



# **2004 WSHGA & WSU ALFALFA VARIETY YIELD TRIALS**

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# Washington State Hay Growers Association/Washington State University Alfalfa Variety Trials

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Six alfalfa trials were harvested for yield in irrigated central Washington State in 2004. The Washington State Hay Growers Association (WSHGA) with cooperation by WSU conducted three trials 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:46.7 Lng:119.0 and at an elevation of 1154 feet. The Pasco sites are located on Glade Road and Columbia Basin College (CBC) at the north edge of Pasco, WA with the CBC site at Lat:46.2 Lng:119.1 and an elevation of 339 feet.

The soils were a Shano silt loam (coarse-silty, mixed-mesic Xerollic Camborthids) at Othello and sand to loamy sand (series undetermined) at Pasco. All trials were sprinkler irrigated throughout the April-October growing season. The frost-free day's (32°F) period extended 140 days from 6 June to 24 October at Othello, and 206 days from 4 April to 25 October at Pasco.

Each trial was arranged in a randomized complete block (RCB) design with 4 replications. All were seeded at about 15lbs/A in rows spaced 6 inches apart with a 1-foot interplot separation. Plot size is 4 x 14 feet. Some trials contained experimental entries, which are not available for commercial planting.

Forage yields for each harvest in 2004, the total yield in 2004, and the total for all years of the trials to date are reported in Tables 4 through 9. Yields were determined from whole plot fresh weights converted to a dry matter basis using a constant dry matter fraction.

Tables 1 and 2 are a summary of yields for alfalfa varieties currently on the market for the Pasco and Othello location. Yields are presented in percent of mean of the test for ease of comparison. Table 3 provides information on dormancy, pest resistance, and seed marketers for the same varieties.

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**Table 1: 2004 Summary of Alfalfa Yield Trials -- Pasco, Washington** (varieties on the market)  
Yield in % of mean of test

Entry	Pasco, Washington Seeded April 4, 1997					Pasco, Washington Seeded Sept. 4, 1997				Pasco, Washington Seeded September, 1998				Pasco, Washington Seeded August, 1999				Pasco, Washington Seeded August, 2000				Pasco, Washington Seeded August, 2001				Pasco, Washington Seeded August, 2002			
	1997 % of mean	1998 % of mean	1999 % of mean	2000 % of mean	4 yr. Percent of Mean	1998 % of mean	1999 % of mean	2000 % of mean	3 yr. Percent of Mean	1999 % of mean	2000 % of mean	2001 % of mean	3 yr. Percent of Mean	2000 % of mean	2001 % of mean	2002 % of mean	3 yr. Percent of Mean	2001 % of mean	2002 % of mean	2003 % of mean	3 yr. Percent of Mean	2002 % of mean	2003 % of mean	2004 % of mean	3 yr. Percent of Mean	2003 % of mean	2004 % of mean	2yr. Percent of Mean	
512																													
6420						101.9%	97.2%	91.1%	97.0%									99.3%	100.1%	105.5%	101.3%	106.1%	104.9%	108.7%	106.3%				
9429																											99.5%	105.7%	102.3%
5 Star																													
53V08	100.0%	103.4%	100.0%	96.7%	100.3%	101.0%	106.5%	112.2%	106.3%	102.5%	103.3%	109.2%	104.8%	103.5%	107.2%	111.3%	106.9%	103.4%	101.0%	110.6%	104.7%	99.9%	107.3%	111.9%	105.9%				
