

Identification and Appreciation of Montana Native Grasses March 15, 2025

Mark Majerus

Eastern plains



Western foothills and valleys



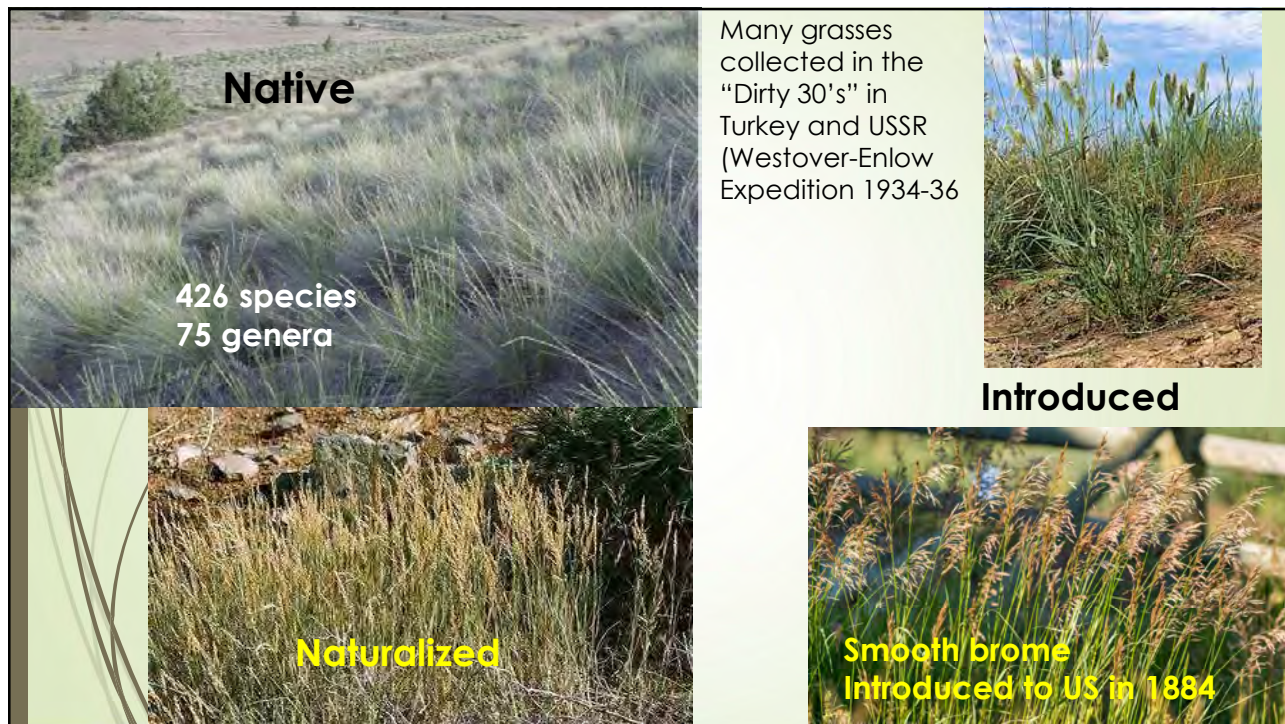
Montana: 60% grasslands

Carbon Sequestration by Grasses



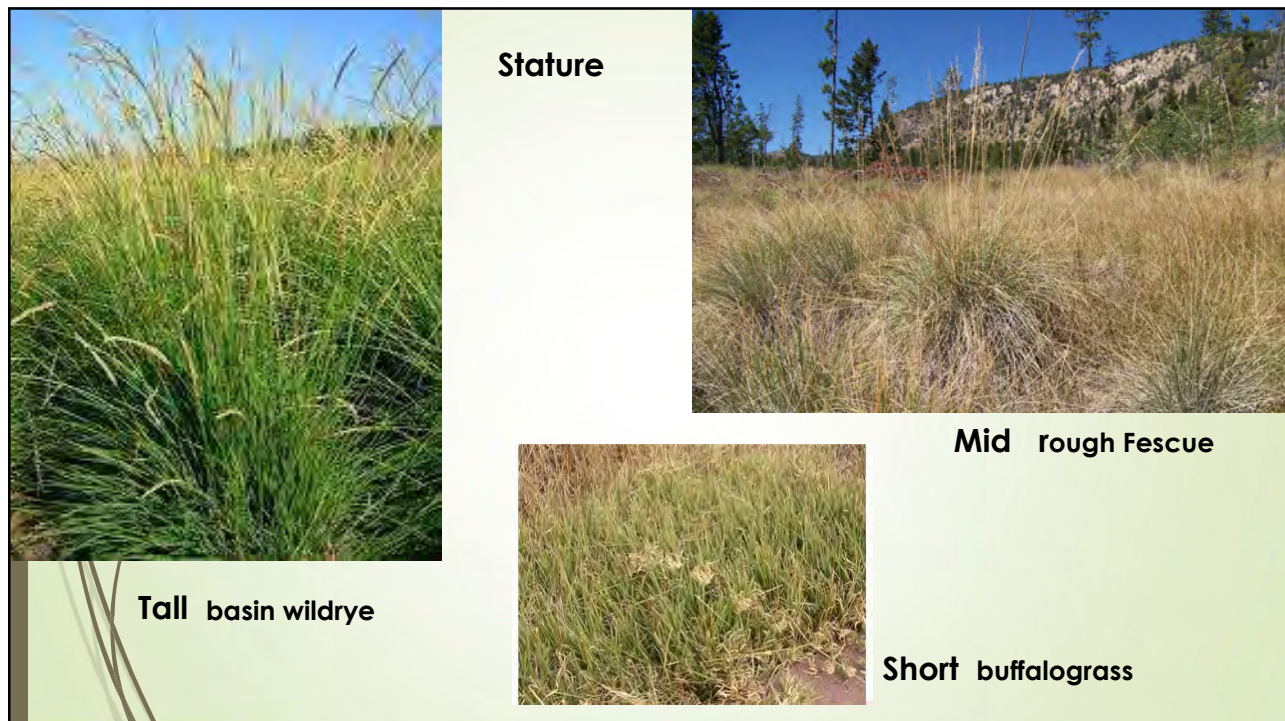
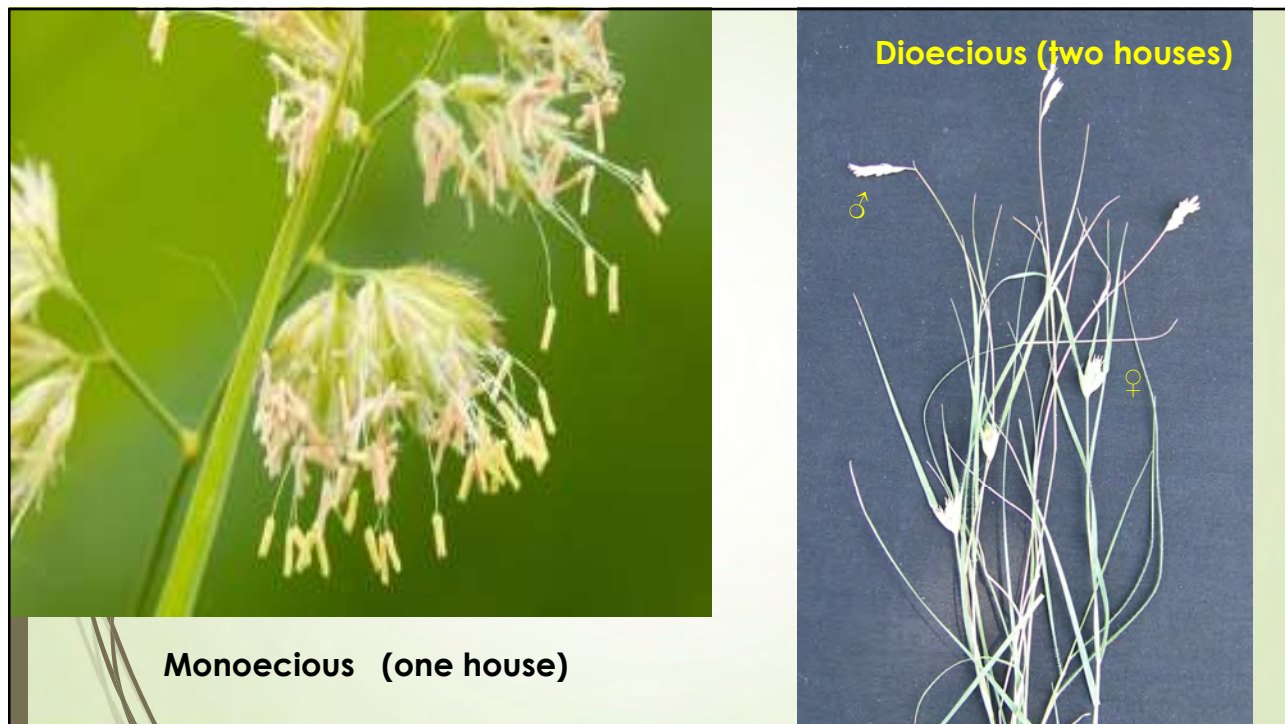
60-80 % grass biomass below ground

