



2012

Washington State Hay Growers Association

ALFALFA VARIETY

YIELD TRIALS

Conducted by Washington State University Extension

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Alfalfa Variety Trials

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Six alfalfa trials were harvested for yield in irrigated central Washington State in 2012. 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 trials are conducted near Othello, WA and three trials near Pasco, WA.

The Othello site is located on the WSU Othello research farm 6 miles ESE of Othello, WA at Lat: N46°47'41 Lng: W119°02'33 and at an elevation of 1154 feet. One Pasco site is located on Selph Landing Road about 8 miles North of Pasco, WA at Lat: N46°19'75, Lng: W119°09'94 at an elevation of 457 feet, the other west of Garfield Road at Lat: N46°28'999, Lng: W119°06'852.

The soils are a Shano silt loam (coarse-silty, mixed-mesic Xerollic Camborthids) at Othello, and a Sagehill very fine sandy loam (coarse-loamy, mixed, mesic Xerillic Camborthids) at the Garfield Road location. All trials were sprinkler irrigated throughout the April-October growing season. The frost-free (32°F) period at Othello averages 180 days and 209 days at Pasco.

Each trial is arranged in a randomized complete block (RCB) design with 4 replications. All are seeded at about 20 lbs/ac in rows spaced 6 inches apart with a 1-foot inter-plot separation. Plot size is 4 x 15 feet. The trials contain some experimental entries that are not available for commercial planting. Forage yields are normally collected for each submitted entry for three years on each planting. 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. Least significant difference or "LSD" is also determined for each measured effect. If the difference between 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.

Tables 1 and 2 contain a summary of yields for alfalfa varieties that have been tested for three years at the Pasco and Othello locations. Yields are presented in percent of mean of the test for ease of comparison. Table 3 is from: NAFA's "Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties – 2013 Edition." For a complete copy of the NAFA document visit www.alfalfa.org/varietyLeaflet.php.

Forage yields for each harvest, total season yield for 2012 and the totals for all years of the trials to date are reported in Tables 4 through 9. Yields are determined from whole plot fresh weights converted to a dry matter basis using a constant dry matter fraction of 20%. Ratings for regrowth after 4th cutting were taken on October 1, 2012, and represent visual ratings from 1-5. Rating scale was: 1 - little to no regrowth, 2 – below average regrowth, 3 - average regrowth, 4 - above average regrowth, 5 - high amount of regrowth. In 2012 a lot of regrowth occurred due to warm fall and timing of last cutting.

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 of the seeded rows compared to the number of 6 inch blocks there are in a plot and calculating the percentage.

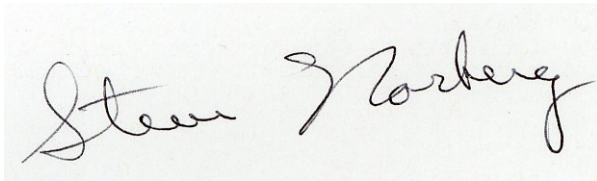
The WSHGA-WSU goal for the alfalfa variety testing project is to identify varieties for growers that are adapted to the Columbia Basin region that will tolerate both biotic (pests) and abiotic (environmental) stresses.

Similar to 2011, the summer of 2012 began cool and wet, and ended hot and dry. We experienced significant rainfall in June which made haying difficult. August on the other hand left us dry and fires filled the skys with smoke so thick it had to affect the plants ability to capture sun.

I want to especially thank Brian Honigman, David Mitchell and Steven Stoker for their assistance with this year's trials and planting of next years trials. I also want to thank the Washington State Hay Growers Association and Washington State University Extension for their support in refurbishing the Carter forage harvester this year.

Please don't hesitate to contact me if you have any questions on the trials.

Sincerely,

A handwritten signature in black ink that reads "Steve Norberg". The signature is written in a cursive style with a large, looped "S" and "N".

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Table 1: 2012 Summary of Alfalfa Yield Trials since August of 2008 - Pasco, WA

