

Common Grasses & Meadow Plants

Jim Kennedy, NH Coverts

- **Identification**

- Taxonomy
- Ecology
- Gestalt

- **Gramminoids**

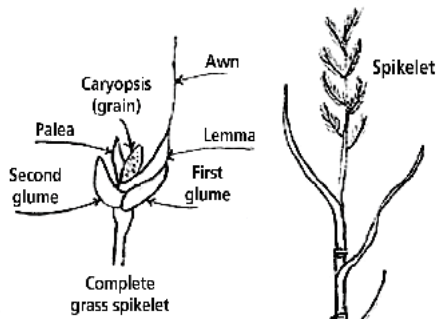
- Grasses
- Sedges
- Rushes

- **Forbs**

- Wildflowers
- Legumes
- Ferns
- Weeds

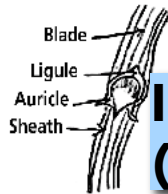


Grasses - Identification



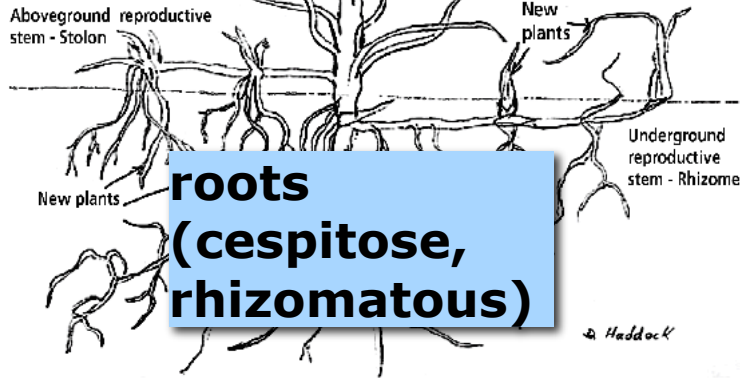
Basic parts of a grass plant

seed head (inflorescence)



leaf & node (ligules, auricles)

stem (culm)

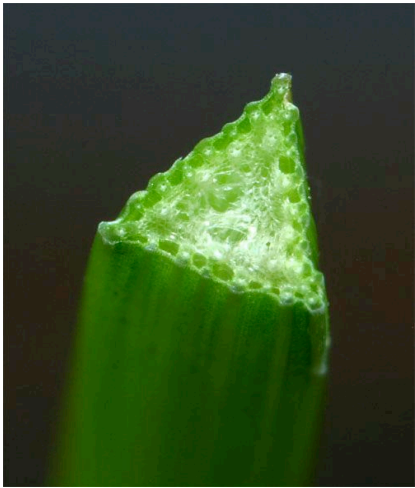


roots (cespitate, rhizomatous)

Characteristics of Forage and Pasture Grasses Found in the Northeast U.S.

Species	Growth Habit	Seedhead	Leaf Characteristics	Other Characteristics
Bluegrass (<i>Poa</i> spp.) Kentucky – <i>P. pratensis</i> Canada – <i>P. compressa</i> Short, low growing perennial grasses; they form a dense sod spreading by short rhizomes; Ky BG is dark green and Can BG is blue-green Leaves fold in bud shoot	 Many short rhizomes	 Panicle with very small seed	 Kentucky Truncate ligules Canada Truncate ligules Midrib has two grooves and is translucent in light	 Narrow leaves with boat shaped tip Leaves fold in bud shoot
Annual bluegrass <i>Poa annua</i> An annual often found near gates and laneways where soil is compacted <i>P. annua</i> spp. <i>repans</i> is a subspecies that is stoloniferous.	 An annual bunchgrass	 Small, short panicles	 Pointed ligule crinkled leaves	 Leaves have boat shaped tip and double grooved, translucent midrib when held in light; leaves folded in the bud shoot
Roughstalk bluegrass <i>Poa trivialis</i> Creeping perennial Prefers shady, moist areas Leaves folded in bud shoot	 Spreads by stolons; forms dense patches	 Loose, green panicle	 Pointed ligule; rough surface	 Folded in bud shoot and leaf blades fold
Orchardgrass <i>Dactylis glomerata</i> Tall growing bunchgrass; Long leaves that are lighter green compared to other grasses; Leaves strongly folded in bud shoot	 Prolific tillering grass	 Panicle seed head with ball-like clumps	 Long, pointed ligule, no auricle	 Leaves strongly folded

Gramminoids (grass-like Plants)



SEDGES

have edges



RUSHES

are round



GRASSES

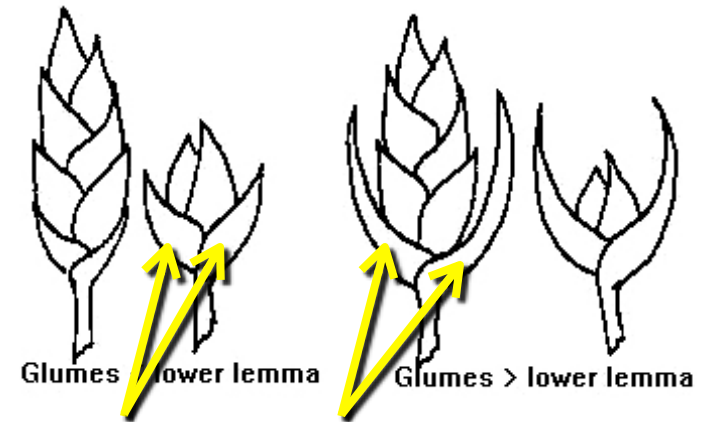
have joints
down to the ground



1 bract
under **sac**
(perigynium)