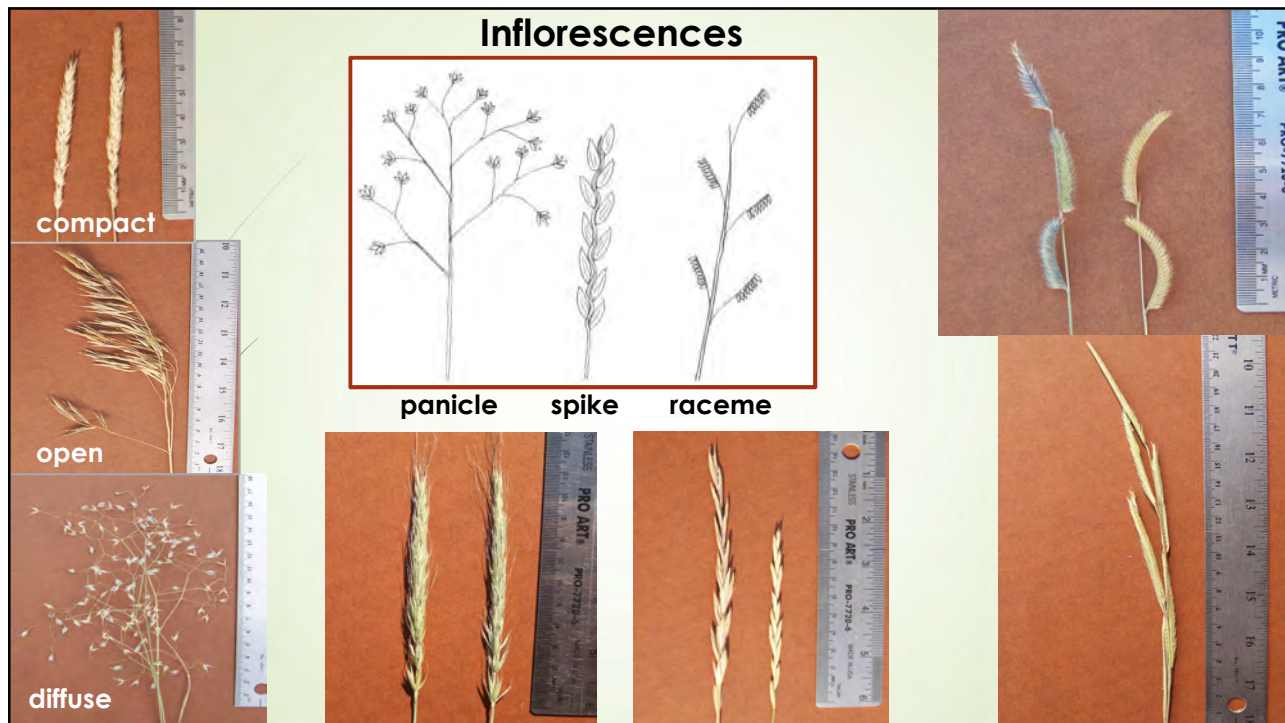
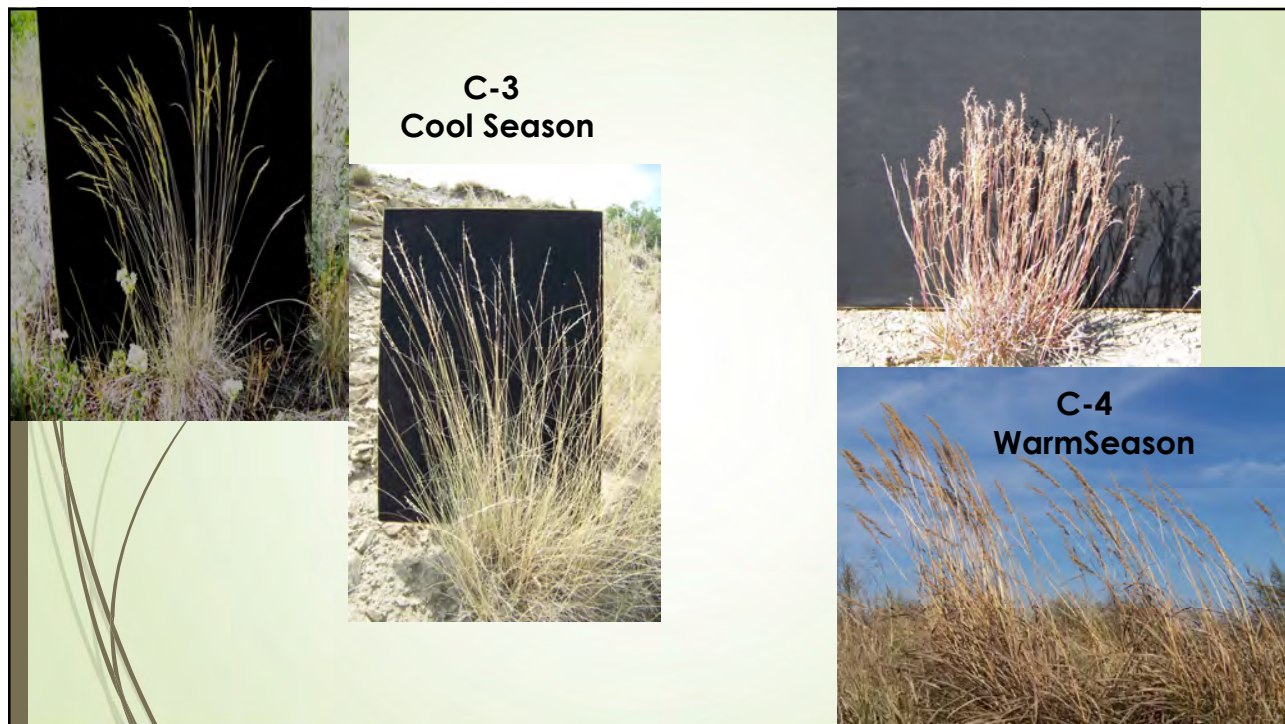
Carbon Sequestration-0.3-1.7 metric
ton C/acre/year