Entry	Seeded August 2008				Seeded March 2010				Seeded August 2010				Seeded August 2011			Avg. of 8/08 & 3/10	
	2009	2010	2011	3 Yr.	2010	2011	2012	3 Yr.	2011	2012	2013	2 Yr.	2012	2013	2014		3 Yr.
45417					108.9%	95.1%	92.7%	96.6%									
64Q22					100.0%	103.8%	113.8%	108.5%	92.8%	102.9%		99.5%					
6422Q													107.7%				
6R100													102.7%				
AmeriStand 407TQ					109.1%	105.1%	96.5%	101.3%	98.8%	96.9%		97.6%	103.2%				
AmeriStand 445NT									100.4%	100.8%		100.6%	108.6%				
Archer III					96.2%	98.1%	103.0%	100.4%	103.1%	101.1%		101.8%					
CW064004					94.1%	103.4%	101.6%	101.6%									
DG 4210									112.4%	105.1%		107.6%	102.0%				
DKA 41-18 RR													109.3%				
DKA 42-15					92.3%	89.1%	92.9%	91.9%									
DKA 43-13	105.8%	103.0%	106.1%	104.9%					95.0%	96.4%		96.0%					
DKA 43-22 RR													105.4%				
DKA 50-18	108.1%	103.9%	107.1%	106.5%					102.0%	103.1%		102.7%					
FG 44W204	96.0%	101.6%	93.1%	96.9%													
FG 45W271	104.2%	101.1%	107.1%	103.5%	100.3%	105.3%	107.8%	105.7%									104.6%
FG 45W273					100.5%	108.3%	103.5%	104.2%									
FG 46W201					98.9%	98.0%	100.5%	99.6%									
FG 46W202	103.3%	106.1%	107.1%	105.0%	108.1%	100.0%	103.8%	103.7%									104.4%
FGI 48W201													104.3%				
FGI 48W202													101.3%				
FGI 48W203													103.1%				
FGI 59W212													102.2%				
FGI R58HG236													101.4%				
FSG 429SN	102.2%	105.4%	103.2%	103.5%													
FSG 639ST	97.0%	96.5%	95.3%	96.5%													
GrandStand	107.7%	102.6%	105.3%	105.5%	108.2%	99.2%	101.8%	102.4%	102.2%	104.6%		103.8%	101.2%				104.0%
HybriForce-2600													109.5%				
HybriForce Exp 802					100.2%	102.4%	97.4%	99.2%									
HybriForce Exp 807					97.6%	92.1%	93.1%	93.8%									
LegenDairy 5.0													105.1%				
Lightning IV	99.7%	100.8%	107.2%	101.6%													
Integra 8400					97.8%	101.3%	101.9%	100.9%									
Magna 551					107.2%	98.5%	99.0%	100.5%									
MasterPiece II					99.6%	102.1%	105.6%	103.5%					109.3%				
Mountaineer 2.0	94.2%	97.1%	96.5%	95.7%	109.5%	95.6%	97.9%	99.7%									97.7%
McSunstra 810									97.5%	98.0%		97.8%					
PGI 557					96.9%	107.7%	101.0%	101.9%					109.2%				
Prosementi					96.3%	114.3%	99.3%	102.6%									
Rebound 5.0	97.5%	101.9%	103.9%	100.3%													
Rebound 6.0									93.6%	88.8%		90.5%	103.8%				
Summit					86.2%	101.9%	99.8%	97.6%									
TS-4027	95.3%	97.5%	91.7%	95.3%													
TS-4028	102.3%	100.1%	95.6%	100.2%													
TS-5026	100.2%	95.2%	99.8%	98.4%													
Vernal	81.4%	91.4%	81.5%	84.8%	88.5%	76.4%	79.4%	80.0%									82.4%
Vernema																	
Winchester									93.6%	100.0%		97.9%					
WL354HQ													107.2%				
WL 363HQ	99.1%	97.3%	103.7%	99.4%	103.5%	102.1%	107.6%	105.4%	108.5%	102.2%		104.3%					102.4%
AV-T/AC	9.46	7.04	4.04	20.50	3.12	3.98	8.50	15.60	4.51	8.83		13.34	6.97				
LSD (for %'s) (0.05)	7.3	NS	9.4	6.7	12.3	13.1	5.3	6.4	9.1	8.5		6.7	8.8				
CV(%)	7.3	6.4	6.6	4.7	8.5	9.2	5.3	1.0	6.5	5.9		4.6	6.2				

