



# 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.

<sup>1</sup>DEP 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 <sup>2</sup>			
	Temperature		Rainfall	
	°F	DEP <sup>1</sup>	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

<sup>1</sup>DEP is departure from the long-term average.<sup>2</sup>2022 data is for ten months through October.

Anthracnose 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. 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-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\\_Alfalfa\\_Variety\\_Leaflet.pdf](http://www.alfalfa.org/pdf/2023_Alfalfa_Variety_Leaflet.pdf). The Alfalfa Analyst publication also provides good information on diagnosing disease and insect damage. Download from [alfalfa.org](http://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	Percent Stand												Yield (tons/acre)						6-year Total					
	FD <sup>1</sup>	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022	2017	2018	2019	2020	2021	2022	6-year Total				
	Sep 26	Mar 14	Sep 25	Mar 28	Oct 11	Mar 17	Sep 24	Mar 24	Sep 29	Mar 22	Sep 22	Total	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	Total				
<b>Commercial Varieties Available for Farm Use</b>																								
Evermore	5	93	93	94	96	96	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	96	95	93	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	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	90	86	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	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	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	
Saracac AR (certified)	4	87	87	86	86	84	63	48	34	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	
<b>Experimental Varieties</b>																								
NF11ALF006	6	93	90	90	89	84	83	79	76	83	80	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	92	91	89	83	75	72	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	24.18	10.87	10.16	20.42	15.87	24.56	18.10	28.27	15.08	14.18	16.35	
LSD,0.05		7	8	8	9	12	13	14	13	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	

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

**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 it will be available when needed.

## Description of the Tests

The current alfalfa variety tests shown in this report were established at Lexington (2017, 2018, 2019, 2020, 2021 and 2022) and Princeton (2022) as part of the forage variety testing program. The summary reports also contain past years results from alfalfa tests in Princeton and Quicksand as well as Lexington. The soils in Lexington (Maury), Princeton (Crider) and Quicksand (Nolan) are well drained silt loams and are well suited for alfalfa production.

Plots were 5 feet by 20 feet in a randomized complete block design with four replications with a harvested plot area of 5 feet by 15 feet. In each test, 20 pounds of seed per acre were planted into a prepared seedbed using a disk drill. All seed was either planted pre-inoculated with rhizobia bacteria inoculum or inoculum was added before seeding. With pre-inoculated seed, the seeding rate was adjusted to account for the weight of any seed coatings. 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 (P, K, Boron, and lime based on regular soil tests), 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. Roundup was applied for weed control in the Roundup Ready trials.

## Results and Discussion

Weather data for Lexington and Princeton are presented in Table 1 and 2. Yield data (on a dry matter basis) for all tests are reported in tables 3 through 11. 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 2022 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 the data, is included

**Table 4. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 12, 2018, at Lexington, Kentucky.**

Variety	FD <sup>1</sup>	Seedling Vigor <sup>2</sup>	Percent Stand												Yield (tons/acre)						5-year Total						
			2018			2019			2020			2021			2018			2019			2020			2021			
			May 22	Sep 25	Oct 28	Mar 11	Sep 12	Oct 24	Mar 9	Sep 22	Oct 22	Mar 13	Sep 22	Oct 22	Mar 12	Sep 13	Oct 12	Mar 13	Sep 12	Oct 12	Mar 11	Sep 11	Oct 11	Mar 11	Sep 11	Oct 11	
<b>Commercial Varieties-Available for Farm Use</b>																											
Ameristand 403T Plus	4	4.8	100	98	95	94	88	75	78	78	74	1.43	2.03	2.45	4.93	1.58	1.41	0.45	1.08	0.51	5.03	15.86*					
Saranac AR (certified)	4	4.0	99	98	95	93	86	76	38	45	40	1.53	2.07	2.29	3.69	0.91	0.98	0.34	0.77	0.39	3.38	12.97					
<b>Experimental Varieties</b>																											
BY5028	-	5.0	100	98	95	94	88	75	78	78	74	1.43	2.03	2.45	4.93	1.58	1.41	0.45	1.08	0.51	5.03	15.86*					
NF11ALF-006	6	4.8	99	98	93	79	72	64	63	68	73	68	1.45	2.00	2.55	4.80	1.37	1.39	0.50	0.85	0.48	4.60	15.40*				
Mean		4.6	99	98	95	91	86	80	62	65	68	63	1.43	2.10	2.66	4.49	1.37	1.29	0.44	0.91	0.46	4.47	15.14				
CV%		6.7	1	2	4	11	16	13	12	21	22	16.18	18.91	17.02	12.34	17.71	19.09	23.22	20.43	23.44	18.32	10.96					
LSD,0.05		0.5	2	4	5	16	22	20	13	22	22	0.37	0.63	0.72	0.89	0.39	0.39	0.16	0.30	0.17	1.31	2.66					