54Q25														101.7%	110.8%	116.3%	108.8%					101.2%	104.5%	111.0%	105.1%	101.2%	103.9%	102.4%	
54Q53						99.0%	104.7%	111.1%	104.7%	105.1%	107.4%	106.1%	106.3%																
Abundance						111.5%	98.1%	97.8%	102.7%																				
Affinity+Z	97.8%	99.1%	103.0%	105.5%	101.7%																								
Alliant																						102.6%	99.7%	108.0%	102.9%				
Ameristand 403T																						104.0%	102.3%	107.6%	104.3%				
Archer II										101.7%	102.5%	101.0%	101.8%																
Attention																										101.1%	98.6%	100.0%	
Baralfa 53 HR																										99.9%	101.4%	100.5%	
Blazer XL																													
Cimarron SR																		99.1%	102.5%	98.5%	100.0%								
DKA42-15																						105.5%	107.4%	117.2%	109.3%				
Dynamic																										101.1%	98.9%	100.1%	
Imperial																													
Innovator+Z										99.2%	99.2%	103.1%	100.3%																
Key																													
LeafMaster	104.3%	106.9%	110.0%	106.6%	107.4%																								
Lobo	104.3%	96.6%	90.0%	93.4%	94.9%					101.7%	96.7%	94.9%	98.0%	99.1%	96.4%	102.5%	99.0%	99.5%	99.9%	101.9%	100.4%								
Magnum III																													
Magnum IV	108.7%	99.1%	88.0%	97.8%	96.9%	95.2%	97.2%	91.1%	94.7%																				
Magnum V										100.8%	95.9%	90.8%	96.2%					100.4%	101.3%	93.6%	98.7%								
Masterpiece														105.2%	113.5%	122.5%	112.7%												
Millennia										103.4%	103.3%	108.2%	104.8%																
MP2000	104.3%	100.0%	101.0%	100.0%	100.8%																								
Perfect										104.2%	105.8%	116.3%	108.3%																
Plumas	108.7%	103.4%	109.0%	113.2%	108.2%									103.5%	108.1%	115.0%	108.2%	103.4%	102.4%	109.4%	104.8%	103.3%	105.1%	112.8%	106.5%	103.9%	101.4%	102.8%	
Radiant																		106.3%	100.1%	101.5%	102.9%								
Rainier	97.8%	100.0%	105.0%	102.2%	101.7%																								
Rebound 4.2										101.7%	109.9%	116.3%	108.9%																
Recover																										103.4%	99.4%	101.6%	
Reward II																						103.4%	95.9%	93.2%	97.8%				
Samurai														92.2%	98.2%	106.3%	98.0%												
Select										104.2%	105.8%	105.1%	105.1%																
Stellar						101.0%	104.7%	110.0%	105.0%																				
Tango										101.7%	101.7%	101.0%	101.5%	103.5%	100.9%	102.5%	102.3%					100.3%	101.0%	100.9%	100.7%				
Vernal						87.5%	81.3%	82.2%	83.7%	87.3%	85.1%	79.6%	84.3%	87.8%	83.8%	81.3%	84.6%	89.9%	90.9%	78.8%	87.0%	91.3%	79.7%	64.5%	79.7%	87.1%	73.2%	80.8%	
Vernema						98.1%	98.1%	92.2%	96.4%	99.2%	91.7%	82.7%	91.7%	102.6%	91.0%	88.8%	94.8%	94.5%	92.0%	87.5%	91.7%	100.5%	90.4%	76.6%	90.3%				
WinterGold																		106.9%	106.1%	107.6%	106.8%								
WL 327														102.6%	104.5%	105.0%	103.9%					106.9%	101.6%	105.1%	104.3%				
WL 342																						98.7%	107.9%	110.2%	105.3%				
WL325HQ	104.3%	100.0%	103.0%	103.3%	102.3%	104.8%	105.6%	107.8%	106.0%																				
XTRA-3																		104.2%	104.8%	107.2%	105.3%								
AV-TIAC	4.6	11.6	10.0	9.1	8.8	10.4	10.7	9.0	10.0	11.8	12.1	9.8	11.2	11.5	11.1	8.0	10.2	10.4	8.7	7.7	9.0	8.1	9.3	8.7	8.7	9.9	8.1	9.0	
LSD(0.05)	13.0%	7.8%	9.0%	11.0%	7.9%	7.7%	5.6%	8.9%	6.3%	3.4%	5.8%	8.2%	2.7%	6.1%	6.3%	6.3%	4.6%	9.15%	7.7%	7.2%	5.9%	8.59%	7.8%	7.18%	7.18%	5.50%	8.03%	5.76%	
CV(%)	9.4	5.3	6.5	7.9	5.1	5.5	3.7	6.3	4.7	2.5	4	5.7	2.4	4.5	4.5	4.8	3.3	6.4	5.4	5.0	4.1	6.3	5.4	5.0	5.0	3.8	5.6	4.0	

