PR-627

2011 Alfalfa Report

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Introduction

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 variety is a key step in establishing a stand of alfalfa. The choice of variety can impact yield, thickness of stand, and persistence.

This report provides yield data on alfalfa varieties included in current yield trials in Kentucky as well as guidelines for selecting alfalfa varieties. Table 10 shows a summary of all alfalfa varieties tested in Kentucky during the past 10-plus years. The UK Forage Extension web site at www.uky.edu/Ag/Forage contains electronic versions of all forage variety testing reports from Kentucky and surrounding states as well as a large number of other forage publications.

Considerations in Selecting an Alfalfa Variety

Local Adaptation and Persistence. High yields in variety tests over a range of years and locations are the best indication that a variety is locally adapted and persistent. Several varieties are adapted for use in Kentucky as determined from results in this report.

Winter-Hardiness. Each variety has a fall dormancy (FD) rating that ranges from 1 (very dormant) to 9 (nondormant). In general, varieties with lower dormancy ratings are more winter-hardy but are slower to initiate growth in the spring and show reduced fall growth. Therefore, fall dormancy can lead to reduced annual yields compared to less dormant varieties. Generally, alfalfa varieties with FD ratings of 2 to 5 will show good winter survival in Kentucky. Varieties with ratings of 6 and above are usually not winter-hardy under Kentucky conditions. Many Kentucky producers have found that FD 4 varieties provide the best combination of yield and winter survival. In recent years some companies have also begun to report a winter survival index (WS) that ranges from 1 to 6. Varieties with a WS of 1 show superior winter survival, and varieties with a WS of 6 are not winter-hardy.

Disease and Pest Resistance. In Kentucky, producers should use varieties that are resistant (R) to aphanomyces root rot (APH), phytophthora root rot (PRR) and anthracnose (AN) and have at least a moderate resistance (MR) to bacterial wilt (Bw), and fusarium wilt (Fw). Kentucky research indicates that aphanomyces root rot is a widespread problem in the state during stand establishment and that resistance is beneficial, particularly in soils also infested with phytophthora root rot.

Phytophthora root rot is a fungal disease associated with poorly drained soils or excessive rainfall. This disease causes yellowish- to reddish-brown areas on roots and crowns that eventually become black and rotten. The top growth of infected plants appears stunted and yellow.

Anthracnose, also caused by a fungus, attacks the stems of alfalfa, preventing water flow to the rest of the shoot and causing sudden wilting. These wilted shoots have a characteristic "shepherd's crook" appearance. Anthracnose can also cause a bluish-black crown rot. Bacterial wilt and fusarium wilt are infections of the water-conducting tissues of alfalfa roots and do not cause any noticeable root rot. These diseases prevent water flow to leaves, resulting in wilting of shoots and the eventual death of infected plants. Roots infected with bacterial wilt often have a yellowish-

Table 1. Temperature and rainfall at Lexington, Kentucky in 2006, 2007, 2008, 2009, 2010 and 2011.

	2006			2007			2008			2009			2010			2011[2]		
	Temp.		Rainfall	Temp.		Rainfall	Temp.		Rainfall	Temp.		Rainfall	Temp.		Rainfall	Temp.		Rainfall
	°F	DEP[1]	IN DEP	°F	DEP	IN DEP	°F	DEP	IN DEP	°F	DEP	IN DEP	°F	DEP	IN DEP	°F	DEP	IN DEP
JAN	42	+11	4.77 +1.91	37	+6	2.93 +0.07	32	+2	3.91 +1.05	28	-3	2.45 -0.41	29	-2	2.40 -0.46	29	-2	2.10 -0.76
FEB	36	+1	2.13 -1.08	27	-8	1.83 -1.38	36	+1	6.11 +2.90	38	+3	2.86 -0.35	29	-6	1.38 -1.83	39	+4	6.34 +3.13
MAR	44	0	3.05 -1.35	52	+8	1.97 -2.43	44	+1	6.51 +1.91	48	+4	2.19 -2.21	47	+3	1.05 -3.35	47	+3	4.76 +0.36
APR	59	+4	3.52 -0.36	53	-2	3.87 -0.01	55	0	5.89 +2.01	55	0	4.48 +0.60	59	+4	2.74 -1.14	58	+3	12.36 +8.48
MAY	62	-2	2.99 -1.48	68	+4	1.45 -3.02	62	-2	4.33 +0.14	64	0	5.05 +0.58	67	+3	7.84 +3.37	64	0	6.72 +2.25
JUN	70	-2	1.82 -1.84	74	+2	1.77 -1.89	74	+2	3.59 -0.07	74	+2	5.41 -1.75	76	+4	4.61 +0.95	74	+2	2.61 -1.05
JUL	76	0	5.13 +0.13	74	-2	6.90 +1.90	76	0	3.41 -1.59	71	-5	5.89 +0.89	78	+2	5.49 +0.49	80	+4	6.29 1.29
AUG	76	+1	3.23 -0.70	80	+5	2.56 -1.37	75	0	2.18 -1.75	73	-2	5.38 +1.45	78	+3	1.54 -2.39	75	0	2.89 -1.04
SEP	64	-4	9.27 +6.07	72	+4	1.15 -2.05	72	+4	1.42 -1.78	68	0	5.37 +2.17	71	+3	1.14 -2.06	66	-2	5.52 +2.32
OCT	54	-3	4.88 +2.31	63	+6	5.28 +2.71	57	0	1.53 -1.04	54	-3	4.83 +2.26	59	+2	1.22 -1.35	55	-2	4.10 +1.53
NOV	47	+2	1.78 -1.61	46	+1	2.86 -0.53	43	-2	2.53 -0.86	49	+4	0.94 -2.45	47	+2	4.58 +1.19			
DEC	42	+6	2.45 -1.53	40	+4	5.29 +1.31	35	-1	6.03 +2.05	36	0	3.86 -0.12	28	-8	2.15 -1.93			
Total			45.02 +0.47			37.86 -6.69			47.24 +2.69			48.71 +4.16			36.14 -8.41			53.69 +16.51

[1] DEP is departure from the long-term average.
[2] 2011 data is for ten months through October.

brown discoloration of the inner woody cylinder of the taproot. Fusarium infection can be recognized by brown-to-red streaks in the inner woody cylinder of the taproot.