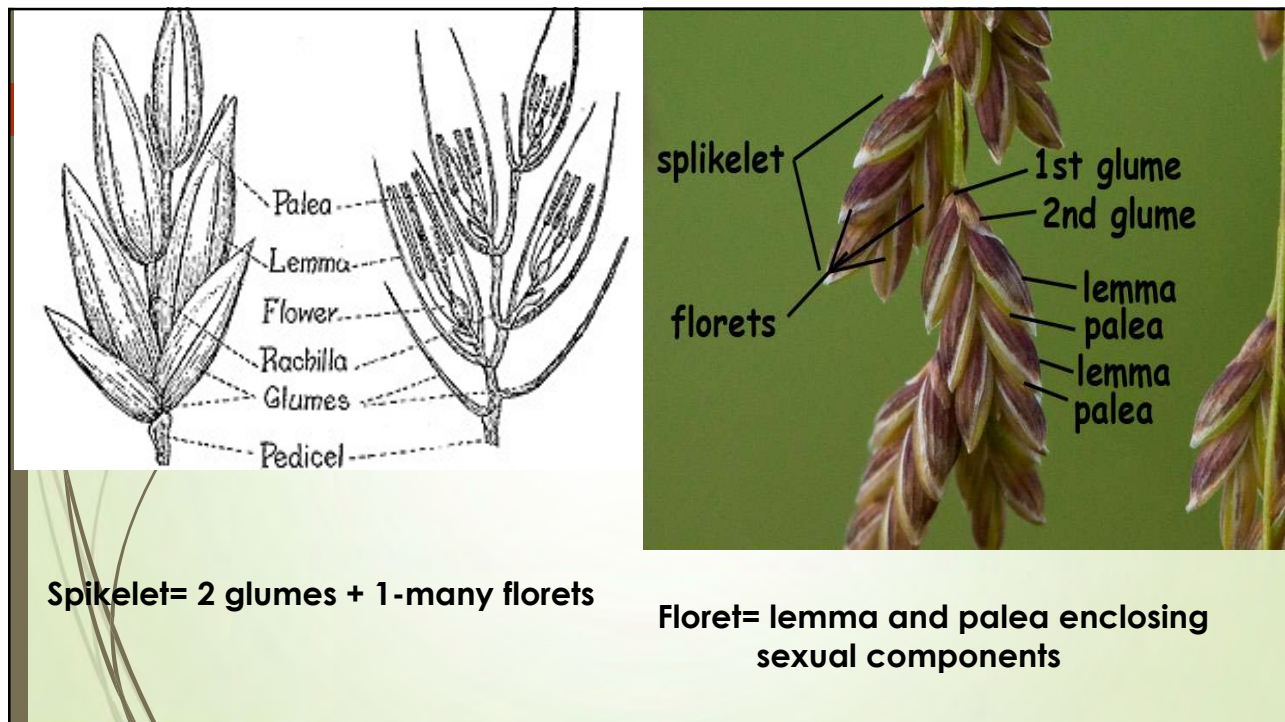


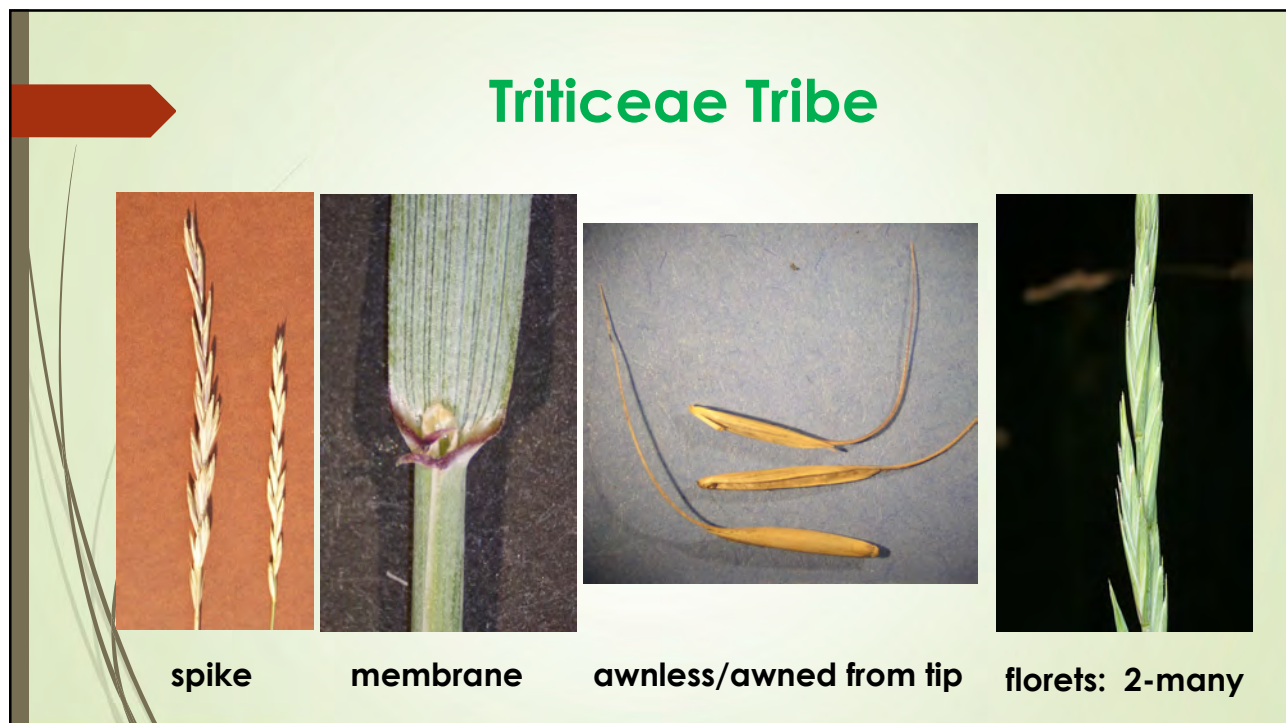
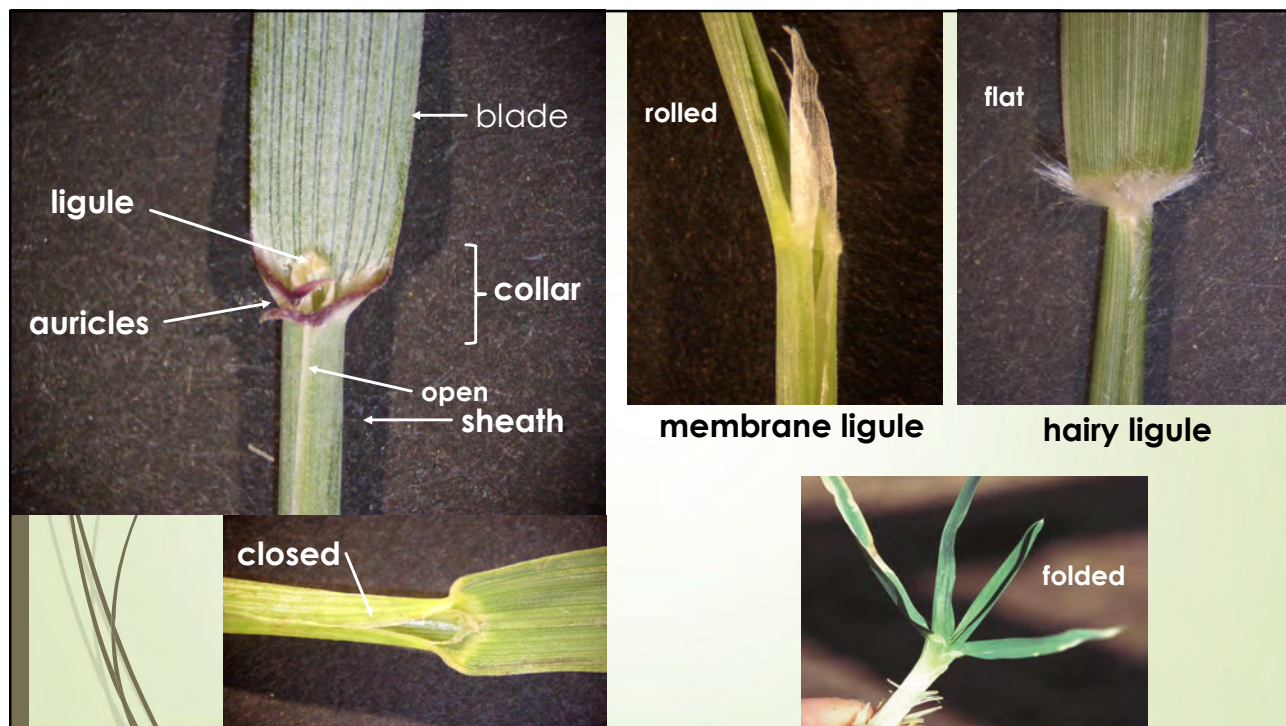
			
Long-lived perennial Out-cross pollination	Short-lived perennial Self pollination	6-week fescue	green foxtail
Annuals			

