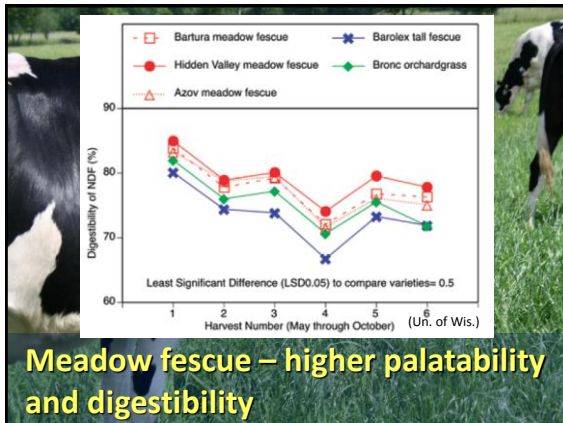


Meadow Fescue in Vermont



Meadow Fescue Quality			
NDF digestibility at each cut of five cultivars (means of two residual sward heights, two locations and two years)			
Cultivar	Cutting		
	1	2	3
- % of NDF -			
Azov Meadow Fescue	65.3	66.2	65.9
Bartura Meadow Fescue	65.7	66.0	68.6
Hidden Valley Meadow Fescue	68.4	67.7	70.0
Barolex Tall Fescue	61.4	59.0	64.2
Bronc Orchardgrass	59.8	60.4	61.3
LSD (0.05)	1.2	0.8	1.0

Source: Brink, Casler and Martin. 2010. Agronomy J. 102: 667-674



Digestible NDF

Each unit of NDFd = 0.5 lbs milk/cow/day
At \$17/CWT = \$1240/Cow/Year

Can meadow fescue consistently provide a higher digestible NDF compared to other grasses in Vermont?

Amount of Added Income For Increased NDF Digestion in 1 Yr (\$17/cwt)
= based on + 1 unit of NDF-D = + 0.5 lb milk

Milking Cows	Increase in NDF-D			
	1	3	5	10
100	\$3,100	\$9,307	\$15,512	\$31,025
250	\$7,750	\$23,267	\$38,780	\$77,562
500	\$15,550	\$46,535	\$77,560	\$155,125

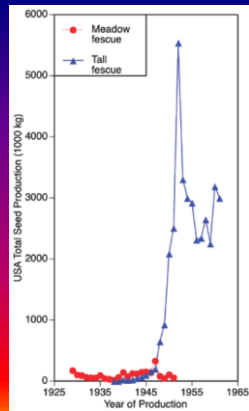
Kung, 2008



Meadow Fescue in Vermont

Because of greater yield and higher resistance to leaf diseases, tall fescue become very popular after it's release in the early 1940's

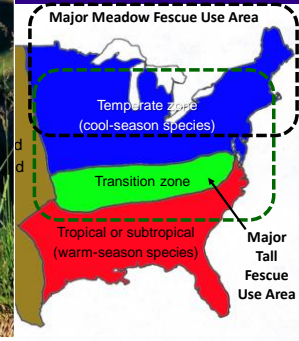
Meadow fescue basically went into obscurity.



Broad Leaf Fescue Adaptation

Meadow fescue is a cold climate grass.

Tall fescue is more tolerant to heat than other cool season grasses, yet, quite winter hardy



Fescue Identification

Tall Fescue

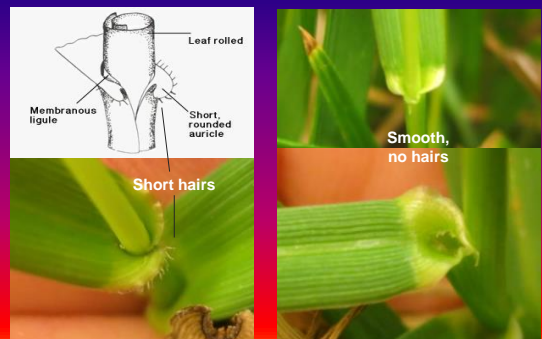
Meadow Fescue



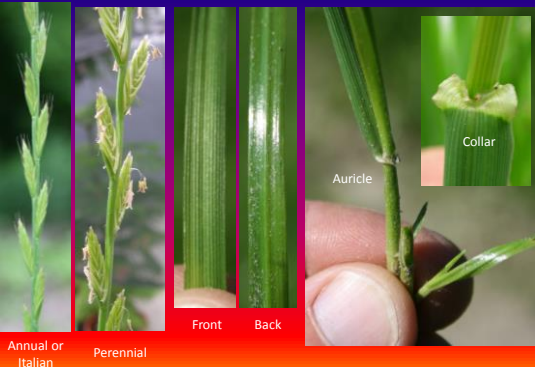
Fescue Identification

Tall Fescue

Meadow Fescue



Related Species – Ryegrass/Festulolium



Evaluating Meadow Fescue in Vermont

Vermont Forage Grass Quality Research

Five varieties of each of the following grass species:

- Late-maturing orchardgrass (*Dactylis glomerata*)
- Tall fescue (*Schedonorus phoenix*)
- Meadow fescue (*Schedonorus pratensis*)
- Festulolium (*Lolium X Schedonorus*)
- Perennial ryegrass (*Lolium perenne*)