Aphanomyces root rot is another fungal disease associated with poorly drained soils or excessive rainfall. Affected seedlings will be stunted but remain upright, unlike those with symptoms of damping off. In established plants, root symptoms are not as well defined as those for phytophthora root rot, but brown lesions on the taproot indicate where lateral roots were destroyed. This disease can be associated with phytophthora root rot, and together they may form a root disease complex. Aphanomyces root rot is known to affect new seedings in Kentucky, but it is still unclear how it affects established alfalfa. In years with overly cool and wet spring weather, alfalfa stands have suffered great damage due to aphanomyces when planted with varieties that are susceptible to this disease.

Certain alfalfa varieties are reported to have resistance to sclerotinia crown and stem rot; however, research at the University of Kentucky has shown that many of these varieties have only limited resistance when conditions are ideal for disease development. Therefore, the best prevention against sclerotinia is to plant by mid-August if fall seeding or plant in the spring. If seeding in the fall, sclerotinia-resistant varieties can provide additional insurance.

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, such as those that are reported in this publication or others like it. Other information on the label will include the test date, which must be within the previous nine months, the level of germination, and the percentage 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

Alfalfa variety tests were established at Lexington (2006 and 2008) and Princeton (2008, 2009 and 2011), as part of the forage variety testing program. A trial was planted in Lexington in spring 2010 but did not establish well, so it was replanted in September 2011. The soils at most locations are well suited to alfalfa because they are generally well drained silt loam soils (Maury and Crider at Lexington and Princeton, respectively).

Plots were 5 by 20 feet in a randomized complete block design with four replications with a harvested plot area of 5 by 15 feet. In each test, 20 pounds of seed per acre were planted into a prepared seedbed using a disk drill. Plots were harvested with a sickle-type forage plot harvester. First cuttings in the seeding year were delayed to allow alfalfa to reach maturity, indicated by full bloom. Otherwise, harvests were taken when the alfalfa was in the bud to early flower stage. Fresh weight samples were taken at each harvest to calculate percentage of dry matter production. Management of all tests for establishment, fertility, pest control, and harvest management was according to Kentucky Cooperative Extension recommendations. Pests (weeds and insects) were controlled so that they would not limit yield or persistence.

Results and Discussion

Weather data for Lexington and Princeton are presented in Tables 1 and 2.

Yield data (on a dry matter basis) for all tests are reported in Tables 4 through 8. Stated yields are adjusted for percentage of weeds; therefore, the value listed is for the crop only. Varieties are listed in order from highest to lowest total production (for the life of the test). Experimental varieties are listed separately at the bottom of the tables and are not available commercially. Yields are given by cutting date for 2011 and as total annual production.

Statistical analyses were performed on all alfalfa yield data (including experimentals) to determine if the apparent differences are due to variety. Varieties not significantly different from the highest numerical value in a column are marked with an asterisk (*). To determine if two varieties are statistically different, compare the difference between the two varieties to the Least Significant Difference (LSD) at the bottom of the column. If the difference is equal to or greater than the LSD, the varieties are truly different when grown under the conditions at a given location. The Coefficient of Variation (CV), a measure of the variability of

Table 2. Temperature and rainfall at Princeton, Kentucky in 2008, 2009, 2010 and 2011.

	2008				2009				2010				2011[2]			
	Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall		Temp.		Rainfall	
	°F	DEP[1]	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP	°F	DEP	IN	DEP
JAN	37	+3	2.40	-1.40	33	-1	0.94	-2.86	31	-3	3.06	-0.74	32	-2	2.35	-1.45
FEB	39	+1	6.76	+2.33	42	+4	3.28	-1.15	33	-5	1.54	-2.89	40	+2	5.71	+1.28
MAR	48	+1	7.55	+2.61	53	+6	2.89	-2.05	48	+1	3.24	-1.70	50	+3	5.54	+0.60
APR	58	-1	6.56	+1.76	58	-1	5.35	+0.55	62	3	3.3	-1.54	61	+2	16.15	+11.35
MAY	65	-2	6.19	+1.23	67	0	6.14	+1.18	69	+2	10.41	+5.45	66	-1	7.22	+2.26
JUN	78	+3	1.24	-2.61	77	+2	7.97	+4.12	79	4	4.82	0.97	77	+2	4.60	+0.75
JUL	79	+1	5.12	+0.83	74	-4	7.45	+3.16	80	2	2.73	-1.56	81	+3	2.98	-1.31
AUG	77	0	0.69	-3.32	75	-2	2.44	-1.60	81	4	2.46	-1.55	77	0	3.95	-0.06
SEP	74	+3	0.61	-2.72	71	0	4.61	+1.28	72	1	0.94	-2.39	68	-3	3.86	+0.53
OCT	60	+1	2.21	-0.84	55	-4	9.08	+6.03	60	+1	0.97	-2.08	57	-2	1.35	-1.70
NOV	46	-1	2.59	-2.04	52	+5	1.50	-3.13	49	+2	3.98	-1.65				
DEC	39	0	6.49	+1.95	36	-3	2.73	-2.31	32	-7	1.57	-3.47				
Total			48.95	-2.18			54.31	+3.22			39.02	-12.11			53.71	+12.25

[1] DEP is departure from the long-term average.
[2] 2011 data is for ten months through October.

the data, is included for each column of means. Low variability is desirable; increased variability within a study results in higher CVs and larger LSDs.

Table 9 summarizes information about fall dormancy, disease resistance, and yield performance across years and locations for all the varieties currently included in the tests discussed in this report. Varieties are listed in alphabetical order with the experimental varieties at the bottom. Remember that experimental varieties are not available for farm use; commercial varieties can be purchased through dealerships. In Table 9, open blocks indicate that the variety was not in that particular test (labeled at the top of the column); an X means that the variety was in the test but yielded significantly less than the top-yielding variety. A single asterisk (*) means that the variety was not significantly different from the top-yielding variety based on the 0.05 LSD. It is best to choose a variety that has performed well over several years and locations as indicated by the asterisks.