Table 2: 2012 Summary of Alfalfa Yield Trials since fall of 2008-Othello, WA

Entry	Seeded August 2008				Seeded August 2009				Seeded August 2010				Seeded August 2010				Avg. of 8/08 & 3/10
	2009	2010	2011	3 Yr.	2010	2011	2012	3 Yr.	2011	2012	2013	2 Yr.	2012	2013	2014	3 Yr.	
45417					103.0%	103.7%	91.5%	97.4%									
4R200													111.6%				
54V09	94.0%	97.0%	91.2%	94.5%													
6305Q									93.0%	98.0%		98.0%	96.4%				
63Q05					98.8%	88.2%	97.6%	95.8%									
6422Q									92.2%	100.4%		97.6%					
64Q22					102.2%	95.2%	101.5%	100.3%									
AmeriStand 407TQ					97.6%	103.3%	104.5%	102.4%	99.7%	99.1%		99.1%	99.8%				
AmeriStand 445NT									106.2%	94.1%		98.2%	115.8%				
CB001													102.8%				
CW 064004					103.4%	108.3%	110.7%	108.2%									
DG4210									94.9%	106.2%		102.4%	92.9%				
DKA 41-18 RR													101.7%				
DKA 42-15					97.7%	92.6%	96.3%	95.9%									
DKA 43-17 RR													104.6%				
DKA 43-13	105.3%	102.0%	105.9%	104.2%					105.7%	99.8%		101.8%					
DKA 43-22 RR													108.7%				
DKA 50-18	99.3%	97.6%	99.5%	98.8%													
DSB01-T													105.9%				
DSB08-M													110.1%				
Enhancer II													106.3%				
FG 44W204	108.2%	108.9%	101.1%	106.9%													
FG45W271	110.4%	102.4%	101.7%	105.5%	98.4%	92.9%	101.5%	98.8%									102.2%
FG45W273					98.2%	97.2%	100.7%	99.2%									
FG46W201					103.3%	109.0%	101.6%	103.7%									
FG46W202	102.2%	101.0%	100.0%	101.2%	107.4%	102.9%	107.2%	106.3%									103.8%
FG55W277	99.9%	93.2%	90.0%	95.2%													
FSG429SN	98.2%	99.0%	94.0%	97.5%													
FSG639ST	94.0%	99.5%	102.2%	97.9%													
FGI 48W201													101.9%				
FGI 48W202													94.2%				
FGI 48W203													102.7%				
FGI R58HG236													100.2%				
GrandStand	108.6%	107.8%	106.8%	107.9%	105.1%	98.2%	105.2%	103.6%	102.3%	101.8%		102.0%	100.3%				105.8%
Gunner													114.1%				
Hybri Force-240									108.7%	95.2%		99.8%					
Hybri Force Exp 802					93.9%	91.0%	89.8%	91.1%									
HybriForce Exp 807					93.0%	103.5%	98.1%	97.9%									
Integra 8300					103.8%	99.9%	104.5%	103.3%									
Integra 8400					99.5%	105.6%	105.9%	104.1%									
LegenDairy 5.0									96.8%	98.7%		98.0%	101.2%				
Lighting IV	102.5%	100.6%	104.7%	102.3%													
LS401	100.0%	98.6%	93.8%	98.1%													
Magna 551									102.7%	101.4%		101.9%					
Magnum 7													109.7%				
MasterPiece II													103.8%				
Mountaineer 2.0	100.6%	99.4%	107.1%	101.6%													
MsSunstra-803													114.0%				
PGI 424													103.2%				
PGI 557					105.5%	112.4%	97.8%	103.1%									
Prosementi					95.1%	104.9%	88.5%	93.9%									
Ranger	82.5%	84.0%	83.8%	83.3%													
Rebound 5.0	99.7%	106.7%	110.6%	104.3%	103.0%	100.7%	106.9%	104.4%									104.4%
Rebound 6.0									100.6%	100.8%		100.7%	103.0%				
Summit					102.1%	94.5%	107.9%	103.3%									
TS 4027	98.3%	98.2%	105.1%	99.8%													
TS 4028	104.2%	104.4%	105.5%	104.6%													
TS-5026	98.7%	97.3%	100.6%	98.6%													
U-223	96.0%	96.5%	94.1%	95.7%													
Vernal					95.3%	93.2%	82.0%	88.1%									
Vernema																	
WL 343 HQ					94.1%	103.1%	100.3%	99.2%					104.8%				
WL 354HQ																	
WL 363HQ	98.4%	106.0%	102.4%	102.1%					97.1%	102.2%		100.4%					
AV-T/AC	7.50	7.30	4.28	18.61	4.53	3.70	8.40	16.63	4.39	8.49		Avg.	7.97				
LSD for % (0.05)	9.77	10.39	13.08	8.70	NS	NS	7.60%	9.20%	NS	NS		NS	11.00				
CV (%)	6.9%	7.3%	9.3%	6.2%	10.8%	12.6%	5.4%	6.5%	8.4%	4.6%		4.6%	7.9%				

Table 3: Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties in these Trials*

