



# **2003 WSHGA & WSU**

## **ALFALFA VARIETY**

### **YIELD TRIALS**

November 24, 2003

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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 2003. Three trials (PE 63, 65 & 67) near Othello, WA and three trials (PE64,66 and 68) near Pasco, WA were conducted by the Washington State Hay Growers Association (WSHGA) with cooperation by WSU.

The Othello site is located on the WSU Othello research farm 6 miles ESE of Othello, WA at 46° 28' N, 119° 3' W and at an elevation of 1191 feet. The Pasco site is located on Glade Road at the north edge of Pasco, WA at 46° 17' N, 119° 7' W at 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 172 days from 6 May to 25 October at Othello, and 171 days from 7 May 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 2003, the total yield in 2003, 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 of 0.20.

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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<sup>1</sup> Extension Agronomist – WSU Pasco, Extension Agronomist – WSU Ephrata, Extension Soil Scientist – WSU Prosser, Agricultural Research Technician – WSU Prosser, respectively.

**Table 1: 2003 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		
	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	2 yr. Percent of Mean
329																								
512																		99.3%	100.1%	105.5%	101.3%	106.1%	104.9%	105.4%
6420						101.9%	97.2%	91.1%	97.0%															
5 Star																						99.9%	107.3%	103.8%
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%	94.3%	103.5%	99.2%
54Q25														101.7%	110.8%	116.3%	108.8%					101.2%	104.5%	102.9%
54Q53						99.0%	104.7%	111.1%	104.7%	105.1%	107.4%	106.1%	106.3%											
ABT 350										101.7%	104.1%	113.3%	106.0%											
ABT 400SCL										101.7%	98.3%	94.9%	98.5%											
Abundance						111.5%	98.1%	97.8%	102.7%															
Accord	102.2%	100.0%	97.0%	100.0%	99.4%	99.0%	103.7%	105.6%	102.7%															
Affinity+Z	97.8%	99.1%	103.0%	105.5%	101.7%																			
Alliant																						102.6%	99.7%	101.1%
Ameristand 403T																						104.0%	102.3%	103.1%
Archer II										101.7%	102.5%	101.0%	101.8%											
Blazer XL																								
Cimarron SR																		99.1%	102.5%	98.5%	100.0%			
Class	104.3%	102.6%	98.0%	95.6%	99.7%																			
Depend+EV										99.2%	96.7%	102.0%	99.1%											
DK127																								
DKA42-15																						105.5%	107.4%	106.5%
Imperial																								
Innovator+Z										99.2%	99.2%	103.1%	100.3%											
Key																								
LeafMaster	104.3%	106.9%	110.0%	106.6%	107.4%																			
LegenDairy 2.0	104.3%	103.4%	104.0%	104.4%	104.0%																			
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%											
Mountaineer										104.2%	99.2%	98.0%	100.6%											
MP2000	104.3%	100.0%	101.0%	100.0%	100.8%																			
MultiQueen	97.8%	100.0%	96.0%	93.4%	96.9%	105.8%	107.5%	101.1%	105.0%															
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%	104.3%
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%											
Reno																								
Reward II																						103.4%	95.9%	99.4%
Samurai														92.2%	98.2%	106.3%	98.0%							
Select										104.2%	105.8%	105.1%	105.1%											
Sendero						99.0%	88.8%	91.1%	93.1%															
Spur	95.7%	98.3%	97.0%	103.3%	98.9%																			
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%	100.7%
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%	85.1%
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%	95.1%
WinterGold																		106.9%	106.1%	107.6%	106.8%			
WL 327														102.6%	104.5%	105.0%	103.9%					106.9%	101.6%	104.1%
WL 342																						98.7%	107.9%	103.6%
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
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%
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