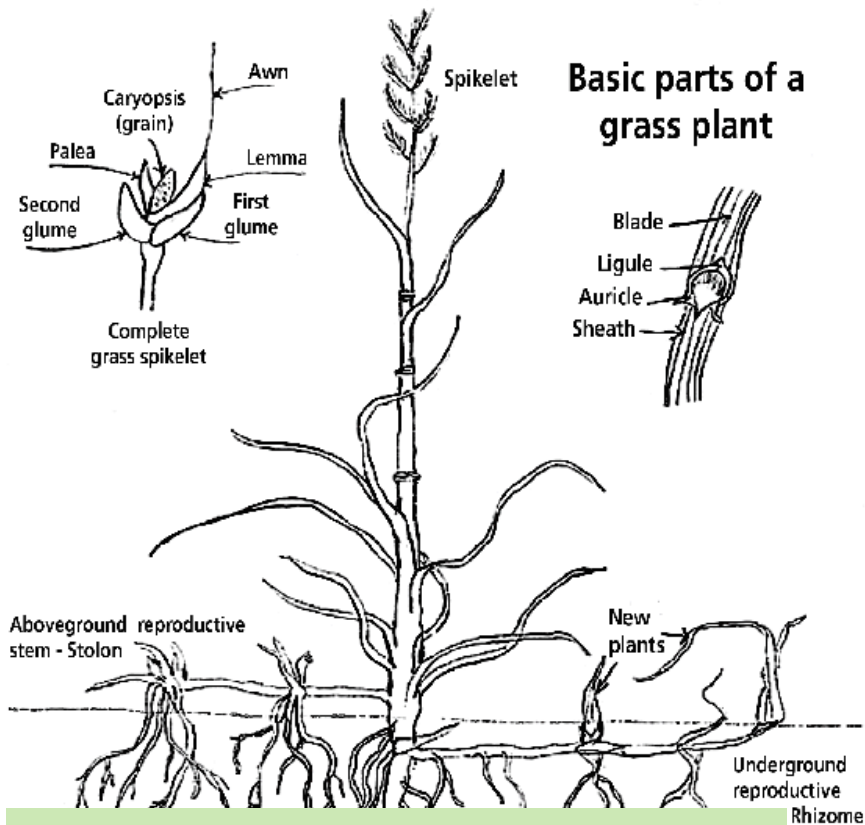


6 bracts
under **capsule**



2 bracts (glumes)
under **floret**

Grasses - Types

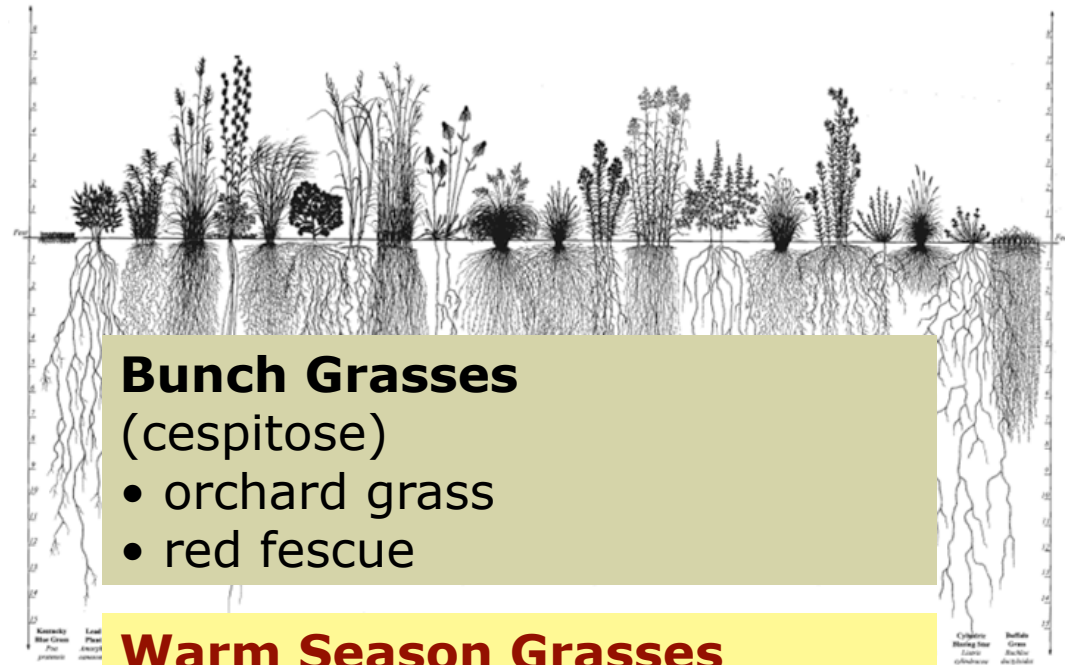


Sod-forming Grasses (rhizomatous & stoloniferous)

- quackgrass
- brome grasses

Cool Season Grasses

- bluegrasses
- fescues
- ryegrass



Bunch Grasses (cespitose)