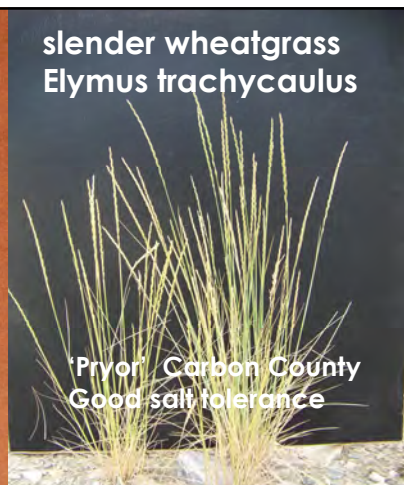
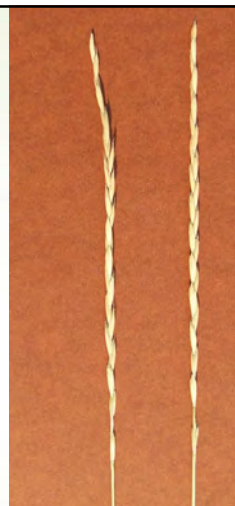
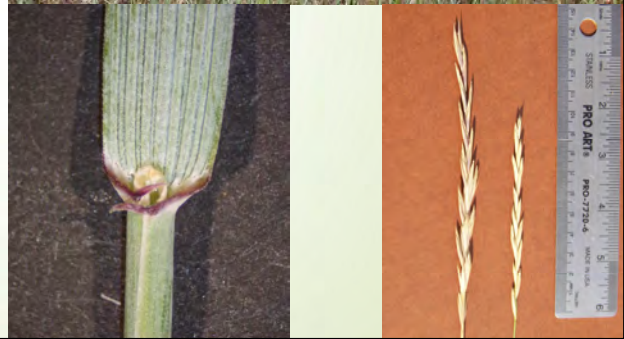
		
Sexual reproduction	Apomixis- asexual reproduction	Vivipary- vegetative propagules
		Small plantlets rather than seed
		

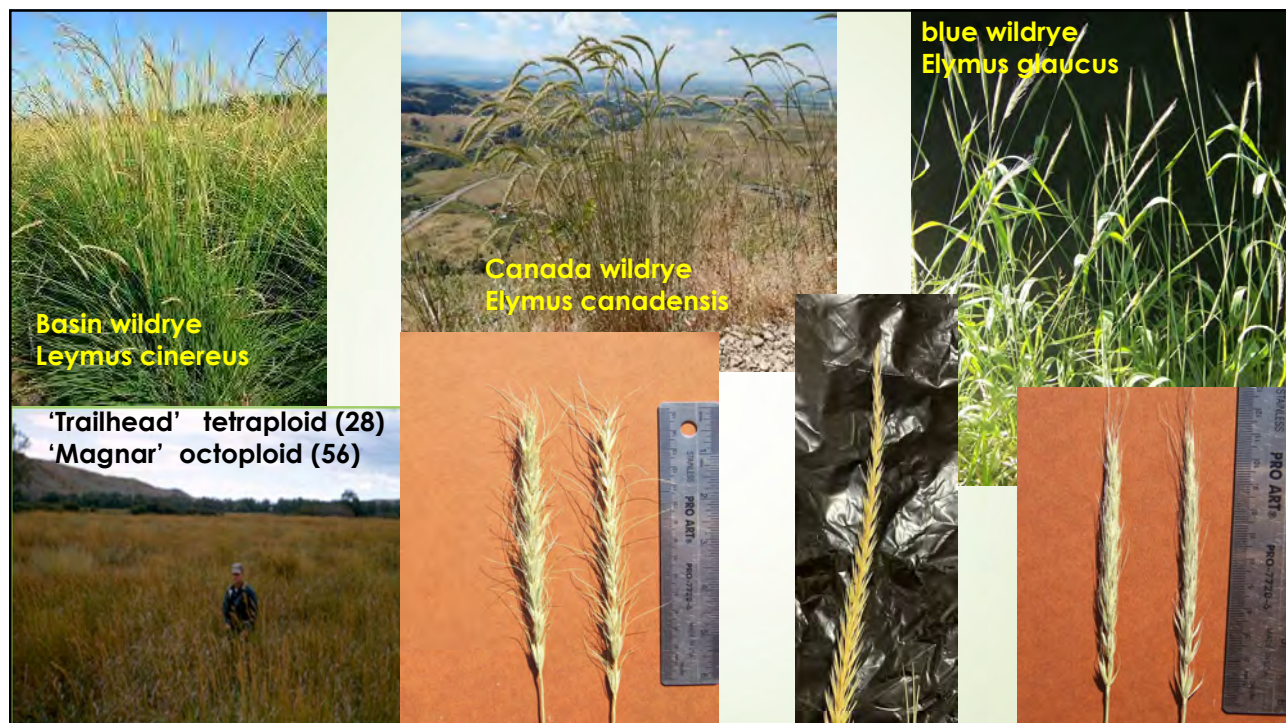
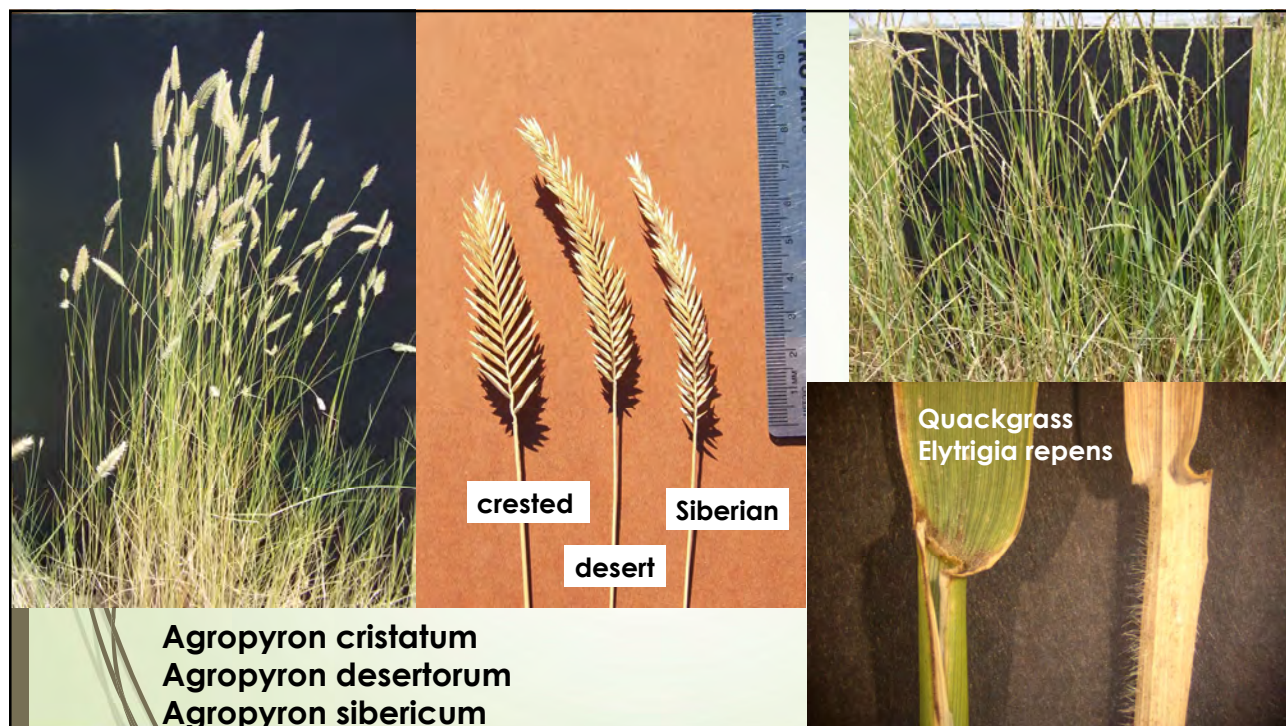