Table 10 is a summary of yield data from 2000 to 2011 of commercial varieties that have been entered in the Kentucky trials. The data is listed as a percentage of the mean of 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. Direct statistical comparisons of varieties cannot be made using the summary Table 10, 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. See footnote in Table 10 to determine which yearly report to refer to.

Table 3. Dry matter yields, seedling vigor and stand persistence of alfalfa varieties sown August 14, 2006 at Lexington, Kentucky.

		Percent Stand											Yield (tons/acre)								
			2007		2008		2009		2010		2011						2011				
Variety	Seedling Vigor[1] Oct 17 2006	2006 Oct 17	Mar 26	Oct 11	Mar 27	Oct 13	Mar 24	Oct 7	Mar 29	Oct 15	Mar 21	Oct 10	2007 Total	2008 Total	2009 Total	2010 Total	May 6	Jun 7	Jul 11	Aug 15	Sep 27	Total	5-year Total
Commercial Varieties-Available for Farm Use																							
Expedition	5.0	99	98	98	99	99	100	100	99	97	97	90	3.98	4.28	6.32	5.66	1.26	1.20	0.97	0.94	0.38	4.74	24.98*
L447HD	4.8	76	96	95	95	97	97	98	97	95	92	87	4.26	4.19	5.69	5.33	1.12	0.96	0.86	0.88	0.46	4.28	23.75*
PerForm	5.0	100	98	98	97	98	98	98	97	97	96	90	4.12	3.99	5.62	5.33	1.29	1.10	0.84	0.95	0.42	4.60	23.67*
DKA41-18RR	4.3	99	98	98	98	99	98	100	97	96	95	90	4.06	3.95	5.62	5.17	1.13	1.13	0.89	0.92	0.40	4.47	23.26*
WL355RR	4.8	98	96	96	95	95	95	99	96	94	91	88	3.90	3.90	5.83	5.19	1.13	1.05	0.86	0.90	0.40	4.34	23.16*
Phoenix	4.8	99	98	98	98	100	98	97	97	95	95	91	3.64	3.89	5.66	4.97	1.30	1.01	0.84	0.94	0.47	4.55	22.71
LegenDairy 5.0	5.0	100	95	95	94	96	96	96	99	95	87	83	3.53	3.79	5.75	5.21	1.05	1.10	0.87	0.80	0.34	4.15	22.42
Withstand	4.8	100	97	98	97	99	99	99	98	95	90	86	3.50	3.72	5.87	4.97	1.15	1.03	0.87	0.94	0.33	4.31	22.37
WL343HQ	4.3	99	100	100	100	100	100	100	99	98	97	92	3.69	3.92	5.34	4.96	1.18	1.14	0.91	0.84	0.38	4.45	22.36
Ameristand 403T	5.0	100	98	98	99	99	99	98	96	95	93	89	3.69	3.74	5.57	4.91	1.26	0.98	0.91	0.87	0.41	4.44	22.36
Radiant-AM	5.0	100	97	96	97	98	96	96	96	95	92	91	3.79	3.73	5.48	4.85	1.13	0.95	0.73	0.94	0.41	4.16	22.00
Saranac AR (certified)	4.8	100	96	96	95	94	92	93	93	91	89	80	3.46	3.48	4.95	4.40	1.10	0.80	0.66	0.88	0.35	3.79	20.09
Buffalo	5.0	99	99	98	99	99	99	97	94	93	88	85	3.67	3.63	4.69	4.07	1.00	0.94	0.70	0.89	0.23	3.75	19.81
Experimental Varieties																							
DS617	5.0	99	97	97	96	98	98	99	98	97	96	86	3.82	4.03	5.84	5.21	1.31	1.07	0.85	0.91	0.45	4.59	23.50*
Mean	4.8	97.6	97.3	97.2	96.9	97.8	97.5	97.6	96.7	95.1	92.6	87.6	3.79	3.87	5.59	5.02	1.17	1.03	0.84	0.90	0.39	4.33	22.60
CV,%	7.6	12.3	2.7	2.8	4.1	2.9	3.1	2.5	3.0	3.5	7.1	7.0	9.36	10.68	7.87	9.30	10.86	11.48	14.49	16.05	14.81	9.48	6.23
LSD,0.05	0.5	17.2	3.8	3.9	5.7	4.1	4.3	3.5	4.2	4.8	9.4	8.9	0.51	0.59	0.63	0.67	0.18	0.17	0.17	0.21	0.08	0.59	2.17

[1] Vigor score based on a scale of 1 to 5 with 5 being the most vigorous seedling growth.
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 4. Dry matter yields and stand persistence of alfalfa varieties sown April 8, 2008 at Lexington, Kentucky.