- orchard grass
- red fescue

Warm Season Grasses

- bluestems
- switchgrass
- crabgrass

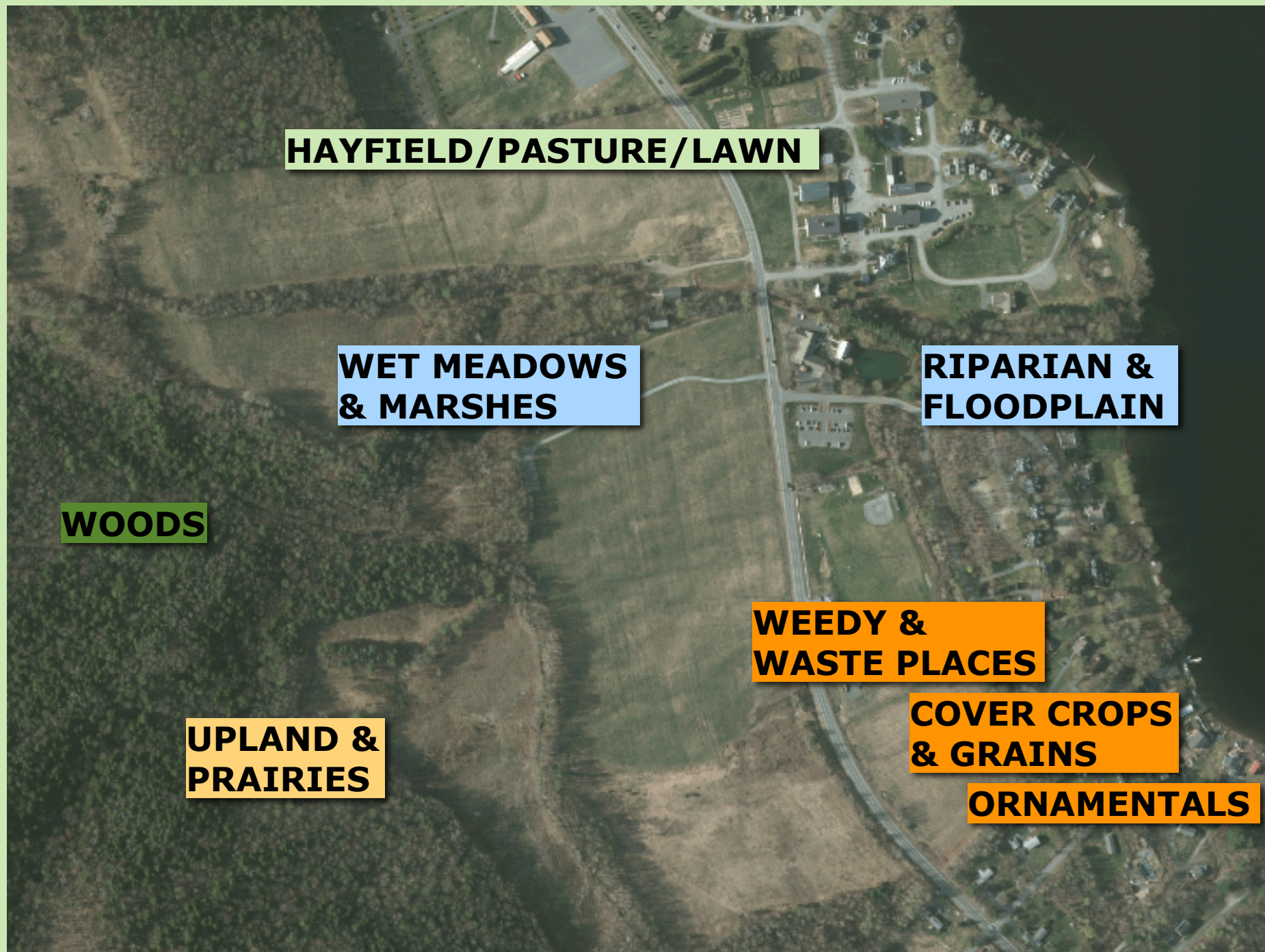
The Gestalt of Grasses[©]

Gestalt: the whole is greater than the sum of its parts

WHERE	WHEN	WHAT	HOW	WHO
Hayfield	Summer	clumped seed heads bunch grass	single clumps	ORCHARD GRASS
Wet Meadow	Winter	tall seed stems wide flag leaves sod-forming	thick masses	REED CANARY GRASS



WHERE - Ecological Groups



HAYFIELD/PASTURE/LAWN

**WET MEADOWS
& MARSHES**

**RIPARIAN &
FLOODPLAIN**

WOODS

**WEEDY &
WASTE PLACES**

**COVER CROPS
& GRAINS**

ORNAMENTALS

**UPLAND &
PRAIRIES**

Grassland Common Species

	TOP DOZEN	EASY ID
SPRING	sweet vernal grass kentucky bluegrass	meadow fescue rushes sedges
SUMMER	orchard grass timothy smooth brome red/hard fescue redtop perennial rye	quackgrass crabgrass barnyard grass
FALL	switch grass/panicums big/Little Bluestem	purple lovegrass phragmites cordgrasses
WINTER	reed canary grass winter rye	poverty grass wild rye

sweet vernal grass*

Anthoxanthum odoratum

Grasslands

✓ short brown spike-like panicle



sweet smelling
short bunch grass



✓ hairs at
base of
short
pointed leaf

Kentucky bluegrass

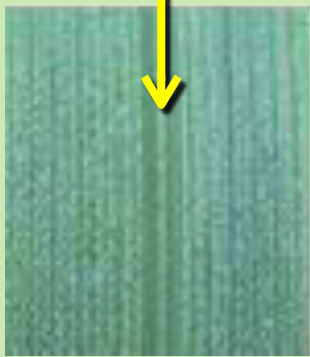
Poa pratensis

turf grass, pastures - universal species

✓ boat-shaped leaf tip



✓ grooved leaf with translucent midrib



✓ open triangle-shape panicle



3-5 branches/
node



cobwebby hairs
on lemma



glumes shorter
than first lemma



orchard grass

Dactylis glomerata

turf grass, pastures - universal species



✓ ball-like clumps of 1-sided spikelets



✓ long pointed ligule



✓ very clumped form, wintergreen leaves

Timothy*

Phleum pratense

Forage grass - hayfields

✓ pencil spike

forked florets
(meadow foxtail has awns)

sweet tasting stem base



Photo by:
Richard Old
www.xidservices.com

meadow foxtail*

Alopecurus pratensis

hayfields



✓ corms - "onions"

Timothy vs. Meadow Foxtail



Timothy has a spike-like panicle that usually heads out late (mid to late June). The Spikelet has two "horns".