**Table 2: 2004 Summary of Alfalfa Yield Trials -- Othello, Washington (varieties on the market)**

Yield in % of mean of test

Entry	Othello, Washington Seeded Aug. 20, 1996				Othello, Washington Seeded August 22, 1997				Othello, Washington Seeded March 31, 1999				Othello, Washington Seeded April, 2001				Othello, Washington Seeded August, 2001				Othello, Washington Seeded August, 2002		
	1997 % of mean	1998 % of mean	1999 % of mean	3 yr. Percent of Mean	1998 % of mean	1999 % of mean	2000 % of mean	3 yr. Percent of Mean	1999 % of mean	2000 % of mean	2001 % of mean	3 yr. Percent of Mean	2001 % of mean	2002 % of mean	2003 % of mean	3 Yr. Percent of mean	2002 % of mean	2003 % of mean	2004 % of mean	3 Yr. Percent of mean	2003 % of mean	2004 % of mean	2 Yr. Percent of mean
512																							
6420					107.1%	109.0%	104.2%	106.9%															
9429																					101.3%	96.3%	99.2%
53V08					103.5%	110.3%	108.3%	107.3%	95.2%	109.1%	112.9%	106.7%	101.5%	101.1%	106.2%	102.8%	102.2%	105.1%	112.9%	105.7%			
54Q25																	104.3%	106.2%	107.7%	105.7%	102.6%	108.2%	104.9%
54Q53					101.2%	103.8%	105.6%	103.4%	103.2%	102.3%	101.2%	102.1%											
A30-06																							
Abundance					104.7%	109.0%	105.6%	106.4%									98.6%	97.7%	90.7%	96.3%			
Affinity+Z	103.3%	93.5%	101.4%	98.7%																			
Alliant																	105.2%	100.2%	103.5%	102.8%			
Ameristand 403T																	94.9%	95.8%	95.8%	95.3%			
Archer II	108.2%	105.4%	112.2%	108.3%					101.6%	105.7%	110.6%	106.3%											
Baralfa 42 IQ													96.2%	96.3%	97.5%	96.7%							
Blazer XL	100.0%	94.6%	90.5%	94.7%																			
Cimarron SR													100.0%	101.1%	98.2%	99.3%							
Dakota													100.0%	96.8%	94.8%	97.4%							
DK127	106.6%	104.3%	105.4%	105.3%																			
DK134									104.8%	100.0%	96.5%	100.0%											
DKA42-15																							
Dynamic																	103.7%	113.1%	113.8%	108.5%	107.0%	101.4%	104.7%
Emperor									96.8%	96.6%	96.5%	96.6%											
Forecast 1001									103.2%	103.4%	105.9%	104.2%	104.4%	104.3%	102.6%	103.3%							
Forecast 3001													100.0%	100.0%	104.1%	101.4%							
Goliath													101.5%	100.0%	97.4%	99.8%							
Imperial	103.3%	100.0%	105.4%	102.6%																			
Innovator+Z									96.8%	97.7%	91.8%	95.3%											
Key	104.9%	98.9%	100.0%	100.9%																			
LeafMaster	100.0%	97.8%	100.0%	99.1%																			
Legendairy 2.0	100.0%	92.5%	98.6%	96.5%																			
Magna 601																	98.1%	103.4%	109.9%	102.7%			
Magnum III	100.0%	98.9%	100.0%	99.6%																			
Magnum IV	106.6%	104.3%	112.2%	107.5%	95.3%	100.0%	98.6%	97.9%															
Magnum V									101.6%	102.3%	101.2%	101.7%	104.4%	100.0%	102.4%	102.0%	103.2%	105.4%	108.6%	105.2%			
Millennia									100.0%	100.0%	102.4%	100.8%											
MP2000	100.0%	103.2%	104.1%	102.6%																			
Perfect									98.4%	102.3%	100.0%	100.4%	102.7%	99.8%	102.8%	101.6%							
Plumas	104.9%	103.2%	102.7%	103.5%									97.1%	100.0%	99.6%	98.6%	97.6%	94.9%	93.3%	95.5%			
Radiant													100.0%	97.9%	98.0%	98.2%							
Rebel																	99.9%	97.7%	92.3%	97.2%			
Rebound 4.2									106.3%	103.4%	105.9%	105.0%											
Reward II																					97.5%	91.2%	94.9%
Ruccus																							
Select									104.8%	102.3%	102.4%	102.9%					101.3%	102.0%	107.1%	102.8%			
Stellar					92.9%	105.1%	105.6%	100.9%															
Tango																	104.6%	97.0%	102.6%	101.2%			
Vernal	85.2%	83.9%	81.1%	83.3%	87.1%	89.7%	91.7%	89.4%	95.2%	93.2%	89.4%	92.3%	86.8%	88.3%	82.2%	85.5%	85.8%	87.8%	80.4%	85.2%	82.2%	79.7%	81.1%
Vernema	96.7%	100.0%	97.3%	98.2%	97.6%	92.3%	93.1%	94.5%	98.4%	100.0%	98.8%	99.1%	100.0%	101.1%	93.8%	98.4%	96.6%	93.6%	89.5%	93.7%			
Vitro																					104.5%	100.0%	102.6%
WinterGold	108.2%	105.4%	120.3%	111.0%									102.9%	102.1%	100.8%	101.6%							
WL 319HQ																					107.2%	102.9%	105.4%
WL 327																	101.6%	100.6%	98.1%	100.3%			
WL 342																	108.9%	106.7%	107.0%	107.5%			
WL325HQ	109.8%	107.5%	116.2%	111.0%	97.6%	105.1%	108.3%	103.4%															
AV-TIAC	6.1	9.3	7.4	7.6	8.5	7.8	7.2	7.8	6.3	8.8	8.5	7.9	6.8	9.4	8.6	8.3	8.1	7.7	4.9	6.9	9.0	6.3	7.8
LSD(0.05)	13.1%	8.6%	5.4%	6.6%	8.2%	5.1%	8.3%	8.9%	6.3%	4.5%	9.4%	6.8%	8.8%	5.3%	7.8%	3.4%	7.7%	7.9%	15.0%	8.0%	6.3%	11.0%	7.5%
CV(%)	9.3	6.1	10	4.7	5.9	3.7	5.4	3.4	4.4	3.2	6.5	4.7	5.9	3.8	5.4	3.6	5.4	5.6	10.4	5.6	4.4	7.7	5.2