**Table 2: 2003 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		
	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	2 Yr. Percent of mean
329	91.8%	95.7%	94.6%	94.3%	104.7%	102.6%	100.0%	102.6%											
512													98.5%	104.3%	107.5%	105.2%	101.0%	101.9%	101.4%
6420					107.1%	109.0%	104.2%	106.9%											
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%	103.6%
54Q25																	104.3%	106.2%	105.3%
54Q53					101.2%	103.8%	105.6%	103.4%	103.2%	102.3%	101.2%	102.1%							
A30-06																	98.6%	97.7%	98.2%
ABT 400SCL									103.2%	100.0%	97.6%	100.0%							
Abundance					104.7%	109.0%	105.6%	106.4%											
Accord					98.8%	97.4%	100.0%	98.8%											
Affinity+Z	103.3%	93.5%	101.4%	98.7%															
Alliant																	105.2%	100.2%	102.8%
Ameristand 403T																	94.9%	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																	103.7%	113.1%	108.3%
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%	100.7%
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%	104.3%
Millennia									100.0%	100.0%	102.4%	100.8%							
Mountaineer									100.0%	106.8%	110.6%	106.3%							
MP2000	100.0%	103.2%	104.1%	102.6%															
MultiQueen					95.3%	92.3%	91.7%	93.2%											
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%	96.3%
Radiant													100.0%	97.9%	98.0%	98.2%			
Rebel																	99.9%	97.7%	98.9%
Rebound 4.2									106.3%	103.4%	105.9%	105.0%							
Reno	106.6%	98.9%	93.2%	99.1%															
Ruccus																	101.3%	102.0%	101.6%
Select									104.8%	102.3%	102.4%	102.9%							
Stellar					92.9%	105.1%	105.6%	100.9%											
Tango																	104.6%	97.0%	100.9%
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%	86.8%
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%	95.1%
WinterGold	108.2%	105.4%	120.3%	111.0%									102.9%	102.1%	100.8%	101.6%			
WL 327																	101.6%	100.6%	101.1%
WL 342																	108.9%	106.7%	107.9%
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	6.8	9.4	8.3
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%	6.8%
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	4.8