Variety	Contact for Marketing Info.	FD	WS	BW	VW	FW	AN	PRR	SAA	PA	BAA	SN	APH ¹	SRKN	NRKN
4R200	Eureka Seeds, Inc.	4	2	HR	HR	HR	HR	HR	MR	R	MR	HR	HR		R
54V09	Pioneer Hi-Bred Int'l, Inc.	4		HR	HR	R	HR	HR	R	HR		HR	R		HR
6R100	Eureka Seeds, Inc.	6		HR	R	HR	HR	HR	HR	R	HR	R		HR	
6305Q	Nexgrow Alfalfa	3	1	HR	HR	HR	HR	HR	HR			R	HR		
6422Q	Nexgrow Alfalfa	4	1	HR	HR	HR	HR	HR		R		R	HR		
64Q22	Syngenta	4	1	HR	HR	HR	HR	HR		R		R	HR		
AmeriStand 407TQ	America's Alfalfa	4	2	HR	HR	HR	HR	HR	R	HR		MR	HR		R
AmeriStand 444NT	America's Alfalfa	4		R	HR	HR	HR	HR	R	HR		HR	HR		HR
AmeriStand 445NT	America's Alfalfa	4		HR	R	HR	HR	HR	HR	R		HR	R		HR
Archer III	America's Alfalfa	5	2	HR	HR	HR	HR	HR		HR		HR	HR		HR
DG4210	Crop Production Services	4	1	HR	HR	HR	HR	HR	HR	R		R	HR		
DKA34-17RR	DeKalb	3	2	HR	HR	HR	HR	HR		HR		R	HR		R
DKA41-18 RR	DeKalb	4	2	HR	HR	HR	HR	HR	HR	HR		R	HR		R
DKA42-15	DeKalb	4	1	HR	HR	HR	HR	HR	R	HR		R	HR		
DKA43-13	DeKalb	4	1	HR	HR	HR	HR	HR		R		R	HR		R
DKA43-22 RR	DeKalb	4	2	HR	HR	HR	HR	HR				HR	HR		R
DKA50-18	DeKalb	5	2	HR	HR	HR	HR	HR	R	R		R	HR		
FSG 429SN	Farm Science Genetics	4	2	HR	HR	HR	HR	HR	R	HR		HR	HR		R
FSG 528SF	Farm Science Genetics	5		HR	HR	HR	HR	R		R	R		R		
FSG 639ST	Farm Science Genetics	6	3	HR	R	HR	R	HR		R		HR	MR	R	HR
GrandStand	Crop Production Services	4	1	HR	HR	HR	HR	HR	R	HR		MR	HR		R
Gunner	CropPlan Genetics	5	1	HR	HR	HR	HR	HR		R		R	HR		
HybridForce 420/wet	Dairyland Seed Co., Inc.	4	2	HR	R	HR	R	HR	R	R		HR	R		HR
HybridForce 2600	Dairyland Seed Co., Inc.	6	2	HR	R	HR	HR	HR		R		HR	R	R	HR
Integra 8300	Wilbur Ellis Company	3	1	HR	HR	HR	HR	HR		HR		R	HR		R
Integra 8400	Wilbur Ellis Company	4	2	HR	HR	HR	HR	HR		HR		R	HR		R
Lariat	J. R. Simplot Company	3	1	HR	HR	HR	HR	HR		HR		R	HR		R
LegenDairy 5.0	CropPlan Genetics	3	1	HR	HR	HR	HR	HR	R	R		MR	HR		R
Magna 551	Dairyland Seed Co., Inc.	5	2	HR	HR	HR	R	HR				R	HR		HR
Magnum 7	Dairyland Seed Co., Inc.	4	2	HR	HR	HR	HR	HR		R		HR	HR	R	HR
Masterpiece	J. R. Simplot Company	4		HR	R	HR	HR	HR	HR		R	HR	R		R
MasterPiece II	J. R. Simplot Company	5		HR	HR	HR	HR	HR		HR		HR	HR		
Medalist	Union	4	3	HR	HR	HR	HR	HR	HR	R		HR	R		HR
Mountaineer 2.0	CropPlan Genetics	5		HR	R	HR	HR	HR	R	HR		HR	R		R
PGI 424	Producer's Choice	4		HR		HR	HR	HR		R		HR	R		R
PGI 557	Producer's Choice	5		HR	HR	HR	HR	HR		R	R	HR	HR		HR
Plumas	Eureka Seeds, Inc.	4		HR	R	HR	HR	HR	R	R		HR	R		MR
Rebound 5.0	CropPlan Genetics	4	2	HR	HR	HR	HR	HR	R	HR		R	HR		R
Rebound 6.0	CropPlan Genetics	4	1	HR	HR	HR	HR	HR	HR	R		R	HR		
Vernal	Public	2		R	S	MR	S	S				SN	S		MR
Whitney	Eureka Seeds, Inc.	4	3	HR	HR	HR	HR	HR	R	HR		HR			HR
WL 343 HQ	W-L Research, Inc.	4	1	HR	HR	HR	HR	HR		HR		R	HR		
WL 354 HQ	W-L Research, Inc.	4	1	HR	HR	HR	HR	HR	HR	HR		R	HR		
WL 363HQ	W-L Research, Inc.	5	1	HR	HR	HR	HR	HR		HR		HR	HR		HR

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
 SRKN Southern Root Knot Nematode
 NRKN Northern Root Knot Nematode

* NAFA's "Winter Survival, Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties – 2013 Edition." For a complete copy of the NAFA document visit www.alfalfa.org/varietyLeaflet.php.

Blanks mean adequate testing has not yet occurred.

Table 4: Three-Year Forage Yield-- Fall 2009 Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/ac)