Meadow foxtail has a spike-like condensed panicle that usually heads out early (late April to May). Spikelet has a single awn.



These are the two most common grasses in the Northeast with spike-like panicles



Anthers protrude out of the florets to disperse pollen during anthesis (flowering)

smooth brome*

Bromus inermis

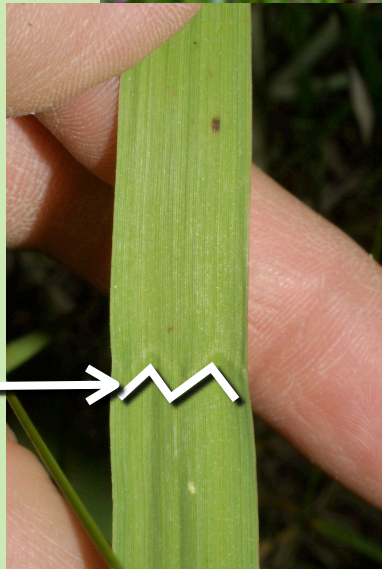
Forage grass - hayfields

✓ 1-sided
long, thin
spikelets
with no awns



curly leaves -
black fungal
spots

✓ "M" in
middle of
leaf



red fescue

Festuca rubra var.

Turf & conservation, dry fields

✓ tight inflorescence



✓ rolled, thin leaves

✓ clumping habit

sheep fescue

Festuca trachyphylla (*ovina*)

conservation, dry fields

shorter
glumes,
awned
lemmas



redtop

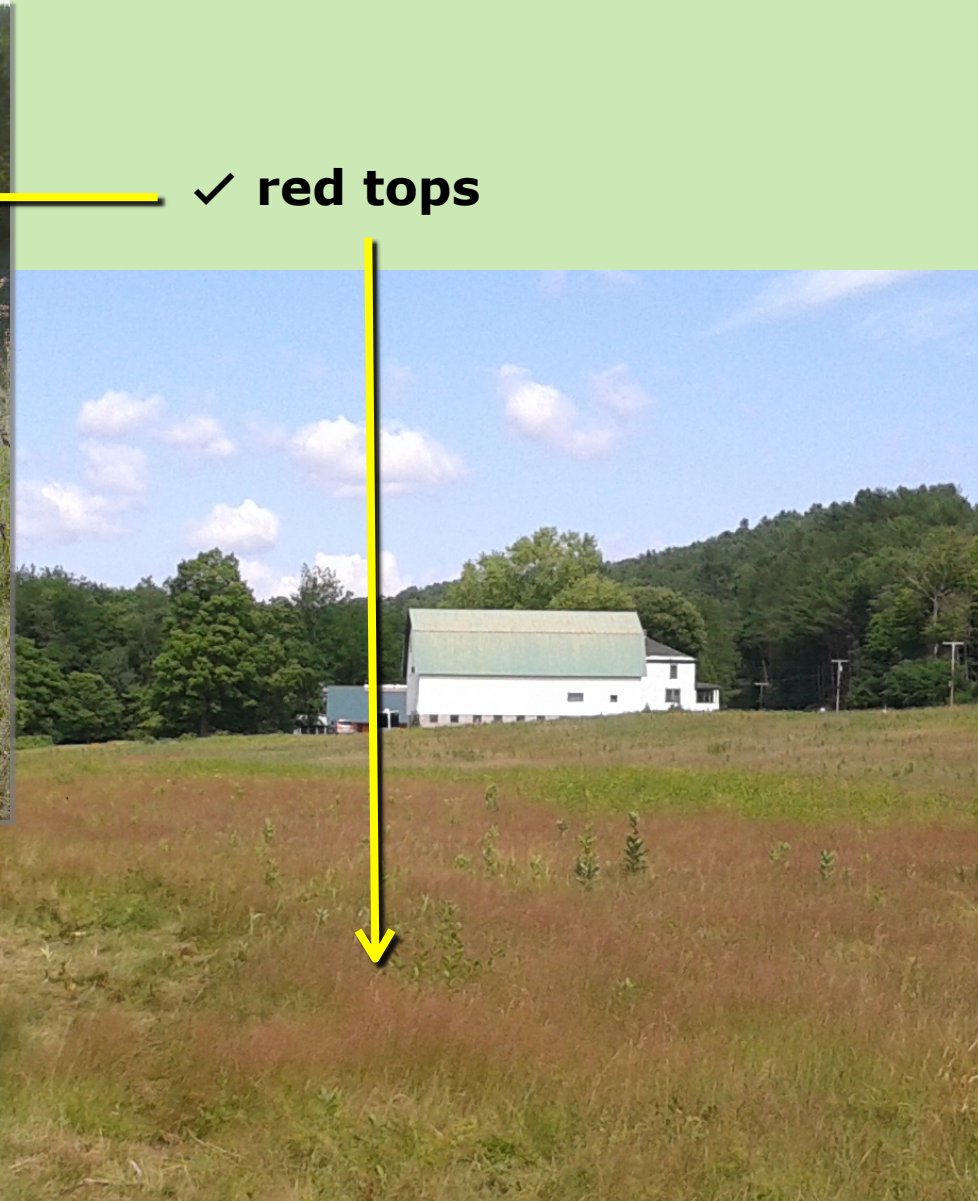
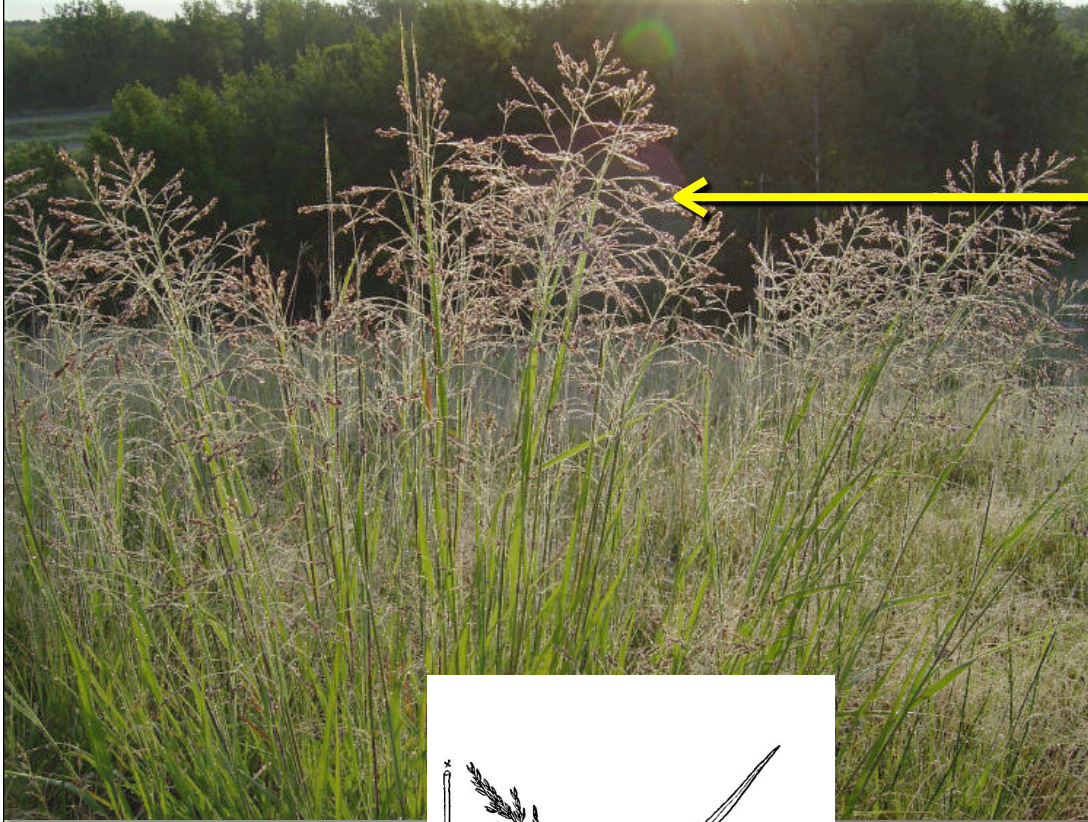
Agrostis gigantea

