

2022 Alfalfa Report



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Introduction

Alfalfa (*Medicago sativa*) has historically been the highest-yielding, highest-quality forage legume grown in Kentucky. It is an important part 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. Tables 13 and 14 (Roundup Ready varieties) show a summary of all alfalfa varieties tested in Kentucky during the past 18 years. The UK Forage Extension website (<https://forages.ca.uky.edu>) 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 (non-dormant). 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. Fall dormancy can lead to reduced annual yields compared to less-dormant varieties. Generally, alfalfa varieties with FD ratings of 3 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 also have 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) or highly resistant (HR) 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 resistance is beneficial, particularly in soils also infested with phytophthora root rot. Ideally, choose varieties resistant to Aphanomyces race 1 and race 2.

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.

Table 1. Temperature and rainfall at Lexington, Kentucky, in 2017, 2018, 2019, 2020, 2021, and 2022.

	2017			2018			2019			2020			2021			2022						
	Temp		Rainfall	Temp		Rainfall	Temp		Rainfall	Temp		Rainfall	Temp		Rainfall	Temp		Rainfall				
	°F	DEP ¹	IN	DEP	IN	DEP	°F	DEP	IN	DEP	IN	DEP	°F	DEP	IN	DEP	IN	DEP				
JAN	40	+9	6.81	+3.95	31	0	2.01	-0.85	4.11	+1.25	40	+9	3.72	+0.86	34	+3	4.51	+1.65	29	-2	4.93	+2.07
FEB	47	+12	4.46	+1.25	45	+10	9.77	+6.56	7.64	+4.43	38	+3	5.14	+1.93	31	-4	4.60	+1.39	38	+3	7.69	+4.48
MAR	48	+4	3.34	-1.06	42	-2	5.16	+0.76	3.49	-0.91	51	+7	3.79	-0.61	50	+6	5.12	+0.72	49	+5	4.27	-0.13
APR	62	+7	4.17	+0.29	50	-5	5.52	+1.64	4.76	+0.88	52	-3	4.92	+1.04	54	-1	2.72	-1.16	55	0	3.71	-0.17
MAY	66	+2	7.74	+3.27	73	+9	8.39	+3.92	4.49	+0.02	62	-2	5.69	+1.22	62	-2	4.34	-0.13	69	+5	3.84	-0.63
JUN	73	+1	7.68	+4.02	76	+4	6.42	+2.76	6.13	+2.47	72	0	2.56	-1.10	73	+1	6.26	+2.60	76	+4	2.10	-1.56
JUL	76	0	4.49	-0.51	77	+1	6.15	+1.15	3.30	-1.70	79	+3	3.23	-1.77	75	-1	5.90	+0.90	80	+4	6.46	+1.46
AUG	74	-1	6.66	+2.73	77	+2	6.45	+2.52	2.42	-1.51	75	0	3.41	-0.52	76	+1	6.16	+2.23	77	+2	4.27	+0.34
SEP	69	+1	4.72	+1.52	74	+6	12.88	+9.68	0.18	-3.02	68	0	4.43	+0.83	69	+1	3.03	-0.17	70	+2	1.50	-1.70
OCT	60	+3	6.06	+3.49	59	+2	6.54	+3.97	7.55	+5.58	57	0	4.98	+2.41	62	+5	4.64	+2.10	57	0	0.96	-1.61
NOV	47	+2	3.09	-0.30	42	-3	5.64	+2.25	5.39	+2.00	49	+4	2.18	-1.21	43	-2	2.13	-1.26				
DEC	35	-1	2.66	-1.32	40	+4	7.35	+3.37	5.74	+1.76	36	0	2.27	-1.71	47	+11	4.41	+0.43				
Total			61.88	+17.33			82.28	+37.73	55.20	+10.65			45.92	+1.37			53.85	+9.30			39.73	+2.55

¹DEP is departure from the long-term average.
²2022 data is for ten months through October.

Table 2. Temperature and rainfall at Princeton, Kentucky, in 2022.

	2022 ²			
	Temperature		Rainfall	
	°F	DEP ¹	IN	DEP
JAN	32	-2	5.04	+1.24
FEB	39	+1	7.44	+3.01
MAR	51	+4	4.85	-0.44
APR	56	-2	6.41	+1.61
MAY	68	+1	2.54	-2.42
JUN	75	0	3.46	-1.39
JUL	80	+2	4.75	+0.46
AUG	76	-1	5.85	+1.84
SEP	69	-2	0.32	-3.01
OCT	57	-2	1.19	-1.86
NOV				
DEC				
Total			40.85	-0.61

¹DEP is departure from the long-term average.
²2022 data is for ten months through October.

