslands need

“Massive stomach.”

Without animal digestion there is no soil

Without soil there is no future

What do cows need to survive ?

- It is located on the tips of plants-energy. That is why cattle graze the tips.
- When their movement is restricted in pastures, they then go the remaining part of the plant. Further on if there is no access to new tips they again feed on the same grass which leads to **overgrazing of that plant**

Continuous grazing

- Livestock remain in the same paddock for the whole grazing season
- They graze selectively, making it difficult to balance the ration
- Pasture quality declines as the season progresses
- Productivity of the pasture also declines from season to season as plants become more damaged by overgrazing

Preferential grazing



Cutting grass



After 45 days rest



Second cutting after 65 days



The Soil is exposed



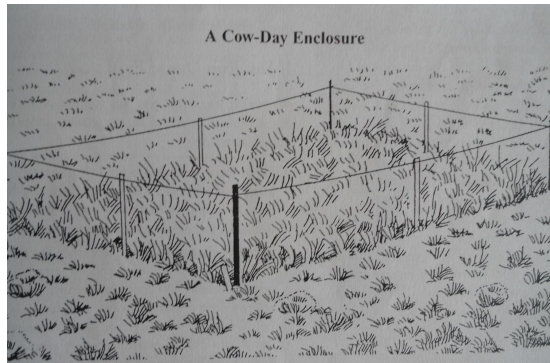
There should be diverse grass varieties



Holistic planned grazing

- Livestock move to a new paddock only when it has fully regrown
- They will have adequate quantity and pasture quality through out the grazing season
- Over the years ,this management system will increase pasture productivity
- The more intensive the management, the faster the pasture will improve

3 month rested grass land



14. The Los Ojos Ranch staff used a cow-day enclosure to check their estimates of nongrowing-season grazing pressure. The enclosures were placed in one paddock that was grazed at the grazing pressure they figured all their cows to stand, on average, during the winter; then they compared the grazed land and the ungrazed enclosure.

6 month rested grass land



Grazing



Various stages in grazing



Cows in movable grazing paddocks in Gokuldham, Belgaum



Impact After High density short time Grazing



Animal impact

- Feeding of cows
- Pruning of grass
- Mulching of the soil
- Seeding
- Disturbing the compacted layers
- 100% utilization of dung and urine as manure
- Carbon sequestration

COW PROTECTION V/S COW PROTECTOR



What is “Animal Impact”??

- Everything that livestock do to the land while living on it is called animal impact. It starts with grazing. Grazing means the feeding of the soil. While grazing the cow does not just feed themselves but also work to nourishes the soil. They do so naturally by their dunging, urinating and mulching. This along with their hoofs impact creates the circumstances for building the soil.

ISKCON AHMEDABAD

Animal impact with cows



When cows graze

- They're nibbling on the grasses in a way that exposes their growth points to sunlight and stimulates growth...
- Their trampling [of the land also] does several things: it breaks any capped earth so that the soil is aerated.
- It presses in seeds [giving them] a chance to germinate, so you have a greater diversity of plants.
- [Grazing herds] also press down dying and decaying grasses, so that they can be better acted upon by microorganisms in the soil. It keeps the decaying process going. -Mulching
- Their dung and urine also fertilizes the soil."

Effect of rest to regrow after grazing-More roots in soil

1. Longer rest periods mean more roots
2. Feeds the micro-organisms
3. Withstands droughts better.
4. Pulls minerals from deeper in the soil
5. The next time they come to graze they get a better quality grass



Advantages of planned grazing (High density short time)

- Cows graze a greater proportion of available plants more evenly
- Distribution of grazing, dung and urine more evenly
- Cows move more frequently to fresh ground which provides a more constant level of nutrition
- Tighter plant communities develop
- Animal performance improves

The next plot waiting for the cows in Gokuldham, Belgaum



Advantages

- No labour for dung removal/Cleaning goshalas
- 100% utilisation of dung and urine
- No labour on cutting ,chopping and feeding of grass
- Feeding the soil (Effective rainfall,mulching,manuring)

Meaning of cow protection

Live stock confined to Feedlots where they stand shoulder to shoulder in their own feces while being force-fed high energy grain

These animals will have to be returned to land ,where they are desperately needed and where their excretions are a valuable asset, rather than a costly liability

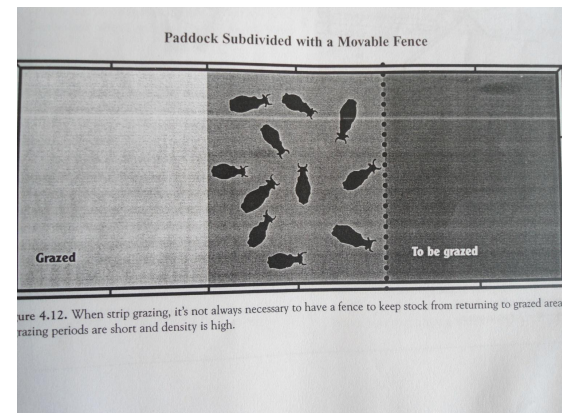
That is why they were hankering for a blade of grass

Advantages of High density short time planned grazing

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Assessing recovered grass

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A 12 hour grazing plot for 15 cows in Gokuldham Belgaum



A 1 hour grazing plot For 40 bulls in Jaipur



A 4 hour grazing plot for 20 bulls in Ahmedabad



Gazers to Grazers

- More sunlight captured means more carbon is entering the soil system. What's above in grasslands is reflected in the root system of plants. Grow more herbage mass above means more root biomass below ground.

Gazers to Grazers

- . The only thing that can effectively cycle carbon is herbivores – any animal that consumes green leaf and processes it into body mass is cycling carbon. –Organic farming or fertility farming

- Grazers have the perfect tool to
- regenerate land,
- restore soil heath and humus, and
- by default build carbon and positively influence the environment.
- **The ability to control the movement of livestock across the landscape puts the power in your hands.**

The Supreme cow-herd boy



Summary

- Graze here today, leave here today and do not come back here till the roots and leaves are fully recovered(2-9 months or more depending on local conditions)
- Gather the animals together for animal impact, easier grazing management, easier handling and more even grazing.

To avoid overgrazing monitor daily growth rates