	Percent Stand							Yield (tons/acre)									
		2009		2010		2011					2011						
Variety	2008 Oct 21	Mar 24	Oct 7	Mar 29	Oct 15	Mar 21	Oct 10	2008 Total	2009 Total	2010 Total	May 6	Jun 7	Jul 11	Aug 15	Sep 27	Total	4-year Total
Commercial Varieties-Available for Farm Use																	
DKA 50-18	84	74	89	88	84	78	70	0.87	5.55	5.84	1.01	1.19	0.83	1.08	0.48	4.59	16.85*
FSG 528SF	89	93	93	93	89	86	79	0.72	5.54	5.81	1.07	1.17	0.84	0.96	0.49	4.52	16.59*
Garst 6417	90	88	89	89	84	83	73	0.73	5.30	5.65	1.14	1.35	0.84	1.00	0.43	4.76	16.45*
WL 343HQ	91	93	94	95	91	87	83	0.68	5.51	5.33	1.09	1.29	0.96	0.94	0.49	4.77	16.30*
Garst 6552	85	84	84	87	86	83	76	0.77	5.17	5.66	1.06	1.26	0.92	0.89	0.49	4.62	16.22*
Rebound 5.0	84	84	88	88	82	80	70	0.73	5.34	5.59	1.11	1.22	0.90	0.81	0.38	4.43	16.09*
A5225	88	85	86	86	84	80	70	0.59	5.38	5.57	1.07	1.19	0.86	0.86	0.52	4.49	16.03*
DKA 43-13	84	83	89	88	87	81	73	0.58	5.39	5.29	1.01	1.31	0.95	1.00	0.42	4.69	15.94*
WL 363HQ	90	89	90	91	89	83	74	0.52	5.12	5.67	1.05	1.31	0.91	0.88	0.46	4.61	15.93*
Phoenix	91	89	90	90	89	88	75	0.57	5.36	5.48	1.12	1.10	0.77	0.93	0.50	4.42	15.83*
PGI 459	93	90	93	94	89	89	74	0.53	5.18	5.47	1.09	1.17	0.86	0.90	0.44	4.47	15.65*
Genoa	73	68	79	80	78	68	66	0.61	5.25	5.34	0.99	1.19	0.90	0.88	0.41	4.37	15.58*
A4440	88	89	91	89	86	86	78	0.65	4.95	5.62	1.05	1.20	0.85	0.85	0.36	4.32	15.54*
Anchormate	96	96	95	95	94	91	84	0.74	4.98	5.46	1.19	1.03	0.78	0.86	0.43	4.28	15.45*
Ameristand 403T	70	65	73	73	75	74	66	0.60	4.68	5.24	0.94	1.05	0.78	0.97	0.33	4.06	14.58
Saranac AR (certified)	88	85	85	88	88	81	71	0.73	4.54	5.05	0.97	0.94	0.69	0.89	0.27	3.77	14.08
Withstand	76	78	76	76	75	69	55	0.52	4.79	5.02	1.01	0.89	0.65	0.90	0.28	3.73	14.05
Buffalo	89	90	90	89	84	80	60	0.68	4.77	4.91	0.92	0.77	0.67	0.85	0.21	3.41	13.77
Mean	85.9	84.4	87.3	87.5	85.1	81.4	71.9	0.66	5.16	5.44	1.05	1.15	0.83	0.91	0.41	4.35	15.61
CV,%	9.9	10.5	6.8	5.9	5.9	8.6	14.1	35.01	8.80	6.41	12.78	12.19	11.90	15.91	16.57	8.86	7.11
LSD,0.05	12.1	12.5	8.4	7.3	7.2	10.0	14.4	0.33	0.64	0.50	0.19	0.20	0.14	0.21	0.10	0.55	1.58

* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Summary

Consistent production of high yields of alfalfa is the result of good variety selection along with the implementation of good management techniques. For further information about alfalfa management, refer to the following College of Agriculture publications, available at the local county extension office or in the "Publications" section of the UK Forage website at www.uky.edu/Ag/Forage.

- *Alfalfa: The Queen of the Forage Crops* (AGR-76)
- *Establishing Forage Crops* (AGR-64)
- *Inoculation of Forage Legumes* (AGR-90)
- *Grain and Forage Crop Guide for Kentucky* (AGR-18)
- *Lime and Fertilizer Recommendations* (AGR-1)
- *Weed Control Strategies for Alfalfa and Other Forage Legume Crops* (AGR-148)
- *Insect Management Recommendations for Field Crops and Livestock* (ENT-17)
- *Kentucky Plant Disease Management Guide for Forage Legumes* (PPA-10D)
- *Alfalfa Hay: Quality Makes the Difference* (AGR-137)
- *"Emergency" Inoculation for Poorly Nodulated Legumes* (PPFS-AG-F-04)
- *Growing Alfalfa in the South,* a publication of the National Alfalfa & Forage Alliance, http://www.alfalfa.org/pdf/alfalfainthesouth.pdf.

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Table 5. Dry matter yields, seedling vigor and stand persistence of alfalfa varieties sown April 17, 2009 at Princeton, Kentucky.																
	Seedling Vigor[1]	Percent Stand						Yield (tons/acre)								
		2009		2010		2011				2011						
Variety	May 12 2009	May 12	Oct 28	Mar 18	Oct 12	Apr 8	Oct 24	2009 Total	2010 Total	May 10	Jun 14	Jul 21	Aug 16	Sep 22	Total	3-year Total
Commercial Varieties-Available for Farm Use																
Ameristand 403T	3.3	98	94	94	96	98	95	2.09	3.85	1.53	1.32	1.05	0.55	0.49	4.94	10.88*
WL 363HQ	3.5	96	96	96	98	100	100	1.84	3.72	1.38	1.25	1.19	0.76	0.65	5.24	10.80*
Adrenalin	2.8	98	91	91	95	97	98	1.74	3.77	1.58	1.22	1.09	0.75	0.60	5.24	10.75*
Radiance HD	2.8	99	96	97	97	98	100	1.72	3.85	1.44	1.23	1.10	0.77	0.62	5.17	10.74*
Ameristand 407TQ	4.3	100	97	97	97	99	99	1.65	3.82	1.20	1.16	1.29	0.82	0.64	5.10	10.57*
Syngenta 6422Q	3.3	95	97	97	96	97	99	1.63	3.65	1.38	0.96	1.11	0.77	0.55	4.78	10.05*
Archer III	3.0	98	97	95	97	100	100	1.53	3.57	1.22	1.15	1.11	0.82	0.66	4.96	10.05*
Saranac AR (certified)	3.3	99	91	90	94	99	97	1.60	3.56	1.33	1.22	1.16	0.60	0.52	4.83	9.99*
Ameristand 403TPlus	3.5	100	95	95	95	98	97	1.57	3.61	1.43	1.25	0.99	0.66	0.47	4.81	9.99*
Rebound 5.0	2.8	95	96	90	93	96	97	1.48	3.64	1.19	1.13	1.13	0.74	0.67	4.86	9.97*
Buffalo	3.3	100	91	93	94	94	91	1.61	3.42	1.41	1.09	1.12	0.53	0.52	4.67	9.71
KingFisher 243	1.3	94	93	92	93	99	98	1.44	3.16	1.25	1.17	1.13	0.68	0.58	4.81	9.41
Experimental Varieties																
BYEXP723	3.8	98	98	97	96	98	98	2.16	4.02	1.28	1.24	1.13	0.75	0.67	5.07	11.25*
TS 4010/A4535	3.5	100	98	97	97	97	97	1.68	3.85	1.44	1.27	1.13	0.75	0.59	5.18	10.71*
GA505	2.8	99	95	93	93	99	99	1.72	3.45	1.45	1.29	1.08	0.66	0.50	4.98	10.16*
CW 055023/PGI557	3.8	100	97	96	97	98	99	1.43	3.49	1.37	1.14	1.00	0.82	0.60	4.94	9.86
GA-APGC	4.0	98	91	94	97	99	97	1.63	3.34	1.43	1.24	1.14	0.57	0.48	4.85	9.82
GA-MPX	1.8	96	92	93	96	98	96	1.42	3.12	1.31	0.89	1.08	0.60	0.50	4.38	8.92
Mean	3.1	97.8	94.6	94.2	95.3	97.9	97.4	1.66	3.61	1.37	1.18	1.11	0.7	0.57	4.93	10.2
CV,%	37.6	4.3	4.8	4.1	3.1	2.2	2.1	24.87	12.72	12.97	14.84	12.59	11.6	13.05	6.5	9.17
LSD,0.05	1.7	5.9	6.5	5.5	4.1	3.0	2.9	0.59	0.65	0.25	0.25	0.2	0.12	0.11	0.46	1.33