Seeded 8/17/2009		2010	2010	2011	2011	2012 Harvests				2012	2012	3 - Year Total		2012 Final
						Harv. 5-28	Harv. 7-2	Harv. 8-3	Harv. 9-13					9-13-12
Company	Entry	Total	% Mean	Total	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Total	% Mean	Total	% Mean	% Stand
Cal/West Seeds	CW 064004	4.68	103.4%	4.01	108.3%	3.01	2.59	1.98	1.73	9.30	110.7%	17.99	108.2%	86.07
FGI	FG 46W202	4.86	107.4%	3.81	102.9%	2.89	2.54	1.90	1.68	9.01	107.2%	17.67	106.3%	86.35
Croplan	Rebound 5.0	4.66	103.0%	3.73	100.7%	3.19	2.46	1.76	1.56	8.98	106.9%	17.36	104.4%	84.40
Wilbur-Ellis	Integra 8400	4.50	99.5%	3.91	105.6%	3.25	2.39	1.76	1.50	8.89	105.9%	17.31	104.1%	71.88
FGI	FG 46W201	4.67	103.3%	4.04	109.0%	2.80	2.31	1.79	1.63	8.53	101.6%	17.24	103.7%	86.07
WFS	GrandStand	4.75	105.1%	3.64	98.2%	3.07	2.45	1.78	1.54	8.83	105.2%	17.22	103.6%	87.14
Cal/West Seeds	Summit	4.62	102.1%	3.50	94.5%	3.15	2.46	1.86	1.60	9.07	107.9%	17.18	103.3%	81.90
Wilbur-Ellis	Integra 8300	4.70	103.8%	3.70	99.9%	3.10	2.46	1.74	1.47	8.78	104.5%	17.17	103.3%	86.19
Producer's Choice	PGI 557	4.77	105.5%	4.16	112.4%	2.59	2.37	1.67	1.58	8.21	97.8%	17.15	103.1%	77.45
America's	AmeriStand 407TQ	4.42	97.6%	3.82	103.3%	2.87	2.49	1.76	1.66	8.78	104.5%	17.02	102.4%	76.26
Syngenta	64Q22	4.62	102.2%	3.53	95.2%	2.78	2.50	1.78	1.46	8.53	101.5%	16.68	100.3%	88.45
FGI	FG 45W273	4.44	98.2%	3.60	97.2%	2.72	2.31	1.87	1.56	8.46	100.7%	16.50	99.2%	69.29
W-L Research	WL 343 HQ	4.26	94.1%	3.81	103.1%	2.73	2.44	1.75	1.50	8.43	100.3%	16.50	99.2%	85.60
FGI	FG 45W271	4.45	98.4%	3.44	92.9%	2.84	2.32	1.77	1.59	8.53	101.5%	16.42	98.8%	85.83
Dairyland Seed Co.	HybriForce Exp 807	4.21	93.0%	3.83	103.5%	3.06	2.09	1.62	1.47	8.24	98.1%	16.27	97.9%	89.40
Mycogen Seeds	45417	4.66	103.0%	3.84	103.7%	2.66	2.02	1.72	1.29	7.69	91.5%	16.19	97.4%	86.67
Monsanto	DKA 42-15	4.42	97.7%	3.43	92.6%	2.92	2.05	1.69	1.44	8.09	96.3%	15.94	95.9%	88.45
Syngenta	63Q05	4.47	98.8%	3.26	88.2%	2.68	2.27	1.79	1.45	8.19	97.6%	15.93	95.8%	73.79
Allstar	Prosementi	4.30	95.1%	3.88	104.9%	2.26	2.16	1.62	1.39	7.43	88.5%	15.62	93.9%	78.62
Dairyland Seed Co.	HybriForce Exp 802	4.23	93.6%	3.37	91.0%	2.86	1.90	1.48	1.31	7.54	89.8%	15.14	91.1%	87.86
Public	Vernal	4.31	95.3%	3.45	93.2%	2.64	1.68	1.43	1.14	6.89	82.0%	14.65	88.1%	82.80
Mean		4.53	1.00	3.70	1.00	2.86	2.30	1.74	1.50	8.40	1.00	16.63	1.00	82.88
CV %		10.8	10.8	12.6	12.6	8.9	5.8	6.0	7.0	5.4	5.4	6.5	6.5	17.4
LSD 5%		NS	NS	NS	NS	0.36	0.19	0.15	0.15	0.64	7.6	1.53	9.2	NS

Table 5: Three-Year Forage Yield-Spring 2010 Garfield Alfalfa Variety Trial, Franklin County, WA
Forage Yield (Ton DM/A)