wet meadows, conservation

bent grass

Agrostis capillaris

lawn grass, dry fields



✓ red tops



single florets

perennial rye*

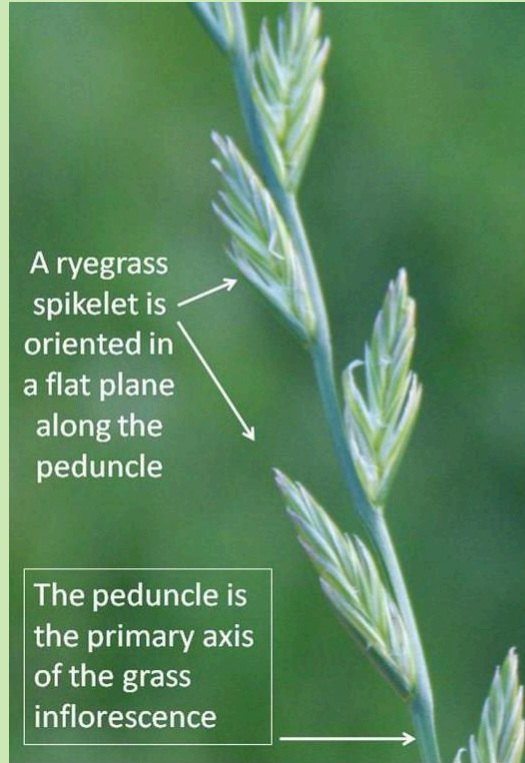
Lolium perenne

Turf & conservation, hayfields

✓ spikelets
on **EDGE**
"ryeee"

