



2024

Washington State Hay Growers Association

ALFALFA VARIETY TRIALS

Conducted by Washington State University Extension

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Washington State Hay Growers Association

Alfalfa Variety Trials

Conducted by Washington State University Extension

Nine alfalfa trials were harvested for yield in irrigated central Washington State in 2024. The Washington State Hay Growers Association (WSHGA) sanctions the trials and contracts with Washington State University (WSU) Extension to conduct and report the research. Three conventional trials are conducted near Othello, WA, and three conventional and one Roundup Ready™ (RR) trials near Pasco, WA. **The trials are named by the year and location when the fall planting occurred.**

For the 2021, 2022, and 2023 trials, the Othello site is located on the WSU Othello research farm 6 miles East, Southeast of Othello, WA at Lat: N46°47'41" Lng: W119°02'33", at an elevation of 1154 feet. The 2020 and 2021 Franklin County trials are located on land leased from the City of Pasco and called "City of Pasco" at Lat: 46°17'31.11"N and 119° 1'54.97" W with an elevation of 502 ft and near the City of Pasco Water Treatment Plant. A Pasco site was established in August 2022 at 3128 Ivy Road, Pasco, WA at Lat: 46°17'51.01"N Lng: 119° 8'22.40"W with an elevation of 446 ft.

Early spring weather was warmer than normal in 2024, allowing earlier harvesting than the 13-years prior, and started May 1st at the Pasco location. This early harvest allowed subsequent harvests to be 35 days apart and brought one of the highest total yields including over 13 tons per acre for one variety at the Pasco location.

The soil series are a Shano silt loam (coarse-silty, mixed-mesic Xerollic Camborthids) at Othello and a Quincy loamy fine sand (Xeric Torripsamments) at the City of Pasco and Pasco locations. All trials were sprinkler irrigated throughout the April-October growing season. Nozzle spacing is 30x40 9/64-inch nozzles. The frost-free (32°F) period at Othello averages 180 days and 209 days at Pasco. The Pasco location had 245 days of frost free in 2024.

The trials follow fertility recommendations found in the "Nutrient Management Guide for Dryland and Irrigated Alfalfa in the Inland Northwest" (PNW0611). Fields were fertilized with phosphorus and potassium in the fall of 2021. Conventional trials are sprayed after 3 tri-foliolate leaves appear after planting with imazamox with 2,4-DB and 0.25% NIS at establishment. Roundup Ready® trials are sprayed with glyphosate when the plants reach 3 trifoliolate leaves. Not enough Roundup Ready® varieties have been entered to have separate trials and are now being placed into conventional trials. This change started with the fall of 2021 planting.

Each trial is arranged in a randomized complete block (RCB) design with 4 replications. All trials are planted at 22 lbs./ac in rows spaced 6 inches apart with a 1-foot inter-plot separation, total plot size is 4 x 15 feet. The trials contain some experimental entries that are not yet named or released for commercial planting. Forage yields are collected for each submitted entry for three years on every planting.

The Coefficient of Variation or "CV" is estimated using statistics and gives an estimate of the variability in the field. The lower the number the less variation in the measurements taken and the more likely you can determine a significant difference between treatments. Analysis of Variance (ANOVA) is calculated and if variety is significant, the least significant difference (LSD) is calculated. The LSD is used to determine if the varieties are statistically different from each other. If the difference between the two-treatment means is greater than the LSD then you can determine that one variety yielded greater than another with a high level of confidence (90% for LSD at 0.10). With results when there is a variety that is statistically significantly better than the worst entry, it is highlighted in yellow, as well as those which cannot be separated from the best in the trial.

Tables 1 - 3 contain a summary of the annual total yields for alfalfa varieties from the fall planting in 2021 to 2023 at the Pasco and Othello locations. Yields are presented in percent of the mean of the test for ease of comparison. Table 4 is from National Alfalfa and Forage Alliance's (NAFA) "Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties – 2025 Edition and previous editions". For a complete copy of the NAFA document visit <https://www.alfalfa.org/varietyratings.php>. Forage yields for each harvest; total season yield for 2024 and the totals for all years of the trials from those planted in the fall of 2021 to date are reported in Tables 5 through 11. Yields are determined from whole plot fresh weights converted to a 100% dry matter basis using a constant dry matter fraction of 20%. Ratings for regrowth after the last cutting was taken in early October for both the City of Pasco and Othello locations and represent visual ratings from 1-5. Fall dormancy ratings for the Pasco location were determined on October 1st and October 4th, 2024.

The rating scale was: 1 - little to no regrowth, 2 - below average regrowth, 3 - average regrowth, 4 - above average regrowth, and 5 - high amount of regrowth. Although it is not a fall dormancy rating it does compare those in the trial for regrowth in the fall. At the end of each experiment, final stands were evaluated for percent stand. This was determined by visually determining how many 6-inch gaps were found between plants in each seeded row compared to the number of 6-inch blocks in a plot and calculating the percentage from the total number of 6-inch blocks in the plot.

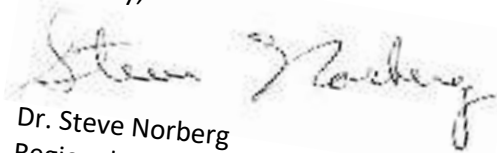
The WSHGA-WSU goal for the alfalfa variety testing project is to identify varieties for growers that are adapted to the Columbia Basin region, that will tolerate both biotic (pests) and abiotic (environmental) stresses, and still yield well. This annual publication aims to provide growers and industry with the best, most reliable quality results possible.

Quality sampling/testing and the data associated with it has not been continued since few entries were entered for evaluation for the last several years so we dropped the option.

I want to especially thank Laurent Leonhard, and Steve Fransen, for their assistance with this year's trials and planting of next year's trials. I also want to thank the Washington State Hay Growers Association and Washington State University Extension for their continued support.

Please do not hesitate to contact me if you have any questions about the trials.