<sup>1</sup>FDFall Dormancy

<sup>2</sup>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.

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](http://www.alfalfa.org/pdf/alfalfainthesouth.pdf)
- Alfalfa Management Guide: [www.crops.org/files/publications/alfalfa-management-guide.pdf](http://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](http://www.alfalfa.org/pdf/AlfalfaAnalyst.pdf)
- Alfalfa Variety Ratings, Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties: [www.alfalfa.org/varietyLeaflet.php](http://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 <sup>1</sup>	Seedling Vigor <sup>2</sup> May 3, 2019	Percent Stand												Yield (tons/acre)														
			2019			2020			2021			2022			Total			May 12			Jun 13			Jul 12			Aug 11		
Commercial Varieties Available for Farm Use															4-year Total														
Rebound 6XT	4	4.9	100	100	99	97	97	97	96	96	96	96	96	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	94	94	94	94	95	95	95	95	95	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	95	95	95	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	97	97	97	97	97	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	96	97	97	95	95	95	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	95	96	96	96	95	95	95	95	95	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	95	95	95	95	95	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	91	91	91	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	95	96	96	96	93	93	93	93	93	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	81	81	81	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	81	81	81	81	1.08	3.94	5.54	1.46	1.27	0.72	0.94	0.69	5.08	15.64					
Alfagrazie	3	4.1	99	99	98	74	78	87	84	96	96	96	96	96	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	91	91	91	91	91	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									

<sup>1</sup>FD=Fall dormancy.

<sup>2</sup>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.

## About the Authors

G.L. Olson is a research specialist, S.R. Smith and J.C. Henning are Extension professors and forage specialists, and C.D. Teutsch is an associate Extension professor and forage specialist.

**Table 6. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 3, 2020, at Lexington, Kentucky.**

Variety	FD <sup>1</sup>	Seedling Vigor <sup>2</sup>		Percent Stand				Yield (tons/acre)				3-year Total					
		2020		2022				2020		2021							
		June 3, 2020	June 3	Sept 24	Mar 24	Sept 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 15	Total		
<b>Commercial Varieties-Available for Farm Use</b>																	
FSG-415BR	4	4.9	100	100	99	99	98	25.6	7.70	2.33	1.80	1.06	1.30	1.23	7.72	17.98*	
Alfabar	3	4.1	97	96	96	96	95	25.3	7.46	2.22	1.83	1.09	1.30	1.24	7.67	17.66*	
HVS4220Q	4	4.8	100	99	99	99	98	21.5	7.86	2.21	1.89	1.05	1.24	1.11	7.50	17.50*	
GA-497HD	5	4.8	98	97	98	98	97	95	24.5	7.25	2.12	1.83	1.15	1.21	1.25	7.56	17.26*
GA-535	5	4.8	98	97	98	98	98	98	23.1	7.02	1.93	1.83	1.05	1.24	1.17	7.22	16.55*
Paola	5	4.8	99	98	98	99	99	97	23.8	7.20	1.66	1.65	1.01	1.31	1.23	6.88	16.46*
Ameristand 403T Plus	4	4.3	99	98	97	97	97	97	2.21	6.93	2.16	1.73	1.05	1.12	1.09	7.15	16.29
GA-409	4	4.6	100	100	100	100	98	96	2.47	6.59	2.08	1.82	1.03	1.13	1.07	7.14	16.20
FSG-527	5	4.3	97	98	98	98	98	98	1.95	7.21	1.97	1.74	0.95	1.15	1.04	6.85	16.01
Triade	5	5.0	100	100	100	100	99	98	2.34	6.99	1.67	1.59	1.01	1.22	1.18	6.67	16.00
Saranac AR (certified)	4	4.5	100	96	96	95	94	94	2.23	6.85	2.07	1.49	0.92	1.11	1.06	6.65	15.73
Alfagrazie	3	4.1	96	94	94	94	94	94	2.32	6.11	1.91	1.44	0.79	1.00	0.95	6.08	14.50
Mean		4.6	99	98	98	97	96	2.33	7.10	2.03	1.72	1.01	1.19	1.14	7.09	16.51	
CV,%		9.5	2	2	2	2	2	2	11.28	8.75	11.79	12.78	12.51	10.27	10.11	8.75	6.86
LSD,0.05		0.6	2	3	3	3	3	3	0.38	0.89	0.34	0.32	0.18	0.18	0.17	0.89	1.63