Anthrachnose is a fungal disease that 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. Anthrachnose 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-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 seedlings in Kentucky, but it is 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 susceptible to this disease. Producers who have experienced stand losses at the seedling stage in their fields are advised to choose varieties with resistance to both Aphanomyces Race1 and Race 2. Ask your local seed supplier for more information or download the complete disease and insect ratings for all U.S. varieties at www.alfalfa.org/pdf/2023_Alalfa_Variety_Leaflet.pdf. The Alfalfa Analyst publication also provides good information on diagnosing disease and insect damage. Download from alfalfa.org under the publications tab.

Certain alfalfa varieties are reported to have resistance to sclerotinia crown and stem rot. However, research at the University of Kentucky has shown that some 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.

Table 3. Dry matter yields and stand persistence of alfalfa varieties sown April 5, 2017, at Lexington, Kentucky.

Variety	FD ¹	Percent Stand												Yield (tons/acre)													
		2017		2018		2019		2020		2021		2022		2017		2018		2019		2020		2021		2022		6-year Total	
		Sep 26	Mar 14	Sep 25	Mar 14	Mar 28	Oct 11	Mar 17	Sep 24	Mar 24	Mar 24	Mar 29	Mar 22	Sep 22	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
Commercial Varieties-Available for Farm Use																											
Evermore	5	93	93	94	96	96	94	94	87	81	80	80	79	1.96	5.24	3.11	2.96	4.47	0.90	0.99	0.37	0.94	0.60	3.81	21.56*		
Fierce	4	96	96	95	96	95	93	93	83	83	85	84	83	1.89	4.67	3.27	3.08	4.64	0.88	1.10	0.42	0.93	0.63	3.97	21.54*		
Ameristand 403T Plus	4	96	97	96	96	95	93	90	84	84	86	86	84	2.27	4.75	3.22	2.98	4.46	0.98	1.10	0.32	0.88	0.50	3.78	21.45*		
Caliber	4	95	95	94	94	94	90	86	83	83	81	80	79	2.00	4.65	3.14	3.05	4.34	1.08	1.04	0.37	0.84	0.56	3.88	21.06*		
Contender	5	94	94	93	93	88	83	76	71	70	70	61	60	2.10	4.67	2.85	2.95	4.10	0.78	0.97	0.36	0.92	0.57	3.59	20.26*		
Bulldog 505	5	92	90	90	88	89	88	88	79	79	79	79	75	1.66	4.33	2.93	2.55	3.73	0.73	0.92	0.22	0.73	0.47	3.07	18.27		
Saranac AR (certified)	4	87	87	86	86	86	84	63	48	34	23	23	23	1.83	4.65	2.70	2.43	3.08	0.39	0.47	0.14	0.52	0.40	1.93	16.63		
Experimental Varieties																											
NF11ALF006	6	93	90	90	89	84	83	79	76	83	80	75	75	1.65	4.64	3.11	2.80	4.63	0.89	1.12	0.41	0.92	0.55	3.89	20.73*		
Mean		93	93	92	92	91	89	83	75	75	72	70	70	1.92	4.70	3.04	2.85	4.18	0.83	0.96	0.33	0.84	0.54	3.49	20.19		
CV,%		5	6	6	7	9	10	11	13	12	14	15	15	24.18	10.87	10.16	20.42	15.87	18.10	28.27	15.08	14.18	16.35	10.84			
LSD,0.05		7	8	8	9	12	13	13	14	13	15	15	15	0.68	0.75	0.45	0.86	0.98	0.30	0.26	0.14	0.19	0.11	0.84	3.23		

¹FD=Fall dormancy.
*Not significantly different from the highest numerical value in the column, based on the 0.05 LSD.

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

Table 12 shows information about proprietors, fall dormancy and disease resistance for all the varieties 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.

Tables 13 and 14 (Roundup Ready varieties) are summaries of yield data from 2004 to 2022 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 tables 13 and 14, 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 stable performance; others may have performed well in wet years or on particular soil types. See footnotes in tables 13 and 14 to determine which yearly report should be referenced.

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 (<https://forages.ca.uky.edu>).

