

2011 Long-Term Summary of Kentucky Forage Variety Trials

S.R. Smith, G.L. Olson, and G. D. Lacefield, Plant and Soil Sciences

Introduction

Forage crops occupy approximately 7 million acres in Kentucky. Forages provide a majority of the nutrition for beef, dairy, horse, goat, sheep, and wildlife in the state. In addition, forage crops play an environmentally friendly role in soil conservation, water quality, and air quality. There are over 60 forage species adapted to the climate and soil conditions of Kentucky. Only 10 to 12 of these species occupy the majority of the acreage, but within these species there is a tremendous variation in varieties.

This publication was developed to provide a user-friendly guide to choosing the best variety for producers based on a summary of forage yield and grazing tolerance trials conducted in Kentucky over the past 10 to 12 years. Detailed variety reports and forage management

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publications are available from your local county agent or at the University of Kentucky forage web site at www.uky. edu/Ag/Forage by clicking on the "Forage Variety Trial" link.

Species in This Report

Red clover (Trifolium pratense L.) is a highquality, short-lived, perennial legume that is used in mixed or pure stands for pasture, hay, silage, green chop, soil improvement, and wildlife habitat. This species is adapted to a wide range of climatic and soil conditions and therefore is versatile as a forage crop. Stands of improved varieties are generally productive for two to three years, with the highest yields occurring in the year following establishment. Red clover is used primarily as a renovation legume for grass pastures. It is a dominant forage legume in Kentucky because it is relatively easy to establish and has high forage quality and high yield.

White clover (*Trifolium repens* L.) is a low-growing, perennial pasture legume with white flowers. It differs from red clover in that the stems (stolons) grow along the surface of the soil and can form adventitious roots that may lead to the development of new plants. White clover is classified into ladino, Dutch, and intermediate types. The intermediate types combine the higher yield of ladino with the grazing tolerance of the Dutch types.

Alfalfa (*Medicago sativa*) has historically been the highest yielding, highest quality forage legume grown in Kentucky. It forms the basis of Kentucky's cash hay enterprise and is an important component in dairy, horse, beef, and sheep diets. Choosing a good alfalfa variety is a key step in establishing a stand of alfalfa. The choice of variety can impact yield, stand persistence, and insect and disease resistance. **Orchardgrass** (*Dactylus glomerata*) is a high-quality, productive, cool-season grass that is well adapted to Kentucky conditions. This grass is used for pasture, hay, green chop, and silage, but it requires better management than tall fescue for higher yields, quality, and long stand life. It produces an open, bunch-type sod, making it very compatible with alfalfa or red clover as a pasture and hay crop or as habitat for wildlife.

Tall fescue (*Festuca arundinacea*) is a productive, well-adapted, persistent, soil-conserving, cool-season grass that is grown on approximately 5.5 million acres in Kentucky. This grass, used for both hay and pasture, is the forage base for most of Kentucky's livestock enterprises, particularly beef cattle. The predominant variety, KY31, was developed in Kentucky for long-term persistence but contains a fungal endophyte that produces alkaloids detrimental to livestock production and reproductive health. Endophyte-free tall fescue varieties produce no detrimental alkaloids, but UK research shows that they are less persistent than KY31. New novel endophyte tall fescue varieties contain safe endophytes, which enhance stand persistence but cause no detrimental animal symptoms.

Annual ryegrass (*Lolium multiflorum*) and **perennial ryegrass** (*Lolium perenne*) are high-quality, productive, cool-season grasses used in Kentucky. Both have exceptionally high seedling vigor and are highly palatable to livestock. Annual ryegrasses are increasing in use across Kentucky as more winter-hardy varieties are released and promoted. Annual ryegrass is productive for four to six months and is used primarily for late fall and early to late spring pasture. Perennial ryegrass can be used as a shortlived hay or pasture plant and has growth characteristics similar to tall fescue. It is



less persistent than other cool-season grass species. There are both diploid (two sets of chromosomes) and tetraploid (four sets of chromosomes) varieties of perennial ryegrass. Tetraploids have larger tillers and seedheads and wider leaves. Tetraploid types tend to be taller and less dense than diploid types, even in early stages of regrowth. Diploid types produce more tillers, have better stand persistence, and are more tolerant to heavy grazing.

Timothy (*Phleum pratense*) is the fourth most widely sown cool-season perennial grass used in Kentucky for forage after tall fescue, orchardgrass, and Kentucky bluegrass. Timothy is primarily harvested as hay, particularly for horses. In Kentucky, timothy behaves like a shortlived perennial, with stands lasting two to four years.

Kentucky bluegrass (*Poa pratensis*) is a high-quality, highly palatable, long-lived pasture plant with limited use for hay. It tolerates close, frequent grazing better than most grasses. It has low yields and low summer production and becomes dormant and brown during hot, dry summers. Kentucky bluegrass is best suited for pastures where a dense sod is more important than high-forage production (e.g., horse pastures).

Festuloliums are hybrids between various fescues and ryegrasses with higher quality than tall fescue and improved stand survival over perennial ryegrass. Their use in Kentucky is still limited because they do not survive as long as tall fescue.

Sudangrass (Sorghum bicolor ssp. drummondi) is a rapidly growing annual grass in the sorghum family. It is medium yielding and well suited for grazing or hay because of its smaller stem size. Sudangrass regrows quickly after harvest and can be grazed several times during summer and early fall.

Sorghum x sudangrass hybrids are more vigorous and slightly higher yielding than sudangrass. A larger stem size

makes these hybrids less useful for hay; therefore, they are commonly used for baleage and grazing

Teff, also referred to as Summer Lovegrass (Eragrostis tef), is a warm-season annual grass native to Ethiopia and has been used as a grain crop for thousands of years. Recently, there has been considerable interest in teff as a forage crop. It is high quality, palatable, and fine stemmed and therefore makes excellent hay.

Important Selection Considerations

Local Adaptation and Seasonal Yield. Choose a variety/species that is adapted to your region of Kentucky, as indicated by good performance across years and locations in replicated yield trials. Also, look for varieties that are productive in the desired season of use. For management recommendations, check with your county Extension agent or see the forage Web site at www.uky.edu/Ag/Forage.

					Lex	kingto	on				Prine	ceton	Quic	ksand	Eden Shale	
			02 ^{1,2}	03	04	06	07	08	09	10	03	05	98	03	03	Mean ³
Variety	Туре	Proprietor	3yr ⁴	3yr	3-yr	2-yr	2-yr	3yr	2yr	2yr	3yr	3-yr	3yr	2yr	2yr	(#trials
Advantage	Ladino	Allied Seed, L.L.C.		125											106	116(2)
Alice	Intermediate	Barenbrug USA					1			1		86				-
Avoca	Dutch	DLF International Seeds				59						82				71(2)
Barblanca	Intermediate	Barenbrug USA		92												-
CA ladino	Ladino	Public	100		124		1			1	103		100	98		105(5)
Colt	Intermediate	Seed Research of OR		90		57						114				87(3)
Common	Dutch	Public	100				53			99		78				83(4)
Companion	Ladino	Oregro Seeds	1					87	94	90		Ì				90(3)
Crescendo	Ladino	Cal/West Seeds	105			140						109				118(3)
Crusader II	Intermediate	Allied Seed, L.L.C.								97						-
Excel	Ladino	Allied Seed, L.L.C.	1		100							Ì				-
Durana	Intermediate	Pennington		94		94	88	82	85	88	87	83		101	95	90(10)
Insight	Ladino	Allied Seed, L.L.C.				128				1						-
lvory	Intermediate	Cebeco	96									Ì				-
lvory II	Intermediate	DLF International Seeds					86			96						91(2)
Jumbo	Ladino	Ampac Seed	93													-
Kopu II	Intermediate	Ampac Seed	97			97	95	95	103	97						97(6)
Ocoee	Ladino	Allied Seed, L.L.C.								85						-
Patriot	Intermediate	Pennington		103		87	104	113	95	118	104	100		98	99	102(10
Pinnacle	Ladino	Allied Seed, L.L.C.				120						111				116(2)
Rampart	Ladino	Allied Seed, L.L.C.					80	89	97	85						88(4)
Regal	Ladino	Public	99	96	92		125	100	116	123	107	100	100	104		106(11
RegalGraze	Ladino	Cal/West Seeds				127	140	102	103	1						118(4)
Resolute	Intermediate	FFR/Southern States				63										-
Seminole	Ladino	Saddle Butte Ag. Inc			108	70	79									86(3)
Super Haifa	Intermediate	Allied Seed, L.L.C.			77		1			1						-
Tillman II	Ladino	Caudill Seed	103													-
Will	Ladino	Allied Seed, L.L.C.	107			162	150	132	107	123		136				131(7)

2002 was harvested 3 years, so the final report would be "2004 Red and White Clover Report" archived in the KY Forage website at </ www.uky.edu/Ag/ Forage>.