Meadow Fescue in Vermont

2013 Forage Quality (Preliminary)

Location	Cutting	Species	Cultivar	NDF	NDF ₆₀
				% of dm	% of NDF
S. Burlington	1	Meadow Fescue	Azof	61.6	b
		Meadow Fescue	Hidden Valley	58.5	c
		Tall Fescue	Bronson	63.1	a
		Tall Fescue	Russler	63.2	a
	2	Meadow Fescue	Azof	60.3	a
		Meadow Fescue	Hidden Valley	60.4	a
		Tall Fescue	Bronson	60.3	a
		Tall Fescue	Russler	60.6	a
	3	Meadow Fescue	Azof	64.0	b
		Meadow Fescue	Hidden Valley	64.4	ab
		Tall Fescue	Bronson	67.1	a
		Tall Fescue	Russler	66.6	ab
Albure	2	Meadow Fescue	Azof	65.1	a
		Meadow Fescue	Hidden Valley	63.9	a
		Tall Fescue	Bronson	64.4	a
		Tall Fescue	Russler	65.7	a

Dry Matter Yields

Preliminary Data

Dry Matter Yield of Five Grasses in Vermont (Average of five cultivars each)				
	2012		2013	
	S. Burlington	Albure	S. Burlington	Albure
	lbs. dm/a	lbs. dm/a	lbs. dm/a	lbs. dm/a
Tall Fescue	11033 a	7417 b	6161 a	6612 a
Meadow Fescue	10028 b	7776 b	4747 b	6264 a
Orchardgrass	9824 b	8646 a	4387 b	6410 a
Per. ryegrass	7984 c	6866 c	**	**
Festulolium	10102 b	7277 bc	**	**

*means with the same letters are not significantly different

**severely winter injured in 2013.

Dry Matter Yields

Preliminary Data

Dry Matter Yield of Meadow Fescue in Vermont

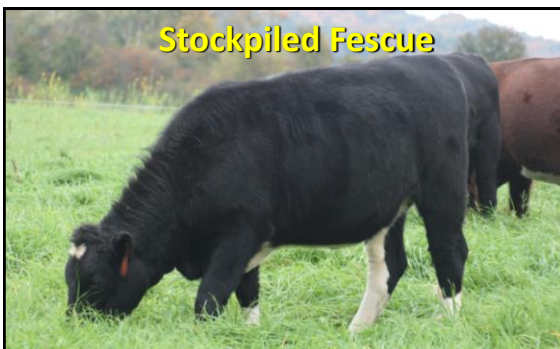
Cultivar	2012		2013	
	S. Burlington	Albure	S. Burlington	Albure
	lbs. dm/a	lbs. dm/a	lbs. dm/a	lbs. dm/a
Azof	10601 a	7361 a	5114 a	5947 a
Hidden Valley	9843 a	7804 a	4896 a	6337 a
Lauri	9789 a	7422 a	4219 a	5656 a
Pradel	9828 a	8274 a	4497 a	7452 a
Preval	10077 a	8019 a	5007 a	5833 a

*means with the same letters are not significantly different

Meadow Fescue in alfalfa or red clover mixtures



Stockpiled Fescue



Because it's leaves hold their integrity after frosts, tall fescue is an excellent grass for "stockpiling" for deferred grazing in late fall or early winter. What about meadow fescue?

Stockpiled Fescue

Oct. 22, 2012
South Burlington

D.M. yield of stockpiled grass forage in Vermont in 2012

	S. Burlington		Albure	
	lbs. dm/a		lbs. dm/a	
Tall Fescue	3799	a	1889	b
Meadow Fescue	2625	c	1426	c
Orchardgrass	3060	b	2518	a
Perennial Ryegrass	1664	d	1108	c
Festulolium	1490	d	873	d

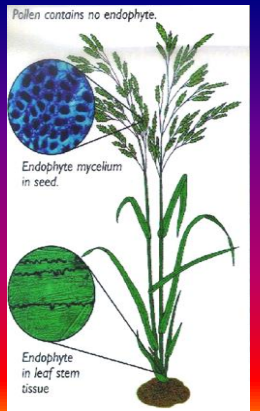
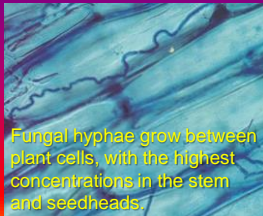
*means with the same letters are not significantly different

Tall Fescue

Meadow Fescue

Meadow Fescue in Vermont

Endophyte Infected Fescues

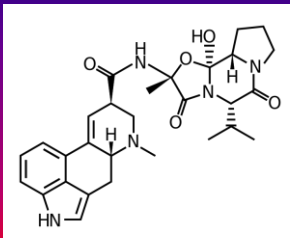


Animal Problems With Tall Fescue



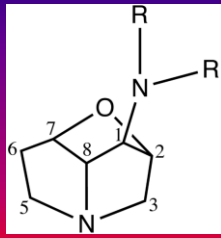
- Unthrifty
- Poor hair coat
- Elevated body temperature
- Higher respiration rate
- Less time grazing
- More time in shade and water
- Decreased weight gain
- Lower milk production
- "Summer syndrome"

Tall Fescue Alkaloids



Ergovaline

One of the Ergot Alkaloids



Loline

Perennial Ryegrass Winter Injury

South Burlington
5/15/2013



Festulolium Winter Injury



Grass Disease Ratings