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

Variety	Contact for Marketing Information	FD	BW	VW	FW	AN	PRR	SAA	PA	BAA	SN	APH	SRKN	NRKN
Vernal	Public	2	R	S	MR	S	S				SN	S		MR
329	L&H Seeds	3	HR	HR	HR	HR	HR	R	HR		R	R		
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		MR		R	HR		
ABT350	Allied Seed	3	HR	HR	HR	HR	HR	R	R			HR		
Blazer XL	Croplan Genetics	3	R	R	HR	HR	HR	HR	R		R	R		
Class	Union Seed Co.	3	HR	R	R	HR	HR	R	R	MR	R			
DK127	Monsanto	3	HR	R	R	HR	HR	HR	HR	MR	R	HR		R
DK134	Monsanto	3	HR	HR	HR	HR	HR		R	MR	LR	HR		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
LegenDairy 2.0	Croplan Genetics	3	HR	R	HR	HR	HR	R	HR		MR	R		R
MP2000	Croplan Genetics	3	HR	R	HR	HR	HR		HR		R	HR		MR
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		
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		HR	R	R		R	R		HR
54Q53	Pioneer Hi-Bred International, Inc.	4	HR	HR	R	R	HR	MR	MR		HR	MR		HR
ABT 400SCL	Allied Seed, L.L.C.	4	HR	HR		HR	HR	R	HR		MR	HR		MR
Abundance	BioPlantResearch/Ziller Seed Co.	4	HR	MR	HR	R	HR	R	R	MR		R		
Accord	Union Seed Co./Chemgro seeds	4	HR	R	HR	HR	HR		HR		MR	R		MR
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		MR	HR		
Cimarron SR	Great Plains Research Co., Inc.	4	HR	HR	HR	HR	HR	R	HR	MR	R	MR	R	
Depend+EV	AgriPro Brand Seeds	4	HR	HR	HR	HR	HR	MR	R	S	MR	R		
DKA42-15	Monsanto	4	HR	HR	HR	HR	HR	R	R		MR	HR		
Emperor	ABI Alfalfa, Inc.	4	HR	HR	HR	HR	HR	MR	R			HR		
Forecast 1001	Dairyland Seed Co., Inc.	4	HR	R	R	R	HR		R		R	R		HR
Goliath	Allied Seed, L.L.C.	4	HR	R	HR	HR	HR	HR	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	HR	R	HR			R
Millennia	Union Seed Co.	4	HR	R	HR	HR	HR	HR	R		HR	R		MR
Mountaineer	Croplan Genetics	4	HR	R	HR	HR	HR	HR	R		HR			R
MultiQueen	L&H Seeds, Inc.	4	HR	R	HR	HR	HR	R	HR		MR	R		
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		
Reno	Syngenta	4	HR	R	HR	HR	HR	R	R		HR	R		MR
Reward II	PGI Alfalfa, Inc.	4	HR	R	HR	R	HR	R	R	R	R	R		HR
Select	Union Seed Co.	4	HR	R	HR	HR	HR	R	R	MR	HR	R		R
Spur	Allied Seed, L.L.C./Wheatland Seed	4	HR	R	HR	HR	HR	R	HR		MR	R		MR
Stellar	Chemgro Seeds	4	HR	HR	HR	HR	HR					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		
WL 327	W-L Research, Inc.	4	HR	R	HR	HR		R			R	HR		
WL 342	W-L Research, Inc.	4	HR	HR	HR	HR	HR	HR	HR		R	HR		
XTRA-3	Wilbur-Ellis Company	4	HR	R	HR	HR	HR	R	HR	R	HR	R		
Archer II	America's Alfalfa	5	R	HR	HR	HR	R	R	MR	HR	R			R
512	Farm Valley Brand	5	HR	R	HR	HR	HR	R	R	HR	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
Sendero	Allied Seed, L.L.C.	6	MR	R	HR	HR	HR	HR	HR	R	MR			R
Tango	Eureka Seeds, Inc.	6	MR	HR	HR	HR	HR	HR	HR	R	MR			R

FD Fall Dormancy  
 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  
 APH Aphanomyces  
 SRKN Southern Root Knot Nematode  
 NRKN Northern Root Knot Nematode

Blank spaces indicate variety is susceptible or has not been adequately tested.