Mean only presented when respective variety was included in two or more trials. Number of years of data

Table 2. Sum	mary of Kentuck	y Red	Clov	er Yi					(yie	d she	owna	as a p				he m	ean c				omm	1				ne trial).
						.exin								incet	1				icksa					Shale		
		001,2	00	01	02	03	04	06	08	09	10	00	03	05	08	09	01	03	05	08	10	00	03	08	10	Mean ³
Variety	Proprietor	3yr ⁴	3yr	3yr	3yr	3yr	3yr		3yr	2yr	2yr	3yr	3yr	2yr	3yr	2yr	2yr	2yr		3yr	2yr	3yr	2yr	3yr	2yr	(#trials)
AA117ER	ABI Alfalfa							110						87					92							96(3)
Acclaim	Allied Seed				92																					-
Arlington	WI Agr. Exp.Sta.				72							ļ														-
Belle	Agribiotech	88			82																					85(2)
Cherokee	FL Agr. Exp. Sta.	78			65																					72(2)
Cinnamon	FFR/Sou.St.	111			108																					110(2)
Cinnamon					100																					
Plus	FFR/Sou.St.					97		109	112	123	113			112	102	102			103	108	108			108	114	109(13)
Common O	Public										97										71				84	84(3)
Dominion	Seed Research							102						95	102				93					109		100(5)
Dominion	of OR							102						95	102				95					109		100(5)
Duration	Cisco Co.			86	100												106									97(3)
Emarwan	Turf-Seed						91			117						106	101				93					102(5)
Freedom!	Barenbrug USA	108	105	127	123	96	118	91	100	108	113	105	110	136	107	116	111		119	106	116	102	102	100	128	110(24)
Freedom!MR	Barenbrug USA				118	115	102	114	114		112		106	101		108		94	111		122		118		112	111(14)
FSG 9601	Allied Seed						89																			-
Impact	Specialty	106	97									98														100(3)
· .	Seeds									0.1					0.2									0.1	70	. ,
Juliet	Caudill Seed									84					93	90								84	72	85(5)
Kenland (cert.)	KY Ag.Exp Sta.	110	111	127	139	118	117	117	99	111	97	104	102	92	113	106	111	88	105	104	109	104	98	110	130	109(24)
Kenland																										
(uncert)	Public										82				74		83				84			66	100	82(6)
Kenstar	KY Ag.Exp Sta.		105									104														105(2)
Kenton	KY Ag.Exp Sta.	100	93	119	109	90	95	112	121			98	95	105	112	94	93	99	106	98		102	98			102(19)
Kenway	KY Ag.Exp Sta.	106	104	111	134		97	119	118			100		94	106	103	100		103	94		102				106(15)
Morning Star	Cal/West Seeds											İ			90							1		90		90(2)
Plus	Allied Seed	113			113																	97				108(3)
Plus II	Allied Seed								130											97						114(2)
Prima	Public	92			74							1														83(2)
Quinequeli	Caudill Seed									92						80									64	79(3)
Red Gold	Proseeds							01																102		01(2)
Red Gold	Marketing							81							89									102		91(3)
Red Gold	Turner Seed		97	97			95					95					98					98				97(6)
Plus																										
RedlanGraze	ABI Alfalfa	95																								-
RedlanGraze	Americas Alfalfa			91	104												93									96(3)
Redland Max	ABI Alfalfa						95																			
Redstart	Syngenta	102			78		95																			90(2)
Robust	Scott Seed	92			70																					90(Z)
	Seed Research	92																								
Robust II	of OR														110									108		109(2)
Dealist	Seed Research														100									100		107(2)
Rocket	of OR														106									108		107(2)
Rojo Diablo	Great Plains			99													101									100(2)
Royal Red	FFR/Sou.St.	108	92		91																	96				97(4)
Rustler	Oregro Seeds								83		86									94	103				103	94(4)
Scarlet	Dairyland	95																								-
Sienna	Great Plains			91													106									99(2)
Solid	Production	97	102		98	84		79				98	87	86					76			105	84			91(11)
	Service					04		19					0/	00					,0				04			
Starfire	Ampac Seed	97	93	<u> </u>	99							98										95				96(5)
Starfire II	Cal/West &								101		114				112					110	113			115	107	110(7)
	Ampac														···-											
Triple Trust 350	ABI Alfalfa							101						92					92							95(3)
Vesna	DLF-Jenks			53													96									75(2)
	Brett Young			55													90									
14/1				1		1				101		1				107					104					104(3)
Wildcat	Seeds																									

¹ Year trial was established.
 ² Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 2000 was harvested 3 years, so the final report would be "2002 Red and White Clover Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 ³ Mean only presented when respective variety was included in two or more trials.
 ⁴ Number of years of data

The following comprehensive bulletins may be especially useful:

- Grain and Forage Crop Guide for Kentucky (AGR-18)
- Establishing Forage Crops (AGR-64)
- Rotational Grazing (ID-143)
- Forage Identification and Use Guide (AGR-175)
- *Lime and Fertilizer Recommendations* (AGR-1)

Seed Quality. Buy premium-quality seed that is high in germination and purity and free from weed seed. Buy certified seed or proprietary seed of an improved variety. An improved variety is one that has performed well in independent trials. Other information on the label will include the test date (which must be within the past nine months), the level of germination, and the amount of other crop and weed seed. Order seed well in advance of planting time to assure that it will be available when needed.

Description of the Tests

Yield trials. Plots were seeded at the recommended seeding rate per acre and were planted into a prepared seedbed with a disk drill. Plots were 5 by 15 feet in a randomized complete block design with four replications. Grass plots were fertilized with 60 pounds of actual N per acre in March, after the first cutting, and again in late summer for a total of 180 pounds per acre per season. Other fertilizers (lime, P, and K) were applied as needed according to the University of Kentucky soil test recommendations. The tests were harvested using a sickle-type forage plot harvester to simulate a spring cut hay/summer grazing/ fall stockpile management system. Fresh weight samples were taken at each harvest to calculate percent dry matter production. Management practices for establishment, fertility, weed control, and harvest timing were in accordance with University of Kentucky recommendations.

Grazing trials. Plots were 5 by 15 feet in a randomized complete block design, with each variety replicated six times. Plots were seeded at the recommended seeding rate per acre and were planted into a prepared