<sup>1</sup>FD=Fall dormancy.

<sup>2</sup>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.

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**Table 7. Dry matter yields, seedling vigor, and stand persistence of Roundup Ready alfalfa varieties sown May 15, 2020, at Lexington, Kentucky.**

Variety	FD <sup>1</sup>	Seedling Vigor <sup>2</sup>		Percent Stand				Yield (tons/acre)				3-year Total						
		2020		2022				2020		2021								
		June 11, 2020	Jun 11	Sep 24	Mar 24	Sep 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 15	Total			
<b>Commercial Varieties-Available for Farm Use</b>																		
438 RR	4	5	100	100	100	100	100	100	100	1.74	8.43	2.05	1.82	0.82	1.03	0.69	6.42	16.59*
Ameristand 405T RR	4	5	100	100	100	100	100	100	100	1.91	7.95	1.95	1.66	0.80	0.84	0.62	5.88	15.75*
Alfagrazie 300 RR	3	5	100	100	100	100	100	100	100	1.60	8.16	2.04	1.56	0.59	0.87	0.56	5.62	15.38*
Ameristand 433T RR	3	5	100	100	100	100	100	100	100	1.58	7.70	1.88	1.49	0.53	0.84	0.53	5.26	14.54*
Mean		5	100	100	100	100	100	100	100	1.68	7.98	1.96	1.61	0.65	0.88	0.59	5.69	15.36
CV,%		0	0	0	0	0	0	0	0	13.60	10.34	20.59	21.15	32.16	14.38	18.22	19.72	12.94
LSD,0.05		0	0	0	0	0	0	0	0	0.33	1.18	0.58	0.49	0.30	0.18	0.15	1.60	2.84

<sup>1</sup>FD=Fall dormancy.

<sup>2</sup>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 8. Dry matter yields, seedling vigor, and stand persistence of alfalfa varieties sown April 5, 2021, at Lexington, Kentucky.**

Variety	FD <sup>1</sup>	Seedling Vigor <sup>2</sup> Jun 1, 2021	Percent Stand					Yield (tons/acre)							2-year Total	
			2021		2022			2021	2022				Total			
			Jun 1	Sep 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	Total		
<b>Commercial Varieties-Available for Farm Use</b>																
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*		
Alfagrazee	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		

<sup>1</sup>FD=Fall dormancy.

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

Variety	FD <sup>1</sup>	Seedling Vigor <sup>2</sup> June 1, 2021	Percent Stand					Yield (tons/acre)							2-year Total	
			2021		2022			2021	2022				Total			
			June 1	Sep 29	Mar 22	Sep 22	Total	May 12	Jun 13	Jul 12	Aug 11	Sep 14	Total	Total		
<b>Commercial Varieties-Available for Farm Use</b>																
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		
Alfagrazee 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		

<sup>1</sup>FD=Fall dormancy.

