



Feed And Fodder Resources Used for Feeding of Cattle and Buffaloes

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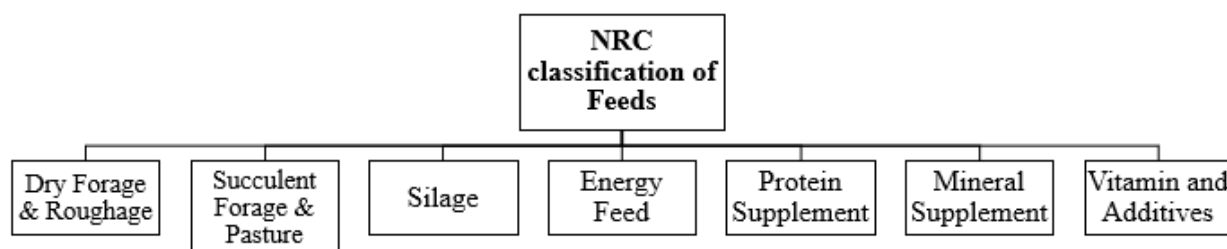
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Introduction

Livestock improvement demands the efficient use of available feed resources. The provision of feeding stuffs of adequate nutritional quality is likely to be the most limiting factor in increasing livestock production in the developing countries. Factors like climate, agronomic practices, feed processing technologies and genetic variations ultimately affect the nutritive value of feed for livestock. Feeding resources and feeding systems of farm animals vary from one place to another. Feeding practices are governed by the farmer's land holdings, socio-economic status and marketing of livestock and their products. Feeds and fodders used for feeding of cattle and buffaloes composed of naturally occurring products from food crops and field crops of many of the byproducts of the milling, oil seed processing, sugar industry, starch manufacturing, vegetable and fruit processing, dairy, meat, fish, prawn etc. processing and other food processing industries (e-Krishi Shiksha, 2012; Reddy, 2016).

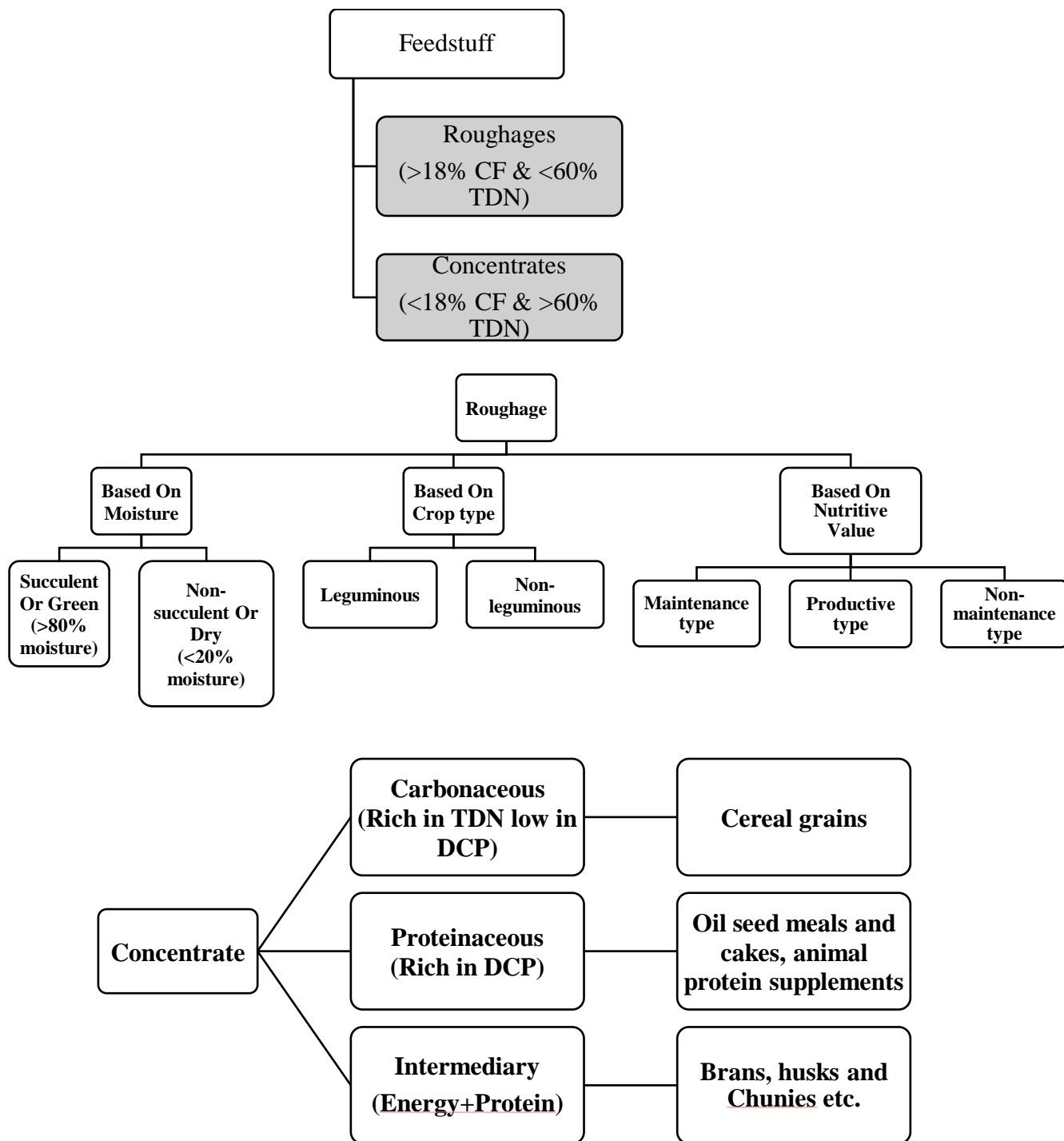
Classification of feed and fodder resources