Table 3. Summary of Kentucky Alfalfa Yield Trials 2000-2011 (yield shown as a percentage of the mean of the commercial varieties in the test)	entucky Alfalfa Yield Tr	ials 2	000-2(0-2011 (yield shown a	eld sh	own as	a per	centage	of the	e mean	ofth	e com	nerciā	<u>Dvinco</u>	ties in	the t	est). Poulin	est). Pourling Guoon ²	Edon Chalo	
				Disease Resistance ³	a Recis	tance ³	-	004,5			90	80	01			- 8	203			9W
Variety	Proprietor	Ð	, W	Ϋ́	An	PRR	APH	5vr ⁷	5 vr	+	+	+	4vr	+	4 Vr	+	3 vr	4vr	4vr	(# trials)
A-4440	Producers Choice	4	뛰	또	ЯH	Ħ	HR		-	<u> </u>	<u> </u>	<u> </u>	-	<u> </u>			-			100(2)
A 5225	Producers Choice	2	Ħ	НR	HR	ЯH	ж					103			107					105(2)
Abilene +Z	America's Alf.	S	Ħ	뛰	НВ	Ħ	ж	66												ı
AC Longview	Newfield Seeds	I	HR	I	I	I	I			83				-						I
Adrenalin	Brett Young	4	HR	HR	HR	HR	HR									105				I
AmeriGraze 401+Z	America's Alf.	4	HR	HR	HR	HR	R	66												I
Ameristand 403T	America's Alf.	3	HR	HR	НR	HR	HR				66	93	97	-	101	106				99(5)
Ameristand 403T Plus	America's Alf.	4	Ħ	Ħ	HR	HR	HR									98				I
Ameristand 407TQ	America's Alf.	4	HR	HR	HR	HR	HR									103				I
Anchormate	ProSeed Marketing	I	I	I	I	I	I					66		-						I
Arc (certified)	Public	4	LR	MR	HR	I	I	91	96	76			66	95	87		98			92(7)
Archer III	America's Alf.	5	HR	HR	HR	HR	HR									98				-
Baralfa 53HR	Barenbrug USA	5	£	Я	HR	HR	HR							104						I
Buffalo	Public	I	I	ı	I	I	I		90	82	88	88		95	79	95		81	95	88(9)
DK 140	Monsanto	4	HR	HR	HR	HR	HR		95				100							98(2)
DKA-41-18RR	Monsanto	4	HR	HR	HR	HR	HR				103									I
DKA 43-13	Monsanto	4	£	HR	HR	또	HR			_		102					_			I
DKA 50-18	Monsanto	5	HR	HR	HR	HR	HR					108								-
Dynagro Everlast	United Agr. Prod.	4	HR	HR	HR	HR	R							101				101		101(2)
Enforcer	FFR/Sou. St.	4	£	HR	HR	또	HR			90							_	82		86(2)
Escalade	Allied Seeds	5	HR	HR	HR	HR	HR											106		-
Evermore	FFR/Sou. St.	5	HR	HR	HR	HR	HR										105	101	103	103(3)
Expedition	Syngenta Seeds	5	£	HR	Я	RR	Я			107	111			96			_			105(3)
Feast +EV	Garst Seeds	m	또	HR	HR	ж	HR			106							101		96	101(3)
Fortress	Syngenta	З	R	R	R	HR	I													I
FSG 406	Allied Seeds	4	또	HR	HR	НR	НR			_						_	110			I
FSG 408DP	Allied Seeds	4	또	HR	HR	HR	Я			105					109					107(2)
FSG 505	Allied Seeds	5	HR	HR	ΗR	HR	R							-			106		108	107(2)
FSG 528SF	Lewis Seed Co.	5	£	ж	HR	또	Я			_		106					_			I
Geneva	Syngenta	4	또	HR	HR	또	HR	106	103				104							104(3)
Genoa	Syngenta	4	또	Ħ	HR	RR	HR			112		100		98	116					107(4)
GH 744	Golden Harvest	4	또	Ħ	Ħ	또	MR		104											I
HybridForce 400	Dairyland	4	또	Ħ	ж	또	MR						106							I
Integrity	PGI Alfalfa	4	HR	HR	HR	HR	HR											101		I

KinaFisher 243	Cal/West	5	뛰	HR	н	뛰	또		_		_				92				I
L447HD	Legacy Seeds	4	또	또	또	또	또			105	10								
LegenDairy 5.0	Croplan Genetics	3	HR	HR	HR	HR	HR			66			103				110		104(3)
Magnum V	Dairyland	4	ЯH	н	ж	뛰	Ħ	104											ı
Magnum V-wet	Dairyland	т. М	۳	۳	œ [또	MR	105		_				ć					I
Mariner III	Allied Seeds	4 4	Ξ	Ξ	Ξ٩	Ξ	Ξ		1	100			_	86					1
Pedasus	FFR/Sou. St.	ף ר	Ĩ	Ĩ	ĨŦ	ĨŦ	<u> </u>		-	2		95							
PerForm	Dairyland Research	4	HR	HR	HR	НЯ	HR			105	5								ı
PGI 459	Producers Choice	4	HR	HR	H	۲	ж				100	0							1
Phirst	UniSouth Genetics	4 4	Ħ	HR	Ŧ	H H	~ 0		+	_	_		105	_			102		104(2)
Padianco UD	Amose Cood /Circo	0 -				Ĕ	r 9		-	10	2	_	_	2	105		<u>о</u> ,		(c)701
Radiant-AM	Ampac Seed/Lisco	4 4	E	Eg	E	E	E			8			_		<u></u>				
	Cronlan Genetics	4	H	H	Ë	Ĩ	E E			3	103	~	_		97		108		103(3)
Regal	Great Plains	r v	Ĩ	H	<u> </u>	E H	MB				2	2	-		\$	103	2	94	(2)60
Reward II	PGI Alfalfa	7	HR	HR	: ~	Ĩ	6					66	103			6		103	100(4)
Rushmore	Syngenta Seeds	4	HR	HR	HR	HR	HR	95											
Saranac AR (certified)	Public	4	MR	Я	Ħ	Ч	1	93	87 7	77 89	6	92	95	89	98	66	89	95	91(12)
Summer Gold	Beck's Hybrids	4	HR	HR	H	НЯ	НЯ		7	107									I
Syngenta6422Q	Syngenta Seeds	4	HR	HR	НЯ	НЯ	НR				_		_		98				ı
Triple Crown	FFR/Sou. St.	4	Ŧ	Ξ	۳	۳	۳	102	_	_	+	100	-						101(2)
TripleTrust 450	ABI Alfalfa	5	HR	ΗR	Ξ	Ξ	ΗH				_	_	100	_			105		103(2)
USG 681HY	UniSouth Genetics	. و	HR	HR	Η	ΗË	1 1			_	_	_	_	112					ı
ValuePlus 1	Forage Genetics	4	Ĩ	HR	Ħ	Ħ	2	106	6	+	+	+	2						- (0)70
Vernal		7 •	¥	MK .	1	1	1		93		_		56	1					94(2)
Withstand	PFR/Sou. St. M. I. Bocozych	4 0	Ξ	Ξ	Ξ٩	Ξ	Ξ		100	66	6	_	_				114		101(4)
WI 377	W-Litescarch	n 4	E	H	Ĩ	E E	E E		105				_						
WI 3385R	W-I Research	4	Ĩ	Ë	ĨĨ	Ĩ	ĨĨ		101		-		-						1
WL 342	W-L Research	4	H	HR	H	H	H		5			102	5						1
WL 343HQ	W-L Research	4	HR	H	Ħ	Ħ	۲			98	104	-		10					101(3)
WL 348AP	W-L Research	4	HR	HR	HR	НЯ	HR				-		_				66		
WL 355RR	W-L Research	4	HR	HR	HR	HR	HR			103									
WL 357HQ	W-L Research	5	HR	HR	HR	HR	HR		=	123			106			101		106	109(4)
WL 363HQ	W-L Research	5	HR	HR	НR	НR	НR				102	2			105				104(2)
4m76	FFR/Sou. St.	4.7	НR	또	۳	또	œ	-	116	_									1
5-star	Croplan Gen.	S (<u>د</u>	뚝	<u>د</u>	<u>د</u>	<u>د</u>						_			97		66	98(2)
5312	Public	γ	Ξ	Ξ	Ξ	Ξď	Ξ	103				_							ı
	Pioneer	n r	Ĕ	Ēġ	ĒĒ	- 9	Ĕα	70		_			_					00	
54/54	Pioneer	4	Ë	Ĩ	ĨĨ	ĨĨ	= ¥	86	94			105						~	(2)00
54V56	Pioneer	• 1	1	1	1	1					-	2	_			98			
6400HT	Garst Seeds	4	HR	HR	Ħ	H	Щ		2	108						96			102(2)
6415	Garst Seeds	4	HR	HR	HR	HR	HR						103				105		104(2)
6417	Garst Seeds	4	НR	HR	Ħ	Щ	Щ				105	5							I
6420	Garst Seeds		НR	ж	Ħ	æ	뛰		106										ı
6530	Garst Seeds	5	HR	HR	HR	НR	НR			_		_				92			I
6552	Garst Seeds	5	Ħ	Ħ	뚠	뛰	뛰			_	104	4	_						ı
¹ Variety characteristics: FD=fall dormancy, Bw=bacterial wilt, Fw=fusarium wilt, An=anthracnose, PRR=phytophthora root rot, APH-aphanomyces root rot. Information provided by seed companies.	FD=fall dormancy, Bw=	bacteri	ial will	t, Fw=f	usariur	n wilt, /	An=ant	hracnose	e, PRR=1	ohytopl	nthora	i root n	ot, APH	-aphar	iomyc	es root	rot. Informat	ion provided	oy seed
² The Bowling Green test ³ Disease resistance: S=s	The Bowling Green test is on soil infested with phytophthora and aphanomyces root rots. Disease resistance: S=susceptible. LB=low resistance. MB=moderate resistance. B=resistance and aphanomyces and b	phyto stance.	phtho MR=r	ra and nodera	aphano te resis	myces tance.	R=resis	ohthora and aphanomyces root rots. MB=moderate resistance. B=resistance. HB=high resistance.	R=hiah	resistar	Jce.								
⁴ Year trial was established	ed								ו										
⁵ Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, Instein the variet for the final vield reports to defer a Market for the final vield report would be "2006 Alf-Alf-	e as a guide in making v	ariety o	decisio	ons, bu	t refer i avamr	o spec	ific yea	rly repor	ts to de	termine	e stati:	stical d	ifferenc	es in fo) rage)	vield be	tween variet	cies. To find ac	tual yields,
Report" archived in the	e KY Forage website at <	WWW.L	uky.ed	u/Ag/F	orage>	, und			highter		2 2 2			ר אכמו א	110.00		ובומ ובלימור א		
⁶ Mean only presented w	when respective variety	was inc	cludec	d in two	or mo	re trial	, ċ												
/ Number of years of uat	la																		

seedbed using a disk drill. Grazing was continuous from April to October.