- 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)
- Alfalfa Hay: Quality Makes the Difference (AGR-137)
- Fertilizer Management in Alfalfa (AGR-210)
- “Emergency” Inoculation for Poorly Nodulated Legumes (PPFS-AG-F-04)
- Common Alfalfa Seedling Diseases and Disorders (PPFS-AG-F-03)
- Managing Diseases of Alfalfa (PPFS-AG-F-09)
- Managing Legume-Induced Bloat in Cattle (ID-186)
- Growing Alfalfa in the South, a publication of the National Alfalfa & Forage Alliance: www.alfalfa.org/pdf/alfalfainthesouth.pdf
- Alfalfa Management Guide: www.crops.org/files/publications/alfalfa-management-guide.pdf
- Alfalfa Analyst (ID guide to alfalfa disease and insect damage and soil fertility deficiencies): www.alfalfa.org/pdf/AlfalfaAnalyst.pdf
- Alfalfa Variety Ratings, Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties: www.alfalfa.org/varietyLeaflet.php

Table 5. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 2, 2019, at Lexington, Kentucky.

Variety	FD ¹	Seedling Vigor ² May 3, 2019	Percent Stand						Yield (tons/acre)										4-year Total			
			2019		2020		2021		2022		2019		2020		2021		2022		Total			
			May 3	Oct 11	Mar 17	Sep 24	Mar 24	Sep 30	Mar 22	Sep 22	Total	Total	Total	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	Total	
Commercial Varieties-Available for Farm Use																						
Rebound 6XT	4	4.9	100	100	99	97	97	97	97	96	1.30	4.18	6.68	2.02	1.80	1.24	1.28	1.00	7.34	19.50*		
GA-535	5	4.8	98	98	98	94	94	94	96	95	1.41	4.39	7.08	1.93	1.56	0.94	1.10	0.82	6.35	19.23*		
Ameristand 403T Plus	4	4.5	100	99	99	95	95	95	96	95	1.51	4.31	6.98	2.06	1.48	0.91	1.03	0.77	6.25	19.05*		
FSG415BR	4	5.0	100	100	100	98	98	98	98	97	1.29	4.02	7.00	2.18	1.56	0.87	1.15	0.91	6.68	18.98*		
GA-497HD	5	4.9	100	100	99	96	96	97	97	95	0.98	4.30	6.70	2.17	1.70	1.09	1.12	0.84	6.92	18.90*		
Charger	5	4.4	99	98	98	95	96	96	96	95	1.10	4.30	6.75	1.65	1.48	1.00	1.08	0.80	6.01	18.16*		
WL 349HQ	4	4.6	99	99	99	96	98	98	98	95	0.94	3.91	6.74	1.85	1.68	0.98	1.12	0.86	6.49	18.08*		
Paola	5	5.0	100	100	99	91	93	93	92	91	1.47	4.21	5.95	1.55	1.47	0.87	1.10	0.84	5.83	17.46*		
55V50	5	5.0	100	100	100	95	96	96	96	93	1.26	3.60	6.54	1.95	1.39	0.77	0.96	0.67	5.73	17.14*		
Saranac AR (certified)	4	4.5	99	100	99	87	86	84	83	81	1.27	3.97	5.88	1.71	1.21	0.70	0.84	0.76	5.22	16.34		
Triade	5	4.9	100	100	97	89	89	87	86	81	1.08	3.94	5.54	1.46	1.27	0.72	0.94	0.69	5.08	15.64		
Alfagraze	3	4.1	99	99	98	74	78	78	87	84	0.96	3.38	5.53	1.59	1.08	0.50	0.71	0.56	4.44	14.31		
Mean		4.7	99	99	99	92	93	93	93	91	1.21	4.04	6.45	1.84	1.47	0.88	1.04	0.79	6.03	17.73		
CV,%		4.9	1	1	2	7	5	6	4	7	23.72	15.30	11.60	12.78	13.95	23.58	15.85	21.54	14.47	10.55		
LSD,0.05		0.3	1	1	3	9	6	8	6	9	0.41	0.89	1.08	0.34	0.30	0.30	0.24	0.25	1.25	2.69		

¹FD=Fall dormancy.
²Vigor 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 8. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 5, 2021, at Lexington, Kentucky.