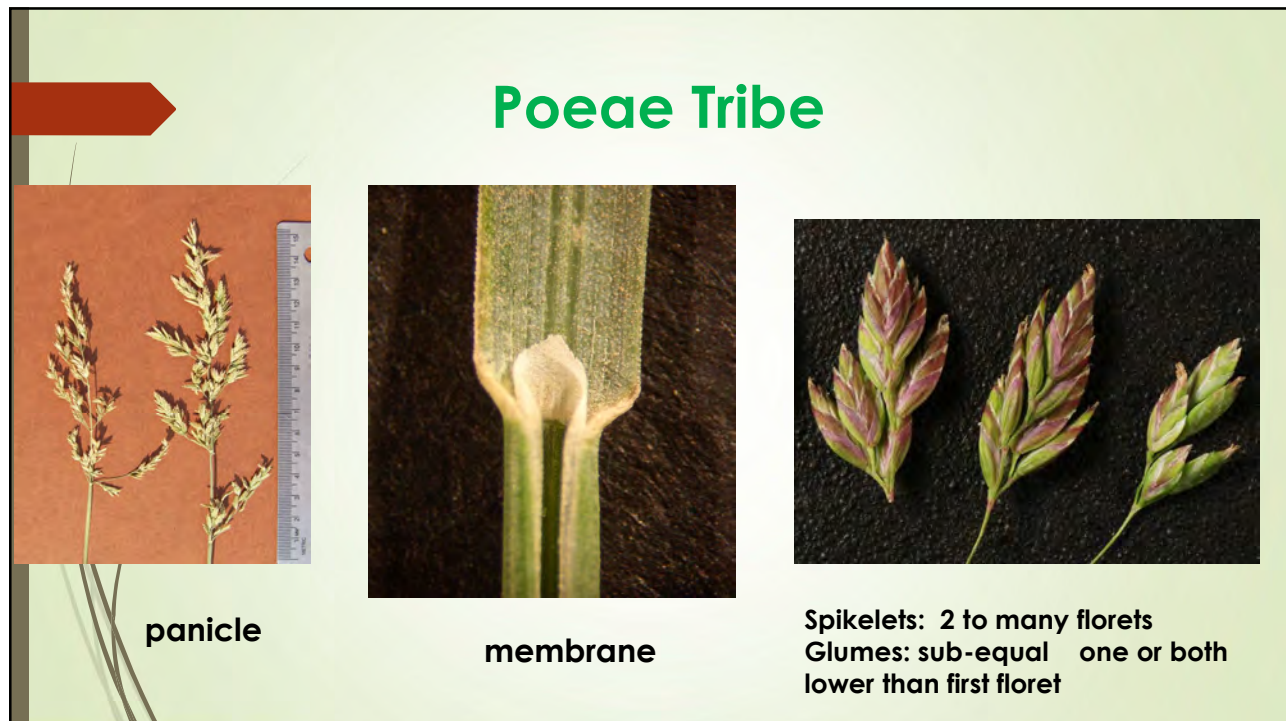


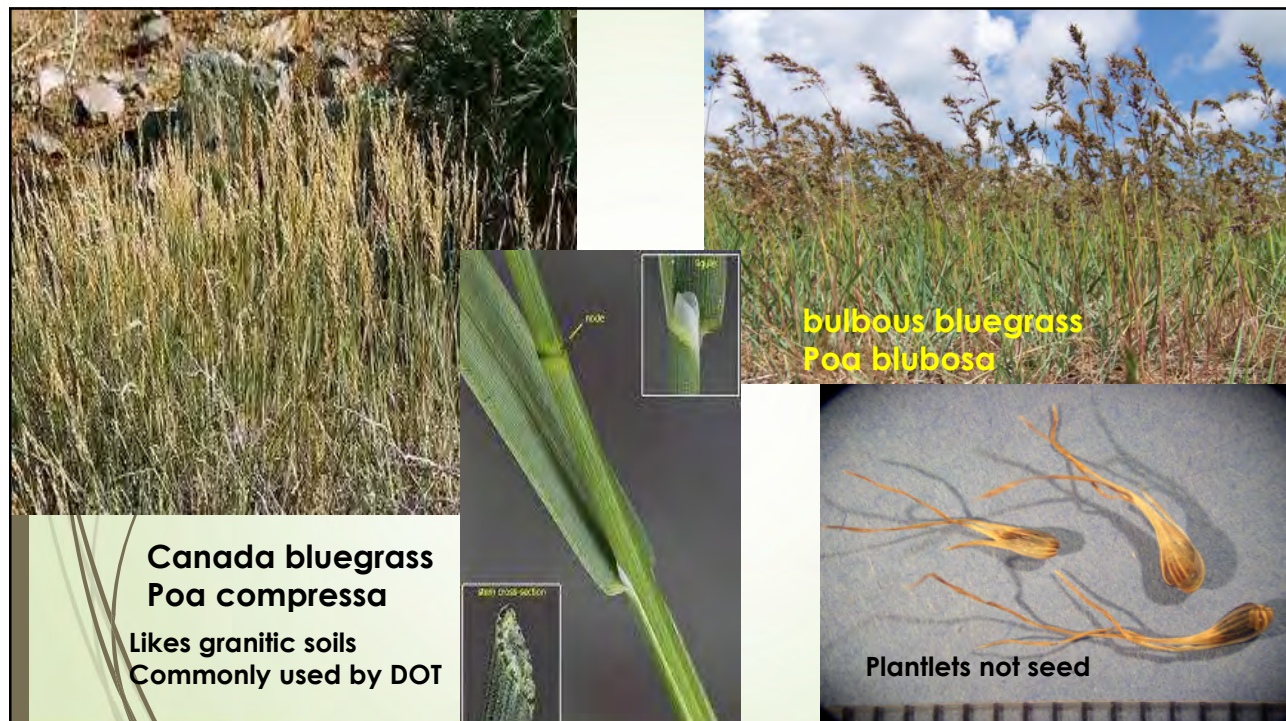
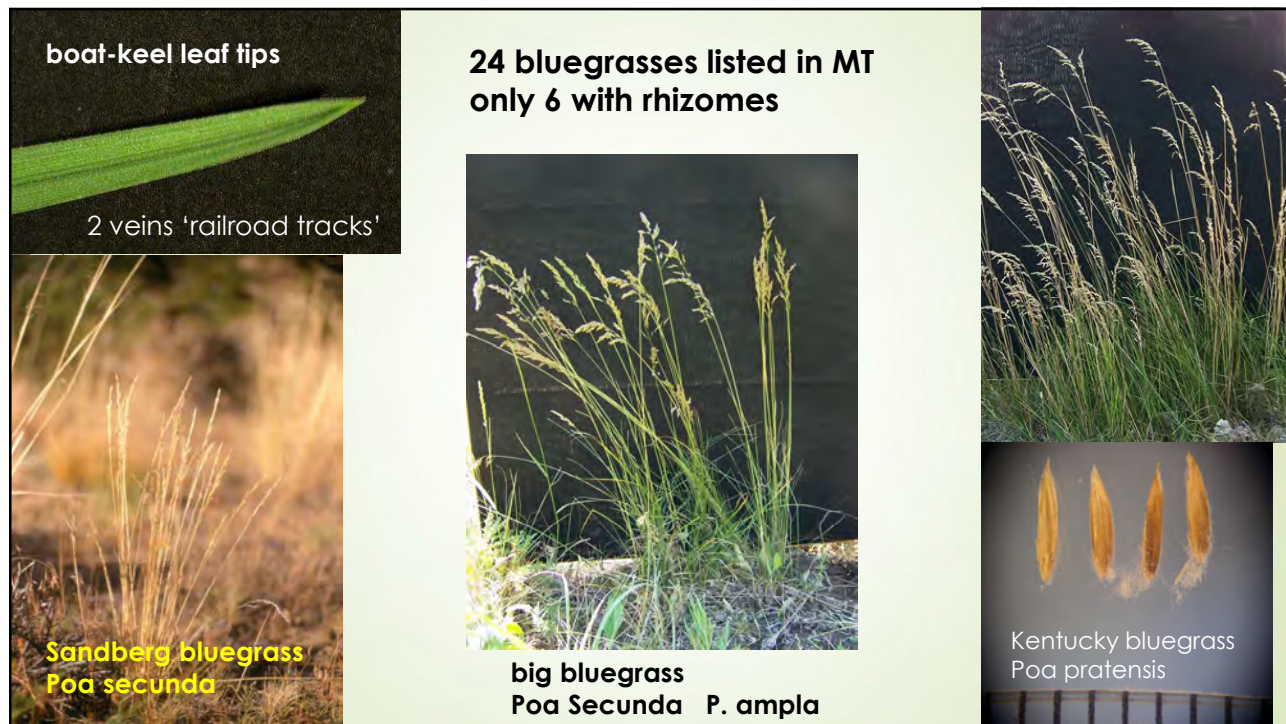