✓ dark
green
shiny
leaves,
midrib

zig-zag stems

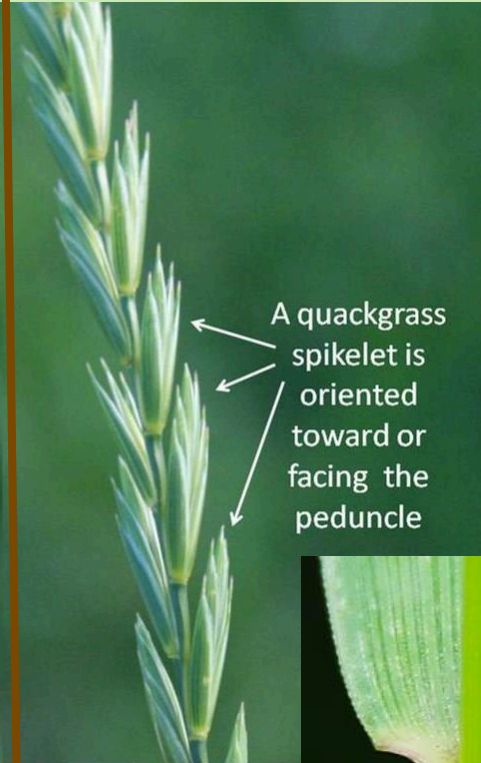


quackgrass*

Elytrigia repens

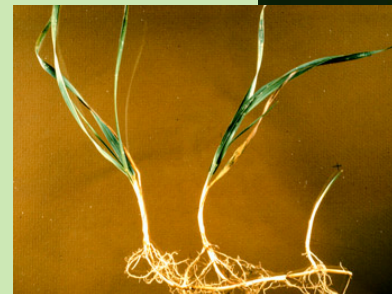
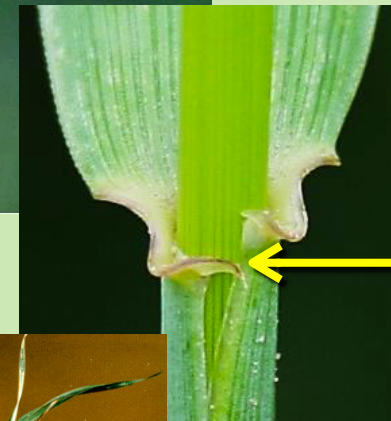
weedy pest

zig-zag stems



✓ spikelets
FLAT
"quaaak"