Sincerely,



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Table 1. Continued. 2024 Summary of Conventionally Sprayed Alfalfa Yield Trials Seeded Since Summer of 2019 at WSU Othello Research Farm, WA

Entry	Seeded August 2019				Seeded August 2020				Seeded August 2021				6 YR Avg. of 2019 & 2020 Trials	6 YR Avg. of 2019 & 2021 Trials	6 YR Avg. of 2020 & 2021 Trials
	2020	2021	2022	3 Yr.	2021	2022	2023	3 Yr.	2022	2023	2024	3 Yr.			
Silverland GT 5					93.2%	91.0%	82.9%	90.1%							
SW4306					105.9%	108.2%	102.9%	106.3%							
SW 4412Y					102.8%	101.8%	98.3%	101.6%							
SW 5210	108.5%	106.4%	112.8%	109.1%											
SW 5213	102.5%	105.2%	108.2%	105.3%											
SW 5520Y					104.4%	107.6%	109.7%	107.2%							
SW 5615									108.8%	96.7%	103.0%	103.5%			
Vernal	78.3%	88.4%	83.9%	83.8%	84.2%	82.3%	74.7%	81.4%	92.3%	82.0%	85.1%	87.0%	82.6%	85.4%	84.2%
WL 349HQ	103.1%	103.3%	103.8%	103.4%											
WL 377HQ	99.2%	98.1%	97.8%	98.4%	104.1%	108.2%	110.1%	107.3%					102.9%		
Avg. Total-Tons/Acre	9.21	10.60	8.95	28.8	11.25	10.37	7.14	28.7	9.91	7.19	8.43	25.5			
LSD (0.10)**	5.1%	4.6%	7.8%	5.0%	6.8%	8.3%	9.1%	6.6%	6.6%	8.2%	8.4%	5.5%			
CV (%)	6.1%	5.5%	9.2%	5.9%	5.7%	7.0%	7.7%	5.6%	5.4%	6.8%	6.9%	4.7%			

* Was originally submitted as a experimental

** If LSD number is given then it was significant at PR>F 0.10, if not then it was not significant (NS).

Table 2. 2024 Summary of Conventionally Sprayed Alfalfa Yield Trials Planted Since Fall of 2019 - Near Pasco, WA

Entry	Seeded August 2019				Seeded August 2020				Seeded August 2021				6 YR	6 YR	6 YR
	2020	2021	2022	3 Yr.	2021	2022	2023	3 Yr.	2022	2023	2024	3 Yr.	Avg. of 2019 & 2020 Trials	Avg. of 2019 & 2021 Trials	Avg. of 2020 & 2022 Trials
457HD+*	101.6%	102.2%	92.6%	99.3%											
54Q16									107.3%	104.8%	106.7%	106.4%			
54Q29	99.1%	100.7%	112.5%	103.5%	107.6%	104.0%	101.9%	105.0%					104.3%		
54VQ52									107.0%	99.4%	98.6%	101.4%			
6585Q	96.9%	97.4%	97.3%	97.2%											
AFX 439*					101.6%	104.6%	102.5%	102.8%							
Stockpile II*	107.1%	107.3%	108.2%	107.5%											
X-Force 5400*					112.2%	115.5%	111.3%	112.7%							
AFX175021*					90.0%	99.6%	102.6%	96.4%							
AmeriStand 428TQ					97.8%	97.5%	103.7%	99.2%	101.9%	99.8%	103.2%	101.9%			100.6%
AmeriStand 446 NT															
CP5028	101.7%	101.7%	90.6%	98.6%											
DKA 40-16					97.1%	99.5%	100.9%	98.8%							
DKA40-51RR	99.8%	100.7%	103.3%	101.2%											
DKA 44-18	103.7%	101.8%	104.9%	103.3%	101.7%	104.8%	103.8%	103.3%					103.3%		
DKA 50-17					105.7%	104.0%	102.0%	104.2%							
DG 4120					98.8%	100.1%	102.8%	100.3%	99.0%	105.2%	104.4%	103.4%			101.9%
F2F6C-418	109.0%	100.9%	104.2%	104.5%											
F2F6C-628	99.2%	98.5%	90.9%	96.6%											
FG C0415SN223*					98.5%	98.2%	104.0%	99.8%							
FSG 415BR					104.6%	102.2%	100.6%	102.8%							
FSG 527					102.9%	103.1%	109.2%	104.5%							
GO-FU Falcata Alfalfa					72.7%	78.4%	69.1%	73.7%							
HybriForce - 3600					104.6%	97.3%	93.2%	99.3%							
HybriForce - 4400					100.4%	100.9%	96.7%	99.6%							
HybriForce /Wet									102.9%	94.2%	100.0%	99.0%			
Integra 8520					100.4%	100.5%	101.8%	100.8%							
LegenDairy AA									93.5%	99.9%	103.0%	99.5%			

Table 2. Continued. 2024 Summary of Conventionally Sprayed Alfalfa Yield Trials Planted Since Fall of 2019 - Near Pasco, WA