Variety	FD ¹	Seedling Vigor ² Jun 1, 2021	Percent Stand				Yield (tons/acre)							2-year Total
			2021		2022		2021	2022						
			Jun 1	Sep 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	
Commercial Varieties-Available for Farm Use														
54VQ52	4	5.0	99	99	95	95	2.20	1.40	1.19	0.37	0.86	0.59	4.42	6.62*
HighFive	5	4.5	99	98	96	96	2.18	1.17	1.12	0.39	1.04	0.66	4.38	6.56*
Ameristand 403TPlus	4	4.1	97	97	95	93	2.00	1.28	1.10	0.32	0.93	0.55	4.18	6.18*
FSG450	4	4.8	96	92	91	90	1.98	1.13	1.05	0.34	0.94	0.58	4.05	6.03*
54Q29	4	4.8	100	98	97	95	1.97	1.10	1.06	0.27	1.02	0.59	4.04	6.01*
GA497	5	4.9	100	98	97	95	1.99	1.06	1.02	0.35	1.00	0.56	4.00	5.99*
Mariner V	4	4.4	96	96	95	91	2.12	1.00	0.97	0.31	0.98	0.57	3.84	5.96*
54Q16	4	4.9	98	96	95	94	1.95	1.11	1.04	0.33	0.94	0.57	3.99	5.94*
Signature	4	4.5	98	96	92	91	1.95	0.96	1.03	0.38	0.98	0.61	3.97	5.92*
Alfagraze	3	4.3	94	93	93	92	2.02	1.25	0.94	0.27	0.85	0.54	3.85	5.87*
55H96	5	4.3	96	96	95	91	2.08	1.11	0.95	0.27	0.87	0.52	3.72	5.80*
Saranac AR (certified)	4	4.5	98	96	93	90	1.97	0.97	0.89	0.22	0.85	0.50	3.42	5.39*
Mean		4.6	98	96	94	93	2.03	1.13	1.03	0.32	0.94	0.57	3.99	6.02
CV,%		11.5	2	3	4	5	15.78	25.75	21.49	33.39	15.40	17.29	19.16	16.71
LSD,0.05		0.8	3	4	5	6	0.46	0.41	0.32	0.15	0.21	0.14	1.10	1.45

¹FD=Fall dormancy.

²Vigor 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 9. Dry matter yields, seedling vigor, and stand persistence of Roundup Ready alfalfa varieties sown April 5, 2021, at Lexington, Kentucky.

Variety	FD ¹	Seedling Vigor ² June 1, 2021	Percent Stand				Yield (tons/acre)							2-year Total
			2021		2022		2021	2022						
			June 1	Sep 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	
Commercial Varieties-Available for Farm Use														
54VR10 RR	4	4.9	99	99	99	98	2.43	2.10	1.37	0.41	1.08	0.59	5.56	7.99*
Ameristand 433T RR	3	4.6	98	98	98	96	2.25	2.13	1.30	0.37	0.88	0.59	5.27	7.52*
Ameristand 405T RR	4	4.6	99	99	97	97	2.25	1.85	1.28	0.37	0.97	0.59	5.05	7.30*
438 RR	4	4.6	99	98	96	96	2.24	1.77	1.18	0.31	0.89	0.50	4.65	6.90
Alfagraze 300 RR	3	4.6	98	97	96	96	2.10	1.76	1.10	0.32	0.83	0.52	4.52	6.62
Mean		4.7	98	98	97	93	2.25	1.92	1.25	0.36	0.93	0.56	5.01	7.27
CV,%		9.2	1	1	2	2	11.42	5.71	8.13	21.54	9.00	11.76	6.13	6.63
LSD,0.05		0.7	2	2	4	3	0.40	0.17	0.16	0.12	0.13	0.10	0.47	0.74

¹FD=Fall dormancy.

²Vigor 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 10. Dry matter yields and stand persistence of Roundup Ready alfalfa varieties sown April 4, 2022, at Lexington, Kentucky.

Variety	FD ¹	Percent Stand		Yield (tons/acre)			
		2022		2022			
		Jul 20	Sep 22	Jul 20	Aug 12	Sep 14	Total
Commercial Varieties-Available for Farm Use							
54VR10 RR	4	88	90	0.45	1.06	0.51	2.03*
438 RR	4	96	96	0.56	0.92	0.51	1.98*
Ameristand 433T RR	3	91	89	0.47	0.98	0.43	1.88*
Aflagraze 300 RR	3	84	86	0.46	0.95	0.42	1.83*
Ameristand 405T RR	4	80	83	0.43	0.92	0.43	1.78
Mean		88	89	0.47	0.97	0.45	1.90
CV,%		8	8	15.92	8.35	15.44	7.55
LSD,0.05		10	10	0.11	0.12	0.10	0.21

¹FD=Fall dormancy.