[1] Vigor score based on a scale of 1 to 5 with 5 being the most vigorous seedling growth.
* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 6. Dry matter yields and stand persistence of alfalfa varieties sown April 17, 2008 at Princeton, Kentucky.

	Percent Stand								Yield (tons/acre)									
	2008		2009		2010		2011					2011						
Variety	May 21	Oct 30	Apr 17	Oct 28	Mar 18	Oct 12	Apr 8	Oct 24	2008 Total	2009 Total	2010 Total	May 10	Jun 14	Jul 21	Aug 16	Sep 22	Total	4-year Total
Commercial Varieties-Available for Farm Use																		
Genoa	99	97	95	93	95	91	89	93	0.58	4.19	3.19	0.89	1.00	0.98	0.43	0.41	3.72	11.67*
USG 681HY	100	93	94	91	93	90	90	90	0.59	3.99	3.17	0.85	0.98	0.97	0.37	0.37	3.53	11.27*
FSG 408DP	100	94	95	91	93	88	91	89	0.51	3.69	3.18	0.96	1.02	0.90	0.38	0.32	3.59	10.97*
A5225	100	95	96	96	95	88	85	84	0.57	3.90	3.03	0.76	0.86	0.85	0.37	0.37	3.22	10.71*
Phoenix	96	91	85	85	85	76	80	76	0.49	3.64	3.07	0.82	0.89	0.77	0.24	0.24	2.95	10.15
Ameristand 403T	98	88	83	84	89	79	80	74	0.56	3.62	2.86	0.80	0.87	0.84	0.26	0.28	3.04	10.09
WL 343HQ	99	90	89	96	93	88	91	91	0.41	3.39	3.03	0.77	0.96	0.86	0.33	0.32	3.25	10.08
Withstand	96	89	84	88	88	81	85	85	0.45	3.52	3.05	0.87	0.90	0.70	0.24	0.30	3.01	10.03
Mariner III	98	90	86	86	85	84	79	83	0.47	3.55	2.85	0.71	0.90	0.82	0.27	0.25	2.95	9.83
Saranac AR (certified)	99	86	83	79	80	81	81	73	0.49	2.92	2.82	0.75	0.81	0.71	0.22	0.22	2.71	8.95
Arc (certified)	98	86	89	78	78	71	66	63	0.46	3.34	2.73	0.61	0.77	0.53	0.17	0.16	2.24	8.78
Buffalo	100	91	89	66	68	61	53	53	0.54	3.16	2.26	0.40	0.63	0.53	0.18	0.19	1.93	7.89
Experimental Varieties																		
TS 4027	99	88	83	83	80	73	76	78	0.64	3.66	3.02	0.86	0.95	0.95	0.34	0.29	3.40	10.72*
CW 24027	99	94	95	96	96	88	79	81	0.61	4.06	2.99	0.70	0.88	0.81	0.32	0.29	2.99	10.65*
Mean	98.5	90.8	88.8	86.4	86.7	81.3	80.3	79.3	0.53	3.62	2.95	0.77	0.89	0.80	0.29	0.29	3.04	10.13
CV,%	1.1	5.7	8.7	9.4	9.3	13.0	11.7	11.7	20.82	13.10	9.52	16.65	13.27.	16.38	23.19	20.22	12.64	8.39
LSD,0.05	1.5	7.4	11.0	11.7	11.6	15.1	13.4	13.3	0.16	0.68	0.40	0.18	0.17	0.19	0.10	0.08	0.55	1.21

*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 7. Dry matter yields and stand persistence of alfalfa varieties [including Roundup Ready (RR)] sown April 7, 2011 at Princeton, Kentucky.

	Percent Stand		Yield (tons/acre)			
	2011		2011			
Variety	Jun 14	Oct 24	Jul 21	Aug 16	Sep 22	Total
Commercial Varieties-Available for Farm Use						
WL354HQ	99	100	1.10	0.55	0.37	2.03*
Ameristand 403T	96	96	1.01	0.58	0.33	1.92*
Phoenix	93	94	0.91	0.53	0.38	1.82*
Gunner	96	97	0.89	0.55	0.36	1.80*
Charger	95	97	0.95	0.52	0.32	1.79*
L-449Aph2	98	99	0.90	0.49	0.35	1.74*
Caliber	96	97	0.90	0.49	0.30	1.69*
Radiance HD	95	97	0.91	0.44	0.32	1.67*
DS4210	97	99	0.83	0.50	0.29	1.62*
Consistency 4.10 RR	99	97	0.81	0.52	0.28	1.61*
Rebound 6.0.	98	99	0.82	0.48	0.30	1.60
Lancer	91	95	0.83	0.46	0.28	1.57
54R02 RR	92	95	0.79	0.45	0.32	1.57
DKA41-18 RR	96	97	0.81	0.47	0.27	1.55
Alfagraze 300 RR	94	94	0.90	0.40	0.25	1.54
Withstand	95	93	0.82	0.44	0.24	1.50
WL355 RR	96	97	0.73	0.48	0.28	1.49
Saranac AR (certified)	98	97	0.84	0.42	0.21	1.48
Ameristand 405T RR	99	98	0.79	0.46	0.22	1.47
Ameristand 407TQ	96	96	0.78	0.43	0.25	1.46
Experimental Varieties						
TS4013	99	98	1.00	0.52	0.36	1.88*
FG R47M120 RR	92	95	0.83	0.50	0.29	1.61*
FG R47M319 RR	97	98	0.76	0.45	0.33	1.54
FG R47M312 RR	95	97	0.77	0.43	0.27	1.47
FG R46M162 RR	98	95	0.80	0.37	0.24	1.41
Mean	95.8	96.6	0.86	0.48	0.30	1.63
CV,%	3.2	3.5	18.88	18.29	28.32	18.58
LSD,0.05	4.5	5.0	0.23	0.12	0.12	0.43

* Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 8. Dry matter yields and stand persistence of Roundup Ready alfalfa varieties sown April 7, 2011 at Princeton, Kentucky.[1]

	Percent Stand		Yield (tons/acre)			
	2011		2011			
Variety	Jun 14	Oct 24	Jul 21	Aug 16	Sep 22	Total
Commercial Varieties-Available for Farm Use						
54R02 RR	94	94	0.83	0.53	0.36	1.72*
Consistency 4.10 RR	99	99	0.89	0.44	0.32	1.64*
DKA41-18 RR	98	97	0.80	0.43	0.25	1.48*
Ameristand 405T RR	96	96	0.73	0.42	0.32	1.47*
WL355 RR	98	98	0.79	0.38	0.26	1.43*
Alfagraze 300 RR	94	94	0.67	0.38	0.19	1.24
Experimental Varieties						
FG R47M120 RR	94	97	0.87	0.47	0.27	1.61*
FG R47M319 RR	98	98	0.78	0.45	0.36	1.59*
FG R46M162 RR	98	98	0.78	0.44	0.31	1.53*
FG R47M312 RR	92	94	0.71	0.42	0.28	1.41
Mean	96.1	96.4	0.79	0.44	0.29	1.51
CV,%	2.8	2.6	12.11	15.37	25.21	13.66
LSD,0.05	3.9	4.3	0.14	0.10	0.11	0.30

[1] Weed control in 2011 was the same as on the other alfalfa trials.
* Not significanly different from the highest numerical value in the column, based on the 0.05 LSD.

Table 9. Characterization and performance of alfalfa varieties across years and locations.

		Variety Characteristics[1]						Lexington									Princeton								
			Disease Resisance[2]					2006[3]					2008				2008				2009			2011	2011
Variety		FD[4]	Bw	Fw	An	PRR	APH	07	08	09	10	11	08	09	10	11	08	09	10	11	09	10	11	11	11
Commercial Varieties-Available for Farm Use																									
54R02 RR	Pioneer Hi-Bred	4	HR	HR	HR	HR	HR																	x	*
6417	Garst Seed Co.	4	HR	HR	HR	HR	HR						*	*	*	*									
6552	Garst Seed Co.	5	HR	HR	HR	HR	HR						*	*	*	*									
A-4440	Producers Choice	4	HR	HR	HR	HR	HR						*	*	*	*									
A5225	Producers Choice	5	HR	HR	HR	HR	R						*	*	*	*	*	*	*	*					
Adrenalin	Brett Young	4	HR	HR	HR	HR	HR														*	*	*		
Alfagraze 300 RR	America's Alfalfa																							x	x
Ameristand 403T	America's Alfalfa	4	HR	HR	HR	HR	HR	x[5]	*	x	x	*	*	x	x	x	*	*	*	x	*	*	*	*	
Ameristand 403TPlus	America's Alfalfa	4	HR	HR	HR	HR	HR														x	*	*		
Ameristand 405T RR	America's Alfalfa	4	HR	HR	HR	HR	HR																	x	*
Ameristand 407TQ	America's Alfalfa	4	HRT	HR	HR	HR	HR														*	*	*	x	
Anchormate	ProSeed Marketing	-	-	-	-	-	-						*	*	*	*									
Arc (certified)	Public	4	LR	MR	HR	-	-										x	x	x	x					
Archer III	America's Alfalfa	5	HR	HR	HR	HR	HR														x	*	*		
Buffalo	Public	-	-	-	-	-	-	x	x	x	x	x	*	x	x	x	*	x	x	x	*	*	x		
Caliber	Beck's Hybrids	4	HR	HR	HR	HR	HR																	*	
Charger	Beck's Hybrids	5	HR	HR	HR	HR	HR																	*	
Consistency 4.10 RR	Croplan Genetics	4	HR	HR	HR	HR	HR																	*	*
DKA 41-18 RR	Monsanto	4	HR	HR	HR	HR	HR	*	*	*	*	*												x	*
DKA 43-13	Monsanto	4	HR	HR	HR	HR	HR						*	*	x	*									
DKA 50-18	Monsanto	5	HR	HR	HR	HR	HR						*	*	*	*									
DS 4210	Crop Production	4	HR	HR	HR	HR	HR																	*	
Expedition	Syngenta Seeds	5	HR	HR	R	RR	R	*	*	*	*	*													
FSG 408DP	Lewis Seed	4	HR	HR	HR	HR	R										*	*	*	*					
FSG 528SF	Lewis Seed	5	HR	R	HR	RR	R						*	*	*	*									
Genoa	Syngenta Seeds	4	HR	HR	HR	RR	HR						*	*	*	*	*	*	*	*					
Gunner	Croplan Genetics	5	HR	HR	HR	HR	HR																	*	
KingFisher 243	Cal/West Seeds	5	HR	HR	HR	HR	HR														x	x	*		
Lancer	Allied Seed, L.L.C.	4	HR	HR	HR	HR	HR																	x	
L447HD	Legacy Seeds, Inc.	4	HR	HR	HR	HR	HR	*	*	*	*	*													
L449Aph2	Legacy Seeds, Inc.	4	HR	HR	HR	HR	HR																	*	
LegenDairy 5.0	Croplan Genetics	3	HR	HR	HR	HR	HR	x	*	*	*	*													
Mariner III	Allied Seed, L.L.C.	4	HR	HR	HR	HR	HR										x	*	*	x					
PerForm	Dairyland Research	4	HR	HR	HR	HR	HR	*	*	*	*	*													
Phoenix	FFR/Southern States	5	HR	HR	HR	HR	R	x	*	x	x	*	*	*	*	*	*	*	*	x				*	
PGI 459	Producers Choice	4	HR	HR	HR	HR	R						x	*	*	*									
RadianceHD	Ampac Seed /Cisco	4	HR	HR	HR	HR	HR														*	*	*	*	