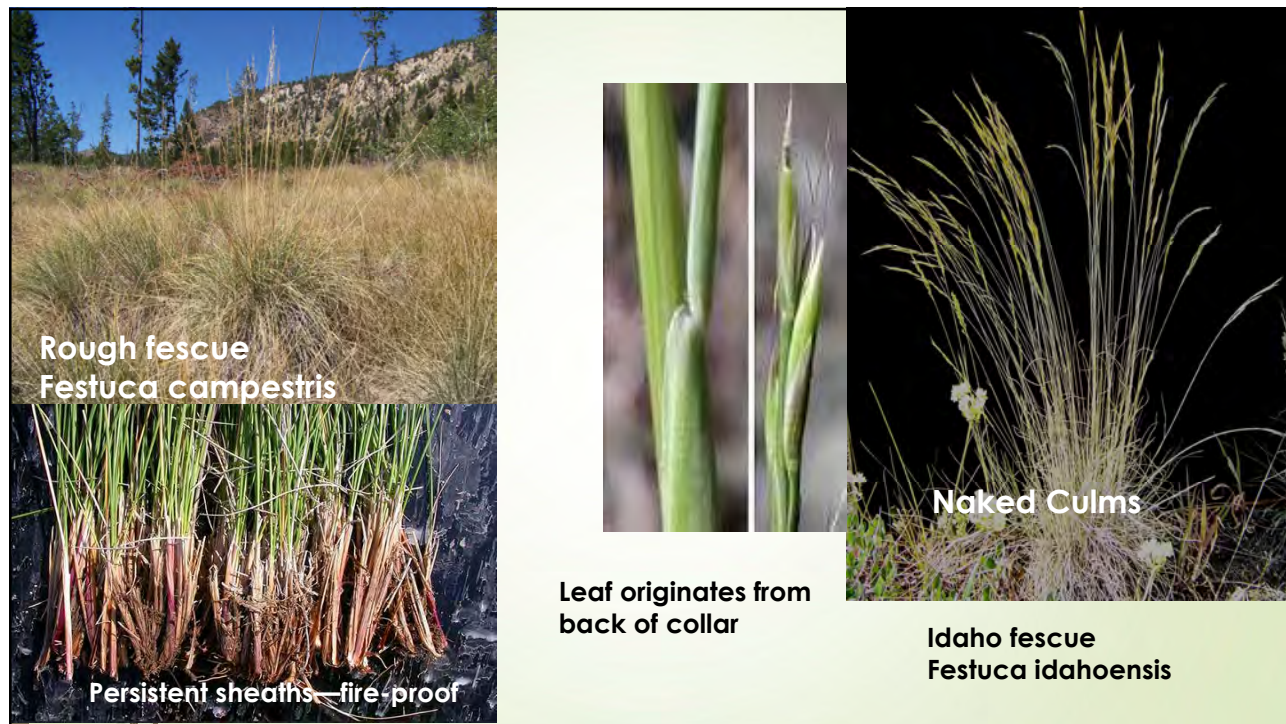


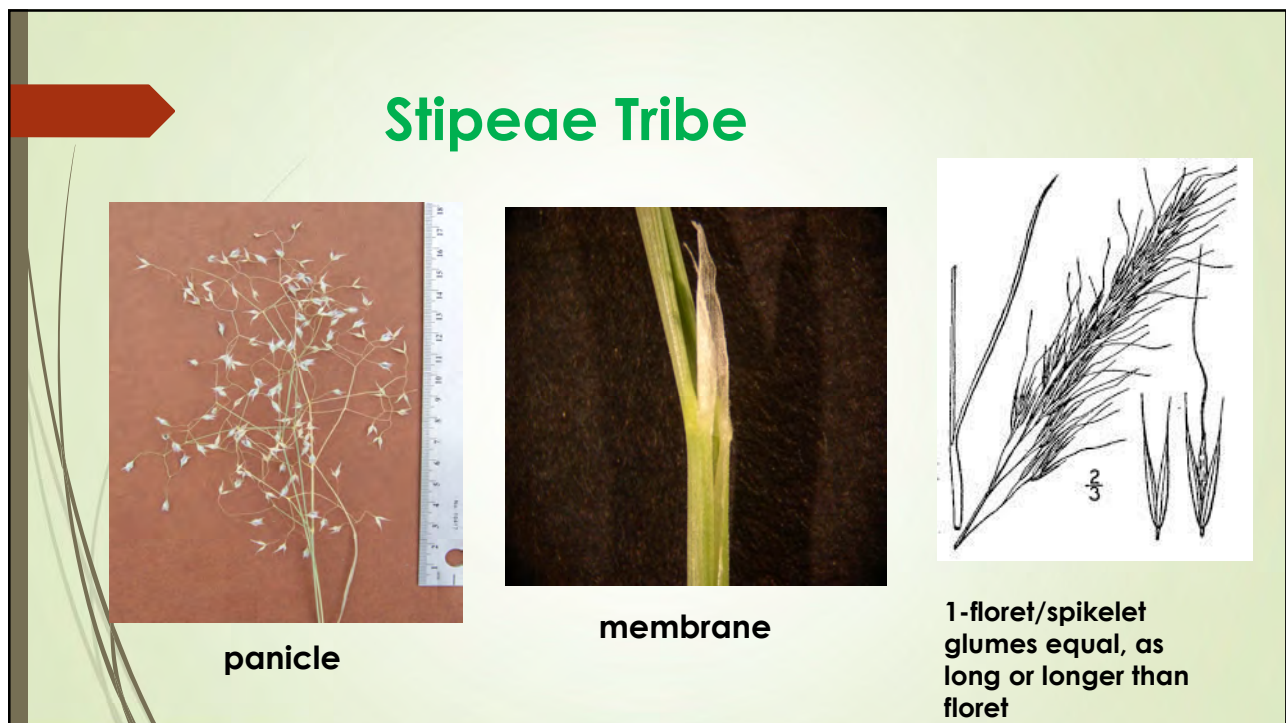














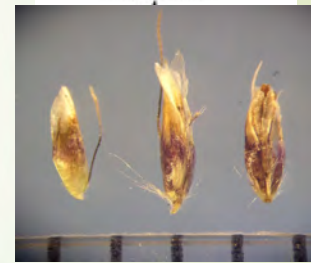
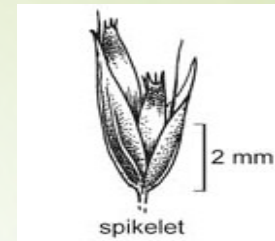
Aveneae Tribe



panicle



membrane



1-many florets,
lemmas awnless/from
base back/bifid tip
Glumes subequal, 2nd
glume longer than
lowest floret