Entry	Seeded August 2019				Seeded August 2020				Seeded August 2021				6 YR Avg. of 2019 & 2020 Trials	6 YR Avg. of 2019 & 2021 Trials	6 YR Avg. of 2020 & 2022 Trials
	2020	2021	2022	3 Yr.	2021	2022	2023	3 Yr.	2022	2023	2024	3 Yr.			
LS - 04SJ					101.1%	95.8%	96.8%	98.3%							
LS - 06DR					98.4%	99.0%	98.8%	98.7%							
LS - 1508					105.2%	102.9%	102.6%	103.8%							
LS -151*									98.7%	93.5%	93.5%	95.2%			
LS - 181*									92.2%	98.6%	98.4%	96.9%			
LS - 183*									92.7%	96.4%	98.3%	96.3%			
Magnum 9-Wet									110.0%	95.8%	93.7%	99.2%			
MPIII Max Q	98.5%	95.6%	98.2%	97.3%											
MVS 4220Q					109.0%	109.4%	116.7%	111.1%							
Nimbus									104.4%	104.2%	100.5%	103.1%			
Rebound AA									101.6%	96.2%	104.3%	101.0%			
SGS47M	106.7%	105.1%	108.7%	106.7%											
Silverland GT 5					97.8%	93.1%	85.2%	93.0%							
SW 4412Y					99.4%	100.5%	108.9%	102.2%							
SW 5210	104.6%	101.5%	116.2%	106.7%											
SW 5213	99.9%	101.1%	104.6%	101.7%											
SW 5520Y					102.9%	97.0%	103.3%	101.0%							
SW 5615									113.3%	109.4%	108.7%	110.4%			
Vernal	99.2%	98.5%	90.9%	96.6%	89.1%	89.6%	79.1%	86.8%	92.1%	85.6%	86.7%	88.0%	91.7%	92.3%	87.4%
WL 349HQ	96.4%	105.7%	102.3%	101.7%											
WL 3521HQ									100.2%	102.0%	110.6%	105.0%			

Avg. Total Tons/Acre	11.10	13.20	9.57	33.80	12.30	9.87	7.42	29.60	8.80	10.90	12.00	31.60			
LSD Years (0.10)**	5.8%	4.4%	5.5%	3.9%	6.9%	8.0%	7.5%	5.1%	8.1%	7.3%	4.8%	4.7%			
CV(%)	4.8%	3.7%	4.6%	3.2%	5.8%	6.8%	6.4%	4.3%	6.9%	6.2%	4.0%	4.0%			

* Was originally submitted as a experimental

** If LSD number is given then it was significant at PR>F 0.10, if not then it was not significant (NS).

Table 3. 2024 Summary of Roundup Sprayed Alfalfa Yield Trials Planted Since 2019 - Near Pasco, WA

Entry	Seeded August 2019				Seeded August 2020				Seeded August 2021				6 YR	6 YR	6 YR
	2020	2021	2022	3 Yr.	2021	2022	2023	3 Yr.	2021	2022	2023	3 Yr.	Avg. of 2019 & 2020 Trials	Avg. of 2019 & 2021 Trials	Avg. of 2020 & 2021 Trials
54VR70	103.4%	99.1%	107.8%	103.0%											
6527R.ST					100.5%	102.2%	103.4%	101.8%							
AFX 463RR									104.1%	109.4%	106.6%	106.8%			
AmeriStand 416NT RR*					102.6%	103.3%	98.0%	101.5%	98.7%	99.4%	101.3%	99.9%			100.7%
AmeriStand 481 HVXRR	91.0%	92.9%	96.7%	93.4%											
DKA 40-21HVXRR	99.0%	94.3%	94.5%	95.9%											
DKA 40-51					100.5%	102.7%	102.6%	101.8%							
DKA43-18RR	108.9%	108.4%	106.1%	107.9%	105.6%	101.8%	106.4%	104.7%					106.3%		
DKA44-16RR	105.1%	101.1%	104.2%	103.3%	101.2%	97.5%	98.3%	99.3%					101.3%		
DKA50-20RR	104.0%	101.1%	100.0%	101.7%											
HVS Megatron									96.6%	101.2%	99.1%	99.1%			
Integra 8471R					100.9%	100.2%	98.2%	99.9%							
NG6424R	101.3%	97.7%	99.2%	99.3%											
NG6547R	105.5%	101.1%	103.5%	103.2%											
RR Apatron 2XT									98.7%	96.3%	102.0%	99.1%			
RR Check	100.2%	98.5%	97.8%	98.8%	100.2%	99.0%	95.5%	98.5%	101.0%	94.5%	97.5%	97.6%	98.7%	98.2%	98.1%
RR NemaStar									98.5%	97.8%	93.2%	96.3%			
RR Saltiva									108.4%	100.2%	96.3%	101.2%			
WL 3441HQ.RR									100.0%	101.6%	104.7%	102.2%			
WL375HVX.RR					92.4%	93.8%	95.7%	93.7%							

Total Tons/Acre	11.20	13.53	10.07	34.80	13.20	9.60	8.84	31.61	9.60	11.00	11.50	32.10			
LSD (0.10)**	6.1%	5.0%	NS	5.5%	0.5%	NS	NS	NS	NS	5.7%	NS	5.1%			
CV(%)	5.1%	4.2%	6.9%	4.5%	3.3%	6.5%	7.3%	4.5%	7.1%	5.1%	6.1%	4.2%			

* Was originally submitted as a experimental

** If LSD number is given then it was significant at PR>F 0.10, if not then it was not significant (NS).

Table 4. Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties in these Trials* HR= High Resistance, R= Resistance, MR=Moderate Resistance, LR=Low Resistance, S=Susceptible