Seeded 4/15/10	2010 Harvest		2011 Total		2012 Harvests				2012 Total		2010-12		Final %
	Total	% Mean	tons/a	% Mean	24-May	2-Jul	1-Aug	12-Sep	tons/a	% Mean	ton/a	%	
64Q22	3.12	100.0%	4.14	103.8%	2.90	2.50	2.41	1.86	9.66	113.8%	16.92	108.5%	86.79
FG 45W271	3.13	100.3%	4.20	105.3%	2.76	2.35	2.21	1.85	9.16	107.8%	16.48	105.7%	84.64
WL 363 HQ	3.23	103.5%	4.07	102.1%	2.83	2.25	2.35	1.72	9.14	107.6%	16.44	105.4%	83.69
FG 45W273	3.14	100.5%	4.32	108.3%	2.79	2.19	2.14	1.66	8.79	103.5%	16.25	104.2%	87.14
FG 46W202	3.37	108.1%	3.98	100.0%	2.64	2.27	2.15	1.76	8.82	103.8%	16.18	103.7%	86.19
MasterPiece II	3.11	99.6%	4.07	102.1%	2.58	2.37	2.28	1.74	8.97	105.6%	16.15	103.5%	86.19
Prosementi	3.01	96.3%	4.55	114.3%	2.43	2.27	2.06	1.67	8.44	99.3%	16.00	102.6%	84.05
GrandStand	3.38	108.2%	3.95	99.2%	2.57	2.19	2.16	1.73	8.65	101.8%	15.98	102.4%	85.00
PGI 557	3.03	96.9%	4.29	107.7%	2.64	2.35	2.00	1.59	8.58	101.0%	15.90	101.9%	85.00
AmeriStand 407TQ	3.41	109.1%	4.19	105.1%	2.50	1.97	2.03	1.70	8.20	96.5%	15.79	101.3%	84.29
Integra 8400	3.05	97.8%	4.04	101.3%	2.83	2.12	2.19	1.60	8.65	101.9%	15.74	100.9%	85.48
CW 064004	2.94	94.1%	4.12	103.4%	2.57	2.25	2.19	1.70	8.63	101.6%	15.69	100.6%	86.19
Magna 551	3.35	107.2%	3.93	98.5%	2.65	2.19	2.04	1.62	8.41	99.0%	15.68	100.5%	85.60
Archer III	3.00	96.2%	3.91	98.1%	2.77	2.33	2.13	1.53	8.75	103.0%	15.67	100.4%	86.07
Mountaineer 2.0	3.42	109.5%	3.81	95.6%	2.73	2.12	1.85	1.61	8.31	97.9%	15.54	99.7%	87.38
FG 46W201	3.09	98.9%	3.91	98.0%	2.69	2.23	1.98	1.63	8.54	100.5%	15.53	99.6%	86.55
HybriForce Exp 802	3.13	100.2%	4.08	102.4%	2.73	2.07	1.92	1.54	8.27	97.4%	15.48	99.2%	86.31
Summit	2.69	86.2%	4.06	101.9%	2.58	2.19	2.07	1.65	8.48	99.8%	15.23	97.6%	85.83
45417	3.40	108.9%	3.79	95.1%	2.56	2.09	1.77	1.46	7.87	92.7%	15.06	96.6%	86.55
HybriForce Exp 807	3.05	97.6%	3.67	92.1%	2.73	1.93	1.83	1.42	7.91	93.1%	14.63	93.8%	84.52
DKA 42-15	2.88	92.3%	3.55	89.1%	2.46	2.00	1.92	1.52	7.90	92.9%	14.33	91.9%	85.71
Vernal	2.76	88.5%	3.05	76.4%	2.40	1.53	1.53	1.18	6.75	79.4%	12.48	80.0%	82.98
Mean	3.12	100.0%	3.98	100.0%	2.65	2.17	2.06	1.62	8.50	100.0%	15.60	100.0%	85.55
CV%	8.5	8.5	9.2	9.2	9.4	9.4	7.3	6.6	5.3	5.3	4.6	4.6	2.4
LSD 5%	0.38	12.3	0.52	13.1	NS	0.29	0.21	0.15	0.63	7.4	1.00	6.4	NS

Table 6: Two-Year Forage Yield-Fall 2010 Planting Garfield Road, Franklin County, WA
Forage Yield (Ton DM/A)

Seeded 8/18/10	Total of 2011 Harvests		2012 Harvests						Total of		31-Oct-11
			5/23	6/30	8/1	9/12		Percent	2011 & 2012		
Variety	tons/acre	% of Mean	Cut 1	Cut 2	Cut 3	Cut 4	Total	of Mean	Total	% Mean	Fall regrowth
DG4210	5.07	112.4%	2.74	2.31	2.41	1.82	9.29	105.1%	14.36	107.6%	4.75
WL 363 HQ	4.89	108.5%	2.67	2.26	2.21	1.88	9.03	102.2%	13.92	104.3%	4.25
Grandstand	4.61	102.2%	2.86	2.39	2.13	1.86	9.24	104.6%	13.85	103.8%	4.00
DKA50-18	4.60	102.0%	2.75	2.24	2.30	1.82	9.11	103.1%	13.71	102.7%	4.50
Archer III	4.65	103.1%	2.81	2.29	2.00	1.83	8.93	101.1%	13.58	101.8%	4.50
AmeriStand 445NT	4.53	100.4%	2.77	2.09	2.23	1.81	8.90	100.8%	13.43	100.6%	4.75
64Q22	4.19	92.8%	2.78	2.27	2.24	1.81	9.09	102.9%	13.28	99.5%	4.25
Winchester	4.22	93.6%	2.98	1.98	2.17	1.70	8.83	100.0%	13.06	97.9%	3.25
MsSunstra 810	4.40	97.5%	2.85	2.02	2.16	1.64	8.66	98.0%	13.05	97.8%	3.00
AmeriStand 407TQ	4.46	98.8%	2.75	1.93	2.23	1.65	8.56	96.9%	13.02	97.6%	3.50
DKA43-13	4.29	95.0%	2.47	2.10	2.17	1.78	8.52	96.4%	12.81	96.0%	4.50
Rebound 6.0	4.22	93.6%	2.31	1.93	2.08	1.52	7.85	88.8%	12.07	90.5%	3.50
Mean	4.51	1.00	2.73	2.15	2.19	1.76	8.83	100%	13.34	100%	4.06
CV %	6.5	6.5	10.1	10.9	7.0	7.6	5.9	4.6	4.6	4.6	12.1
LSD 5%	0.41	9.14	NS	NS	NS	0.19	0.75	8.5	0.89	6.7	0.71

NS = Data was not statistically significant at the alpha = 0.05

* Rating scale was: 1 - little to no regrowth, 2 – below average regrowth, 3 - average regrowth, 4 - above average regrowth, 5 - high amount of regrowth.

