

## **Grazing Management**

### **Indigenous Herding System**

Livestock nurture in the area depends upon the overall farming system of the area. Herding system is governed by factors as cropping intensity, availability and proximity of forest resource, animal species and productive stage, labor availability and animal population per household. Farming systems at different altitude are different upon the temperature, irrigation, and other related factors and will vary.

### **Common herding system (a) Transhumance system (b) Sedentary System (c) Stall Feeding**

#### **Transhumance system**

This system is adopted in the high Himalayan area where the herds of animals migrate from one place to another throughout the year. Herdsmen settle at about 2500 m elevation and this system applicable in where sedentary animal husbandry is not possible due to snowfall and shortage of grazing areas. All the herbage remains under snow for about six months in a year. Therefore, as soon as temperature rises, animals start arising to the high elevations in March for grazing and they start moving down in August and reach at 2000 m elevation. Herds of animal migrate from one place to another throughout the year. In this system mountain pasture utilizes during monsoon and crop growth of the fallow land utilize during winter.

During upward and downward migration, the undergrowth in the forest region is the major forage source. The ruminant animals involved in this system are; Yak or Tartary ox , Sheep, goat, and cattle. But in some area buffaloes are also included. The pure breed yak cannot come down below 3000m elevation, they either have to go to Tibet for grazing while all the grass land

remains under snow, or remains under starving condition. Owners go to see their herd once a while and offer some corn bread, which does not help even for maintenance.

### **Sedentary system**

Ruminant livestock make daily grazing and return evening. The main grazing area during the summer is the bush and community grazing area around the village. The sedentary population consists of working oxen, dry buffaloes and small number of cattle.

### **Stall Feeding system**

This type of animals rearing is found mostly in the area with intensive cultivation and availability of crop residues are richly in addition to tree leaves and other grass and weeds are available. Mostly the high value animal like milking buffalos and exotic or crossbreed animals are kept under this system.

### **Transhumance Sheep Herding System**

This system is followed in the High hill and Himalayan areas. Animals are moved to different area throughout the year. The herd migrates from lower hills (south) to the high alpine pasture and back again based on climatic condition. Supplemented with 40-50 gm salt/head/week. This is one of oldest system grew when animals were domesticated. In migratory flocks, sheep and goat are run together, the goats acting as the lead animals.

### **Limitations in herding systems:**

1. Excessive population depending on limited natural resources: Lack of forage resource and water for livestock
2. Severe forage deficit: Availability of feed and fodder during the winter and early summer is a major limitation.

3. Disease and their effects: (a) High occurrence of disease and parasitism is common (b) Poor nutrition (c) Mostly disease and parasite are endemic to most countries (d) Many more yet to be identified (e) Approximately 90% death or mortality occurs due to starvation and 10% due to accidents and disease.
4. Labor availability: (a) High labor requirement and minimum net return (b) The size of the herds depends upon the labor availability. (c) One herder can take care of approximately 500 heads. (d) Sheep and goats are generally looked after by either children or by old people incapable for doing other operations.
5. Poor productivity potential of indigenous animals: (a) Low milk production (b) Low meat production/body size (c) Quantity and quality of wool low (d) Long calving interval (e) Late sexual maturity
6. Poor marketing structure: (a) For livestock and its byproducts (b) Weekly system (c) No competitive market (d) Middleman control
7. Poor Transportation and communication: Narrow trails and bridges to pasture
8. Lack of specialized industries.
9. Climate change: Changes resulting in disaster such as floods, landslides can also have disturbing effect on local rangeland and create the situation difficult for transhumane herding.