**Table 4: PE-64 Three-Year Forage Yield: 2000 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

Seeded August 2000 Entry	Forage Yield (Tons DM/Ac)															
	2003 Harvests					2003		2002		2001		3-Year	3-Yr %	Final	3-Jun	17-Oct
	14-May Cut 1	16-Jun Cut 2	25-Jul Cut 3	20-Aug Cut 4	24-Sep Cut 5	Total	%mean	Total	%mean	Total	%mean	Total	mean	%Stand	Regrowth	Regrowth**
Winter Gold	3.0	2.8		1.5	1.0	8.3	107.6%	9.3	106.1%	11.2	106.9%	28.7	106.8%	74.1%	7.5	5.8
*XTRA-3	3.0	2.8		1.5	1.0	8.3	107.2%	9.1	104.8%	10.9	104.2%	28.3	105.3%	69.9%	7.8	7.5
*FG3R129	3.1	2.8		1.6	1.0	8.5	110.2%	9.0	103.4%	10.7	102.7%	28.3	105.1%	73.0%	7.5	6.8
Plumas	3.2	2.7		1.5	1.0	8.5	109.4%	8.9	102.4%	10.8	103.4%	28.2	104.8%	82.1%	5.5	5.5
53V08	3.1	2.9		1.5	1.1	8.6	110.6%	8.8	101.0%	10.8	103.4%	28.2	104.7%	74.5%	8.5	4.3
*Y54V03	3.1	2.6		1.5	1.0	8.2	105.8%	9.1	104.6%	10.5	100.2%	27.8	103.2%	78.6%	7.0	6.8
*CW 60008	3.0	2.9		1.6	1.0	8.4	109.0%	9.0	103.5%	10.3	98.6%	27.8	103.2%	77.0%	7.5	5.3
Radiant	2.8	2.6		1.5	1.0	7.8	101.5%	8.7	100.1%	11.1	106.3%	27.7	102.9%	80.9%	6.3	4.8
512	2.9	2.7		1.5	1.0	8.2	105.5%	8.7	100.1%	10.4	99.3%	27.3	101.3%	70.7%	6.8	6.3
DK 142	3.1	2.6		1.4	0.9	8.1	104.6%	8.8	100.7%	10.4	99.3%	27.2	101.3%	82.4%	6.3	5.0
Lobo	2.6	2.6		1.5	1.1	7.9	101.9%	8.7	99.9%	10.4	99.5%	27.0	100.4%	65.1%	8.8	9.0
*DS 9833	2.8	2.6		1.4	1.0	7.8	101.3%	8.9	101.8%	10.3	98.4%	27.0	100.3%	73.9%	5.5	5.3
Cimmaron SR	2.9	2.6		1.3	0.9	7.6	98.5%	8.9	102.5%	10.4	99.1%	26.9	100.0%	79.8%	5.8	4.3
*DS 015	2.6	2.5		1.6	0.9	7.6	98.8%	8.6	98.9%	10.6	101.7%	26.9	100.0%	67.9%	6.8	6.8
*DS 014	2.7	2.4		1.3	0.9	7.3	94.3%	8.7	99.4%	10.7	102.5%	26.7	99.1%	69.0%	5.8	6.0
Magnum V	2.7	2.4		1.3	0.9	7.2	93.6%	8.8	101.3%	10.5	100.4%	26.6	98.7%	61.5%	6.3	5.0
*DS 9705	2.8	2.5		1.4	0.9	7.6	98.2%	8.5	97.3%	10.4	99.1%	26.4	98.3%	70.7%	6.3	5.5
Barafla 42 IQ	2.9	2.6		1.5	1.0	7.9	102.7%	8.7	99.5%	9.8	93.6%	26.4	98.1%	87.5%	5.5	4.5
*DS 0703	2.8	2.5		1.3	0.8	7.4	95.5%	8.5	96.9%	10.4	100.0%	26.3	97.7%	63.6%	5.5	4.8
Dakota	2.9	2.3		1.2	0.8	7.2	93.0%	8.6	98.0%	10.3	99.0%	26.1	97.0%	69.4%	4.5	3.8
*DS 013	2.7	2.3		1.3	0.8	7.0	90.9%	8.7	100.2%	10.3	98.3%	26.0	96.8%	60.6%	5.0	5.0
*W45	2.6	2.3		1.3	1.0	7.2	93.3%	8.3	94.6%	10.4	100.0%	25.9	96.3%	58.7%	4.5	6.8
Vernema	2.5	2.3		1.2	0.8	6.8	87.5%	8.0	92.0%	9.9	94.5%	24.7	91.7%	57.4%	4.5	4.3
Vernal	2.5	2.2		0.8	0.6	6.1	78.8%	7.9	90.9%	9.4	89.9%	23.4	87.0%	38.6%	3.0	2.0
<b>Mean</b>	<b>2.8</b>	<b>2.6</b>	<b>N/A</b>	<b>1.4</b>	<b>0.9</b>	<b>7.7312</b>	<b>100.0%</b>	<b>8.7</b>	<b>100.0%</b>	<b>10.4</b>	<b>100.0%</b>	<b>26.9</b>	<b>100.0%</b>	<b>70.3%</b>	<b>6.2</b>	<b>5.4</b>
<b>LSD 5%</b>	<b>0.24</b>	<b>0.28</b>	<b>N/A</b>	<b>0.17</b>	<b>0.17</b>	<b>0.56</b>	<b>7.22%</b>	<b>0.67</b>	<b>7.71%</b>	<b>0.96</b>	<b>9.15%</b>	<b>1.59</b>	<b>5.91%</b>	<b>10.0%</b>	<b>1.54</b>	<b>1.36</b>
<b>CV %</b>	<b>5.9</b>	<b>7.5</b>	<b>N/A</b>	<b>8.4</b>	<b>12.4</b>	<b>5.0</b>	<b>5.0</b>	<b>5.4</b>	<b>5.4</b>	<b>6.4</b>	<b>6.4</b>	<b>4.1</b>	<b>4.1</b>	<b>10.0</b>	<b>17.4</b>	<b>17.5</b>