Variety		Variety Characteristics[1]						Lexington									Princeton								
			Disease Resisance[2]					2006[3]					2008				2008				2009			2011	2011
Variety		FD[4]	Bw	Fw	An	PRR	APH	07	08	09	10	11	08	09	10	11	08	09	10	11	09	10	11	11	11
Commercial Varieties-Available for Farm Use																									
Radiant-AM	Ampac Seed	4	HR	HR	HR	HR	HR	*	*	x	x	*													
Rebound 5.0	Croplan Genetics	4	HR	HR	HR	HR	HR						*	*	*	*					x	*	*		
Rebound 6.0	Croplan Genetics	4	HR	HR	HR	HR	HR																	x	
Saranac AR (certified)	Public	4	MR	R	HR	LR	-	x	x	x	x	x	*	x	x	x	*	x	*	x	*	*	*	x	
Syngenta 6422Q	Syngenta Seeds	4	HR	HR	HR	HR	HR														*	*	*		
USG 681HY	UniSouth Genetics	6	HR	HR	R	HR	-										*	*	*	*					
Withstand	FFR/Southern States	4	HR	HR	HR	HR	HR	x	*	*	x	*	x	x	x	x	x	*	*	x				x	
WL 343HQ	W-L Research	4	HR	HR	HR	HR	HR	x	*	x	x	*	*	*	x	*	x	x	*	*					
WL 354HQ	W-L Research	4	HR	HR	HR	HR	HR																	*	
WL 355 RR	W-L Research	4	HR	HR	HR	HR	HR	*	*	*	*	*												x	*
WL 363HQ	W-L Research	5	HR	HR	HR	HR	HR						x	*	*	*					*	*	*		
Experimental Varieties																									
BYEXP 723	Brett Young	4	HR	HR	HR	HR	HR														*	*	*		
CW 055023/PGI 557	Producers Choice	5	HR	HR	HR	HR	HR														x	*	*		
CW 24027	Cal/West Seeds	4	HR	HR	HR	HR	HR										*	*	*	x					
DS617	Dairyland Research	4	HR	HR	HR	HR	HR	*	*	*	*	*													
FG R46M162 RR	Forage Genetics	4	HR	HR	HR	HR	HR																	x	*
FG R47M120 RR	Forage Genetics	4	HR	HR	HR	HR	HR																	*	*
FG R47M312 RR	Forage Genetics	4	HR	HR	HR	HR	HR																	x	x
FG R47M319 RR	Forage Genetics	4	HR	HR	HR	HR	HR																	x	*
GA 505	Univ. of Georgia																				*	*	*		
GA-APGC	Univ. of Georgia																				*	x	*		
GA-MPX	Univ. of Georgia																				x	x	x		
TS 4010/A4535	Producers Choice																				*	*	*		
TS 4013	Producers Choice	4	HR	HR	HR	HR	HR																	*	
TS4027	Target Seed, LLC	4	HR	HR	HR	HR	R										*	*	*	*					

[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.
[2] Disease resistance: S=susceptible, LR=low resistance, MR=moderate resistance, R=resistance, HR=high resistance.
[3] Establishment year.
[4] Fall dormancy-check varieties: 1=Spredor 3, 2=Vernal, 3=Ranger, 4=Saranac, 5=DuPuits.
[5] x in the box indicates the variety was in the test but yielded significantly less than the top-ranked variety in the test. Open boxes indicate the variety was not in the test.
* Not significantly different from the top-ranked variety in the test.

Table 10. Summary of Kentucky Alfalfa Yield Trials 2000-2011 (yield shown as a percentage of the mean of the commercial varieties in the test).