Plots were grazed down to below 4 inches quickly and were maintained at 2 to 4 inches (sometimes less) for the remainder of the grazing season. Supplemental hay was fed during periods of slowest growth. Visual ratings of percent stand were made in the fall several weeks after the cattle were removed to check stand survival after the grazing season and in the spring prior to grazing to check on winter survival and spring growth. Because trials were seeded in rows, persistence ratings were based on density within a row and not total ground cover. Grass plots were fertilized with 60 pounds of actual N per acre in the spring and 30 to 40 pounds of actual N in early November after cattle or horses were removed from the pasture. Other fertilizers (lime, P, and K) were applied as needed according to the University of Kentucky soil test recommendations. Management practices for establishment, fertility, and weed control were in accordance with University of Kentucky recommendations.

Results and Discussion

These tables summarize long-term yield and stand persistence data of commercial varieties that have been entered in the University of Kentucky trials. The data are listed as a percentage of the mean of

				Lexin	gton					Princ	ceton				Quick	sand		
		99 ^{1,2}		03	05	07	09	98	00	02	04	06	08	99	01	03	05	Mean ³
Variety	Proprietor	2-yr ⁴	3-yr	2-yr	3-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-yr	3-yr	3-yr	2-yr	2-yr	2-yr	4-yr	(#trials
Atlas	ProSeeds Marketing	107												89				98(2)
Atlas Select	ProSeeds Marketing												96					-
Aprilia	ProSeeds Marketing												94					-
BarElite	Barenbrug USA					99												-
Bariane	Barenbrug USA			87	103												95	95(3)
Barolex	Barenbrug USA				94													-
BarOptima PLUS E34	Barenbrug USA					101												-
BAR 9 TMPO	Barenbrug USA	96												97				97(2)
Bronson	Ampac Seed				91	100	105										102	100(4)
Bull	Improved Forages			98	106				102	103						97		101(5)
Carmine	DLF International		99												97			98(2)
Cowgirl	Rose-AgriSeeds												102					-
DLF-B	DLF International	96																-
Enhance	Allied Seed										107							-
Festival	Pickseed West		107								102				107			105(3)
Fuego	Advanta Seeds	99																-
Goliath	Ampac Seed						100											-
Hoedown	DLF International		104												106			105(2)
HyMark	Fraser Seeds												102					-
Jesup EF	Pennington Seed							106										-
Jesup MaxQ	Pennington Seed				102	104	109		ĺ	98			95			100	102	101(7)
Johnstone	ProSeeds Marketing	95	108							1				95				99(3)
KENHY	KY Agric Exp Sta.										89							_
Kentucky 32	Oregro Seeds												99					_
Kokanee	Ampac Seed		89						86	l l								88(2)
KY31+ ⁵	KY Agric Exp Sta.	102	118	113	112	105	101	122	108	104		106	93	107	124	98	110	115(15)
Maximize	Turf-Seed	96	95											105	93			97(4)
Nanryo	Jap. Grassland ForageSeed/ USDA-ARS, El Reno, OK					99												-
Noria	ProSeeds Marketing					100				1								-
RAD-ERF50	Radix Research, Inc.												113					_
Resolute	Ampac Seed		90												65			78(2)
Savory	DLF International									l l		93						_
Seine	Advanta Seeds	99									96							98(2)
Select	FFR/Sou. St.	106	106	94	103	102	101	105	105	95	105	103	105	107	112	102	91	103(16)
Stockman	Seed Research of OR			109							101	99				105		104(4)
TF0203G	Seed Research of OR		1			90												_
TF33	Barenbrug USA		1					70				1						_
Tuscany	Forage Genetics		112					-										-
Tuscany II	Seed Research of OR											100						_
Vulcan	International Seeds		1					97										_
5CAN	Brett Young	1	1				83											

¹ Year trial was established.

² Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 2 years, so the final report would be "2001 Tall Fescue Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>. Mean only presented when respective variety was included in two or more trials.

⁴ Number of years of data.

⁵ "+" indicates variety is endophyte infected.

Table 5. Summary	of Kentucky Orchardgras	s Yield Tr				ld sho	wn as	a perc	entage			n of th	e comr	nercia			the tri	al).
				Lexing	ton					Prine	ceton				Quic	ksand		
		1999 ^{1,2}	2001	2003	2006	2007	2009	1998	2000	2002	2004	2006	2008	1999	2001	2003	2005	Mean ³
Variety	Proprietor	2-yr ⁴	2-yr	3-yr	4-yr	3-yr	2-yr	2-yr	2-yr	3-yr	3-yr	3-yr	3-yr	2-yr	2-yr	3-yr	4-yr	(#trials)
Abertop	Pennington									71								-
Albert	Univ. of Wis.		103												106			105(2)
Amba	DLF International Seeds		96												80			88(2)
Ambassador	DLF International Seeds										95							-
Ambrosia	American Grass Seed Prod.											90						-
Athos	DLF International Seeds		98												105			102(2)
Benchmark	FFR/Sou. St.	103						101	97	113				106				104(5)
Benchmark Plus	FFR/Sou. St.				100	108	104			107		107	104			107	102	105(8)
Boone	Public							103	104									104(2)
Bronc	Grassland West								98									-
Bounty	Allied Seed				101												98	100(2)
Century	Seed Research of Oregon				98												104	101(2)
Checkmate	Seed Research of Oregon					102												-
Christoss	Proseeds Marketing					92												-
Command	Seed Research of Oregon										87					1		_
Crown	Donley Seed	101					98	105		101			105	97				101(6)
Crown Royale	Donley Seed														110			_
	· · · ·									108					110	97		103(2)
Eastwood	Ampac Seed		86							100					86			86(2)
Elsie	Rose-AgriSeed		00										98		00			
Endurance	DLF International Seeds											104	90					
Extend	Allied Seed										100	104						-
Hallmark	James VanLeeuwen		102	102						103	98				101	96		100(6)
Harvestar	Columbia Seeds		102	102	91	97				105	90	106			101	90	100	99(4)
Haymaster	FFR/Sou. St.				91	97						100					97	99(4) 96(2)
/	FFR/Sou. St.	106			94			93	100	106				108	104	103	97	103(7)
Haymate		100			105			95	100	100				108	104	105	98	
Icon	Seed Research of Oregon			102	105												98	102(2)
Intensiv	Barenbrug			102									07					-
Lazuly	Proseeds Marketing										0.0		97					-
LG-31	DLF International Seeds		102								92				104			-
Mammoth	DLF International Seeds		102										100	101	104			103(2)
Megabite	Turf-Seed	94	105										106	101				102(4)
Niva	DLF International Seeds					100				81								-
Paiute	DLF International Seeds			100		108												-
Persist	Smith Seed			123	105	106	108				101					108	101	107(7)
Potomac	Public	104					104			98			108	99				103(5)
Prairie	Turner Seed		101		107	101	111		95	104		100	104		102	105	107	103(11)
Prodigy	Caudill Seed						102						103					103(2)
Profit	Ampac Seed					107	94						103					101(3)
Renegade	Grassland West								95							ļ		-
Shawnee	Rose-AgriSeed												86					-
Shiloh	Proseeds Marketing							109										-
Shiloh II	Proseeds Marketing										117							-
Spanish Pink	DLF International Seeds			L				82										-
Spanish Red	DLF International Seeds	101												94				98(2)
Takena	Smith Seed		107							100					108			105(3)
Tekena II	Smith Seed			110	102						109					106	104	106(5)
Tekapo	Ampac Seed	88			91	81	78					98	86	94	92	105	91	90(10)
Tucker	Oregro Seeds											96	102					99(2)
Udder	Improved Forages			100	107				102	102						106	99	103(6)
Vailliant	Proseeds Marketing					96												_
Vision	Cropmark Seeds			63												67		65(2)

1 Year trial was established.
 2 Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 2 years, so the final report would be "2001 Orchardgrass Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 3 Mean only presented when respective variety was included in two or more trials.
 4 Number of years of data.