<sup>2</sup>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 10. Dry matter yields and stand persistence of Roundup Ready alfalfa varieties sown April 4, 2022, at Lexington, Kentucky.**

Variety	FD <sup>1</sup>	Percent Stand		Yield (tons/acre)				2022	
		2022		2022					
		Jul 20	Sep 22	Jul 20	Aug 12	Sep 14	Total		
<b>Commercial Varieties-Available for Farm Use</b>									
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*		
Alfagrazee 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		

<sup>1</sup>FD=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 <sup>1</sup>	Seedling Vigor <sup>2</sup> Jun 1, 2022	Percent Stand		Yield (tons/acre)				2022
			2022		2022				
			Jun 1	Nov 9	Jul 11	Aug 23	Total		
<b>Commercial Varieties-Available for Farm Use</b>									
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*		
Alfagrazee	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	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	

<sup>1</sup>FD=Fall dormancy.

<sup>2</sup>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 12. Characterization and proprietors of alfalfa varieties in current trials in Kentucky.**

Variety	Proprietor	Variety Characteristics <sup>1</sup>						
		Fall Dormancy <sup>3</sup>	Bw	Fw	An	PRR	APH1	APH2
<b>Commercial Varieties-Available for Farm Use</b>								
Alfabar	Barenbrug	3	HR	HR	HR	HR	HR/R	-
Alfagrazze	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
<b>Experimental Varieties<sup>4</sup></b>								
BY55028	Brett Young	5	HR	HR	HR	HR	HR	R
NF11ALF0006	Noble Foundation	6	-	-	-	-	-	-

<sup>1</sup>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.

<sup>2</sup>Disease 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](http://www.alfalfa.org/pdf/2023_Alfalfa_Variety_Leaflet.pdf)).

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

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

**Table 13. Summary of Kentucky alfalfa yield trials 2004-2022 (yield shown as a percentage of the mean of the commercial varieties in the test).**