**Table 3: Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties  
Commerically Available in Washington**

Variety	Contact for Marketing Informator	FD	BW	VW	FW	AN	PRR	SAA	PA	BAA	SN	APH	SRKN	NRKN
Dynamic	Grassland Central/Grassland West	2	HR	HR	HR	HR	HR		R			HR		R
Vernal	Public	2	R	S	MR	S	S				SN	S		MR
53V08	Pioneer Hi-Bred International, Inc.	3	HR	HR	HR	HR	HR	R	HR	MR	HR	LR		HR
A30-06	PGI Alfalfa, Inc.	3	HR	HR	HR	HR	HR		R			HR		
Blazer XL	Croplan Genetics	3	R	R	HR	HR	HR	HR	R		R	R		
DKA33-16	Monsanto	3	HR	HR	HR	HR	HR	R	R			HR		R
Class	Union Seed Co.	3	HR	R	R	HR	HR	R	R	MR	R			
Forecast 3001	Dairyland Seed Co., Inc.	3	HR	R	HR	R	HR		R		R	R		R
Imperial	ABI Alfalfa, Inc.	3	HR	R	HR	HR	HR	MR	HR		LR	R		
Innovator+Z	America's Alfalfa	3	HR	HR	HR	HR	HR	MR	R	S	R	R		
LeafMaster	Union Seed Co.	3	R	HR	HR	HR	HR	R	R		HR	MR		MR
MP2000	Croplan Genetics	3	HR	R	HR	HR	HR	R	HR		R	HR		R
Rainier	Syngenta	3	HR	R	HR	HR	HR	HR	HR		R	HR		R
Samurai	ABI Alfalfa, Inc.	3	HR	R	HR	HR	HR	MR	R			R		
Somerset	Syngenta	3	HR	HR	HR	HR	HR	R			R	HR		
Vitro	Eureka Seeds, Inc.	3	HR	HR	HR	HR	HR	R	R		R	R		
WL 319HQ	W-L Research, Inc.	3	HR	HR	HR	HR	HR	R	HR		MR	HR		
WL 325HQ	W-L Research, Inc.	3	HR	R	HR	HR	HR	R	R	MR	R	R		
6420	Garst Seed Co.	4	HR	R	HR	R	HR	R	R		R	R		HR
54Q25	Pioneer Hi-Bred International, Inc.	4	HR	HR	HR	HR	HR	R	R		HR	R		HR
54Q53	Pioneer Hi-Bred International, Inc.	4	HR	HR	R	R	HR	MR	MR		HR	MR		HR
Abundance	BioPlantResearch/Ziller Seed Co.	4	HR	MR	HR	R	HR	R	R	MR		R		
Alliant	Monsanto	4	HR	R	HR	HR	HR	R	R	R	R	HR		
Affinity+Z	America's Alfalfa	4	HR	HR	HR	HR	HR		R		R	R		
AmeriStand 403T	America's Alfalfa	4	HR	HR	HR	HR	HR	MR	R		MR	HR		
Baralfa 42 IQ	Barenbrug USA	4	HR	HR	HR	HR	HR	HR	R			HR		
Boulder	Syngenta	4	HR	HR	HR	HR	HR	HR	HR		HR	R		R
Bullseye	Target Seed, LLC	4	HR	HR	HR	HR	HR	MR	LR	MR	R	MR		HR
Cimarron SR	Great Plains Research Co., Inc.	4	HR	HR	HR	HR	HR	R	HR	MR	R	MR	R	
DKA42-15	Monsanto	4	HR	HR	HR	HR	HR	R	HR		R	HR		
Emperor	ABI Alfalfa, Inc.	4	HR	HR	HR	HR	HR	MR	R			HR		
Forecast 1001	Dairyland Seed Co., Inc.	4	R	HR	R	R	R	MR	R	MR	R	R		HR
Key	Great Plains Research Co., Inc.	4	HR	HR	HR	HR	HR	HR	HR	MR	MR	MR	MR	
Magnum III	Dairyland Seed Co., Inc.	4	R	MR	R	MR	R	MR	R	MR	MR	LR		
Magnum IV	Dairyland Seed Co., Inc.	4	HR	R	HR	R	HR	MR		MR	R	MR		MR
Magnum V	Dairyland Seed Co., Inc.	4	HR	R	HR	R	HR	R	R	MR	R	MR		MR
Masterpiece	J. R. Simplot Company	4	HR	R	HR	HR	HR	HR		R	HR	R		R
Millennia	Union Seed Co.	4	HR	R	HR	HR	HR	R	R		HR	R		MR
Perfect	Grassland Central/Grassland West	4	HR	HR	HR	HR	HR	R	R		R	HR		
Plumas	Eureka Seeds, Inc.	4	HR	R	HR	HR	HR	R	R		HR	R		MR
Radiant	Ampac Seed Co.	4	HR	HR	HR	HR	HR	R	R		R	HR		
Rebound 4.2	Croplan Genetics	4	HR	HR	HR	HR	HR	R	R		MR	HR		
Rebel	Target Seed, LLC	4	HR	HR	HR	HR	HR		HR	MR		HR		
Reward II	PGI Alfalfa, Inc.	4	HR	R	HR	R	HR	R	R	R	R	R		HR
Robust T&N	Gooding Seed Co., Inc.	4	R	HR	HR	HR	HR	R	HR	MR	HR	MR		R
Select	Union Seed Co.	4	HR	R	HR	HR	HR	R	R	MR	HR	R		R
Stellar	Chemgro Seeds	4	HR	HR	HR	HR	HR	R	R			LR		
Vernema	Public	4	MR	MR		LR	LR	MR			HR			
WinterGold	L&H Seeds/Renk Seed/Tri-West Seed	4	HR	HR	HR	HR	R	R	R	HR	R	HR		
WL 327	W-L Research, Inc.	4	HR	R	HR	HR	HR	R	R	HR	R	HR		
WL 342	W-L Research, Inc.	4	HR	HR	HR	HR	HR	HR	HR		R	HR		
XTRA-3	Union Seed Co.	4	HR	R	HR	HR	HR	R	HR	R	HR	R		
512	Farm Valley Brand	5	HR	R	HR	HR	HR	R	R	HR	R	R		
5-Star	Croplan Genetics	5	R	R	HR	R	R	R	R	R	R	R		
Archer II	America's Alfalfa	5	R	HR	HR	HR	R	HR	MR	HR	HR			R
Baralfa 53HR	Barenbrug USA	5	HR	R	HR	HR	HR		R		R	HR		
DKA50-18	Monsanto	5	HR	HR	HR	HR	HR	R	R		R	HR		
Expedition	Syngenta	5	R	HR	HR	HR	HR	R			R	HR		R
Recover	Union Seed Co.	5	R	R	HR	R	R	R	R	R	R	R		
Ruccus	Target Seed, LLC	5	R	R	HR	MR	HR	R	R	LR	R			MR
Lobo	Eureka Seeds, Inc.	6	MR	R	HR	R	R	R	R	R	R			R
Magna 601	Dairyland SeedCo., Inc.	6	R	MR	HR	R	HR	HR	R		R	MR	R	R
Tango	Eureka Seeds, Inc.	6	MR	HR	HR	HR	HR	HR	HR	R	MR			R

<b>Variety</b>	<b>Contact for Marketing Information</b>	<b>FD</b>	<b>BW</b>	<b>VW</b>	<b>FW</b>	<b>AN</b>	<b>PRR</b>	<b>SAA</b>	<b>PA</b>	<b>BAA</b>	<b>SN</b>	<b>APH</b>	<b>SRKN</b>	<b>NRKN</b>
FD	Fall Dormancy	PA	Pea Aphid	Blank spaces indicate variety is susceptible or has not been adequately tested.										
BW	Bacterial Wilt	BAA	Blue Alfalfa Aphid											
VW	Verticillium Wilt	SN	Stem Nematode											
FW	Fusarium Wilt	APH	Aphanomyces											
AN	Anthracnose Race 1	SRKN	Southern Root Knot Nematode											
PRR	Phytophthora Root Rot	NRKN	Northern Root Knot Nematode											
SAA	Spotted Alfalfa Aphid													