\*Planted as experimental  
FG3R134 =XTRA-3

\*\* 2=4 in, 9=12 in

**Table 5: PE-63 Three-Year Forage Yield: 2001 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Seeded 4/04/01	Forage Yield (Tons DM/Ac)														
	Final	2003 Harvests				2003	2003%	2002	2002%	2001	2001%	3-Year	3-Yr %	4-Jun	14-Oct
Entry	%Stand	Cut 1	Cut 2	Cut 3	Cut 4	Total	mean	Total	mean	Total	mean	Total	mean	Regrowth	Regrowth**
*Y54V03	99.7%	3.3	2.5	2.2	1.4	9.4	109.4%	9.9	105.1%	7.0	101.7%	26.3	105.7%	8.0	7.8
512	99.2%	3.1	2.5	2.2	1.4	9.2	107.7%	9.8	103.8%	7.1	104.2%	26.2	105.2%	7.8	8.0
*Perfect	98.9%	2.9	2.4	2.1	1.3	8.8	102.4%	9.8	103.7%	7.3	106.7%	25.9	104.1%	7.5	5.5
Forecast 1001	99.2%	3.1	2.4	2.0	1.3	8.8	102.9%	9.8	103.4%	7.1	103.6%	25.7	103.3%	8.0	5.0
DK 142	99.6%	3.0	2.3	2.1	1.4	8.9	103.3%	9.7	103.0%	7.1	103.4%	25.7	103.2%	7.3	5.8
53V08	99.6%	3.1	2.4	2.2	1.4	9.1	106.4%	9.6	101.6%	6.9	100.0%	25.6	102.8%	8.0	5.5
Magnum V	98.6%	3.0	2.3	2.0	1.4	8.8	102.6%	9.5	100.4%	7.1	103.5%	25.4	102.0%	8.3	6.0
Winter Gold	99.2%	2.8	2.4	2.0	1.4	8.7	101.0%	9.6	101.4%	7.0	102.8%	25.3	101.6%	7.8	5.0
*XTRA-3	99.5%	2.9	2.4	2.1	1.4	8.8	102.8%	9.4	99.8%	7.0	102.7%	25.3	101.6%	7.8	5.8
Forecast 3001	99.0%	3.1	2.4	2.1	1.4	8.9	104.3%	9.5	100.3%	6.8	99.2%	25.2	101.4%	8.0	5.8
*DS 9705 Hyb	98.7%	2.9	2.2	2.0	1.4	8.6	99.7%	9.5	101.1%	6.8	99.5%	24.9	100.2%	7.8	5.3
Goliath	99.4%	2.7	2.3	2.0	1.3	8.4	97.6%	9.5	100.5%	6.9	101.4%	24.8	99.8%	7.3	4.8
Cimarron SR	99.0%	3.0	2.3	1.9	1.3	8.4	98.4%	9.5	100.5%	6.8	98.8%	24.7	99.3%	6.8	4.8
Plumas	99.6%	2.9	2.3	2.0	1.3	8.6	99.8%	9.4	99.5%	6.6	96.1%	24.5	98.6%	7.3	5.3
Vernema	98.3%	2.7	2.1	1.9	1.3	8.1	94.0%	9.6	101.5%	6.8	99.6%	24.5	98.4%	7.0	4.8
Radiant	99.4%	2.8	2.4	2.0	1.3	8.4	98.2%	9.2	97.0%	6.8	99.7%	24.4	98.2%	7.5	4.8
Laser	99.4%	2.9	2.2	2.0	1.3	8.4	97.6%	9.1	96.4%	6.8	99.1%	24.3	97.6%	7.3	5.3
Dakota	98.7%	2.9	2.2	1.8	1.3	8.2	95.1%	9.2	97.8%	6.8	99.9%	24.2	97.4%	6.3	4.3
*W45	98.9%	2.8	2.2	1.9	1.3	8.3	96.5%	9.3	98.6%	6.6	96.2%	24.2	97.2%	7.5	5.0
Baralfa 42 IQ	99.2%	2.9	2.3	1.9	1.3	8.4	97.5%	9.1	96.3%	6.6	96.2%	24.0	96.7%	6.8	3.5
Vernal	97.7%	2.5	1.9	1.7	1.1	7.1	82.4%	8.3	88.1%	5.9	85.8%	21.3	85.5%	6.0	2.5
<b>Mean</b>	<b>99.1%</b>	<b>2.9</b>	<b>2.3</b>	<b>2.0</b>	<b>1.3</b>	<b>8.6</b>	<b>100.0%</b>	<b>9.4</b>	<b>100.0%</b>	<b>6.8</b>	<b>100.0%</b>	<b>24.9</b>	<b>100.0%</b>	<b>7.4</b>	<b>5.2</b>
<b>LSD 5%</b>	<b>0.01</b>	<b>0.31</b>	<b>0.17</b>	<b>0.17</b>	<b>0.16</b>	<b>0.67</b>	<b>7.78%</b>	<b>0.70</b>	<b>7.42%</b>	<b>0.51</b>	<b>7.48%</b>	<b>0.85</b>	<b>3.42%</b>	<b>0.82</b>	<b>1.51</b>
<b>CV %</b>	<b>0.5</b>	<b>7.3</b>	<b>5.1</b>	<b>5.8</b>	<b>8.1</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>3.6</b>	<b>3.6</b>	<b>7.7</b>	<b>20.1</b>