Variety	Proprietor	Variety Characteristics <sup>1</sup>												Lexington						Princeton					
		Disease Resistance <sup>2</sup>												Lexington						Princeton					
		F	Bw	Fw	An	PRR	APH1	APH2	5yr <sup>3</sup>	7yr	6yr	5yr	6yr	5yr	4yr	3yr	5yr	5yr	6yr	4yr	3yr	11	13	Mean <sup>5</sup>	
A-4440	Producers Choice	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	100	104	104	107	107	104	106(2)	106(2)	-	
A-5225	Producers Choice	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	100	104	107	107	107	104	106(2)	106(2)	-	
Adrenalin	Brett Young Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	81	88	100	101	107	99	99(8)	99(8)	-
Alfabar	Barenbrug USA	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	105	105	105	105	105	105	104(7)	104(7)	-
Altagraze	America's Alfalfa	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	109	109	103	103	104	104	104(2)	104(2)	-
Ameristand 403T	America's Alfalfa	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	99	91	102	94	104	102	107	107	-
Ameristand 403TPlus	America's Alfalfa	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	99	91	102	94	104	102	107	107	-
Ameristand 407TQ	America's Alfalfa	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	99	91	102	94	104	102	107	107	-
Ameristand 427TQ	America's Alfalfa	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	100	100	100	100	101	101	107	107	-
Anchormate	ProSeed Marketing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	100	100	100	100	106	106	-
Arc (certified)	Public	4	LR	M	M	HR	-	-	-	-	76	93	92	93	92	-	95	86	95	95	95	95	90(6)	90(6)	-
Archer III	America's Alfalfa	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	104	104	104	104	104	104	106	106	-
Baralfa 53HR	Barenbrug USA	5	HR	R	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	104	104	104	104	104	104	106	106	-
Buffalo	Public	-	-	-	-	-	-	-	-	-	82	86	80	89	85	-	95	78	91	91	91	91	86(9)	86(9)	-
Bulldog-505	Univ. of GA	5	-	HR	-	R	-	R	-	R	-	R	-	R	-	-	103	93	91	91	91	91	96	96	-
Caliber	Beck's Hybrids	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	99	105	99	105	105	105	101(5)	101(5)	-
Charger	Beck's Hybrids	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	102	102	102	102	102	102	104(2)	104(2)	-
Contender	Beck's Hybrids	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	101	103	101	101	101	101	101(3)	101(3)	-
DKA 43-13	Monsanto	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	102	102	102	102	102	102	102(2)	102(2)	-
DKA 50-18	Monsanto	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	110	110	110	110	110	110	106	106	-
DG4210	Crop Production	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	101	101	101	101	101	101	103	103	-
Dynagro Everlast	United Agr. Prod.	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	102	102	102	102	102	102	102(2)	102(2)	-
Enforcer	Southern States	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	90	90	90	90	90	90	96	96	-
Evermore	Southern States	5	HR	HR	R	R	R	R	R	R	R	R	R	R	R	-	107	112	112	112	112	112	105	105	-
Expedition	NEXGROW	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	106	106	106	106	106	106	106	106	-
Feast +EVY	NEXGROW	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	107	107	107	107	107	107	107	107	-
Fierce	Beck's Hybrids	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	107	107	107	107	107	107	107	107	-
FSG 403LUR	Farm Sci. Genetics	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	108	108	108	108	108	108	108(2)	108(2)	-
FSG 408DP	Allied Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	105	105	105	105	105	105	105(3)	105(3)	-
FSG 415BR	Allied Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	103	103	103	103	103	103	106(3)	106(3)	-
FSG 424	Farm Sci. Genetics	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	102	102	102	102	102	102	104(2)	104(2)	-
FSG 426	Farm Sci. Genetics	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	103	103	103	103	103	103	103(3)	103(3)	-
FSG 524	Farm Sci. Genetics	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	96	96	96	96	96	96	103(3)	103(3)	-
FSG 527	Farm Sci. Genetics	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	97	97	97	97	97	97	103(3)	103(3)	-
FSG 528SF	Lewis Seed Co.	5	HR	R	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	107	107	107	107	107	107	107	107	-
GA-409	Pref. Alf. Genetics	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	104	104	104	104	104	104	104(2)	104(2)	-
GA-497HD	Pref. Alf. Genetics	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	108	108	108	108	108	108	108(2)	108(2)	-
GA-535	Pref. Alf. Genetics	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	100	100	100	100	100	100	109(2)	109(2)	-
Genoa	NEXGROW	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	112	99	99	99	99	99	107(4)	107(4)	-
Gunner	Cropian Genetics	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	103	103	103	103	103	103	107(4)	107(4)	-
HVS4220Q	Mountain View Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	106	106	106	106	106	106	106(3)	106(3)	-
KingFisher 243	Cal/NWest	5	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	101	101	101	101	101	101	101(2)	101(2)	-
KingFisher 4020	Legacy Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	105	105	105	105	105	105	105(3)	105(3)	-
L447HD	Legacy Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	97	97	97	97	97	97	102	102	-
L449Aph2	Legacy Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	101	101	101	101	101	101	101(2)	101(2)	-
L455HD	Legacy Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	102	102	102	102	102	102	102(2)	102(2)	-
Lancer	Allied Seeds	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	101	101	101	101	101	101	101(2)	101(2)	-
LegenDairy 5.0	Cropian Genetics	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	-	99	99	99	99	99	99	103(3)	103(3)	-