Table 7: Two-Year Forage Yield-Fall 2010 Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/A)

Seeded 8/17/10	2011 Total		2012 Harvests						Total of		Oct. 1, 2012
			Harv. 6/2	Harv. 7/2	Harv.8/3	Harv. 9/13	Total	Total	2011 & 2012		
Variety	Tons/a	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Tons/a	% Mean	Tons/a	% of Mean	Fall regrowth
DG4210	4.17	95%	2.61	2.56	2.10	1.75	9.02	106.2%	13.19	102.4%	4.8
Grandstand	4.49	102%	2.67	2.49	1.87	1.62	8.64	101.8%	13.14	102.0%	4.0
Magna 551	4.51	103%	2.72	2.45	1.83	1.60	8.61	101.4%	13.12	101.9%	3.5
DKA43-13	4.64	106%	2.48	2.48	1.96	1.55	8.47	99.8%	13.12	101.8%	4.8
Rebound 6.0	4.42	101%	2.67	2.44	1.86	1.58	8.55	100.8%	12.97	100.7%	4.0
WL 363 HQ	4.26	97%	2.56	2.53	1.90	1.68	8.67	102.2%	12.94	100.4%	3.8
HybriForce-240	4.77	109%	2.60	2.31	1.63	1.55	8.09	95.2%	12.86	99.8%	3.0
AmeriStand 407TQ	4.38	100%	2.45	2.43	1.90	1.61	8.38	98.7%	12.76	99.1%	4.8
AmeriStand 445NT	4.66	106%	2.16	2.31	1.84	1.68	7.99	94.1%	12.65	98.2%	5.0
LegenDairy 5.0	4.25	97%	2.47	2.39	1.87	1.65	8.38	98.7%	12.63	98.0%	3.5
6305Q	4.08	93%	2.45	2.55	1.90	1.65	8.55	100.6%	12.63	98.0%	3.5
6422Q	4.05	92%	2.58	2.35	1.86	1.74	8.53	100.4%	12.58	97.6%	4.8
Mean	4.39	100%	2.54	2.44	1.88	1.64	8.49	100%	12.88	1.00	4.1
CV %	8.4	8.4	9.0	7.0	6.5	5.0	4.6	4.6	3.9	3.9	12.0
LSD 5%	NS	NS	NS	NS	0.18	0.12	NS	NS	NS	NS	0.7

NS = Data was not statistically significant at the alpha = 0.05

* Rating scale was: 1 - little to no regrowth, 2 – below average regrowth, 3 - average regrowth, 4 - above average regrowth, 5 - high amount of regrowth.

Table 8: One-Year Forage Yield-Fall 2011 Alfalfa Variety Trial, Othello, Adams County, WA
Forage Yield (Ton DM/A)

Seeded 8/26/11		Roundup Ready® (RR)	2011 Harvests				2011	2011	2011 Fall
Company	Entry		Harv. 6-2	Harv. 7-2	Harv. 8-3	Harv. 9-13	Total	% Mean	10-1
			Cut 1	Cut 2	Cut 3	Cut 4		Regrowth	
America's	AmeriStand 445NT		3.48	2.33	1.68	1.74	9.23	115.8%	5.00
Croplan Genetics	Gunner		3.31	2.36	1.78	1.64	9.09	114.1%	5.00
Dairyland Seed Co.	MsSunstra-803		3.56	2.38	1.56	1.59	9.09	114.0%	2.50
Eureka Seeds	4R200	RR	3.42	2.22	1.64	1.62	8.89	111.6%	3.75
Dairyland Seed Co.	DSB08-M		3.54	2.13	1.55	1.56	8.78	110.1%	2.75
Dairyland Seed Co.	Magnum 7		3.68	2.12	1.50	1.45	8.74	109.7%	2.50
Monsanto	DKA 43-22 RR	RR	3.42	2.21	1.53	1.51	8.66	108.7%	3.75
CPS	Enhancer II		3.18	2.22	1.55	1.52	8.47	106.3%	2.50
Dairyland Seed Co.	DSB01-T		3.56	2.01	1.42	1.45	8.44	105.9%	2.75
W-L Research	WL 354HQ		3.17	2.05	1.57	1.56	8.35	104.8%	4.00
Monsanto	DKA 34-17 RR	RR	3.05	2.21	1.57	1.51	8.34	104.6%	3.00
JR Simplot	MasterPiece II		3.08	2.10	1.57	1.52	8.27	103.8%	4.25
Producer's Choice	PGI 424		3.20	2.02	1.50	1.50	8.22	103.2%	3.25
Croplan Genetics	Rebound 6.0		3.15	2.02	1.53	1.50	8.21	103.0%	4.00
Columbia Basin Col.	CB001		3.02	2.11	1.54	1.53	8.20	102.8%	3.50
Forage Genetics	FGI 48W203		2.88	2.15	1.58	1.57	8.19	102.7%	4.75
Forage Genetics	FGI 48W201		2.84	2.20	1.56	1.51	8.12	101.9%	4.50
Monsanto	DKA 41-18 RR	RR	2.69	2.22	1.64	1.55	8.10	101.7%	3.50
Croplan Genetics	LegenDairy 5.0		2.87	2.12	1.57	1.51	8.06	101.2%	3.50
Services	Grandstand		2.98	1.99	1.48	1.54	7.99	100.3%	3.50
Forage Genetics	FGI R58HG236		2.83	2.15	1.55	1.45	7.99	100.2%	4.25
America's	AmeriStand 407TQ		3.07	1.97	1.45	1.46	7.96	99.8%	4.00
Syngenta	6305Q		2.68	2.00	1.55	1.45	7.68	96.4%	3.25
Forage Genetics	FGI 48W202		2.62	1.96	1.55	1.39	7.51	94.2%	4.75
Services	DG4210		2.92	1.73	1.39	1.36	7.40	92.9%	2.50
Public	Vernema ¹		0.06	1.16	1.24	1.18	3.65	45.8%	2.00
Public	Vernal ¹		0.06	1.08	1.19	1.20	3.54	44.4%	1.00
	Mean		2.90	2.05	1.53	1.49	7.97	100.0%	3.48
	CV %		12.4	10.6	7.8	8.1	7.9	7.9	13.6
	LSD 5%		0.51	0.31	0.17	0.17	0.88	11.04	0.66