				Lex	xingto	n			Quick	csand	Princ	eton	
		00 ^{1,2}	01	02	06	07	08	09	99	01	00	04	Mean ³
Variety	Proprietor/KY Distributor	2yr ⁴	3yr	4yr	3yr	3yr	3yr	2yr	2yr	2yr	3yr	2yr	(#trials
Alma	Newfield Seeds Co/Caudill Seed Co.											81	-
Auroro	General Feed and Grain	100							98				99(2)
Barfleo	Barenbrug USA							94					-
Barpenta	Barenbrug USA					74							-
Clair	Ky Agric. Exp. Station		109	115	107	95	108	102		108		122	108(8)
Classic	Cebeco International Seeds	100		88					87				92(3)
Climax	Canada Agr. Res. Station				79	102	105	97					96(4)
Colt	FFR Cooperative	105		101	90				112			99	101(5)
Common	Public		96										-
Derby	FFR Cooperative				112	111		107				124	114(4)
Dolina	DLF-Trifolium	100		91									96(2)
Express	Seed Research of Oregon			97		91		98					95(3)
Hokuei	Snow Brand Seed	103											-
Hokusei	Snow Brand Seed	97							99				98(2)
Joliette	Newfield Seeds Co/Caudill Seed Co.						87	90				90	89(3)
Jonaton	Newfield Seeds Co/Caudill Seed Co.											84	-
Outlaw	Grassland West Company										107		-
Richmond	Pickseed Canada Inc.	100							103				102(2)
Summit	Allied Seed, L.L.C.			114									-
Talon	Seed Research of Oregon				110	112		106					109(3)
Treasure	Seed Research of Oregon				103	115		105					108(3)
Tundra	DLF-Trifolium	95											_
Tuukka	Ampac Seed Company		95	90						92	93		93(4)

differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 2000 was harvested 2 years, so the final report would be "2002 Timothy Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.

Mean only presented when respective variety was included in two or more trials. Number of years of data.

	mmary of Kentucky of the mean of the								eld shown as	s a
				Lex	cingto	on			Princeton	
	Proprietor/KY	96 ^{1,2}	03	04	06	07	08	09	02	Mean ³
Variety	Distributor	3yr ⁴	2yr	3yr	4yr	3yr	3yr	2yr	3yr	(#trials)
Adam 1	Radix Research			98						-
Barderby	Barenbrug USA					94		107	114	104(2)
BigBlue	Rose-AgriSeed							77		-
Common	Public				71	66	68			68(3)
Ginger	ProSeeds Marketing		89		118	119	114	116		111(5)
Kenblue	Public	90		102	133					110(3)
Lato	Turf Seed Inc.	110				122				116(2)
RAD-5	Radix Research				103					-
RAD-339	Radix Research				101					-
RAD-643	Radix Research				94					-
RAD-731zx	Radix Research				87					-
RAD-762	Radix Research				94					-
RAD-1039	Radix Research						118			-
Slezanka	DLF International Seeds		111							-

Year trial was established

Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 2004 was harvested 2 years, so the final report would be "2006 Timothy and Kentucky Bluegrass Report" archived in the KY Forage website at <www.uky. edu/Ag/Forage>. The 96 and 03 Lexington and 02 Princeton results are in the appropriate Tall Fescue Reports.

Mean only presented when respective variety was included in two or more trials

Number of years of data

the commercial varieties entered in each specific trial. In other words, the mean for each trial is 100 percent; varieties with percentages over 100 yielded better than average, and varieties with percentages less than 100 yielded lower than average. For the grazing trials, varieties with percentages over 100 persisted better than average, and varieties with percentages less than 100 persisted less than average. Also in the grazing trials, the alfalfa varieties were compared to Alfagraze, and the fescue varieties were compared to KY31+ instead of the mean of all the commercial varieties. In the horse grazing trials, the fescue varieties were compared to KY31instead of the mean of all the commercial varieties. Direct, statistical comparisons of varieties cannot be made using the summary tables, but these comparisons do help to identify varieties for further consideration. Varieties that have performed better than average over many years and at several locations have very stable performance; others may have performed very well in wet years or on particular soil types. These details may influence variety choice, and the information can be found in the yearly reports. To determine which yearly report to refer to, see footnote in each table.

							Lexi	ngto	n ¹					Pr	incet	on		ling en	
			99 2,3	01	03	04	05	06	07	08	09	10	10	00	02	04	00	03	Mean ⁴
Variety	Туре	Proprietor						All t	rials	are 1	year	yiel	ds						(#trials
Abundant	tetraploid	Ampac Seed	1					26				-							_
Acrobat	•	Proseeds Marketing								244									_
Andy	Westerwold tetraploid	DLF International	112	105										99					105(3)
Angus I	Westerwold tetraploid	DLF International														80			
Attain	Westerwold tetraploid	Smith Seed Services										113							_
Aurelia	Italian tetraploid	Forage Genetics		120												130			125(2)
Avance	Westerwold diploid	DLF International	113											109					111(2)
Barextra	Italian tetraploid	Barenbrug USA													117				_
Barmultra II	Italian	Barenbrug USA										136							_
Big Boss	Westerwold tetraploid	Smith Seed Services										99							_
Big Daddy	Westerwold tetraploid	FFR/Sou. St.	87	86								88	102	90	85		104		92(7)
Brangus	Italian diploid	KB SeedSolutions	0,									96							-
Bruiser	Westerwold diploid	Ampac Seed		<u> </u>						111	104	102							106(3)
Common		Public								· · ·				85	85		95	87	88(4)
DH-3	Italian tetraploid	Allied Seed							106	45				0.5				0/	76(2)
Diamond T	Italian tetraploid	Oregro Seeds						18	1.00	5									
Domino	Italian tetraploid	DLF International						10							121				_
Ed	Westerwold diploid	Smith Seed Services										98			121	<u> </u>			
Fantastic	Westerwold diploid	Ampac Seed	83					105	98			90		90		<u> </u>	97		92(4)
Feast	Italian tetraploid	Ampac Seed	05	90				105	- 20					- 50		<u> </u>	57		-
Feast II	Italian tetraploid	Ampac Seed		98						59	112	111			123	<u> </u>			101(5)
Flying A	Westerwold diploid	Oregro Seeds		90				85		100	112	111			125				101(3)
Fighting A	Italian diploid	DLF International						05		100		110				 			
Fria	Westerwold diploid	Allied Seed										97				┝───┘			
GR-AS10	Italian	Ampac Seed										115							_
Graze-N-Gro	Westerwold diploid	Seed Research of OR			105				78			115				94		107	96(4)
Giaze-N-Gio		Public		72	105					44	00	70		01	77	94 57	00	107	. ,
Hercules	Westerwold diploid		114	12					78	44	86	79		81 110	//	57	86		73(9)
	Westerwold tetraploid	Barenbrug USA	114									72		110		<u> </u>			112(2)
HS-1	Italian diploid	KB SeedSolutions				00	100	120	120	100	100	73	105		07	├ ───		0.6	-
Jackson	Westerwold diploid	The Wax Co.		124		80	100	138	120	100	100	101	105		87			96	99(9)
Jeanne	Italian tetraploid	DLF International		124	100											<u> </u>			-
Jumbo	Westerwold tetraploid	Barenbrug USA			103							~ ·				<u> </u>		104	104(2)
KB Royal	Italian diploid	KB SeedSolutions										84							-
King	Westerwold diploid	Lewis Seed		92												<u> </u>			-
Marshall	Westerwold diploid	The Wax Co.	87		92	120	100	221	116	169	99	102	104	102	97	<u> </u>	114	106	108(13)
Monarque	Italian tetraploid	Seed Research of OR														117			-
Nelson	Westerwold tetraploid	The Wax Co.											89			<u> </u>			-
Passerel Plus	Westerwold diploid	Pennington Seed		ļ											100				-
Rio	Westerwold diploid		88											100	97	<u> </u>	102		97(4)
Spark	tetraploid	DLF International	87														83		85(2)
Stockaid	diploid							181											_
Striker	Westerwold tetraploid	Seed Research of OR							104										-
ТАМТВО	Italian tetraploid	Tex. Ag Exp Sta.								80		103				<u> </u>			92(2)
Tam 90	Italian diploid	Tex. Ag Exp Sta.								82					85	\vdash			84(2)
TetraPro	Italian tetraploid	Tex. Ag Exp Sta.								67						<u> </u>			_
Tetrelite II	Intermediate	DLF International														122			
T-Rex	Westerwold tetraploid	SaddleButte						25											-
Verdure	Westerwold tetraploid	Smith Seed Services										87							_
Winterhawk	Westerwold diploid	Oregro Seeds										106							-
Winter Star	Italian tetraploid	Ampac Seed		87											96				92(2)
Zorro	Italian tetraploid	DLF International	120	127										135	130		118		126(5)

¹ In annual ryegrass, low yielding varieties usually result from winterkill. Note: Due to severe winterkill, yield results from the 2006 planting were not included in the overall mean. ² Year trial was established.

