

Treeless grassland predominate the temperate regions & it comprises about 24% of the world vegetation.

The temperate forages is classified into

- Temperate grasses
- Temperate legumes

1. Temperate grasses:

- Most of the grasses found in temperate region belongs to festucoid (Poaoid)group.
- Growth of temperate grasses start at the onset of spring season varying from april to june depending upon the altitude.
- Their growth rate vary from zero in winter to the full genetic potential in spring.
- Example. Crested wheat grass,Intermediate wheat grass,Drooping wheat grass,Common bent grass,Meadow fox-tail grass,false oat grass,false brome grass,rescue grass,smooth brome grass,bush grass,rice grass,Timothy grass,muhly grass, perennial rye grass etc....

Some important temperate grasses are

Agropyron intermedium (Intermediate wheat grass)

- A long lived rhizomatous turf forming temperate perennial grass native of Europe &asia.
- Adapted to temperate dry region having<500mm annual rain fall &requires well drained and good soil.
- Starts growth in spring &provides palatable herbage till early flowering stage.
- Yield-4-6t DM/ha in 3-4 cuttings.
- It is less drought &frost resistant than crested wheat grass,but stays green longer.
- Suitable for planting in dry temperate regions of Himalayas.
- Superior varieties:Slate,Ree,,Amur,Chief,Clarke,Tegmar etc..

Alopecurus pratensis (Meadow fox-tail grass)

- Along-lived ,tufted perennial temperate grass native of europe& asia.
- Adapted tocool,moist temperate climates,very resistant to cold &also withstands high summer temperature.
- Grows best on deep,moist,fertile soils
- Grows well under shade too.
- Yield-5-6t DM/ha in 3-4 cuttings.

Bromus catharticus (Rescue grass or prairie grass)

- A tufted,short lived,perennial grass native of south America.
- Adapted to a wide range of soils in temperate &sub-temperate regions.
- A good pasture grass in the subtropical winter rainfall region during the cool season,&in tropical highlands.

- Yield-5-6tDM/ha.
- Satisfactory quality of herbage with 4.1 to 4.3%D.C.P(digestible crude protein)&highly palatable.
- Superior varieties:lamont,nakuru,chapelhill,grassland matua etc...

Calamagostis epigejos (bushgrass or small reed)

- A tuft or tussock forming temperate perennial grass, native of Asia & Europe.
- A coarse grass of open places found in dry habitats such as sandy shores, rocky slopes or on heavy clay soil.
- Herbage is not considered to be very palatable but is grazed by hill cattle, sheep & goats.
- Yield-4-5t/ha/yr.

Pennisetum flaccidum (pennisetum grass)

- A tufted perennial grass of temperate & alpine region, having creeping rootstock.
- It is common in higher alpine slope areas in Himalayas grazed by sheep & goats & is considered as good fodder.
- DM of 3-4t/ha/yr.

Phleum pratense (Timothy grass)

- It is shallow rooting growing best on moist heavy soils.
- Adapted to cool, humid climates.
- Available for hay making as it is not so regenerative.
- High palatability with DM of 3.2 to 6.9t/ha & crude protein of 7.2 to 14.5%.
- Superior varieties: kamot, bounty, pecora, champs, Aberystwyth S 352, S 48, etc...

2. Temperate legumes:

- In general, temperate legumes are frost resistant & low temperature damages their foliage do not.
- They are generally long day plants.
- Legumes of temperate region in general, are more specific in their Rhizobium requirements than tropical species.
- Example: Cicer milk vetch, crown vetch, birds foot trefoil, Lucerne, sweet clover white flowered, yellow flowered, sainfoin, honey clover, straw-berry clover, crimson clover, red clover etc...

Some important temperate legumes are seen below

Medicago sativa (Lucerne or alfalfa)

- Already discussed above

Coronilla varia (crown vetch)

- A long-lived, deep rooted, frost & drought tolerant, herbaceous perennial legume native of Asia.
- New shoots arise from creeping rootstock or underground rhizomes.
- Yield-3-4t/ha & its regeneration is slower than alfalfa.
- Best suited to permeable, well drained calcareous soil.
- Its digestibility is higher than Lucerne & its seed production in crown vetch is 100kg/ha.

- Superior varieties:penngift,Emerald,Chmungetc.....

Trifolium ambiguum (Honey clover)

- A drought tolerant temperate legume found in temperate & alpine regions of western Himalayas & near east center of origin.
- Has deep, strong & dense mat of roots & rhizome making it for erosion control.
- It is winter hardy, persistent & resistant to drought & pests.
- It is better adapted to humid region & forage is palatable to cattle.
- Yield-3-4t/ha/yr.
- Superior varieties:Frostline,Summit.

Trifolium incarnatum (crimson clover)

- It's annual in growth habit & well adapted to temperate region of the world.
 - It is grown as important pasture & soil improvement crop.
 - Herbage dry matter yield varies from 3 to 4t/ha/yr
 - Varieties:Auburn,Dixie,chief,Talledaga etc
-