- Crampton and Harris (1969) proposed a classification of feeds and fodder based upon their use, known as NRC classification of feeds, referred as international feed classes:





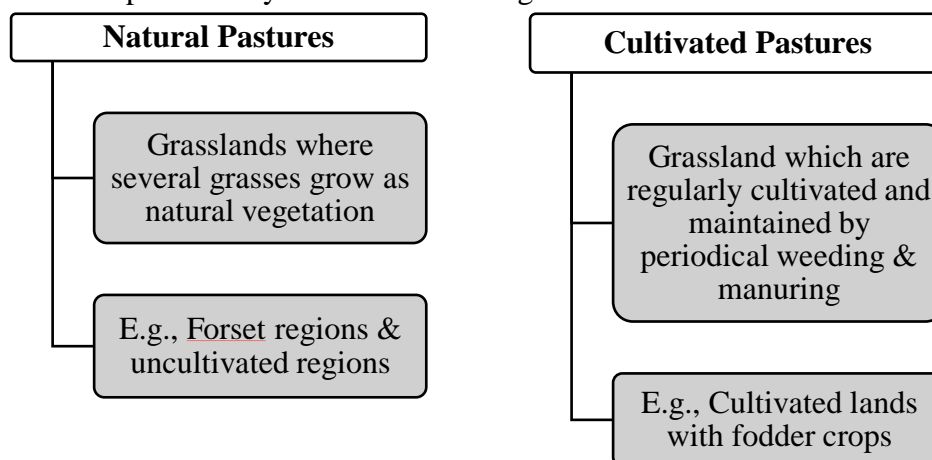
- Feedstuff can be grouped into different classes on the basis of bulkiness and chemical composition:





Forages and Roughages: - Products containing >18% CF or >35% of cell wall in their dry state

- ✓ **Hay**
Product obtained by drying the tender stemmed leafy plant material in the sun or in the shade in such a way that they contain not more than 12-14% moisture
- ✓ **Straw**
Byproduct of cereal, millet or legume crop leftover after harvesting, threshing and removal of grains or pulses
- ✓ **Stover**
Aerial parts with ear, husks or head
- ✓ **Soilage**
Pasture whether natural or cultivated when cut and fed green to an animal in its stall is known as **soilage**
- ✓ **Soiling**
Method of feeding animals with soilage is known as **soiling** or **zero grazing**
- ✓ **Soiling Crops**
Grasses or crops which act to provide fodder, these crops are nothing but fodder grasses or other crops raised by farmers for feeding livestock



➤ **Fodder crops**

S. No.	Type	Examples
1.	Kharif fodders	Sorghum, Maize, Bajra, Teosinte, Sun hemp & cowpea etc.
2.	Rabi fodders	Oats, Lucern, Berseem & Mustard etc.
3.	Fodder grasses	Berseem, Lucern & Kudzu vine
4.	Fodder trees	Babul, Subabul, Sesbania & Glyricidia

**➤ Energy feeds**

S. No.	Type	Examples
1.	Cereals	Bajra, Sorghum, Maize, Wheat, Barley & Ragi etc.
2.	Legume/Pulses	Horse gram, Black gram, Bengal gram & Red gram etc.
3.	Cereal byproducts	Rice bran, Rice polish, Wheat bran & Maize bran etc.
4.	Pulses byproducts	Chunies & Husk
5.	Roots & Tubers	Turnips, Sugar beat, Potatoes, Cassava & Sweet potatoes

➤ Protein feeds

S. No.	Type	Examples
1.	Plant origin	Oil cakes & Meals; Groundnut cake & meal, Soybean meal, Sesame oil cake, Cottons seed cake, Mustard oil cake, Rapeseed meal, Linseed oil cake & meal, Sunflower cake etc.
2.	Animal origin	Meat meal, Blood meal, Liver residue meal, Fish meal and Feather meal etc.

Availability of feed & fodder in India

- ✓ In 1970s India was deficit of green fodder, concentrate & dry fodder to the tune of 38%, 44% & 40% respectively (NCA, 1976).
- ✓ In 2005, it was 11%, 28% & 35% for dry fodder, green fodder & concentrates respectively (NIANP, 2005).
- ✓ In 2025, India will face a shortfall of 32.6%, 24.7% & 46.7% of dry fodder, green fodder and concentrates respectively (Niti Aayog, 2015).

Conclusion

Feed & fodder are important input for cattle & buffalo farming. It constitutes about 50-75% of production cost. Feed & fodder resources are depleting due to increase population. Pressure on lands for cereal & cash crops. Need to look for alternative feed resources, relentlessly to sustain livestock productivity for food & nutritional security of the populace.

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