

Classification, development and management of pasture

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ARTICLE ID: 11

ABSTRACT

For the better health of animal and high yield from the livestock quality fodder is required along with efficient feeding management. Farmers cultivate different fodders in agricultural land for the feeding of animals. In few areas, natural pastures are available for the grazing of animals. In some countries, pastures are also developed and well managed by the farmers to provide fresh, nutritious pasture as per the requirement of animals. In our country, 50 % of the livestock population is depends on grazing. Only 2.3% of the world's land area supports India's total livestock and human population. Hence, for proper growth of livestock farming, it is necessary to develop more pasture or grassland. The pastures are annual, permanent, annual seasonal, developed or created pastures. Nowadays, the development of pastures and their proper management attracts farmers' minds that will support the development of livestock farming in India in the coming years.

Keywords: Classification, development, Grazing, Management, Pasture

Introduction

Only 2.3 % of the total geographical area of the world is available in India, of which only 0.367 % is under grazing pasture and the forest occupies 2.983 %. Among the 2.51 crore hectares forest area, 2.10 crore hectare is available for grazing. About 90% of the livestock population of India subsists on natural vegetation that are available inside and outside of the forest.

Classification of pastures

1. **Annual permanent:** Alpine pastures in the Himalayan region and at the foot-hills of the Himalaya are succulent, delicate, tender, palatable and the best in the world.

Sporadic annual pastures are also available in Himalayan regions but not in other parts of the country. It accounts for about 13 million hectares.

2. **Annual seasonal pastures:** The uncultivable, undulating, unproductive, saline-alkaline (7-8 million hectares), cultivable waste land (15 million hectares) covered by natural vegetation in the monsoon season are the natural grazing land and a potential source of forage for four months. They are degraded due to highly dense (high stocking rate) uncontrolled village grazing animals and insufficient to maintain animal health. All such natural seasonal village grazing lands are under the control of the government, co-operative or village panchayat.

3. **Developed/ created pastures:**

Silvipasture: Land development through contour-bunding, drainage followed by multipurpose ever green fodder. Plantation on the bunds/ contours or dry land fruits crops at a distance of 5 meters in a row and good quality perennial legume + non-legume grasses in a 1:1 ratio called silvi or horti pasture.

Advantages of developed pasture

- i) Any type (undulated, waste) of land can be used.
- ii) Contour bunding penetrates water in the soil.
- iii) Control soil and water erosion.
- iv) Drain and remove excess water and salt.
- v) Recurring expenditure on preparatory is not required.
- vi) Forage production is available throughout the year.
- vii) It provides rest, a nest and home to wild animals and birds.
- viii) Trees are multipurpose used for fuel, farm implements, construction, bodybuilding.
- ix) The grass+ tree leaves provide higher production per hectare.
- x) It will improve soil texture, structure and fertility.
- xi) Help to maintain a pollution-free environment.

Development of pastures

- a) **Fencing:** Barbed wire, live shrubs, stones, woods, drain (1 x 1 m) etc. are used for fencing. It gives protection from stray cattle, wild animals, theft and maintains ownership.
- b) Eradicate the thorny, poisonous plant shrubs, poor-quality grasses and weeds from roots and destroy them.
- c) **Leveling and ploughing:** Prepare contour bunds and drains pits at an 8-10m distance, especially on low land areas prone to flood. Keep a 3% slope.
- d) **Soil and water conservation:** Harvest rainwater by plugging gullies nala, stream and by putting check bunds at several points.
- e) Apply 20 QL FYM, 20 Kg N, 20 Kg P₂O₄, 10 Kg K₂O and 100 Kg ZnSO₄/hectare.
- f) **Tree plantation:** Prepare pits 1'x1' x 0.5' on lands at 5 m distance in a line or 8-10 m distance between lines (depending upon the gradient of slope). But, there must be 50 trees/ hectare. Forage tree-Karanj, Haldoo, Pipal, Neem, Arjun, Sesum
Fruit trees-Tamarind, Amla, Mango, Bel, Ber.
- g) **Sowing:** The space between the bunds/ drain is sown with 6-10 Kg (small size) and 20-30 Kg (Big size) seeds of legumes and non-legumes in a 1:1 ratio in Kharif. Before sowing, allows the seed to soak in water for 10 hrs. Under irrigated conditions, sowing can be done in any season.
- h) Average 750 Kg DM-poor quality, 2500-4750 DM/ hectare is available for good quality pasture.

Management of developed pasture

1. Do not allow grazing during the first year of sowing.
2. Harvest the forage during the second year.
3. Adopt rotational grazing for the third year. Such pasture can supply forage for ten years.
4. Do not graze the animal early in the morning or on rainy days or when there is wet condition.
5. Different types of animals are to be grazed (creep grazing) in the same flock at the same time due to other feeding behavior; the feeding competition can be reduced.

6. Prepare four compartments, graze three compartments for 15 days each and the 4th compartment is reserved for harvesting. Thus each compartment gets 45 days rest period. More forage is available; the surplus forage is harvested. The reseeding is possible from mature fodder and future crop will be dense in each year. A New plot/ compartment is reserved for harvesting.

The good quality pasture yields 6-7 MT green forage.

Conclusion

For constant and nutritious forage, developing perennial pastures is essential, along with proper management of developed pastures.

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