² Year trial was established.
 ³ Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 1 year, so the final report would be "2000 Annual and Perennial Ryegrass Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 ⁴ Mean only presented when respective variety was included in two or more trials.

Summary

Selecting a good forage variety is an important first step in establishing a productive stand of forage. Proper management, beginning with seedbed preparation and continuing throughout the life of the stand, is necessary for even the highest-yielding variety to produce to its genetic potential. For more detailed information on yield and grazing tolerance within species, go to individual 2011 reports on the forage web site. See below for specific reports. The forage website contains all reports from 2001 through 2011.

						Le	xingte	on				Princ	eton		ling en	
			99 ^{1,2}	01	03	04	05	06	07	08	09	00	02	00	03	Mean ^{3,4}
Variety	Туре	Proprietor	2yr ⁵	2yr	2yr	3yr	3yr	2yr	3yr	3yr	2yr	2yr	3yr	2yr	2yr	(#trials)
Aires	diploid	Ampac Seed		95									93			94(2)
Amazon	tetraploid	AgriBioTech	108			99							107			104(3)
Anaconda	tetraploid	Caudill Seed	113									95		103		104(3)
Aubisque	tetraploid	Seed Research of OR			144										99	122(2)
Bandit	tetraploid	Grassland West										106		114		110(2)
Bastion C-2	tetraploid	Seed Research of OR				91										-
Bestfor	tetraploid	Improved Forages										113	107	120		113(3)
Best for Plus	hybrid tetraploid	Improved Forages			116	108	118								136	120(4)
BG-34	diploid	Barenbrug USA			1		83	85								84(2)
Bison	hybrid tetraploid	International Seeds													140	_
Boost	tetraploid	Allied Seed							130	125	120					125(3)
Boxer	tetraploid	AgriBioTech	121									106				114(2)
Calibra	tetraploid	DLF International								96	109		112			106(3)
CAS MP64	diploid	Cascade International		97												-
Citadel	tetraploid	Ag Canada	101									94	113	103		103(4)
Derby		Public												74		_
Eurostar	tetraploid	Seed Research of OR							112							_
Feeder	diploid	Seed Research of OR							76							_
Granddaddy	tetraploid	Smith Seed		118				101	109		73		111			102(5)
Green Gold	tetraploid	Grasslands Oregon						96								_
Herbal		ProSeeds Marketing								77						-
Impressario	tetraploid	DLF International									110					_
Lactal	tetraploid	Brett Young									102					_
Lasso	diploid	DLF International		98							102					_
Linn	diploid	Public	87	98	98	102		98	85	84	98	87	88	77		91(11)
Manhatten	diploid												85			_
Mara	diploid	Barenbrug USA											0.5	85		_
Matrix	diploid	Cropmark seeds			77										64	_
Maverick Gold	hybrid tetraploid	Ampac Seed		97									71			84(2)
Orantas	diploid	DLF International		57							81		/1			-
Ortet	tetraploid	Oregro Seeds								114						_
Polly II	tetraploid	FFR/Sou. St.	104									110		125		113(3)
Polly Plus	hybrid tetraploid	Allied Seed	104		64									125	60	62(2)
Power	tetraploid	Ampac Seed							110	103	104				00	106(3)
Quartermaster	tetraploid	Radix Research					122			105	10-1					-
Quartet	tetraploid	Ampac Seed		97			56		46				113			78(4)
RAD-CPS212	hybrid tetraploid	Radix Research			<u> </u>		134	<u> </u>								-
RAD-MI125	hybrid tetraploid	Mountain View Seeds					- 1.54	120								
Sampson	diploid	International Seeds	87					120								
Sierra	diploid	Lewis Seed Co.	- 07		-		89	-								_
Tonga	tetraploid	Kings AgriSeeds					96				103					100(2)
9	diploid	Barenbrug USA	80				90				103	89				85(2)
Yatsyn 1 Yoar trial was os		Datenbiug USA	00	L	L	L	I	L	1	I	I	09			L	03(2)

Year trial was established.

² Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 2 years, so the final report would be "2001 Annual and Perennial Ryegrass Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 ³ Mean only presented when respective variety was included in two or more trials.

⁴ In perennial ryegrass, low yielding varieties usually result from winterkill or summer mortality.
 ⁵ Number of years of data

					Lexingtor	1			Princeton	Quicl	csand	
		1999 ^{2,3}	2001	2003	2005	2007	2008	2009	2000	2001	2003	Mean ⁴
Variety	Proprietor	2-yr ⁵	3-yr	2-yr	3-yr	3yr	3yr	2yr	2-yr	2-yr	2-yr	(#trials)
Duo	Ampac Seed	104			84		103	99				98(4)
Felina	DLF International		101									-
Hykor	DLF International			98							98	98(2)
Spring Green	Turf-Seed		88		105	100	114	101		97		101(6)
Sweet Tart	ProSeeds Marketing						88					-
Vorage	Improved Forages								99			-

² Year trial was established.

³ Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in forage yield between varieties. To find actual yields, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1999 was harvested 2 years, so the final report would be "2001 Tall Fescue Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.

Mean only presented when respective variety was included in two or more trials.

⁵ Number of years of data

Table 11. Sum	mary of Kentuck	y Sudang	rass Yield Trials 2008-2011 (yi	eld
			e commercial varieties in the	

			Lexing	ton		
		2008 ^{1,2}	2009	2010	2011	Mean ³
Variety	Proprietor/KY Distributor	All trial	(#trials)			
Enorma BMR	Cal/West Seeds			99	94	97(2)
Hayking BMR	Central Farm Supply	111	112	91	97	103(4)
Monarch V	Public	104	96	102	97	100(4)
Piper	Public	90	91	97	94	93(4)
ProMax BMR	Ampac Seed	95	101	110	115	105(4)
SS130 BMR	Cal/West Seeds			101	103	102(2)
1						

¹ Establisment year.

² Use this summary table as a guide in making variety decisions, but refer to specific tables in this report to determine statistical differences in forage yield between varieties.

³ Mean only presented when respective variety was included in two or more trials.

Table 12. Summary of Sorghum-Sudangrass Yield Trials 2008-2011 (yield shown as a percentage of the mean of the commercial varieties in the trial).

in the that).												
			Lexing	ton								
	Proprietor/KY	2008 ^{1,2}	2009	2010	2011	Mean ³						
Variety	Distributor	All tria	All trials are I year yields									
FSG 208 BMR	Farm Science Genetics			75		-						
Greengrazer V	Farm Science Genetics			166		-						
GW300 BMR	Gayland Ward Seed				88	-						
HyGain	Turner Seed	104	105	118		109(3)						
MS 202 BMR	Farm Science Genetics			106		-						
NutraPlus BMR	Cisco	106	97	94	103	100(4)						
Special Effort	Cisco	109	110	93	94	102(4)						
SS211	Southern States				104	-						
SS220 BMR	Southern States		107	84		96(2)						
Surpass BMR-6	Turner Seed	81	80	64		75(3)						
Super Sugar	Gayland Ward Seed				102	-						
Sweet-For-Ever	-For-Ever Gayland Ward Seed				110	-						

Establisment year.

² Use this summary table as a guide in making variety decisions, but refer to specific tables in this report to determine statistical differences in forage yield between varieties.

³ Mean only presented when respective variety was included in two or more trials.

Table 13. Summary of Kentucky Teff Yield Trials 2008-2011 (yield shown as a percentage of the mean of the commercial varieties in the trial).

	Prince	ton		Lexir	igton		
	2008 ^{1,2}	2009	2008	2009	2010	2011	Mean ³
Variety	A	ll trial	s are 1	year y	vields		(#trials)
Corvallis	94	112	81	101	91	101	97(6)
Dessie	102	87	99	92	96	94	95(6)
Excaliber	109	111	109	104	125	108	111(6)
Highveld	111	115	100	121	106	101	109(6)
HorseCandi	91	84	99	105	89	108	96(6)
Pharaoh	95	101	105	85	106	106	100(6)
Rooiberg	102	107	112	109	113	108	109(6)
Summer Delight		90		91	96	88	91(4)
Tiffany	102	106	102	93	82	93	96(6)
VA T1 Brown		89		99	87	91	92(4)
Velvet		94		100	97	98	97(4)
Witkope	94	100	93	101	115	103	101(6)

¹ Establisment year.