✓
constriction
at tip of leaf



switchgrass

Panicum virgatum

warm season grass

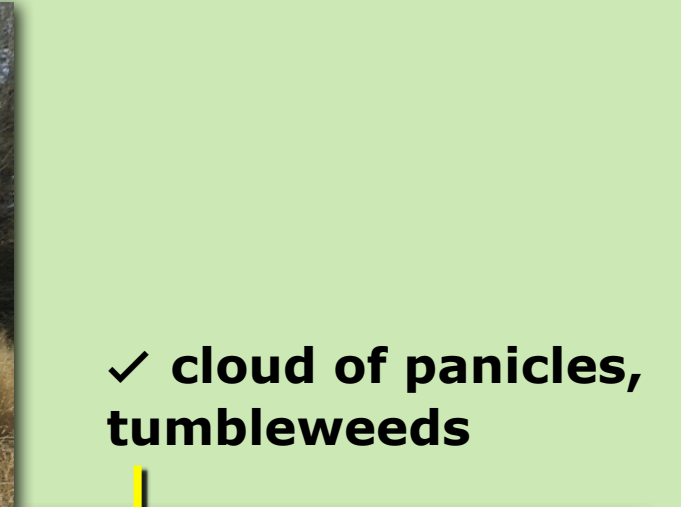
fall panicum

Panicum dichotomiflorum

weedy, waste areas



✓ wide open panicles
with **single** seeds



✓ cloud of panicles,
tumbleweeds



little bluestem

Schizachrium scoparium

warm season grass



✓ small fuzzy seed heads

✓ long fuzzy seed heads

✓ turkey foot



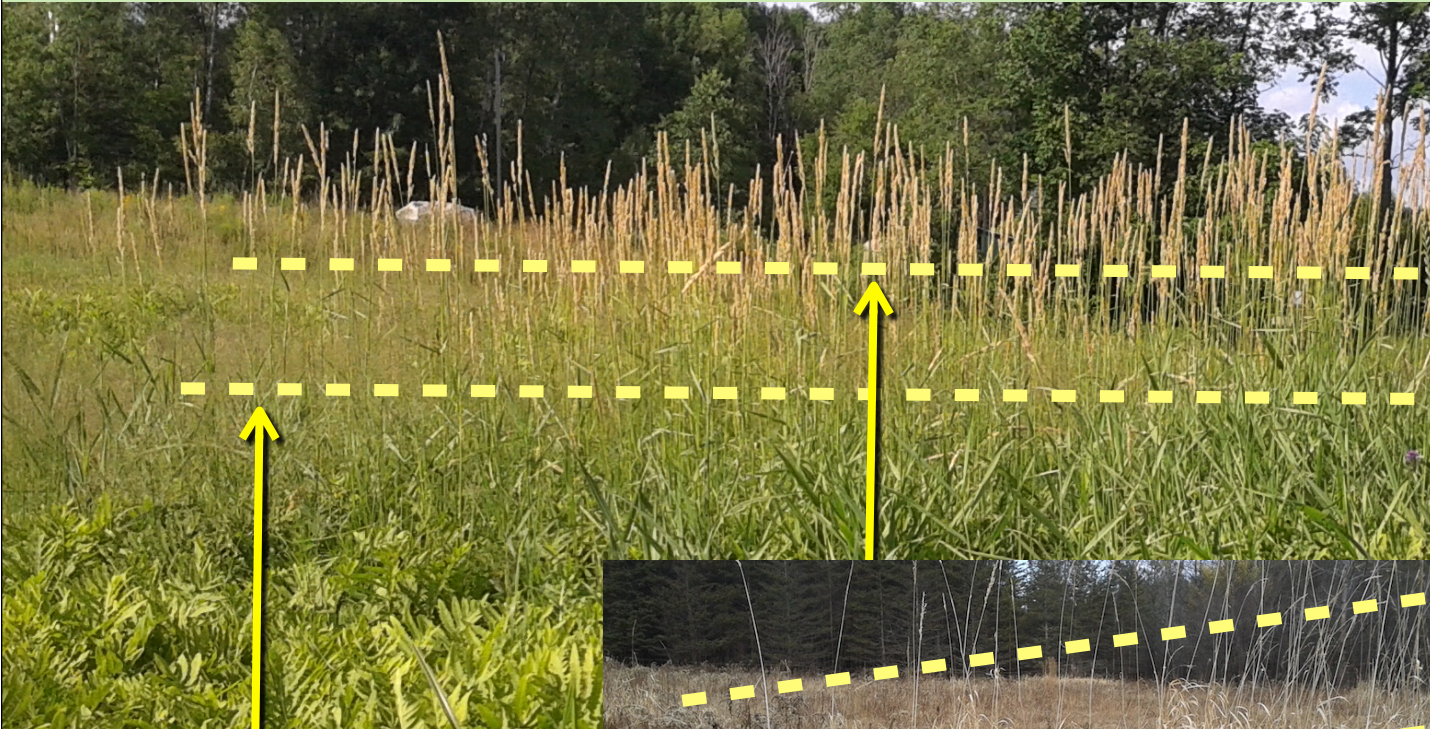
✓ bunch grass growth forms

✓ tan, orange, purple fall colors

reed canary grass

Phalaris arundinacea

Hayfields, Wet Meadows



✓ lines of
leaves, stems,
heads



✓ wide pointed
"flag" leaves



winter rye*

Secale cereale

Cover crop, conservation



© Smithsonian Institution

✓ bristly seed heads



✓ gray-green
stems, leaves

Canada wild rye

Elymus canadense

riparian areas



Common Meadow Plants

- **Wildflowers**
- **Legumes**
- **Weeds**
- **Ferns**



Pollinator Plants

	HIGH VALUE	INVADERS
SPRING	dandelions golden alexanders heal-all plantain	golden alexanders wild chervil sheep sorrel hawkweeds ragged robin
SUMMER	milkweeds daisies clovers legumes joe-pye weed Queen Anne's Lace	bedstraw wild parsnip yellow rattle chickory
FALL	goldenrods asters	tall goldenrods thistles

