

Animal performance is better when the variety grown is endophyte-free. Endophytes are fungi that invade plant tissues, reducing forage palatability and animal performance.

The wheatgrasses are valuable native forage species. They are especially suitable for growing in the northern Great Plains area of the United States.

The variety Newhy is a wheatgrass x quackgrass hybrid. Wheatgrasses can produce excellent forage yields and sustained productivity under hay and pasture management systems, either in monoculture or in mixtures with alfalfa or other suitable legumes.

Recent releases of improved varieties have prompted interest in these species, especially in the drier western areas of Minnesota. Where rainfall is higher, tall fescue will outyield the wheatgrasses.

Minnesota Agricultural Experiment Station scientists initiated performance trials of tall fescue and the wheatgrasses in 1992, 1997 and 1998.

The trials were harvested three times per year, and nitrogen was applied in the early spring and after each harvest at rates of 50 pounds per acre.

TALL FESCUE

Tall fescue, a bunchgrass, may be planted in mixtures with other grasses and legumes. It establishes rapidly, withstands trampling, tolerates summer drought and produces fall-season pasture when other grasses become dormant.

Tall fescue is subject to winter injury, but it may remain productive in areas with reliable snow cover.

at three locations in Minnesota.

Variety	Grand Rapids		Rosemount		Morris
	1994-1996	2002	1994-1996	2000-2002	1994-1996
Chiefton	–	4.9	–	3.7	–
Lara	–	–	3.0	–	–
Palaton	3.5	4.8	3.1	3.8	6.1
Rival	–	4.6	–	3.8	–
Vantage	3.3	5.1	3.3	3.7	5.7
Venture	3.5	5.1	3.1	3.9	5.5
LSD 5%	NS	0.4	NS	NS	NS

Tall Fescue Planting Rate and Date

Bushel Weight, Pounds	25
Seeds/Pound.....	229,000
Planting Rate, Pounds/Acre	
Alone	10
In Mixtures.....	4
Planting Rate, Seeds Sq.Ft.	
Alone	50
In Mixtures.....	20
Planting Date	
Alone.....	Early Spring or Summer
With Legumes	Use Date for Legume

Dry matter yields, in tons dry matter per acre, of tall fescue, wheatgrass and festuca-lolium hybrids seeded at three locations.

Variety	Grand Rapids		Rosemount		Morris
	1994-1996	1999-2001	1993-1995	1998-2000	1993-1996
Tall Fescue					
Barcel	3.0	–	5.3	–	4.5
Cajun	–	4.9	–	5.3	–
Fawn	3.3	–	4.9	–	5.0
Ky 31	3.5	4.6	5.8	–	4.7
Ky 31 endophyte-free ¹	3.3	–	5.6	5.9	4.9
Martin	3.6	4.9	5.3	4.8	4.7
Maximize	–	4.6	–	5.1	–
Mozark	3.5	4.8	5.4	5.5	4.8
Mustang	2.7	4.3	4.7	4.9	–
Seine	–	–	–	5.6	4.8
Stef	3.3	–	5.3	–	–
Festuca-Lolium Hybrids					
Kemal	–	3.8	–	3.3	–
Tandem II	–	3.8	–	3.3	–
Wheatgrasses					
Manska	2.9	–	4.0	–	4.8
Newhy	2.7	–	3.9 ²	4.2	–
Reliant	3.0	–	4.2	–	5.0
LSD 5%	0.5	0.6	0.6	0.4	NS

¹ Endophytes are fungi that invade plant tissues, reducing forage palatability and animal performance.

² Newhy main yield reported for 1993 and 1994. Winter injury was severe at Rosemount in 1994-1995, resulting in stand loss of Newhy and reducing overall varietal yield by 25%.