Table 13. Continued

Variety	Proprietor	Variety Characteristics <sup>1</sup>										Lexington						Princeton												Mean <sup>5</sup> (# trials)										
		FD		Bw		Disease Resistance <sup>2</sup>		04 <sup>3,4</sup>		06		08		11		12		15		16		17		18		19		00		05		08		09		11		13		
		Fw	Bw	Fw	An	PRR	APH1	APH2	5yr <sup>6</sup>	7yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr	5yr	6yr							
Mariner II	Allied Seeds	4	HR	HR	HR	HR	HR	R																																
Optimus	Brett Young Seeds	-	HR	HR	HR	HR	HR	-																																
Paola	Interlake Forage Seeds	5	HR	HR	HR	HR	HR	HR																											98					
Perform	Dairyland Research	4	HR	HR	HR	HR	HR	HR	-																									98(2)						
PGI 459	Producers Choice	4	HR	HR	HR	HR	HR	R																																
Phirst	UniSouth Genetics	4	HR	HR	HR	HR	HR	R																																
Phoenix	Southern States	5	HR	HR	HR	HR	HR	R	-																									105						
Radiance HD	Ampac Seed/Cisco	4	HR	HR	HR	HR	HR	R																										105(6)						
Radiant-AM	Ampac Seed	4	HR	HR	HR	HR	HR	R	-																										-					
Rebound 5.0	Croplan Genetics	4	HR	HR	HR	HR	HR	R	-																										-					
Rebound 6.0	Croplan Genetics	4	HR	HR	HR	HR	HR	R	-																									103(2)						
Rebound 6XT	Croplan Genetics	4	HR	HR	HR	HR	HR	R	-																									104(2)						
Reward II	PGI Alfalfa	4	HR	HR	HR	HR	HR	R	-																									-						
Saranae AR (certified)	Public	4	MR	R	HR	LR	-	-																										103(16)						
Triade	Interlake Forage Seeds	5	HR	HR	HR	HR	HR	R	-																									93(2)						
TripleTrust 450	ABi Alfalfa	5	HR	HR	HR	HR	HR	R	-																									-						
TripleTrust 500	Central Farm Supply	5	HR	HR	HR	HR	HR	R	-																									-						
USG 68THY	UniSouth Genetics	6	HR	HR	HR	HR	HR	R	-																									-						
Vernal	Public	2	R	MR	-	-	-	-																										-						
Withstand	Southern States	4	HR	HR	HR	HR	HR	R	-																									95(5)						
WL 343HQ	W-L Research	4	HR	HR	HR	HR	HR	R	-																								104(3)							
WL 349HQ	W-L Research	4	HR	HR	HR	HR	HR	R	-																								-							
WL 354HQ	W-L Research	4	HR	HR	HR	HR	HR	R	-																								-							
WL 357HQ	W-L Research	5	HR	HR	HR	HR	HR	R	-																								115							
WL 363HQ	W-L Research	5	HR	HR	HR	HR	HR	R	-																								115(2)							
WL 365HQ	W-L Research	5	HR	HR	HR	HR	HR	R	-																								104(3)							
4030	Brett Young Seeds	4	HR	HR	HR	HR	HR	R	-																								-							
53H92	Pioneer	3	HR	HR	HR	HR	HR	R	-																								-							
54Q32	Pioneer	4	HR	HR	HR	HR	HR	R	-																								-							
55V48	Pioneer	5	HR	HR	HR	HR	HR	R	-																								-							
55V50	Pioneer	5	HR	R	HR	HR	HR	R	-																								-							
6400HT	NEXGROW	4	HR	HR	HR	HR	HR	R	-																								105							
6415	NEXGROW	4	HR	HR	HR	HR	HR	R	-																								104(3)							
6417	NEXGROW	4	HR	HR	HR	HR	HR	R	-																								-							
6422Q	NEXGROW	4	HR	HR	HR	HR	HR	R	-																								107(2)							
6552	NEXGROW	5	HR	HR	HR	HR	HR	R	-																								-							

<sup>1</sup>Variety characteristics: FD=fal dormancy, Bw=bacterial wilt, Fw=fusarium wilt, An=anthracnose, PRR=phytophthora root rot, APH=aphanomyces root rot. Information provided by seed companies.<sup>2</sup>Disease 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](http://www.alfalfa.org/pdf/2023_Alfalfa_Variety_Leaflet.pdf)).<sup>3</sup>Year trial was established.<sup>4</sup>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 the spring of 2008 was harvested for 6 years, so the final yield report would be '2013 Alfalfa Report' archived in the UK Forage website (<https://forages.ca.uky.edu>).<sup>5</sup>Mean only presented when respective variety was included in two or more trials.<sup>6</sup>Number of years of data.

**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 <sup>1</sup>						Lexington				Princeton			Quicksand	Mean <sup>5</sup> (# trials)	
		FD	Disease Resistance <sup>2</sup>					12 <sup>3,4</sup>	15	16	00	11	13	15	14		
			Bw	Fw	An	PRR	APH1	APH2	6yr <sup>6</sup>	6yr	5-yr	3-yr	5yr	4yr	2yr	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	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)

<sup>1</sup>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.

<sup>2</sup>Disease 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](http://www.alfalfa.org/pdf/2022_Alfalfa_Variety_Leaflet.pdf)).

<sup>3</sup>Year trial was established.

<sup>4</sup>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 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>).

<sup>5</sup>Mean only presented when respective variety was included in two or more trials.

<sup>6</sup>Number of years of data.



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