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

Table 11. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 28, 2022, at Princeton, Kentucky.

Variety	FD ¹	Seedling Vigor ² Jun 1, 2022	Percent Stand		Yield (tons/acre)		
			2022		2022		
			Jun 1	Nov 9	Jul 11	Aug 23	Total
Commercial Varieties-Available for Farm Use							
54VQ52	4	5.0	100	96	0.51	1.22	1.73*
55H96	5	4.6	100	91	0.49	1.06	1.55*
Ameristand 403T Plus	4	4.5	100	95	0.44	1.07	1.51*
Alfagraze	2	4.8	99	92	0.38	1.07	1.45*
Saranac AR (certified)	4	4.6	100	90	0.37	1.07	1.44*
High Five	5	4.9	100	95	0.40	1.03	1.43*
54Q29	4	4.6	98	97	0.37	1.05	1.42*
FSG 450	4	4.8	99	93	0.40	0.93	1.34
Mariner V	4	4.6	99	90	0.34	0.99	1.33
GA-497HD	5	5.0	100	94	0.35	0.94	1.30
54Q16	4	5.0	100	94	0.28	1.02	1.29
Signature	4	4.8	99	88	0.39	0.76	1.15
Mean		4.8	99	93	0.39	1.02	1.41
CV,%		6.4	1	6	36.78	14.57	16.02
LSD,0.05		0.4	1	8	0.21	0.21	0.33

¹FD=Fall dormancy.

²Vigor 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 12. Characterization and proprietors of alfalfa varieties in current trials in Kentucky.

Variety	Proprietor	Variety Characteristics ¹							
		Fall Dormancy ³	Disease Resistance ²					APH1	APH2
			Bw	Fw	An	PRR			
Commercial Varieties-Available for Farm Use									
Alfabar	Barenbrug	3	HR	HR	HR	HR	HR/R	-	
Alfagraze	America's Alfalfa	2	MR	R	MR	R	-	-	
Ameristand 403TPlus	America's Alfalfa	4	HR	HR	HR	HR	HR	R	
Bulldog-505	Univ. of Georgia	5	-	HR	-	R	-	-	
Caliber	Beck's Hybrids	4	HR	HR	HR	HR	HR	-	
Charger	Beck's Hybrids	5	HR	HR	HR	HR	HR	-	
Contender	Beck's Hybrids	5	HR	HR	HR	HR	HR	-	
Evermore	Allied Seed, L.L.C.	5	HR	HR	HR	HR	HR	-	
Fierce	Beck's Hybrids	4	HR	HR	HR	HR	HR	-	
FSG 415BR	Farm Science Genetics	4	HR	HR	HR	HR	HR	-	
FSG 450	Allied Seed, L.L.C.	4	HR	HR	HR	HR	HR	HR	
FSG 527	Farm Science Genetics	5	HR	HR	HR	HR	HR	R	
GA-409	Pref. Alfalfa Genetics	4	HR	HR	HR	HR	HR	HR	
GA-497HD	Pref. Alfalfa Genetics	5	HR	HR	HR	HR	HR	-	
GA-535	Pref. Alfalfa Genetics	5	HR	HR	HR	HR	HR	-	
High Five	Allied Seed, L.L.C.	5	HR	HR	HR	HR	HR	HR	
HVS4220Q	MountainView Seeds	4	HR	HR	HR	HR	HR	HR	
Mariner V	Allied Seed, L.L.C.	4	HR	HR	HR	HR	HR	HR	
Paola	Interlake Forage Seeds	5	HR	HR	HR	HR	HR	HR	
Rebound 6XT	Croplan Genetics	4	HR	HR	HR	HR	HR	HR	
Saranac AR (certified)	Public	4	MR	R	HR	LR	-	-	
Signature	Allied Seed, L.L.C.	4	HR	HR	HR	HR	HR	HR	
Triade	Interlake Forage Seeds	5	HR	HR	HR	HR	HR	HR	
WL-349HQ	W-L Research	4	HR	HR	HR	HR	HR	HR	
WL 365HQ	W-L Research	5	HR	HR	HR	HR	HR	-	
54Q16	Corteva Agriscience	4	HR	HR	HR	HR	HR	HR	
54Q29	Corteva Agriscience	4	HR	HR	HR	HR	R	R	
54VQ52	Corteva Agriscience	4	HR	R	HR	HR	HR	HR	
55H96	Corteva Agriscience	5	HR	HR	HR	HR	HR	HR	
55V50	Pioneer	5	HR	R	HR	HR	HR	HR	
Experimental Varieties⁴									
BYS5028	Brett Young	5	HR	HR	HR	HR	HR	R	
NF11ALF0006	Noble Foundation	6	-	-	-	-	-	-	

¹Variety 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.