		Variety Characteristics[1]						Lexington					Princeton				Bowling Green[2]		Eden Shale	Mean[6] (# trials)
			Disease Resistance[3]					00[4,5]	02	04	06	08	01	05	08	09	03	06	03	
Variety	Proprietor	FD	Bw	Fw	An	PRR	APH	5yr[7]	5yr	5yr	5yr	4yr	4yr	5yr	4yr	3yr	3yr	4yr	4yr	
A-4440	Producers Choice	4	HR	HR	HR	HR	HR					100		99						100(2)
A 5225	Producers Choice	5	HR	HR	HR	HR	R					103			107					105(2)
Abilene +Z	America's Alf.	5	HR	HR	HR	HR	R	99												–
AC Longview	Newfield Seeds	–	HR	–	–	–	–			83										–
Adrenalin	Brett Young	4	HR	HR	HR	HR	HR									105				–
AmeriGraze 401+Z	America's Alf.	4	HR	HR	HR	HR	R	99												–
Ameristand 403T	America's Alf.	3	HR	HR	HR	HR	HR				99	93	97		101	106				99(5)
Ameristand 403T Plus	America's Alf.	4	HR	HR	HR	HR	HR									98				–
Ameristand 407TQ	America's Alf.	4	HR	HR	HR	HR	HR									103				–
Anchormate	ProSeed Marketing	–	–	–	–	–	–					99								–
Arc (certified)	Public	4	LR	MR	HR	–	–	91	96	76			99	95	87		98			92(7)
Archer III	America's Alf.	5	HR	HR	HR	HR	HR									98				–
Baralfa 53HR	Barenbrug USA	5	HR	R	HR	HR	HR							104						–
Buffalo	Public	–	–	–	–	–	–		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									–
DKA 43-13	Monsanto	4	HR	HR	HR	HR	HR					102								–
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	HR	HR	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	HR	R	RR	R			107	111			96						105(3)
Feast +EV	Garst Seeds	3	HR	HR	HR	R	HR			106							101		96	101(3)
Fortress	Syngenta	3	R	R	R	HR	–													–
FSG 406	Allied Seeds	4	HR	HR	HR	HR	HR										110			–
FSG 408DP	Allied Seeds	4	HR	HR	HR	HR	R			105					109					107(2)
FSG 505	Allied Seeds	5	HR	HR	HR	HR	R										106		108	107(2)
FSG 528SF	Lewis Seed Co.	5	HR	R	HR	HR	R					106								–
Geneva	Syngenta	4	HR	HR	HR	HR	HR	106	103				104							104(3)
Genoa	Syngenta	4	HR	HR	HR	RR	HR			112		100		98	116					107(4)
GH 744	Golden Harvest	4	HR	HR	HR	HR	MR		104											–
HybridForce 400	Dairyland	4	HR	HR	R	HR	MR						106							–
Integrity	PGI Alfalfa	4	HR	HR	HR	HR	HR											101		–
KingFisher 243	Cal/West	5	HR	HR	HR	HR	HR									92				–
L447HD	Legacy Seeds	4	HR	HR	HR	HR	HR				105									–
LegenDairy 5.0	Croplan Genetics	3	HR	HR	HR	HR	HR				99			103				110		104(3)
Magnum V	Dairyland	4	HR	HR	R	HR	HR	104												–
Magnum V-wet	Dairyland	3	HR	HR	R	HR	MR	105												–
Mariner III	Allied Seeds	4	HR	HR	HR	HR	HR								98					–
Mountaineer 2.0	Croplan Gen.	5	HR	HR	HR	HR	HR			108										–
Pegasus	FFR/Sou. St.	4	HR	HR	HR	HR	R						95							–
PerForm	Dairyland Research	4	HR	HR	HR	HR	HR				105									–
PGI 459	Producers Choice	4	HR	HR	HR	HR	R					100								–
Phirst	UniSouth Genetics	4	HR	HR	HR	HR	R							105				102		104(2)
Phoenix	FFR/Sou. St.	5	HR	HR	HR	HR	R			113	101	101			101			96		102(5)
Radiance HD	Ampac Seed/Cisco	4	HR	HR	HR	HR	HR									105				–
Radiant-AM	Ampac Seed	4	HR	HR	HR	HR	HR				98									–

Variety	Proprietor	Variety Characteristics[1]						Lexington					Princeton				Bowling Green[2]		Eden Shale	Mean[6]
			Disease Resistance[3]					00[4,5]	02	04	06	08	01	05	08	09	03	06	03	
		FD	Bw	Fw	An	PRR	APH	5yr[7]	5yr	5yr	5yr	4yr	4yr	5yr	4yr	3yr	3yr	4yr	4yr	(# trials)
Rebound 5.0	Croplan Genetics	4	HR	HR	HR	HR	HR					103				97		108		103(3)
Regal	Great Plains	5	HR	HR	R	HR	MR										103		94	99(2)
Reward II	PGI Alfalfa	4	HR	HR	R	HR	R						99	103			94		103	100(4)
Rushmore	Syngenta Seeds	4	HR	HR	HR	HR	HR	95												–
Saranac AR (certified)	Public	4	MR	R	HR	LR	–	93	87	77	89	90	92	95	89	98	99	89	95	91(12)
Summer Gold	Beck's Hybrids	4	HR	HR	HR	HR	HR			107										–
Syngenta6422Q	Syngenta Seeds	4	HR	HR	HR	HR	HR									98				–
Triple Crown	FFR/Sou. St.	4	HR	HR	HR	HR	HR	102					100							101(2)
TripleTrust 450	ABI Alfalfa	5	HR	HR	HR	HR	HR							100				105		103(2)
USG 681HY	UniSouth Genetics	6	HR	HR	HR	HR	–								112					–
ValuePlus 1	Forage Genetics	4	HR	HR	HR	HR	R	106												–
Vernal	Public	2	R	MR	–	–	–		93					95						94(2)
Withstand	FFR/Sou. St.	4	HR	HR	HR	HR	HR				99	90			100			114		101(4)
WL 319HQ	W-L Research	3	HR	HR	HR	HR	HR		108											–
WL 327	W-L Research	4	HR	HR	HR	HR	HR		105											–
WL 338SR	W-L Research	4	HR	HR	HR	HR	HR		101											–
WL 342	W-L Research	4	HR	HR	HR	HR	HR						102							–
WL 343HQ	W-L Research	4	HR	HR	HR	HR	HR				98	104			100					101(3)
WL 348AP	W-L Research	4	HR	HR	HR	HR	HR											99		–
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	HR	HR	HR					102				105				104(2)
4m76	FFR/Sou. St.	4.7	HR	HR	R	HR	R		116											–
5-star	Croplan Gen.	5	R	HR	R	R	R										97		99	98(2)
5312	Public	3	HR	HR	HR	HR	HR	103												–
53H81	Pioneer	3	HR	HR	HR	R	HR	102												–
54V46	Pioneer	4	R	HR	HR	HR	R												99	–
54V54	Pioneer	4	HR	HR	HR	HR	HR	98	94				105							99(3)
54V56	Pioneer	–	–	–	–	–	–										98			–
6400HT	Garst Seeds	4	HR	HR	HR	HR	HR			108							96			102(2)
6415	Garst Seeds	4	HR	HR	HR	HR	HR							103				105		104(2)
6417	Garst Seeds	4	HR	HR	HR	HR	HR					105								–
6420	Garst Seeds	4	HR	R	HR	R	HR		106											–
6530	Garst Seeds	5	HR	HR	HR	HR	HR										92			–
6552	Garst Seeds	5	HR	HR	HR	HR	HR					104								–

[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.
[2] The Bowling Green test is on soil infested with phytophthora and aphanomyces root rots.
[3] Disease resistance: S=susceptible, LR=low resistance, MR=moderate resistance, R=resistance, HR=high resistance.
[4] Year trial was established
[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, look in the yearly report for the final year of each specific test. For example, the Lexington trial planted in 2002 was harvested for 5 years, so the final yield report would be "2006 Alfalfa Report" archived in the KY Forage website at <www.uky.edu/Ag/Forage>.
[6] Mean only presented when respective variety was included in two or more trials.
[7] Number of years of data.

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