² Use this summary table as a guide in making variety decisions, but refer to specific tables in this report to determine statistical differences in forage yield between varieties.

³ Mean only presented when respective variety was included in two or more trials.

Yield and Grazing Tolerance Reports

www.uky.edu/Ag/Forage/ForageVarietyTrials2.htm

- 2011 Alfalfa Report (PR-627)
- 2011 Red and White Clover Report (PR-628)
- 2011 Orchardgrass Report (PR-629)
- 2011 Tall Fescue and Bromegrass Report (PR-630)
- 2011 Timothy and Kentucky Bluegrass Report (PR-631)
- 2011 Annual and Perennial Ryegrass and Festulolium Report (PR-632)
- 2011 Alfalfa Grazing Tolerance Report (PR-633)
- 2011 Red and White Clover Grazing Tolerance Report (PR-634)
- 2011 Cool-Season Grass Grazing Tolerance Report (PR-635)
- 2011 Cool-Season Grass Horse Grazing Report (PR-636)
- 2011 Summer Annual Grass Report (PR-637)

Authors

- S.R. Smith, Extension Professor, Forages
- G.L. Olson, Research Specialist, Forages
- G.D. Lacefield, Extension Professor, Forages

Table 14. Summary of Kentucky White Clover Grazing trials 2002-2011 (stand persistence shown as a percent of the mea
of the commercial varieties in the test.

			2002 ^{1,2}	2004	2006 ³	2006	20084	2008	2009	Mean ⁵
Variety	Туре	Proprietor	2yr ⁶	4yr	2yr	2yr	3yr	3yr	2yr	(#trials)
Alice	Intermediate	Barenbrug USA		59	98					79(2)
Barblanca	Intermediate	Barenbrug USA		118	91	151				120(3)
Colt	Intermediate	Seed Research of OR		114	134	122				123(3)
Crescendo	Ladino	Cal/West	84			72				78(2)
Durana	Intermediate	Pennington		83	105	103		106	109	101(5)
Insight	Ladino	Allied Seed				77				-
lvory	Intermediate	Cebeco	132	142						137(2)
Ivory II	Intermediate	DLF International					102			-
Kopu II	Intermediate	Ampac Seed			77	122	96		85	95(4)
KY Select	Intermediate	KY Agr Ex. Sta./Saddle Butte						101		-
Patriot	Intermediate	Pennington		110	137	122		120	109	120(5)
Rampart	-	Oregro Seeds						95		-
Regal	Ladino	Public	92		57	54		76		70(4)
Regal Graze	Ladino	Cal/West			84	87	105	106	93	95(5)
Resolute	Intermediate	FFR/Southern States			101	106				104(2)
Seminole	Ladino	Saddle Butte Ag. Inc.		75		97	91			88(3)
Tillman II	Ladino	Caudill Seed	92							-
Will	Ladino	Allied Seed			117	87	107	97	103	102(5)

¹ Year trial was established.

Year trial was established.
 Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in stand persistence between varieties. To find actual persistence ratings, look in the yearly report for the final year of each specific test. For example, the trial planted in 2002 was grazed for 2 years so the final persistence report would be "2004 Red and White Clover Grazing Tolerance Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 This trial was replanted in the spring of 2006 due to poor establishment in the fall of 2005
 This trial was replanted in the spring of 2008 due to poor establishment in the fall of 2007
 Mean only presented when respective variety was included in two or more trials.
 Number of years of data.

			Varie	ety Ch	aract	eristic	s ¹					Lexing	gton						Mean ⁵
			[Disea	se Res	sistanc	e ²	1994 ^{3,4}	1996	1997	1998	2000	2000	2001	2004	2005	2006	5 2008	
Variety	Proprietor	FD	Bw	Fw	An	PRR	APH	3yr ⁶	3yr	4yr	3yr	2yr	3yr	3yr	4yr	4yr	3yr	3yr	(#trials)
ABT 205	W-L Research	2	HR	HR	HR	HR	R	94		84									89(2)
ABT 350	W-L Research	3	HR	HR	HR	HR	HR						46						-
ABT 405	W-L Research	4	HR	HR	HR	HR	R	71	129	69			46	100					83(5)
Alfagraze	Americas Alfalfa	2	MR	R	MR	R	-	100	100	100	100	100	100	100	100	100	100	100	100(11)
Amerigraze 401+Z	Americas Alfalfa	4	HR	HR	HR	HR	R		120	53	56	26	85	125					78(6)
Ameristand 403T	Americas Alfalfa	4	HR	HR	HR	HR	HR									141	144	75	120(3)
Ameristand 407TQ	Americas Alfalfa	4	HR	HR	HR	HR	HR									136			_
Apollo	Americas Alfalfa	4	R	R	R	R	-	48	75	33	47	17	31	25		36	27	50	39(10)
Arc (certified)	Public	4	LR	MR	HR	-	-		38										-
Baralfa 54	Barenbrug USA	-	R	HR	HR	HR	HR				78								-
Cut-n-Graze	Americas Alfalfa	3	HR	HR	HR	HR	R	68											-
FK 421	Donley Seed Co.	4	HR	Н	Н	н	н							100					-
Feast	Garst Seeds	3	HR	HR	HR	HR	R		146			87	92						108(3)
Fortress	Syngenta	3	R	R	R	HR	R	40	71										56(2)
Gold Plus	PGI Alfalfa	4	HR	HR	HR	HR	R				81								-
Grazeking	FFR/Southern States	5	MR	HR	HR	R	S		91	41				50					61(3)
Haygrazer	Great Plains Research	4	HR	HR	R	R	MR		75	39			38						51(3)
Integrity	PGI Alfalfa	4	HR	HR	HR	HR	HR									172			_
Legacy	Green Seed	4	R	R	R	R	R	32											-
LegenDairy5.0	Croplan Genetics	3	HR	HR	HR	HR	HR											75	-
Magnagraze	Dairyland Seed Co.	3	HR	HR	R	HR	-	56											-
Pasture Plus	MBS	3	HR	HR	R	HR	MR	60											-
Pioneer 98	Pioneer	3	HR	R	HR	R	-				56								-
ProGro	MBS Inc.	4	HR	HR	R	HR	MR				81								-
Quantum	ABI Alfalfa	2	HR	HR	HR	HR	R	71											-
Rebel	Target Seed	4	HR	HR	HR	HR	HR										79		-
Rugged	Target Seed	3	HR	HR	HR	HR	HR										146		-
Rushmore	Syngenta	4	HR	HR	HR	HR	HR	32											-
Saranac AR (cert.)	Public	4	MR	R	HR	LR	-		77					100					89(2)
Spredor 3	Syngenta	1	HR	HR	R	MR	S	71	123		75					68			96(4)
Spredor 4	Syngenta	2	HR	HR	HR	HR	R											25	-
Stampede	Allied Seed	3	HR	R	R	HR	R		73										-
Triple Trust 450	ABI/America's Alfalfa	5	HR	HR	HR	HR	HR									145			-
Wintergreen	ABI Alfalfa	3	HR	HR	HR	HR	R	95		57	72								75(3)
WL 326GZ	W-L Research	4	HR	HR	HR	HR	HR		118		88								103(2)
115 Brand	Monsanto	3	HR	HR	R	HR	R					56	85						71(2)
5373	Pioneer	4	HR	HR	HRT	MR	LR	21								1			-
5432	Pioneer	4	HR	HR	_	MR	-								51				-

 5432
 Pioneer
 4
 HR
 HR
 Image: MR
 Image: MR
 Image: MR
 Image: MR
 <td Ag/Forage>. ⁵ Mean only presented when respective variety was included in two or more trials. ⁶ Number of years of data