Spring Flowers



common dandelion*
Taraxacum officinale



golden Alexanders
Zizia aurea

Lawn Weeds



broad-leaved plantain*
Plantago major



heal-all
Prunella vulgaris

Milkweeds



common milkweed
Aclepias syriaca



swamp milkweed
Aclepias incarnata



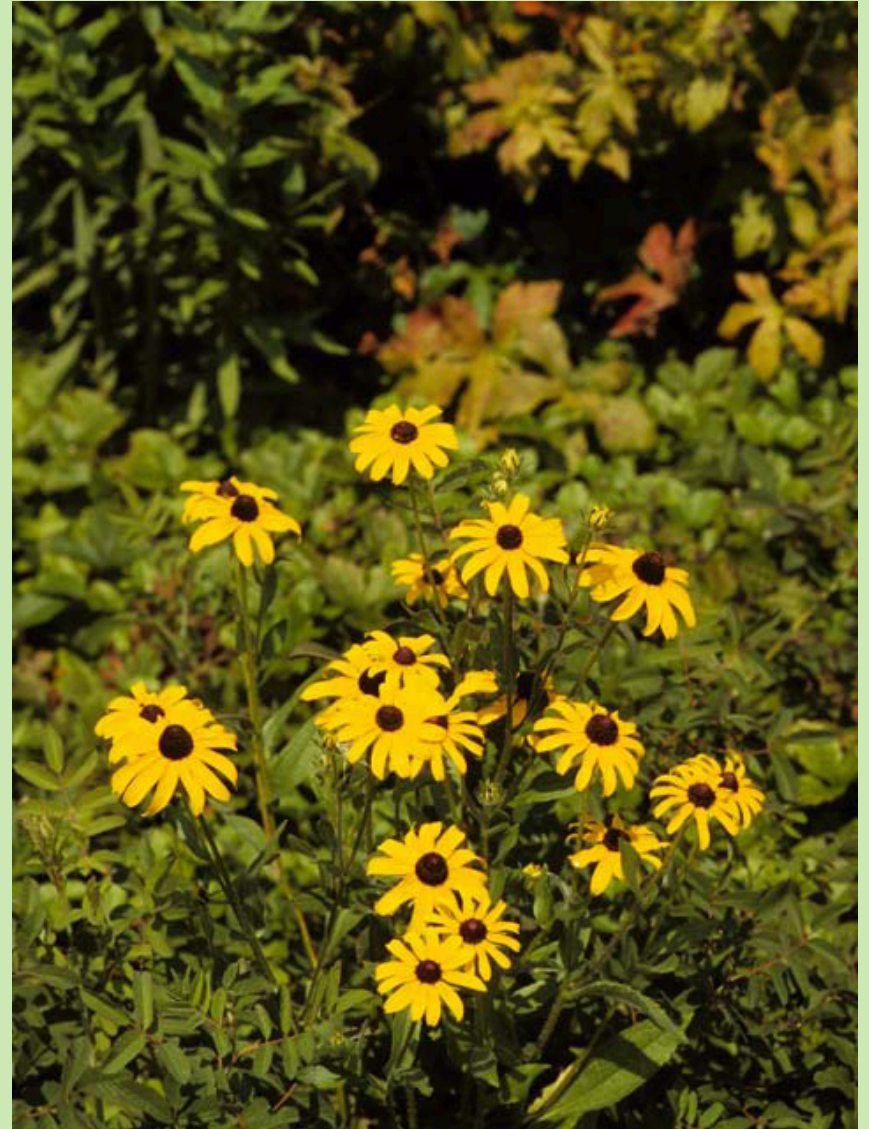
butterfly milkweed
Aclepias tuberosa

Daisies



© St. Mary's College of California

ox-eye daisy*
Leucanthemum vulgare



 **black-eyed Susan***
Rudbeckia hirta

Legumes

Slide courtesy Sid Bosworth, UVM

Racemes



Alfalfa



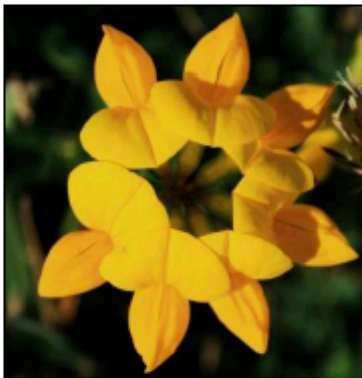
Sweetclover



Vetch

Text

Umbels



Birdsfoot trefoil

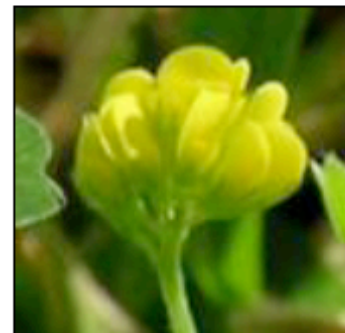
Flower Heads



White clover



Red clover



Black medic



Alsike clover

Pollinator Weeds



wild carrot
(Queen Anne's lace)*
Daucus carota



joe-pye weed
Eupatoriadelphus maculatus

Goldenrods

Group 1
early/gray/seaside
Solidago spp.

Group 2
tall/Canada/late
Solidago spp.

Group 3
downy/hairy/white
Solidago spp.

Group 4
**blue-stemmed/zig-zag/
slender**
Solidago spp.

Group 5
**grass-leaved/slender-
leaved**
Euthamia spp.



**outcurved
flowers, basal
leaves larger**

**outcurved
flowers, same-
sized leaves**



**spiral flowers,
basal leaves
larger**



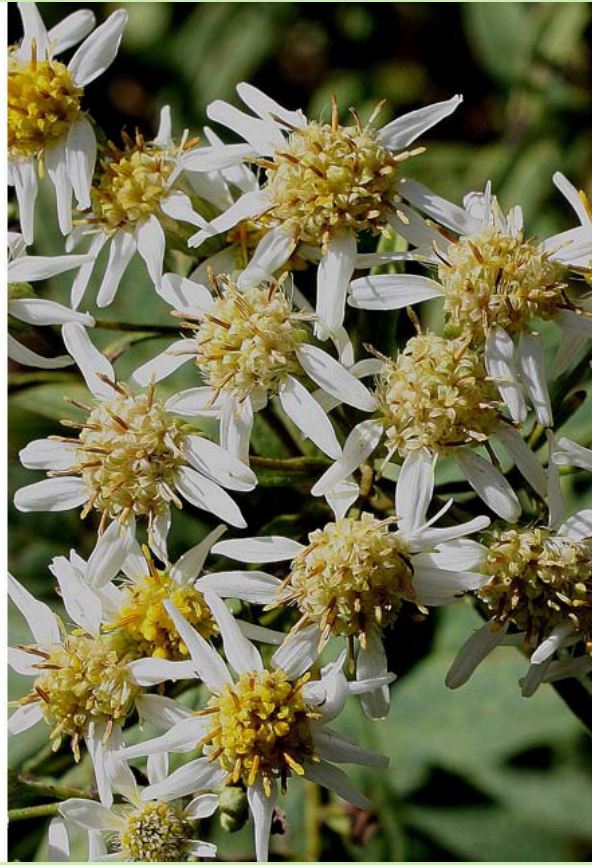
**spiral flowers,
same-sized
leaves**

**flat-topped
flowers
narrow leaves**

✿ Asters



✿ **New England
aster**
*Symphyotrichum
novae-angliae*



✿ **flat-topped
white aster**
*Doellingeria
umbellata*



✿ **smooth blue
aster**
*Symphyotrichum
laeve*

Weeds

Commonly Found Weeds in Vermont Pastures

Sid Bosworth, Extension Professor, Department of Plant and Soil Science, University of Vermont sid.bosworth@uvm.edu

There are many weeds that can be found in pastures in Vermont. The following list represents some of the more commonly found species or some of the more problematic species. According to a 2010 survey of 49 pasture farms in Vermont, the top five weeds identified as most problematic were smooth bedstraw, common milkweed, Canada thistle, goldenrod and bull thistle. To see the complete list, refer to [Table 1](#).

Weeds vary in their habitat and degree of aggressive growth. Some weeds are opportunistic only showing up in open areas or compacted areas near fence gates and watering sites. Others can be quite competitive and will spread quickly through a field or pasture.

To see a larger image, click on the respective thumbnail picture.

Broadleaf Weeds

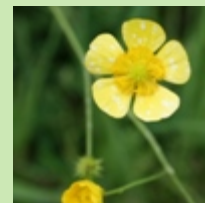
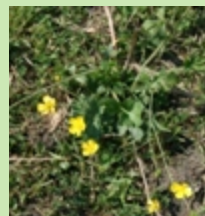
Bedstraw, Smooth

Creeping perennial
Propagation by seed and
rhizomes
*Very aggressive spreading
weed*



Buttercup species

Simple and/or creeping
perennial
Propagation by seed (and
stolons for some species)
*Mildly toxic to livestock but
usually unpalatable*



Burdock

Biennial
Propagation by seed
*Mostly found around
watering or feeding areas*



Worst Weeds



whorled (smooth) bedstraw*
Galium mollugo



little yellow rattle*
Rhinanthus minor



common thistle*
Cirsium vulgare

Field Session

Noon - 12:45 Lunch Break

12:45 - 3:00 Field Session at the Strafford County Farm

Led by Matt Tarr and Andy Fast, UNH Cooperative Extension