Variety	Marketing	FD	WS	BW	VW	FW	AN	PRR	APH ¹	APH ²	SAA	PA	BAA	SN	SRKN	NRKN	Salt	Tech.
54Q16	Pioneer	4		HR	HR	HR	HR	HR	HR	HR		R		HR				C
54Q29	Pioneer	4		HR	HR	R	HR	HR	HR		R	HR		HR				C
54VQ52	Pioneer	3		HR	HR	HR	HR	HR	HR	HR	R	R		HR				C
54VR70	Pioneer	4		R	R	R	R	HR	HR	R		MR		HR				R
6453Q	NEXGROW	4	2	HR	HR	HR	HR	HR	HR	HR	R	R		R				C
6585Q	NEXGROW	5	2	HR	HR	HR	HR	HR	HR			R		HR			G	C
Ace	BrettYoung	4		HR	HR	HR	HR	HR	HR		R	MR	R	HR				C
AFX 439*	Alforex Seeds	4		HR	HR	HR	HR	HR	HR	R	HR	R	R	R				C
AFX 467	Alforex Seeds	4		HR	HR	HR	HR	HR	HR	R		R		R			G	C
AmeriStand 416NT RR	America's Alf.	4		HR	HR	HR	HR	HR	HR		R	R		HR			G	R
AmeriStand 428TQ	America's Alf.	4	1	HR	HR	HR	HR	HR	HR	HR	R	R		HR				C
AmeriStand 446NT	America's Alfalfa	4	2	HR	HR	HR	HR	HR	R		R	HR		HR				C
AmeriStand 481 HVXRR	America's Alfalfa	4	2	HR	HR	HR	HR	HR	HR	HR	R	R		R				RX
AmeriStand 518NT	America's Alfalfa	5		HR	HR	HR	HR	HR	HR			HR		HR		HR	G	C
DG 4120	Nutrien Ag Solutions	4	1	HR	HR	HR	HR	HR	HR	HR	R	R		R				C
DG 4210	Nutrien Ag Solutions	4	1	HR	HR	HR	HR	HR	HR		HR	R		R				C
DKA40-16	DeKalb	4	1	HR	HR	HR	HR	HR	HR	R	R	R		HR			G	C
DKA40-21HVXRR	Dekalb	4	2	HR	HR	HR	HR	HR	HR	R	R	R		R				RX
DKA40-51RR	Dekalb	4	1	HR	HR	HR	HR	HR	HR	HR	R			R				R
DKA43-18RR	DeKalb	4	2	HR	HR	HR	HR	HR	HR	HR				HR		R		R
DKA44-16RR	DeKalb	4	2	HR	HR	HR	HR	HR	HR	R	R	R		R			G	R
DKA50-17	DeKalb	5	1	HR	HR	HR	HR	HR	HR	R		HR		R				C
Dynamo	BrettYoung	4	2	HR	HR	HR	HR	HR	HR	R		R	R					C
Gunner AA	Winfield United	5	1	HR	HR	HR	HR	HR	HR	HR		HR		HR			G	C

FD Fall Dormancy
 WS Winter Survival
 BW Bacterial Wilt
 VW Verticillium Wilt
 FW Fusarium Wilt

AN Anthracnose Race 1
 PRR Phytophthora Root Rot
 SAA Spotted Alfalfa Aphid
 PA Pea Aphid

BAA Blue Alfalfa Aphid
 SN Stem Nematode
 APH¹ Aphanomyces Race 1
 APH² Aphanomyces Race 2

SRKN Southern Root Knot Nematode
 NRKN Northern Root Knot Nematode
 Salt Tol.- G=germination F=forage prod.
 Tech. C= Conv., R= RR, RX= RR & HarvXtra H=Hybrid

* NAFA's "Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties - 2021 Edition and previous editions". "For a more complete copy of the NAFA document visit www.alfalfa.org/varietyLeaflet.php." Blanks mean adequate testing has not yet occurred. Only data from publications were used.

Table 4. Continued. Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties in these Trials* HR= High Resistance, R= Resistance, MR=Moderate Resistance, LR=Low Resistance, S=Susceptible

Variety	Marketing	FD	WS	BW	VW	FW	AN	PRR	APH ¹	APH ²	SAA	PA	BAA	SN	SRKN	NRKN	Salt	Tech.
HVX MegaTron	CROPLAN	4	2	HR	HR	HR	HR	HR	HR	HR	R	R		R			G	RX
HybriForce-4420/Wet	Alforex Seeds	4		HR	HR	HR	HR	HR	HR	HR								H
ISS37Q	Simplot	3	1	HR	HR	HR	HR	HR	HR	HR		R		R			G	C
LegenDairy AA	CROPLAN	3	1	HR	HR	HR	HR	HR	HR	HR	R	HR		R			G	C
Magnum 8-Wet	Dairyland Seeds	4	2	HR	HR	HR	HR	HR	HR	HR	R	MR	R	MR				C
MPIII Max Q	Simplot	5	2	HR	HR	HR	HR	HR	HR	R	R	HR		HR			G	C
Nimbus	CROPLAN	5		HR	R	HR	HR	HR	HR			HR		HR		HR	F	C
Rebound AA	CROPLAN	4	2	HR	HR	HR	HR	HR	HR	HR	R	R		R			G	C
RR AphaTron 2XT	CROPLAN	4	1	HR	HR	HR	HR	HR	HR	HR		HR		H			G	C
RR NemaStar	CROPLAN	5		HR	HR	HR	HR	HR	HR		R	R		HR		R	G	R
RR Saltiva	CROPLAN	5	2	HR	HR	HR	HR	HR	HR		R	HR	MR	HR			G	R
SGS 47M	Simplot	4	2	HR	HR	HR	HR	HR	HR	R		R		R				C
Stockpile II	BrettYoung	4	2	HR	HR	HR	HR	HR	HR	HR		R		R				C
SW 5210	Alfalfa Partners	5		HR	HR	HR	HR	HR	HR	HR	R	HR		HR			G	C
SW 5213	Alfalfa Partners	5		HR	HR	HR	HR	HR	HR	HR	R	HR		HR				C
SW 5615	S&W5615	5	1	HR	HR	HR	HR	HR	HR	HR	R	R		HR				C
Vernal	Public	2		R	S	MR	S	S	S					S		MR		C
WL 3441HQ.RR	W-L Alfalfas	4	2	HR	HR	HR	HR	HR	HR	HR		R		HR			G	R
WL 349HQ	W-L Alfalfas	4	2	HR	HR	HR	HR	HR	HR	HR		HR		R				C
WL 3521HQ	W-L Alfalfas	5	2	HR	HR	HR	HR	HR	HR	HR	HR	HR		R			G	C
WL375HVX.RR	W-L Alfalfas	5	2	HR	HR	HR	HR	HR	HR	HR		R		HR			G	RX
WL 377HQ	W-L Alfalfas	5		HR	HR	HR	HR	HR	HR		HR	HR		HR		HR	G	C

FD Fall Dormancy
 WS Winter Survival
 BW Bacterial Wilt
 VW Verticillium Wilt
 FW Fusarium Wilt

AN Anthracnose Race 1
 PRR
 Phytophthora Root Rot
 SAA Spotted Alfalfa Aphid
 PA Pea Aphid

BAA Blue Alfalfa Aphid
 SN Stem Nematode
 APH¹ Aphanomyces Race 1
 APH² Aphanomyces Race 2

SRKN Southern Root Knot Nematode
 NRKN Northern Root Knot Nematode
 Salt Tol.- G=germination F=forage prod.
 Tech. C= Conv., R= RR, RX= RR & HarvXtra H=Hybrid

* NAFA's "Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties - 2021 Edition and previous editions". "For a more complete copy of the NAFA document visit www.alfalfa.org/varietyLeaflet.php." Blanks mean adequate testing has not yet occurred. Only data from publications were used.