**Table 4: Three-Year Forage Yield: 2001 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

Entry	Forage Yield (Tons DM/Ac)											3-Year Total	3-Yr % mean	2003 3-Jun Regrowth**	2003 17-Oct Regrowth**	2004 20-May Regrowth**
	2004 Harvests					2004 Total	2004% mean	2003 Total	2003% mean	2002 Total	2002% mean					
	6-May Cut 1	11-Jun Cut 2	14-Jul Cut 3	16-Aug Cut 4	12-Oct Cut 5											
DKA42-15	2.0	1.2	1.5	1.7	0.8	7.3	117.2%	9.9	107.4%	8.6	105.5%	25.8	109.3%	6.8	7.3	8.0
Plumas	1.9	1.1	1.5	1.7	0.8	7.0	112.8%	9.7	105.1%	8.4	103.3%	25.2	106.5%	5.3	5.3	5.5
512	1.8	1.1	1.3	1.7	0.8	6.8	108.7%	9.7	104.9%	8.6	106.1%	25.1	106.3%	6.5	7.8	6.3
5 Star	2.0	1.2	1.5	1.5	0.7	7.0	111.9%	9.9	107.3%	8.1	99.9%	25.0	105.9%	8.3	9.0	9.0
WL 342	1.9	1.1	1.4	1.6	0.8	6.8	110.2%	10.0	107.9%	8.0	98.7%	24.9	105.3%	7.5	7.3	8.0
*54Q25	2.0	1.2	1.3	1.6	0.7	6.9	111.0%	9.7	104.5%	8.2	101.2%	24.8	105.1%	8.0	5.3	6.5
WL 327	1.8	1.0	1.4	1.5	0.8	6.5	105.1%	9.4	101.6%	8.7	106.9%	24.6	104.3%	6.3	5.5	5.3
Ameristand 403T	2.0	1.0	1.3	1.6	0.8	6.7	107.6%	9.5	102.3%	8.5	104.0%	24.6	104.3%	6.3	3.5	4.8
Alliant	1.8	1.1	1.4	1.5	0.8	6.7	108.0%	9.2	99.7%	8.4	102.6%	24.3	102.9%	6.0	6.5	5.3
Tango	1.7	1.0	1.3	1.5	0.7	6.3	100.9%	9.3	101.0%	8.2	100.3%	23.8	100.7%	6.0	8.5	5.3
53VO8	1.9	1.0	1.3	1.6	0.7	6.5	104.9%	9.6	103.5%	7.7	94.3%	23.8	100.7%	8.0	4.8	6.0
AL 352	1.7	0.9	1.3	1.5	0.7	6.1	98.4%	9.3	100.2%	8.3	102.4%	23.7	100.5%	6.0	5.8	5.0
AL 223	1.9	1.1	1.3	1.5	0.7	6.5	103.8%	9.4	101.7%	7.7	94.3%	23.6	99.7%	5.5	4.3	4.3
Ruccus	1.6	1.0	1.2	1.5	0.7	6.1	97.7%	9.0	97.6%	8.3	102.0%	23.4	99.1%	6.8	8.0	6.8
Reward II	1.6	0.8	1.2	1.4	0.7	5.8	93.2%	8.9	95.9%	8.4	103.4%	23.1	97.8%	5.0	4.5	4.0
AL 355	1.6	0.9	1.2	1.4	0.7	5.8	93.6%	9.1	98.7%	8.0	98.2%	23.0	97.2%	5.5	5.5	4.0
Laser	1.5	0.9	1.1	1.4	0.7	5.7	91.7%	8.8	94.5%	8.2	100.9%	22.7	96.0%	5.5	6.0	3.8
*GP 98 FR	1.8	0.9	1.1	1.3	0.7	5.8	92.6%	9.2	99.5%	7.4	91.4%	22.4	94.9%	5.5	5.0	5.0
*GP 00 TC	1.6	0.8	1.1	1.3	0.7	5.5	89.3%	8.9	96.6%	7.6	92.8%	22.1	93.4%	6.3	6.0	4.8
Vernema	1.4	0.6	0.9	1.2	0.6	4.8	76.8%	8.4	90.4%	8.2	100.5%	21.3	90.3%	4.5	4.8	2.8
Vernal	1.1	0.5	0.8	1.0	0.5	4.0	64.5%	7.4	79.7%	7.4	91.3%	18.8	79.7%	3.3	2.0	2.0
<b>Mean</b>	<b>1.7</b>	<b>1.0</b>	<b>1.3</b>	<b>1.5</b>	<b>0.7</b>	<b>6.2</b>	<b>100.0%</b>	<b>9.3</b>	<b>100.0%</b>	<b>8.1</b>	<b>100.0%</b>	<b>23.6</b>	<b>100.0%</b>	<b>6.1</b>	<b>5.8</b>	<b>6.1</b>
<b>LSD 5%</b>	<b>0.18</b>	<b>0.23</b>	<b>0.18</b>	<b>0.19</b>	<b>0.15</b>	<b>0.18</b>	<b>1.6%</b>	<b>0.72</b>	<b>7.8%</b>	<b>0.70</b>	<b>8.59%</b>	<b>1.77</b>	<b>7.51%</b>	<b>1.18</b>	<b>0.96</b>	<b>1.23</b>
<b>CV %</b>	<b>7.0</b>	<b>16.6</b>	<b>10.1</b>	<b>8.8</b>	<b>14.1</b>	<b>7.6</b>	<b>7.6</b>	<b>5.4</b>	<b>5.4</b>	<b>6.3</b>	<b>6.3</b>	<b>5.2</b>	<b>5.2</b>	<b>13.4</b>	<b>11.5</b>	<b>15.9</b>