							Lex	cingto	n						Princeton	
		1996 ^{1,2}	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2002	Mean ³
Variety	Proprietor	3yr ⁴	4yr	3yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	3yr	4yr	(#trials)
Advance MaxQ	Pennington Seed											94				-
Bariane	Barenbrug USA								89		75	47	29			60(4)
Barcel	Barenbrug USA	92														-
BarElite	Barenbrug USA												96			-
Barolex	Barenbrug USA										78	101	86			88(3)
BarOptima PLUS E34	Barenbrug USA										100		97			99(2)
BAR9TMPO	Barenbrug USA				75											-
Bronson	Ampac Seed			39												-
Cattle Club	Green Seed		37	98	70	93	91									78(2)
Carmine	DLF-Jenks						90									-
Cowgirl	Rose Agri-Seed									99						-
Dovey	Barenbrug USA	92														-
Festival	Pickseed West						100	101							89	97(3)
Festorina	Advanta Seeds	98	86		57											80(3)
Fuego	Advanta Seeds			27												_
Hoedown	DLF-Jenks					88										-
HyMark	Fraser Seeds													99		-
Jesup EF	Pennington Seed		63	91					99							84(3)
Jesup MaxQ	Pennington Seed			114	79			103	97		68	102	97	97	105	96(9)
Johnstone	Proseeds		65	107			92									88(3)
KY31+ ⁵	KY Agri. Exp Sta.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100(14)
KY31-5	KY Agri. Exp Sta.	94	90	102	84		98	103	98	100	82	100	100	100	105	97(13)
Kenhy	Public			116												-
Kokanee	Ampac Seed					43										-
Martin II	International Seeds		59													-
Maximize	Rose Agri-Seed						99									-
Nanryo	Japanese Grassland For. Seed/USDA-ARS,ElReno,OK												100			-
Orygun								99								-
Resolute	Ampac Seed						23									-
Select	FFR/Sou. St.			109	69	107	101	100	100		67	100	93	98	98	95(11)
Southern Cross			25													-
Stargrazer	FFR/Sou. St.	90			52	86	89									79(4)
Stockman	Seed Res. of OR									102						-
TF33	Barenbrug USA			34												-
Tuscany II	Seed Res. of OR											100				-
Verdant	Am.Grass Seed											97				-
Vulcan	International Seeds			109			İ	İ								-

1 Year trial was established.
 2 Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in stand persistence between varieties. To find actual persistence ratings, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1997 was grazed 4 years so the final report would be "2001 Cool-Season Grazs Grazing Tolerance Report" archived in the KY Forage website at www.uky.edu/Ag/Forage.
 3 Mean only presented when respective variety was included in two or more trials.
 4 Number of years of data
 5 KY 31- is the variety KY31 from which the toxic endophyte has been removed. KY31+ contains the toxic endophyte. Jesup MaxQ and Advance MaxQ

KY 31- is the variety KY31 from which the toxic endophyte has been removed. KY31+ contains the toxic endophyte. Jesup MaxQ and Advance MaxQ contain a non-toxic endophyte. BarOptima PLUS E34 contains a beneficial endophyte. The other fescue varieties in this table do not contain an endophyte.

						L	.exingto	on					Princeton		
		1996 ^{1,2}	1997	1998	1999	2000	2001	2002	2003	2004	2005	2007	2002	Mean ³	
Variety	Proprietor	3yr ⁴	4yr	3yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	4yr	(#trials)	
Abertop	Pennington Seed							38						-	
Albert	Univ. of Wisconsin						115							-	
Amba	DLF-Jenks						71							-	
Ambrosia	Pennington Seed		90									94		92(2)	
Athos	DLF-Jenks						93				60			77(2)	
Benchmark	FFR/Sou. States	100	105	115	94	118	123	114					133	113(8)	
Benchmark Plus	FFR/Sou. States							120			152	135	133	135(4)	
Boone	Public			131		102								117(2)	
Cheyenne	Western Prod. Inc.			94										-	
Command	Seed Research of OR									81				-	
Crown	Donley Seed		86	96										91(2)	
Crown Royale	Donley Seed						100							-	
Crown Royale Plus	Donley Seed							124					83	104(2)	
Hallmark	James VanLeeuwen	107		104	103		115		113				83	104(6)	
Harvestar	Columbia Seeds											75		-	
Haymate	FFR/Sou. States	93	71	102	96	53	115	100	118				83	92(9)	
Intensiv	Barenbrug USA								51					-	
Mammoth	DLF-Jenks						115							-	
Megabite	Turf Seed						77							-	
Niva	DLF-Jenks							76					83	80(2)	
Persist	Smith Seed										138	107		123(2)	
Pizza	Advanta Seeds			63										-	
Potomac	Public	98						116		119			117	113(4)	
Prairie	Turner Seed					127	121						83	110(3)	
Profile	Scott Seed	98						116						107(2)	
Progress	Scott Seed	111												-	
Tekapo	Ampac Seed	93	166	92	104		55	74	118		50	103	100	96(10)	
Takena	Smith Seed		81				99							90(2)	
Seco	FFR/Sou. States											85		-	
WP300	Western Prod. Inc.			94										-	

¹ Year trial was established.

Year trial was established.
 Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in stand persistence between varieties. To find actual persistence ratings, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 1997 was grazed 4 years so the final report would be "2001 Cool-Season Grass Grazing Tolerance Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
 Mean only presented when respective variety was included in two or more trials.
 Number of years of data
 Stand thinning may have been greater for preferred varieties due to closer grazing. See individual trial tables for preference ratings.

Table 18. Summary of 2000-2011 Kentucky Perennial Ryegrass and Festulolium(FL) Grazing Tolerance Trials (stand persistence shown as a percent of the mean of the commercial varieties in the trial).

the trial).								
		2000 ^{1,2}	2001	2003	2005	2007	2008	Mean ³
Variety	Proprietor	4yr ⁴	3yr	4yr	3-yr	4yr	3yr	(#trials)
AGRLP103	AgResearch USA	128		86				107(2)
Aries	Ampac Seed		139					-
BG 34	Barenbrug USA				1765	1455		185(2)
Boost	Allied Seed						99	-
Citadel	Donley Seed	107						-
Duo (FL)	Ampac Seed	116					84	100(2)
Granddaddy	Smith Seed Services		121			70		89(2)
Lasso	DLF-Jenks		130					-
Linn	Public	112	129	63			101	101(4)
Maverick	Ampac Seed		36					-
Polly II	FFR/Southern States	36	68					52(2)
Power	Ampac Seed					134		-
Quartet	Ampac Seed		77		63	50		60(3)
Remington	Barenbrug USA			151 ⁵				-
Spring Green (FL)	Rose Agri-Seed	101					116	109(2)
Tonga	Ampac Seed				61			_

Year trial was established.

² Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in stand persistence between varieties. To find actual persistence ratings, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 2000 was grazed 4 years so the final report would be "2004 Cool-Season Grass Grazing Tolerance Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.

Mean only presented when respective variety was included in two or more trials.

⁴ Number of years of data

⁵ Grazing tolerance values for these entries may have been elevated due to the low survival of the other commercial varieties in the trials for these years.

Table 19. Summary of 1999-2011 Kentucky Tall Fescue Horse Grazing Tolerance Trials in Lexington (stand persistence shown as
a percent of the stand rating of KY 31-).

a percent of the star	iu raung of KT 51-).										
		1999 ^{1,2}	2001	2002	2003	2004	2005	2006	2007	2008	Mean ³
Variety	Proprietor/KY Distributor	3-yr ⁴	4-yr	4-yr	4-yr	4-yr	4-yr	4-yr	4-yr	3-yr	(#trials)
BarOptima PLUS E34	Barenbrug								107		-
Bronson	Ampac Seed	80									-
Cattle Club	Green Seed	95									-
Cowgirl	Rose Agri-Seed									99	-
Festorina	Advanta Seed	102									-
Jesup MaxQ	Pennington Seed			98			78			95	90(3)
Johnstone	ProSeeds		88								-
KY31+ ⁵	KY Agri. Exp.Sta.		105				102	109	120	99	107(5)
KY31- ⁵	KY Agri. Exp.Sta.	100	100	100	100	100	100	100	100	100	100(9)
Nanryo	Japanese Grassland For. Seed/								72		-
	USDA-ARS, El Reno, OK										
Seine	Seed Research of OR					135					-
Select	FFR/Southern States	82		109	94	99	73	104	76	99	92(8)
Stargrazer	FFR/Southern States	70									_
Stockman	Seed Research of OR					125					-

¹ Year trial was established.

² Use this summary table as a guide in making variety decisions, but refer to specific yearly reports to determine statistical differences in stand persistence between varieties. To find actual persistence ratings, look in the yearly report for the final year of each specific trial. For example, the Lexington trial planted in 2001 was grazed 4 years so the final report would be "2005 Cool-Season Grass Horse Grazing Tolerance Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.

³ Mean only presented when respective variety was included in two or more trials.

⁴ Number of years of data

⁵ KY 31- is the variety KY31 from which the toxic endophyte has been removed. KY31+ contains the toxic endophyte. Jesup MaxQ contains a non-toxic endophyte. BarOptima PLUS E34 contains a beneficial endophyte. The other fescue varieties in this table do not contain an endophyte.



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