Table 5. Three-Year Forage Yield - 2021 Conventional Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/A)

Planted August 10, 2021		Fall	2022 Harvests		2023 Harvests		2024 Harvests						3 Year Total		2024 Fall	
		Dorm.	Total	Total	Total	Total	9-May	10-Jun	11-Jul	12-Aug	13-Sep	Total	Total	Total	Total	Oct. 13
Company	Entry	Rating	Tons/a	% Mean	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Tons/a	% Mean	% Stand
Dyna Gro	DG4120	4	10.28	103.7	8.06	112.2	2.84	1.82	2.10	1.69	0.99	9.43	111.9	27.8	108.8	77.3
America's Alfalfa	AmeriStand 428 TQ	4	9.80	98.9	7.86	109.3	2.71	1.56	2.05	1.62	0.93	8.88	105.2	26.5	103.9	69.8
S&W Seed Company	SW5615	5	10.78	108.8	6.95	96.7	2.94	1.66	1.84	1.46	0.79	8.69	103.0	26.4	103.5	68.8
America's Alfalfa	AmeriStand 416NT RR	4	10.49	105.9	7.31	101.7	2.69	1.60	1.91	1.45	0.81	8.46	100.4	26.3	102.9	73.7
CROPLAN	LegenDairy AA	3.4	9.65	97.4	7.41	103.1	2.78	1.67	1.90	1.42	0.85	8.62	102.2	25.7	100.6	70.6
CROPLAN	Rebound AA	4.4	10.05	101.4	7.17	99.8	2.60	1.36	1.79	1.47	0.77	8.00	94.8	25.2	98.8	70.8
America's Alfalfa	AmeriStand 446 NT	4	9.32	94.0	7.17	99.8	2.60	1.48	1.84	1.54	0.97	8.44	100.1	24.9	97.7	76.1
RR Check	RR Check	4	9.67	97.6	6.85	95.3	2.76	1.37	1.79	1.52	0.77	8.20	97.3	24.7	96.9	71.1
Check Conv.	Vernal	2	9.14	92.3	5.89	82.0	2.58	1.21	1.50	1.31	0.57	7.17	85.1	22.2	87.0	61.9

Mean	3.9	9.91	100.0	7.19	100.0	2.72	1.53	1.86	1.50	0.83	8.43	100.0	25.5	100.0	71.1
CV %		5.4	5.4	6.8	6.8	9.3	10.6	6.7	9.4	11.7	6.9	6.9	4.7	4.7	8.4
LSD 10%		0.65	6.6	0.59	8.2	NS	0.20	0.15	0.17	0.12	0.71	8.4	1.4	5.5	NS

NA = Not available

* = Entered as an experimental variety

Table 6. Three-Year Forage Yield - 2021 Conventional Alfalfa Variety Trial, Pasco, Franklin County, WA
Forage Yield (Ton DM/A)

Planted August 11, 2022		Fall	2022 Harvests		2023 Harvests		2024 Harvests						3 Year Total		2024 Fall	
		Dorm.	Total	Total	Total	Total	2-May	6-Jun	9-Jul	14-Aug	20-Sep	Total	Total	Total	Total	4-Oct
Company	Entry	Rating	Tons/a	% Mean	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Tons/a	% Mean	Stand (%)
S&W Seed Company	SW5615	5	10.01	113.3	11.91	109.4	3.31	2.87	2.50	2.63	1.70	13.01	108.7	34.9	110.4	70.2
Corteva Agriscience	54Q16	4	9.49	107.3	11.41	104.8	3.11	2.84	2.54	2.54	1.75	12.77	106.7	33.7	106.4	75.0
WL Research	WL 3521HQ	5	8.86	100.2	11.11	102.0	3.20	2.94	2.60	2.74	1.76	13.24	110.6	33.2	105.0	71.2
Dyna Gro	DG4120	4	8.75	99.0	11.45	105.2	3.04	2.73	2.62	2.51	1.59	12.49	104.4	32.7	103.4	76.5
Winfield United	Nimbus	5	9.23	104.4	11.34	104.2	2.91	2.72	2.28	2.53	1.58	12.03	100.5	32.6	103.1	62.0
America's Alfalfa	AmeriStand 428 TQ	4	9.00	101.9	10.87	99.8	3.03	2.79	2.42	2.52	1.59	12.35	103.2	32.2	101.9	70.8
Corteva Agriscience	54VQ52	4	9.46	107.0	10.82	99.4	2.73	2.72	2.35	2.43	1.57	11.80	98.6	32.1	101.4	66.3
Winfield United	Rebound AA	4.4	8.98	101.6	10.48	96.2	2.96	2.78	2.42	2.63	1.69	12.48	104.3	31.9	101.0	69.0
Winfield United	LegenDairy AA	3.4	8.27	93.5	10.88	99.9	2.88	2.72	2.35	2.80	1.58	12.33	103.0	31.5	99.5	66.5
Corteva Agriscience	Magnum 8-Wet	4	9.73	110.0	10.43	95.8	2.68	2.47	2.36	2.14	1.56	11.21	93.7	31.4	99.2	67.5
Corteva Agriscience	HybriForce-4420/Wet	4	9.10	102.9	10.26	94.2	2.90	2.66	2.44	2.31	1.66	11.96	100.0	31.3	99.0	61.8
	Conv. Check 2	4	8.77	99.2	10.78	99.0	3.09	2.66	2.24	2.09	1.57	11.64	97.3	31.2	98.6	62.6
	RR Check	4	8.60	97.3	11.03	101.3	2.74	2.61	2.29	2.02	1.62	11.27	94.1	30.9	97.7	61.1
America's Alfalfa	AmeriStand 446 NT	4	8.31	94.0	10.65	97.8	2.72	2.66	2.31	2.53	1.50	11.72	97.9	30.7	97.0	65.1
Legacy Seeds	181*	4	8.15	92.2	10.74	98.6	2.89	2.63	2.27	2.46	1.53	11.77	98.4	30.7	96.9	66.4
Legacy Seeds	183*	4	8.19	92.7	10.50	96.4	2.90	2.63	2.33	2.37	1.52	11.76	98.3	30.4	96.3	62.7
Legacy Seeds	151*	4	8.73	98.7	10.18	93.5	2.70	2.54	2.28	2.15	1.52	11.19	93.5	30.1	95.2	64.0
Check Conv.	Vernal	2	8.14	92.1	9.33	85.6	2.63	2.26	1.96	2.21	1.32	10.38	86.7	27.8	88.0	36.9