\*Planted as experimental

\*\*Regrowth is confounded with health of plants. Rating 9=tallest

**Table 5: Three-Year Forage Yield: 2001 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Seeded 8/30/01	Forage Yield (Tons DM/Ac)															
	2004 Harvests				2004 Total	Percent mean	2003 Total	Percent mean	2002 Total	Percent mean	2-Year Total	2-Yr % mean	3-Year Total	3-Yr % mean	4-Jun Regrowth	18-Oct Regrowth**
	13-May Cut 1	17-Jun Cut 2	20-Jul Cut 3	27-Aug Cut 4												
*DKA42-15	2.0	1.3	1.2	1.4	5.6	113.8%	8.7	113.1%	8.4	103.7%	17.1	108.3%	22.7	109.5%	8.0	5.5
WL 342	1.8	1.1	1.2	1.3	5.3	107.0%	8.2	106.7%	8.8	108.9%	17.0	107.9%	22.3	107.5%	8.0	4.5
*54Q25	2.0	1.1	1.1	1.3	5.3	107.7%	8.2	106.2%	8.5	104.3%	16.6	105.3%	21.9	105.7%	7.8	4.8
53VO8	2.0	1.2	1.2	1.5	5.5	112.9%	8.1	105.1%	8.3	102.2%	16.4	103.6%	21.9	105.7%	7.3	4.5
Magnum V	1.9	1.2	1.1	1.4	5.3	108.6%	8.1	105.4%	8.4	103.2%	16.5	104.3%	21.8	105.2%	7.0	5.8
Alliant	1.8	1.1	1.1	1.3	5.1	103.5%	7.7	100.2%	8.5	105.2%	16.2	102.8%	21.3	102.8%	7.5	4.5
Ruccus	1.9	1.1	1.1	1.4	5.3	107.1%	7.8	102.0%	8.2	101.3%	16.1	101.6%	21.3	102.8%	8.0	7.5
Magna 601	2.0	1.1	1.1	1.4	5.4	109.9%	8.0	103.4%	7.9	98.1%	15.9	100.7%	21.3	102.7%	8.3	7.3
512	1.8	1.2	1.1	1.4	5.3	106.9%	7.8	101.9%	8.2	101.0%	16.0	101.4%	21.3	102.6%	7.5	6.8
Tango	1.8	1.1	1.1	1.3	5.0	102.6%	7.5	97.0%	8.5	104.6%	15.9	100.9%	21.0	101.2%	7.0	6.0
AL 355	1.9	1.1	1.1	1.3	5.2	105.0%	7.7	99.6%	8.1	99.4%	15.7	99.5%	20.9	100.7%	7.3	5.3
WL 327	1.8	1.1	1.0	1.2	4.8	98.1%	7.7	100.6%	8.2	101.6%	16.0	101.1%	20.8	100.3%	7.8	5.5
AL 352	1.9	1.1	1.0	1.3	5.0	101.3%	7.6	99.2%	7.9	97.9%	15.6	98.5%	20.5	99.1%	7.3	5.5
AL 223	1.8	1.1	1.1	1.3	5.1	104.0%	7.3	94.4%	8.0	98.8%	15.3	96.7%	20.4	98.3%	7.0	4.3
Rebel	1.6	0.9	1.0	1.2	4.5	92.3%	7.5	97.7%	8.1	99.9%	15.6	98.9%	20.2	97.2%	7.0	3.5
*DS120HYB	1.8	1.0	1.0	1.3	4.8	97.3%	7.8	101.0%	7.6	93.4%	15.3	97.1%	20.1	97.0%	7.0	6.0
Hybri Force-400	1.7	1.0	1.0	1.2	4.6	94.3%	7.6	98.5%	7.9	97.4%	15.5	98.0%	20.1	97.0%	7.8	4.0
*ZX0059D	1.7	1.0	0.9	1.2	4.6	93.8%	7.5	97.1%	8.0	98.6%	15.5	97.9%	20.1	96.8%	7.0	5.3
*A30-06	1.7	0.9	0.9	1.2	4.5	90.7%	7.5	97.7%	8.0	98.6%	15.5	98.2%	20.0	96.3%	7.3	2.8
Plumas	1.7	0.9	1.0	1.2	4.6	93.3%	7.3	94.9%	7.9	97.6%	15.2	96.3%	19.8	95.5%	6.8	3.8
Ameristand 403T	1.7	1.0	1.0	1.3	4.7	95.8%	7.4	95.8%	7.7	94.9%	15.1	95.3%	19.8	95.3%	7.0	2.5
Vernema	1.6	0.9	1.0	1.2	4.4	89.5%	7.2	93.6%	7.8	96.6%	15.0	95.1%	19.4	93.7%	7.3	4.5
*GP 98 FR	1.7	0.9	1.0	1.2	4.5	92.5%	7.2	93.4%	7.5	93.2%	14.7	93.3%	19.3	93.0%	7.3	4.0
*GP 00 TC	1.7	0.9	0.9	1.2	4.5	91.9%	6.8	88.6%	7.7	95.6%	14.6	92.2%	19.1	92.0%	7.3	4.5
Vernal	1.5	0.9	0.8	1.1	3.9	80.4%	6.8	87.8%	7.0	85.8%	13.7	86.8%	17.7	85.2%	5.8	2.8
<b>Mean</b>	<b>1.8</b>	<b>1.1</b>	<b>1.0</b>	<b>1.3</b>	<b>4.9</b>	<b>100.4%</b>	<b>7.7</b>	<b>100.0%</b>	<b>8.102</b>	<b>99.3%</b>	<b>15.8</b>	<b>100.0%</b>	<b>20.7</b>	<b>100.0%</b>	<b>7.3</b>	<b>4.8</b>
<b>LSD 5%</b>	<b>0.25</b>	<b>0.25</b>	<b>0.18</b>	<b>0.20</b>	<b>0.74</b>	<b>15.00%</b>	<b>0.61</b>	<b>7.91%</b>	<b>0.62</b>	<b>7.67%</b>	<b>1.07</b>	<b>6.78%</b>	<b>1.65</b>	<b>7.96%</b>	<b>0.61</b>	<b>1.67</b>
<b>CV %</b>	<b>9.6</b>	<b>16.9</b>	<b>12.1</b>	<b>10.9</b>	<b>10.4</b>	<b>10.4</b>	<b>5.6</b>	<b>5.6</b>	<b>5.4</b>	<b>5.4</b>	<b>4.8</b>	<b>4.8</b>	<b>5.6</b>	<b>5.6</b>	<b>5.8</b>	<b>24.0</b>