Opens up during
anthesis



bulbous base



creeping foxtail
Alopecurus arundinaceus





'Spirit' from Sweetgrass Hills



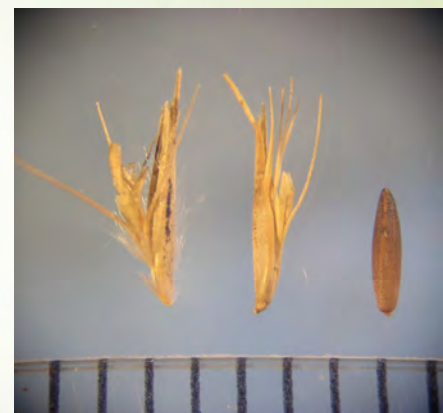
Chlorideae Tribe



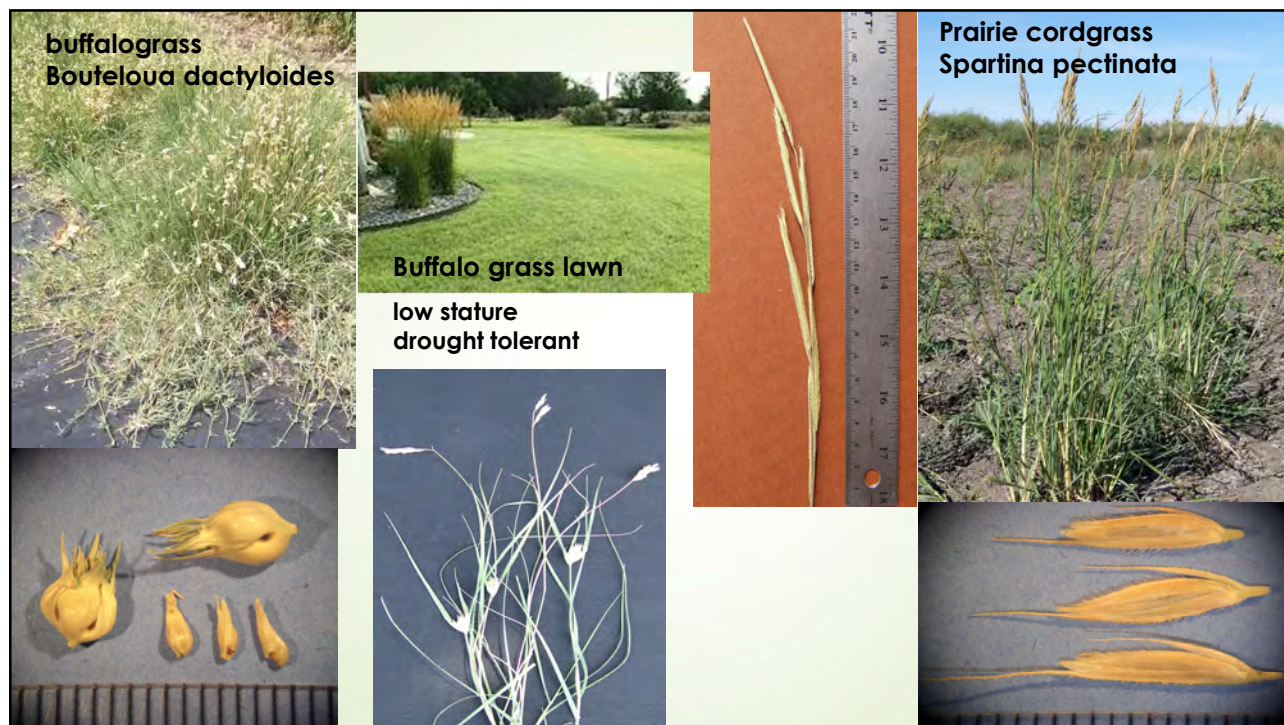
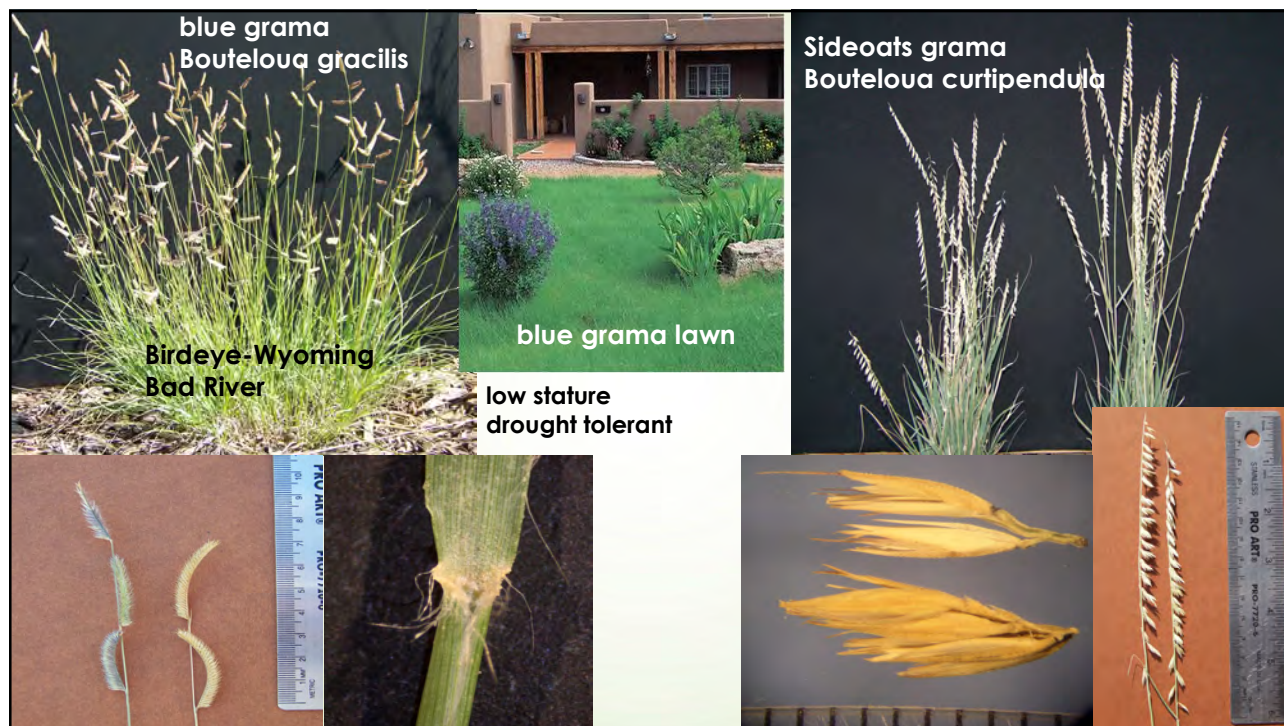
raceme