Mean	3.9	8.8	100.0	10.9	100.0	2.91	2.68	2.36	2.42	1.59	11.97	100.0	31.6	100.0	65.3
CV %		6.9	6.9	6.2	6.2	6.0	5.6	8.1	10.7	5.2	4.0	4.0	4.0	4.0	9.3
LSD 10%		0.72	8.1	0.8	7.3	0.21	0.18	0.23	0.31	0.09	0.57	4.8	1.5	4.7	7.2

NA = Not available

* = Entered as an experimental variety

**Table 7. Three-Year Forage Yield - 2021 Roundup Ready Alfalfa Variety Trial, Pasco, Franklin County, WA
Forage Yield (Ton DM/A)**

Planted August 11, 2021		Fall	2022		2023		2024 Harvests						2022-2024		2024 Fall	
		Dorm.	Total	Total	Total	Total	1-May	5-Jun	8-Jul	14-Aug	19-Sep	Total	Total	Total	Total	1-Oct
Company	Entry	Rating	Tons/a	% Mean	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Tons/a	% Mean	% Stand
Corteva Agriscience	AFX 463RR	4	9.96	104.1	12.00	109.4	3.08	2.18	2.68	2.34	1.64	12.31	106.64	34.27	106.8	66.4
WL Research	WL 3441HQ.RR	5	9.57	100.0	11.15	101.6	2.93	2.16	2.62	2.20	1.66	12.08	104.67	32.79	102.2	71.5
CROPLAN	RR Saltilva	4.8	10.36	108.4	10.99	100.2	2.55	1.78	2.53	2.17	1.45	11.11	96.25	32.46	101.2	63.9
America's Alfalfa	AmeriStand 416NT RR	4	9.44	98.7	10.90	99.4	2.71	2.28	2.61	2.29	1.55	11.69	101.27	32.03	99.9	71.0
CROPLAN	RR Aphastron 2XT	4	9.43	98.7	10.57	96.3	2.58	2.37	2.75	2.22	1.73	11.77	101.99	31.77	99.1	64.8
CROPLAN	HVX Megatron	4.2	9.24	96.6	11.10	101.2	2.79	2.04	2.66	2.13	1.43	11.43	99.07	31.77	99.0	64.0
	RR Check 2	4	8.99	94.0	10.94	99.7	2.74	2.24	2.61	2.17	1.53	11.47	99.40	31.40	97.9	66.3
	RR Check	4	9.66	101.0	10.37	94.5	2.53	2.11	2.54	2.21	1.55	11.26	97.54	31.29	97.5	61.9
CROPLAN	RR NemaStar	4.9	9.42	98.5	10.73	97.8	2.31	2.11	2.60	2.11	1.45	10.75	93.16	30.90	96.3	62.1

Mean	4.3	9.6	100.0	11.0	100.0	2.69	2.14	2.62	2.20	1.55	11.54	100.0	32.1	100.0	65.8
CV %		7.1	7.1	5.1	5.1	9.9	7.3	6.2	5.8	12.0	6.1	6.1	4.2	4.2	9.4
LSD 10%		NS	NS	0.68	5.7	0.32	NS	NS	NS	NS	NS	NS	1.6	5.1	NS

NA = Not available

* = Entered as an experimental variety

Table 8. Two-Year Forage Yield - 2022 Othello Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/A)