²Disease resistance: S=susceptible, LR=low resistance, MR=moderate resistance, R=resistance, HR=high resistance (more detailed disease and insect resistance ratings at www.alfalfa.org/pdf/2023_Alfalfa_Variety_Leaflet.pdf).

³Check varieties: 1=Spredor 3, 2=Vernal, 3=Ranger, 4=Saranac, 5=DuPuits.

⁴Experimental varieties are not available commercially, but provide an indication of the progress being made by forage breeding companies.

Table 14. Summary of Kentucky Roundup Ready alfalfa yield trials 2011-2022 (yield shown as a percentage of the mean of the commercial varieties in the test).

Variety	Proprietor	Variety Characteristics ¹							Lexington				Princeton			Quicksand	Mean ⁵ (# trials)
		FD	Disease Resistance ²						12 ^{3,4}	15	16	00	11	13	15	14	
			Bw	Fw	An	PRR	APH1	APH2	6yr ⁶	6yr	5-yr	3-yr	5yr	4yr	2yr		
Alfagraze 300 RR	America's Alfalfa	3	HR	R	HR	HR	HR	–	95	96	100	100	93	99	93		97(7)
Alfagraze 600 RR	America's Alfalfa	6		R	HR	R	R	–		97					85	93	92(3)
Ameristand 405T RR	America's Alfalfa	4	HR	HR	HR	HR	HR	MR	100	100	89	103	97	100	98	93	98(8)
Ameristand 433T RR	America's Alfalfa	3	HR	R	R	HR	HR	–	92	98	100	95		95	96	107	98(7)
Ameristand 445TQ RR	America's Alfalfa	4	HR	HR	HR	HR	HR	–	105	104				100			103(3)
AphaTron RR	Croplan Genetics	4	HR	HR	HR	HR	HR	HR	99					98			99(2)
Consistency 4.10 RR	Croplan Genetics	4	HR	HR	HR	HR	HR	–	101				102				102(2)
DKA-41-18 RR	Monsanto	4	HR	HR	HR	HR	HR	–	100				101		100		100(3)
DKA 44-16 RR	Monsanto	4	HR	HR	HR	HR	HR	–	104					100			102(2)
Stratica RR	Croplan Genetics	4	HR	HR	HR	HR	HR	–	97		105			96			99(3)
Tonnica RR	Crop Genetics	5	HR	HR	HR	HR	HR	–	105					101			103(2)
WL 355 RR	W-L Research	4	HR	HR	HR	HR	HR	–	99				102		110		104(3)
WL 356HQ RR	W-L Research	5	HR	HR	HR	HR	HR	HR	100	99				96			98(3)
WL 372HQ RR	W-L Research	5	HR	HR	HR	HR	HR	–	102					106			104(2)
428 RR	Allied Seed	4	HR	HR	HR	HR	HR	–		100	100			104		111	104(4)
438 RR	Allied Seed	4	HR	HR	HR	HR	HR	–				108					–
54R02 RR	Dupont Pioneer	4	HR	HR	HR	HR	HR	–	97	107	96		104		102	97	101(6)
55VR06 RR	Dupont Pioneer	5	HR	R	Hr	HR	HR	MR		95						99	97(2)
55VR08 RR	Dupont Pioneer	5	–	HR	HR	HR	HR	HR		103	111				110		108(3)
6516R RR	NEXGROW	5	HR	–	HR	HR	HR	–	106					109			108(2)

¹Variety 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.

²Disease resistance: S=susceptible, LR=low resistance, MR=moderate resistance, R=resistance, HR=high resistance (more detailed disease and insect resistance ratings at www.alfalfa.org/pdf/2022_Alfalfa_Variety_Leaflet.pdf).

³Year trial was established.

⁴Use 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 Princeton trial planted in the spring of 2011 was harvested for 5 years, so the final yield report would be "2015 Alfalfa Report" archived in the UK Forage website (<https://forages.ca.uky.edu>).

⁵Mean only presented when respective variety was included in two or more trials.

⁶Number of years of data.