¹ Vernal and Vernema seed did not germinate due to bad seed. These varieties were replanted in the spring so lower yields resulted.

NS = Data was not statistically significant at the alpha = 0.05

* Rating scale was: 1 - little to no regrowth, 2 – below average regrowth, 3 - average regrowth, 4 - above average regrowth, 5 - high amount of regrowth.

Table 9: One-Year Forage Yield-Fall 2011 Planting Garfield Road, Franklin County, WA
Forage Yield (Ton DM/A)

Seeded 9/1/11		Roundup	2011 Harvests				2011	2011	2011 Fall
Company	Entry	Ready® (RR)	Harv. 5-24 Cut 1	Harv. 6-30 Cut 2	Harv.7-31 Cut 3	Harv.8-12 Cut 4	Total	% Mean	10-1 Regrowth
Dairyland Seed Co.	HybriForce-2600		2.60	1.40	1.92	1.70	7.63	109.5%	3.25
Monsanto	DKA 41-18 RR	RR	2.62	1.41	1.91	1.67	7.61	109.3%	4.50
JR Simplot	MasterPiece II		2.59	1.40	1.88	1.74	7.61	109.3%	4.75
Producer's Choice	PGI 557		2.48	1.39	1.89	1.84	7.60	109.2%	4.75
America's	AmeriStand 445NT		2.35	1.45	1.99	1.77	7.56	108.6%	5.00
Syngenta	6422Q		2.38	1.44	1.94	1.74	7.50	107.7%	4.50
W-L Research	WL 354HQ		2.51	1.33	1.93	1.70	7.47	107.2%	4.75
Monsanto	DKA 43-22 RR	RR	2.41	1.27	1.95	1.71	7.34	105.4%	4.25
Croplan Genetics	LegenDairy 5.0		2.62	1.36	1.80	1.54	7.32	105.1%	3.50
Forage Genetics	FGI 48W201		2.40	1.35	1.84	1.67	7.26	104.3%	5.00
Croplan Genetics	Rebound 6.0		2.27	1.29	1.95	1.72	7.23	103.8%	4.00
America's	AmeriStand 407TQ		2.37	1.23	1.97	1.62	7.19	103.2%	4.75
Forage Genetics	FGI 48W203		2.33	1.37	1.87	1.61	7.18	103.1%	5.00
Eureka Seeds	6R100	RR	2.38	1.17	1.90	1.70	7.15	102.7%	5.00
Forage Genetics	FGI 59W212		2.46	1.32	1.72	1.62	7.12	102.2%	5.00
Crop Production Services	DG4210		2.42	1.31	1.74	1.64	7.11	102.0%	3.00
Forage Genetics	FGI R58HG236		2.30	1.34	1.86	1.56	7.06	101.4%	5.00
Forage Genetics	FGI 48W202		2.21	1.31	1.90	1.64	7.06	101.3%	4.50
Crop Production Services	Grandstand		2.35	1.26	1.82	1.61	7.05	101.2%	3.75
Public	Vernal ¹		0.06	0.93	1.46	1.34	3.79	54.5%	2.00
Public	Vernema ¹		0.06	0.70	1.30	1.34	3.40	48.8%	2.50
	Mean		2.20	1.29	1.84	1.64	6.97	100%	4.23
	CV %		7.7	14.0	8.4	10.1	6.2	6.2	12.3
	LSD 5%		0.24	0.26	0.22	0.24	0.61	8.76	0.74

¹ Vernal and Vernema seed did not germinate due to bad seed. These varieties were replanted in the spring so lower yields resulted.

NS = Data was not statistically significant at the alpha = 0.05

* Rating scale was: 1 - little to no regrowth, 2 – below average regrowth, 3 - average regrowth, 4 - above average regrowth, 5 - high amount of regrowth.