Planted August 9, 2022		Fall	2023 Harvest		2024 Harvests							2023-2024		2024 Fall
		Dorm.	Total	Total	13-May	10-Jun	11-Jul	14-Aug	12-Sep	Total	Total	Total	Total	15-Oct
Company	Entry	Rating	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Tons/a	% Mean	Regrowth
WL Research	WL 3521HQ	5	7.62	110.04	2.78	2.55	2.25	1.93	1.52	11.03	112.2	18.6	111.3	5.0
Alforex	AFX479	4	7.28	105.21	2.74	2.47	2.17	1.89	1.29	10.56	107.5	17.8	106.5	4.3
Simplot	ISS ULTRA-4STN*	4	7.25	104.77	2.65	2.54	2.20	1.86	1.31	10.57	107.5	17.8	106.4	4.8
FGI	CO418SN215*	4	7.42	107.21	2.48	2.45	2.07	1.82	1.42	10.24	104.2	17.7	105.4	5.0
Simplot	SGS47M	4	7.45	107.65	2.63	2.29	2.12	1.66	1.22	9.92	101.0	17.4	103.7	4.0
FGI	CO415RK207*	4	7.50	108.33	2.48	2.30	1.99	1.69	1.32	9.78	99.5	17.3	103.2	5.0
America's Alfalfa	AmeriStand 446NT	4	7.09	102.46	2.56	2.34	2.11	1.86	1.30	10.17	103.5	17.3	103.1	5.0
Winfield United	LegenDairy AA	3	6.68	96.56	2.55	2.47	2.13	1.72	1.58	10.45	106.4	17.1	102.3	4.0
Winfield United	Gunner AA	5	7.12	102.88	2.40	2.42	2.10	1.77	1.32	10.00	101.8	17.1	102.2	5.0
Allied Seed	FSG450	4	7.21	104.24	2.48	2.39	2.01	1.67	1.31	9.86	100.4	17.1	102.0	5.0
Allied Seed	Signature	4	6.70	96.74	2.58	2.38	2.15	1.78	1.32	10.22	104.0	16.9	101.0	5.0
WL Research	WL 349HQ	4	6.85	98.97	2.58	2.37	2.08	1.76	1.27	10.05	102.3	16.9	100.9	4.8
Winfield United	Rebound AA	4	7.00	101.10	2.55	2.32	2.12	1.76	1.15	9.90	100.8	16.9	100.9	4.8
Winfield United	Saltiva	5	6.79	98.13	2.53	2.42	2.03	1.74	1.23	9.96	101.3	16.7	100.0	5.0
Corteva Agriscience	AFX184021*	4	7.05	101.86	2.59	2.22	1.94	1.70	1.08	9.53	96.9	16.6	99.0	2.5
Innvictis Seed Solutions	MPIII Max Q	5	6.70	96.87	2.50	1.99	1.79	1.61	1.64	9.53	96.9	16.2	96.9	4.0
Nexgrow	6453Q	4	6.57	94.91	2.60	2.12	1.95	1.60	1.14	9.41	95.7	16.0	95.4	4.0
Private Variety	Check 2	4	6.48	93.62	2.61	2.21	1.88	1.65	1.14	9.48	96.5	16.0	95.3	2.8
Innvictis Seed Solutions	ISS FD4 EXP> 1 Yr*	4	6.77	97.79	2.60	1.99	1.82	1.61	1.11	9.13	92.9	15.9	94.9	4.3
Simplot	ISS37Q	3	6.32	91.29	2.50	2.01	1.82	1.53	1.15	9.01	91.6	15.3	91.5	2.5
Public Variety	Vernal	2	5.49	79.38	2.33	1.62	1.56	1.39	0.67	7.58	77.1	13.1	78.1	2.0

Mean	4	6.92	100.0	2.56	2.28	2.01	1.71	1.26	9.83	100.0	16.7	100.0	4.2
CV %		6.10	6.1	4.5	6.4	5.8	6.5	12.4	4.1	4.1	4.0	4.0	8.8
LSD 10%		0.50	7.2	0.13	0.17	0.14	0.13	0.19	0.48	4.9	0.8	2.6	0.4

NA = Not available

* = Entered as an experimental variety

Table 9. Two-Year Forage Yield - 2022 Pasco Alfalfa Variety Trial, Pasco, WA
Forage Yield (Ton DM/A)

Planted August 11, 2022		Fall	2023 Harvests		2024 Harvests							2023-2024		2024 Fall
		Dorm.	Total	Total	24-May	5-Jun	8-Jul	8-Aug	18-Sep	Total	Total	Total	Total	3-Oct
Company	Entry	Rating	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Tons/a	% Mean	Regrowth
WL Research	WL 3521HQ	5	10.0	107.9	2.51	2.73	2.61	2.62	1.76	12.22	110.5	22.21	109.3	5.0
FGI	ISS ULTRA-4STN*	4	9.9	107.2	2.44	2.58	2.58	2.47	1.83	11.90	107.5	21.82	107.4	5.0
America's Alfalfa	AmeriStand 518NT	5	9.9	106.4	2.47	2.64	2.72	2.36	1.62	11.81	106.7	21.66	106.6	4.8
Pioneer Brand	54Q16	4	10.1	108.9	2.66	2.43	2.21	2.39	1.77	11.47	103.6	21.55	106.0	4.5
Alforex	AFX479	4	9.8	105.5	2.44	2.47	2.42	2.40	1.71	11.44	103.4	21.20	104.3	4.3
Alforex	AFX589	5	9.7	105.2	2.41	2.50	2.54	2.30	1.65	11.40	103.1	21.14	104.0	5.0
Pioneer Brand	54VR12	4	9.6	104.0	2.51	2.40	2.46	2.33	1.72	11.41	103.2	21.04	103.5	4.8
Winfield United	Saltiva	4.8	9.5	102.3	2.31	2.61	2.35	2.47	1.74	11.48	103.7	20.95	103.1	5.0
Innvictis Seed Solutions	ISS FD4 EXP > 1 Yr*	4	9.6	103.3	2.25	2.46	2.34	2.43	1.78	11.28	101.9	20.84	102.6	4.5
Pioneer Brand	54VQ52	4	9.5	102.2	2.36	2.36	2.28	2.31	1.78	11.09	100.2	20.54	101.1	4.0
FGI	CO415RK207	4	9.3	100.4	2.39	2.45	2.18	2.43	1.66	11.11	100.4	20.41	100.4	4.8
Nexgrow	6453Q	4	9.1	97.9	2.52	2.37	2.25	2.31	1.80	11.26	101.7	20.32	100.0	4.3
Simplot	SGS47M	4	9.1	98.4	2.39	2.47	2.38	2.19	1.76	11.18	101.1	20.29	99.8	4.5
Innvictis Seed Solutions	MPIII Max Q	5	9.2	99.4	2.27	2.29	2.54	2.28	1.65	11.03	99.7	20.24	99.6	4.0
FGI	CO418SN215	4	8.9	95.7	2.26	2.51	2.19	2.28	1.62	10.86	98.2	19.72	97.0	5.0
America's Alfalfa	AmeriStand 428TQ	4	8.8	95.4	2.58	2.16	2.12	2.19	1.82	10.87	98.3	19.70	97.0	4.3
DLF USA Inc.	EXP AFX184021*	4	9.2	98.9	2.28	2.25	2.20	2.09	1.64	10.45	94.5	19.61	96.5	3.0
America's Alfalfa	AmeriStand 416NT RR	4	8.8	95.4	2.19	2.33	2.26	2.21	1.66	10.64	96.2	19.47	95.8	5.0
Pioneer 54V11	Check 2	4	8.9	95.8	2.25	2.44	2.10	2.11	1.54	10.43	94.3	19.30	95.0	3.8
Simplot	ISS37Q	3	8.5	91.8	2.29	2.11	2.22	2.07	1.66	10.35	93.5	18.84	92.7	3.5
Public	Vernal	2	7.2	78.0	2.11	1.78	1.61	1.86	1.30	8.67	78.3	15.89	78.2	2.0