\*Planted as experimental

\*\* 2=5 in, 9=12 in

**Table 6: Two-Year Forage Yield: 2002 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

Seeded 8/23/02 Entry	Forage Yield (Tons DM/Ac)										2003	2003	2004	
	2004 Harvests					2004 Total	Percent mean	2003 Total	Percent mean	2-Year Total	2-Yr % mean	06/03/03	10/17/03	05/20/04
	6-May Cut 1	11-Jun Cut 2	14-Jul Cut 3	16-Aug Cut 4	12-Oct Cut 5							Regrowth**	Regrowth**	Regrowth*
*FG 4A 135	2.6	1.6	1.7	2.0	0.9	8.8	109.1%	9.9	100.5%	18.7	104.4%	6.3	7.0	6.5
Plumas	2.4	1.3	1.6	1.9	0.9	8.2	101.4%	10.3	103.9%	18.4	102.8%	5.3	4.3	4.5
54Q25	2.6	1.5	1.6	1.9	0.8	8.4	103.9%	10.0	101.2%	18.3	102.4%	5.8	4.5	5.5
9429	2.5	1.5	1.7	1.9	0.8	8.5	105.7%	9.8	99.5%	18.3	102.3%	5.5	5.5	5.8
*FG 5543	2.6	1.6	1.7	1.8	0.8	8.5	105.2%	9.8	99.7%	18.3	102.2%	7.8	6.8	9.0
Recover	2.5	1.4	1.6	1.7	0.7	8.0	99.4%	10.2	103.4%	18.2	101.6%	6.8	7.0	7.8
AL 366	2.4	1.4	1.6	2.0	0.9	8.2	102.4%	10.0	100.9%	18.2	101.6%	5.0	5.0	5.3
55H05	2.4	1.3	1.6	2.0	0.8	8.1	100.8%	10.0	101.6%	18.1	101.3%	7.8	8.8	7.3
Baralfa 53 HR	2.4	1.5	1.6	1.8	0.8	8.2	101.4%	9.9	99.9%	18.0	100.5%	6.8	8.0	8.0
Dynamic	2.4	1.4	1.5	1.8	0.8	8.0	98.9%	10.0	101.1%	17.9	100.1%	5.5	3.8	4.0
Attention	2.4	1.5	1.5	1.9	0.7	7.9	98.6%	10.0	101.1%	17.9	100.0%	7.0	7.3	7.8
Vernal	1.9	0.9	1.1	1.3	0.6	5.9	73.2%	8.6	87.1%	14.5	80.8%	3.3	2.3	2.5
<b>Mean</b>	<b>2.4</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>0.8</b>	<b>8.1</b>	<b>100.0%</b>	<b>9.9</b>	<b>100.0%</b>	<b>17.9</b>	<b>100.0%</b>	<b>6.0</b>	<b>5.8</b>	<b>6.1</b>
<b>LSD 5%</b>	<b>0.22</b>	<b>0.19</b>	<b>0.19</b>	<b>0.26</b>	<b>0.15</b>	<b>0.65</b>	<b>8.0%</b>	<b>0.54</b>	<b>5.5%</b>	<b>1.03</b>	<b>5.8%</b>	<b>1.32</b>	<b>1.10</b>	<b>1.23</b>
<b>CV %</b>	<b>6.4</b>	<b>9.2</b>	<b>8.5</b>	<b>9.7</b>	<b>13.1</b>	<b>5.6</b>	<b>5.6</b>	<b>3.8</b>	<b>3.8</b>	<b>4.0</b>	<b>4.0</b>	<b>15.2</b>	<b>13.1</b>	<b>13.8</b>

\*Planted as experimental

\*\* Rating 9=tallest



**Table 7: Two-Year Forage Yield: 2002 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Seeded 8/23/02 Entry	Forage Yield (Tons DM/AC) 2004 Harvests				2004 Total	04 Percent mean	2003 Total	03 Percent mean	2-Year Total	2-Yr % mean	2003	2003
	13-May Cut 1	17-Jun Cut 2	20-Jul Cut 3	27-Aug Cut 4							4-Jun Regrowth**	23-Sep Regrowth*
*4M76	2.4	1.5	1.2	1.5	6.7	106.3%	9.7	108.2%	16.4	107.4%	8.3	7.8
55H05	2.5	1.6	1.1	1.7	6.9	110.2%	9.2	102.0%	16.1	105.4%	8.5	7.5
WL 319HQ	2.2	1.6	1.2	1.4	6.5	102.9%	9.6	107.2%	16.1	105.4%	8.3	7.8
54Q25	2.4	1.6	1.2	1.5	6.8	108.2%	9.2	102.6%	16.0	104.9%	8.3	7.8
Dynamic	2.2	1.6	1.2	1.4	6.4	101.4%	9.6	107.0%	16.0	104.7%	8.0	7.3
Vitro	2.3	1.5	1.2	1.4	6.3	100.0%	9.4	104.5%	15.7	102.6%	8.0	7.0
AL 366	2.2	1.5	1.2	1.5	6.5	103.6%	9.1	101.1%	15.6	102.1%	7.8	7.0
9429	2.2	1.3	1.1	1.5	6.1	96.3%	9.1	101.3%	15.1	99.2%	7.8	7.5
*DS 9809	2.3	1.4	1.1	1.3	6.1	97.9%	8.9	99.6%	15.1	98.9%	7.8	7.3
Hybri Force 400	2.2	1.4	1.0	1.4	6.1	96.8%	8.9	99.4%	15.0	98.3%	7.5	7.0
*DS 108	2.3	1.4	1.1	1.4	6.2	99.2%	8.7	96.7%	14.9	97.7%	7.5	7.3
*DS 201	2.3	1.5	1.3	1.6	6.7	106.3%	8.2	91.0%	14.8	97.3%	7.0	7.3
Reward II	2.2	1.4	1.0	1.2	5.7	91.2%	8.7	97.5%	14.5	94.9%	7.5	7.0
Vernal	1.9	1.1	0.9	1.1	5.0	79.7%	7.4	82.2%	12.4	81.1%	6.0	7.0
<b>Mean</b>	<b>2.3</b>	<b>1.5</b>	<b>1.1</b>	<b>1.4</b>	<b>6.3</b>	<b>100.0%</b>	<b>9.0</b>	<b>100.0%</b>	<b>15.3</b>	<b>100.0%</b>	<b>7.7</b>	<b>7.3</b>
<b>LSD 5%</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.69</b>	<b>11.0%</b>	<b>0.57</b>	<b>6.3%</b>	<b>1.15</b>	<b>7.5%</b>	<b>0.7</b>	<b>1.1</b>
<b>CV %</b>	<b>6.7</b>	<b>11.7</b>	<b>10.0</b>	<b>16.1</b>	<b>7.7</b>	<b>7.7</b>	<b>4.4</b>	<b>4.4</b>	<b>5.2</b>	<b>5.2</b>	<b>6.8</b>	<b>10.9</b>