ligule: ring of hairs



1 fertile floret 1-3 reduced



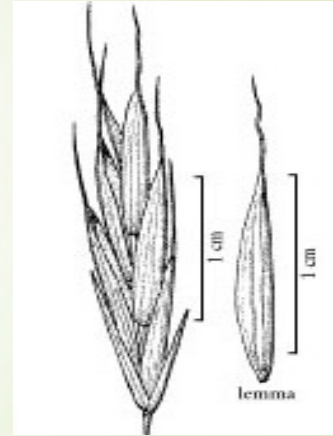
Bromeae Tribe



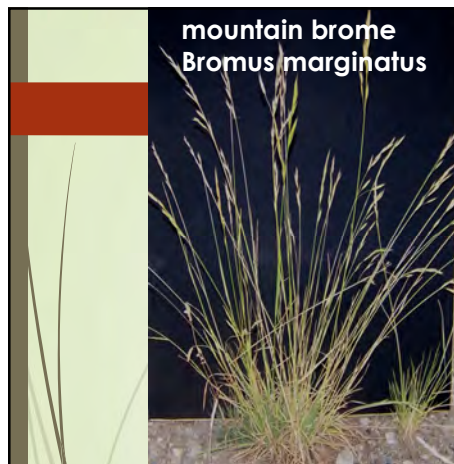
panicle



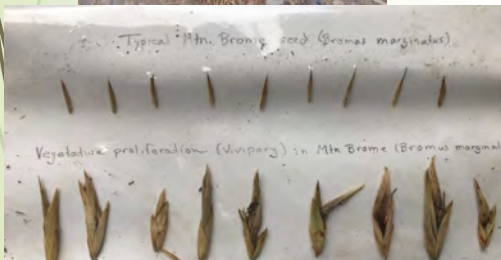
ligule: membrane
closed sheath



many flowered
glumes subequal



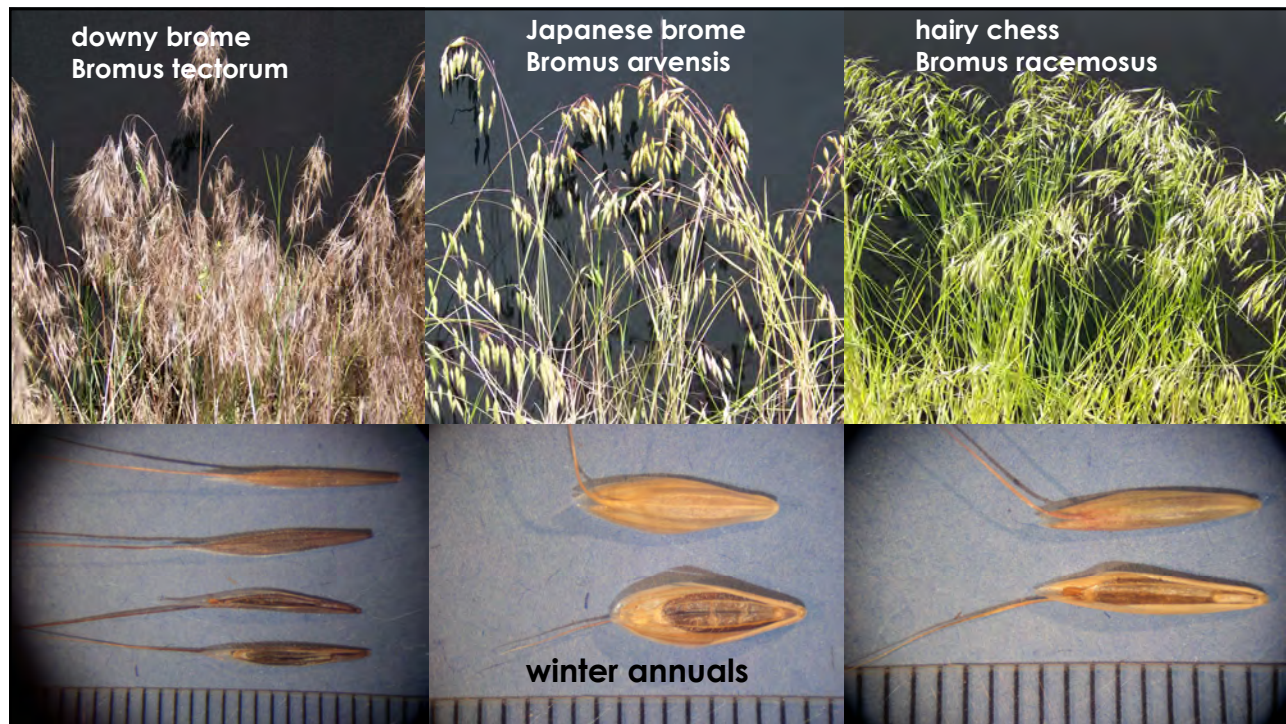
mountain brome
Bromus marginatus



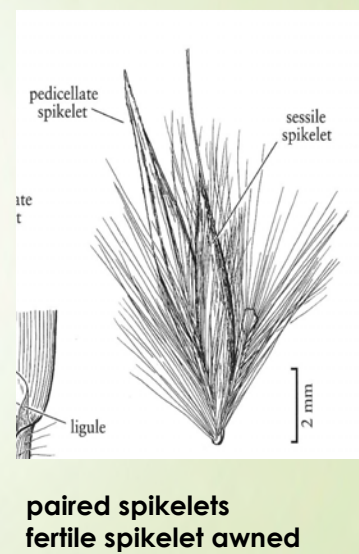
smooth brome
Bromus inermis

Characteristic 'M'
constriction on leaf

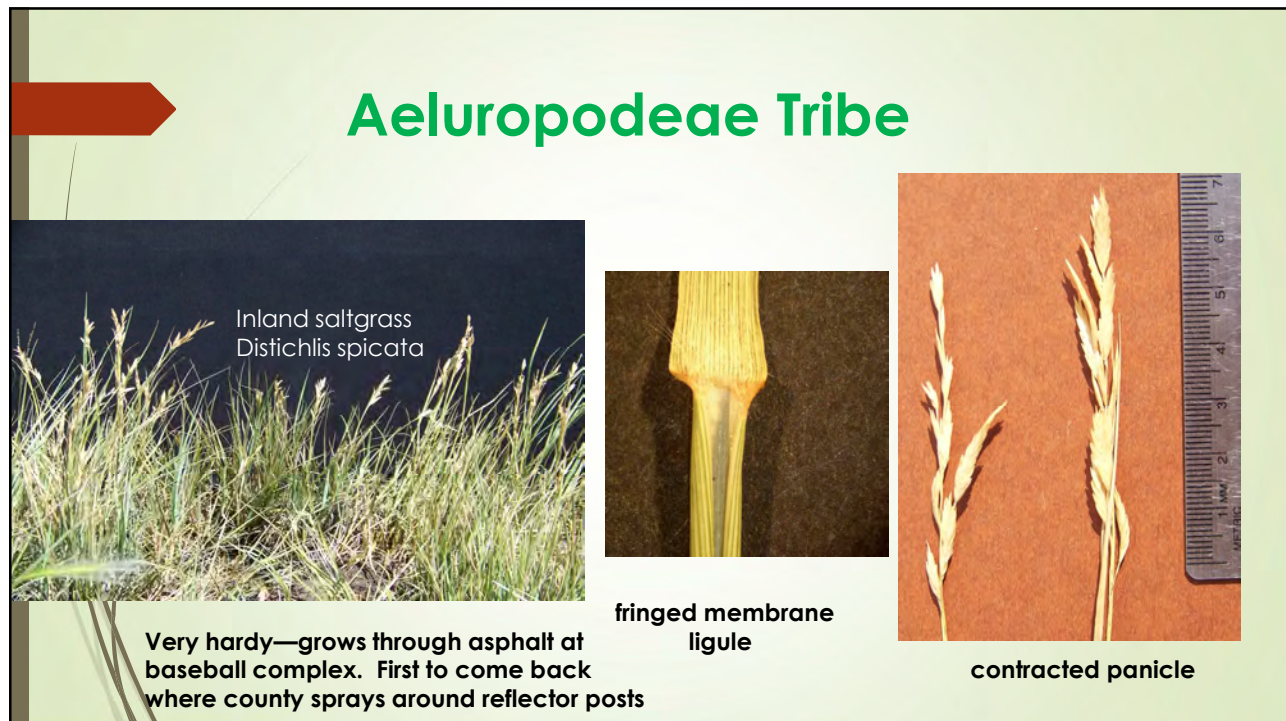




Andropogoneae Tribe







Paniceae Tribe

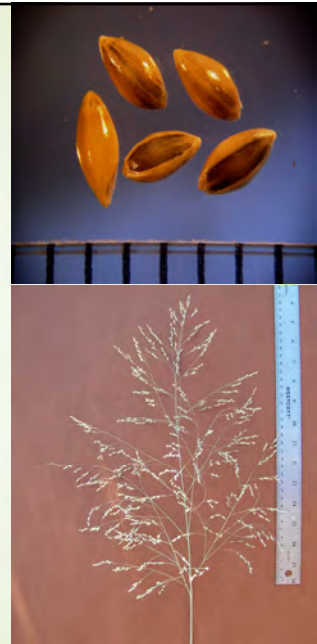
switchgrass
Panicum virgatum

Cellulosic ethanol
Biofuel mixed with coal

Good accent plant



No ligule, but hairs at base of leaf blade



paired florets
1 staminate 1 fertile



Karl Foerster
plain and variegated leaves

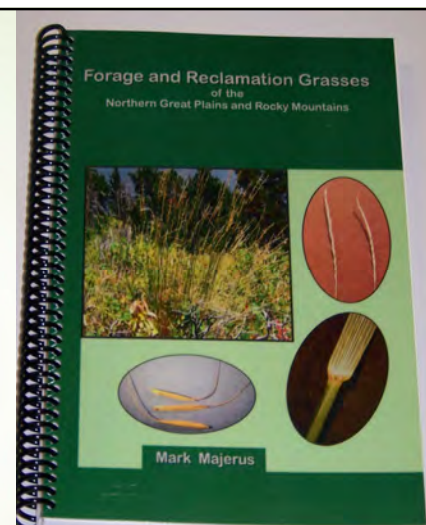
feather reedgrass
Calamagrostis acutiflora

Sterile, therefore does not spread

Miscanthus sinensis
silvergrass, miscanthus, maiden grass



Cellulosic ethanol
biofuel



Mark Majerus majerus13@gmail.com