Mean	4.1	9.3	100.0	2.37	2.40	2.31	2.29	1.69	11.06	100.0	20.32	100.0	4.3
CV %		6.7	6.7	10.1	8.1	8.0	7.3	7.4	5.9	5.9	5.3	5.3	10.6
LSD 10%		0.7	7.9	NS	0.23	0.22	0.20	0.15	0.77	6.96	1.30	6.4	0.5

NA = Not available

* = Entered as an experimental variety

Table 10. One-Year Forage Yield - 2023 Othello Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/A)

Planted August 11, 2023		Fall	2024 Harvests							2024 Fall
		Dorm.	10-May	10-Jun	11-Jul	12-Aug	12-Sep	Total	Total	15-Oct
Company	Entry	Rating	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Regrowth
Allied Seed	High Five	5	2.91	2.42	1.94	1.72	1.27	10.27	108.5	3.5
Simplot	ISS ULTRA-4STN*	4	2.53	2.21	1.98	1.81	1.22	9.74	103.0	4.3
WL Research	WL 3521HQ	5	2.39	2.16	2.03	1.92	1.21	9.71	102.6	4.8
Albert Lea Seed House	565 ST	4.3	2.50	2.11	1.97	1.86	1.25	9.70	102.5	4.0
Albert Lea Seed House	394AP	4.3	2.75	2.14	1.86	1.74	1.14	9.63	101.7	3.5
Alforex	AFX184035*	4	2.56	2.16	1.90	1.74	1.17	9.53	100.7	3.8
SW Seed Co.	SW5615	5	2.66	2.13	1.91	1.69	1.07	9.46	100.0	4.0
Croplan	RR Saltiva	5	2.68	2.09	1.87	1.68	1.05	9.39	99.2	5.0
Croplan	Rebound AA	4	2.37	2.02	2.01	1.83	1.15	9.38	99.1	4.8
Nexgrow	6453Q	4	2.47	1.94	1.94	1.83	1.16	9.34	98.7	4.5
Croplan	Gunner AA	5	2.35	2.03	1.99	1.75	1.16	9.28	98.0	4.8
America's Alfalfa	AmeriStand 428TQ	4	2.69	2.00	1.76	1.75	1.06	9.26	97.9	4.0
Allied Seed	FSG 527	5	2.45	2.11	1.84	1.70	1.10	9.20	97.2	4.8
Alforex	AFX467*	4	2.72	1.93	1.71	1.66	1.09	9.09	96.1	3.3
America's Alfalfa	AmeriStand 446NT	4	2.02	1.80	1.97	1.98	1.19	8.96	94.7	5.0

Mean	4.4	2.54	2.08	1.91	1.78	1.15	9.46	100.0	4.3
CV %		10.5	8.9	5.8	6.5	10.0	5.8	5.8	10.9
LSD 10%		0.32	0.22	0.13	0.14	NS	0.65	6.9	0.6

NA = Not available

* = Entered as an experimental variety

Table 11. One-Year Forage Yield - 2023 City of Pasco Alfalfa Variety Trial, Pasco, WA
Forage Yield (Ton DM/A)

Planted August 3, 2024		Fall	2024 Harvests							2024 Fall
		Dorm.	2-May	5-Jun	10-Jul	14-Aug	1-Sep	Total	Total	3-Oct
Company	Entry	Rating	Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Tons/a	% Mean	Regrowth
Brett Young Seeds	Stockpile II	4	3.60	2.67	2.74	2.62	1.81	13.43	107.8	4.3
DLF	AFX184035*	4	3.43	2.72	2.77	2.38	1.82	13.13	105.3	5.0
Croplan	Gunner AA	5	3.12	2.73	2.84	2.34	1.91	12.95	103.9	5.0
Croplan	Rebound AA	4	3.16	2.63	2.75	2.35	1.89	12.78	102.6	4.8
Allied Seed	High Five	5	3.27	2.53	2.55	2.36	1.74	12.45	100.0	4.5
Simplot	ULTRA-4STN*	4	3.08	2.76	2.66	2.28	1.68	12.45	100.0	4.5
DLF	AFX467*	4	3.11	2.48	2.48	2.48	1.74	12.29	98.6	4.0
Allied Seed	FSG 527	5	3.14	2.54	2.56	2.33	1.66	12.23	98.1	5.0
Croplan	RR Saltiva	5	3.22	2.49	2.56	2.34	1.59	12.20	97.9	5.0
Brett Young Seeds	Dynamo	4	3.11	2.33	2.44	2.37	1.73	11.97	96.1	3.3
Public	Vernal	2	3.42	2.26	2.41	2.18	1.55	11.83	94.9	2.0
Allied Seed	438RR	4	3.06	2.36	2.48	2.18	1.74	11.82	94.9	4.8

Mean	4.2	3.23	2.54	2.60	2.35	1.74	12.46	100.0	4.3
CV %		7.9	7.0	6.7	6.9	12.0	5.5	5.5	10.6
LSD 10%		0.30	0.21	0.19	0.25	NS	0.82	6.6	0.6

NA = Not available

* = Entered as an experimental variety