\*Planted as experimental

\*\*Ratings 9=tallest

**Table 8: One-Year Forage Yield: 2003 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

<i>Entry</i>	<i>Forage Yield (Tons DM/Ac)</i>						
	<i>2004 Harvests</i>				<i>2004 Total</i>	<i>2004% mean</i>	<i>30-Jul Regrowth</i>
	<i>7-May Cut 1</i>	<i>6-Jun Cut 2</i>	<i>14-Jul Cut 3</i>	<i>18-Aug Cut 4</i>			
<i>Boulder</i>	2.0	2.1	1.7	1.4	7.2	106.2%	8.3
<i>54Q25</i>	2.0	2.0	1.7	1.5	7.2	105.8%	6.5
<i>DKA50-18</i>	1.9	2.0	1.7	1.5	7.1	104.9%	7.3
<i>Plumas</i>	1.9	2.0	1.7	1.4	7.1	104.1%	5.8
<i>DKA42-15</i>	1.8	2.0	1.7	1.5	7.0	102.7%	6.8
<i>AmeriStand 403T</i>	1.9	1.9	1.6	1.5	6.9	101.9%	5.8
<i>*4 M 124</i>	2.0	2.1	1.6	1.5	6.9	101.4%	7.5
<i>Expedition</i>	1.8	1.9	1.7	1.5	6.9	101.2%	7.8
<i>SW 435</i>	2.0	2.1	1.6	1.4	6.8	100.5%	8.0
<i>Bullseye</i>	2.0	1.9	1.5	1.4	6.8	100.2%	5.3
<i>9429</i>	1.9	1.9	1.5	1.4	6.7	99.1%	6.0
<i>LegenDairy 5.0</i>	1.8	2.0	1.6	1.3	6.7	98.3%	7.0
<i>512</i>	2.0	1.9	1.6	1.4	6.7	98.1%	5.3
<i>Archer II</i>	1.8	1.8	1.6	1.4	6.6	97.3%	6.3
<i>Robust T&amp;N</i>	1.8	1.9	1.6	1.4	6.3	93.1%	7.0
<i>Vernal</i>	1.9	1.7	1.3	1.1	5.8	85.3%	3.5
<b>Mean</b>	<b>1.9</b>	<b>1.9</b>	<b>1.6</b>	<b>1.4</b>	<b>6.8</b>	<b>100.0%</b>	<b>6.5</b>
<b>LSD 5%</b>	<b>NS</b>	<b>0.19</b>	<b>0.17</b>	<b>NS</b>	<b>NS</b>	<b>NS</b>	<b>1.16</b>
<b>CV %</b>	<b>7.2</b>	<b>6.9</b>	<b>7.4</b>	<b>12.0</b>	<b>8.1</b>	<b>8.1</b>	<b>12.5</b>

*\*Planted as experimental*

*\*\*rating 9 =tallest*

**Table 9: One-Year Forage Yield: 2003 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Entry	Forage Yield (Tons DM/Ac)					
	2004 Harvests				2004 Total	2004% mean
	13-May Cut 1	17-Jun Cut 2	20-Jul Cut 3	27-Aug Cut 4		
Seeded 8/26/03						
LegenDairy 5.0	2.4	1.7	1.8	1.7	7.6	111.1%
DKA33-16	2.5	1.8	1.7	1.6	7.5	111.1%
DKA42-15	2.5	1.7	1.6	1.6	7.4	108.7%
WL 357HQ	2.3	1.7	1.7	1.6	7.4	108.2%
Boulder	2.3	1.6	1.7	1.7	7.3	107.0%
Somerset	2.3	1.6	1.6	1.5	7.0	103.4%
Plumas	2.2	1.5	1.7	1.5	7.0	102.3%
Baralfa 321Q	2.2	1.6	1.7	1.5	6.9	102.2%
**Robust T & N	2.1	1.5	1.6	1.6	6.9	101.1%
Baralfa 53HR	2.4	1.4	1.6	1.4	6.9	101.0%
54Q25	2.3	1.5	1.6	1.5	6.8	100.5%
*4M 124	1.9	1.5	1.7	1.7	6.8	100.4%
ML 05 - 3773	2.0	1.5	1.7	1.5	6.8	100.0%
Archer II	2.1	1.5	1.7	1.5	6.8	99.9%
Robust T & N	1.9	1.5	1.7	1.7	6.7	99.3%
AmeriStand 403T	2.1	1.4	1.6	1.5	6.7	98.5%
9429	2.1	1.3	1.7	1.4	6.6	97.4%
HybriForce 420	2.2	1.5	1.6	1.3	6.6	96.4%
Ranger	2.1	1.3	1.5	1.6	6.5	95.2%
Phirst	1.9	1.3	1.6	1.5	6.4	93.7%
512	2.1	1.4	1.5	1.4	6.4	93.5%
Baralfa 54	1.9	1.4	1.6	1.5	6.3	92.9%
HybriForce 400	2.0	1.3	1.3	1.4	6.0	89.0%
Vernal	1.9	1.1	1.5	1.3	5.9	87.3%
<b>Mean</b>	<b>2.2</b>	<b>1.5</b>	<b>1.6</b>	<b>1.5</b>	<b>6.8</b>	<b>100.0%</b>
<b>LSD 5%</b>	<b>0.27</b>	<b>0.22</b>	<b>NS</b>	<b>0.22</b>	<b>0.63</b>	<b>9.31</b>
<b>CV %</b>	<b>8.8</b>	<b>10.5</b>	<b>10.0</b>	<b>10.3</b>	<b>6.6</b>	<b>6.6</b>

\*Planted as experimental

\*\* treated with ryzocoat