\*Planted as experimental  
FG 3R134=XTRA-3

\*\* 2=4 in, 9=11 in

**Table 6: PE-66 Two-Year Forage Yield: 2001 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

Seeded 8/29/01 Entry	Forage Yield (Tons DM/Ac)												
	2003 Harvests					2003 Total	2003% mean	2002 Total	2002% mean	2-Year Total	2-Yr % mean	3-Jun Regrowth	17-Oct Regrowth**
	15-May Cut 1	16-Jun Cut 2	24-Jul Cut 3	20-Aug Cut 4	24-Sep Cut 5								
DKA42-15	3.2	2.3	1.9	1.7	0.7	9.9	107.4%	8.6	105.5%	18.5	106.5%	6.8	7.3
512	3.2	2.2	1.9	1.7	0.7	9.7	104.9%	8.6	106.1%	18.4	105.4%	6.5	7.8
Plumas	3.4	2.1	2.0	1.6	0.6	9.7	105.1%	8.4	103.3%	18.2	104.3%	5.3	5.3
WL 327	3.1	2.2	1.8	1.6	0.6	9.4	101.6%	8.7	106.9%	18.1	104.1%	6.3	5.5
5 Star	3.3	2.2	1.9	1.8	0.7	9.9	107.3%	8.1	99.9%	18.1	103.8%	8.3	9.0
WL 342	3.4	2.3	1.9	1.7	0.6	10.0	107.9%	8.0	98.7%	18.0	103.6%	7.5	7.3
Ameristand 403T	3.4	2.1	1.9	1.6	0.6	9.5	102.3%	8.5	104.0%	17.9	103.1%	6.3	3.5
*54Q25	3.3	2.2	1.8	1.7	0.7	9.7	104.5%	8.2	101.2%	17.9	102.9%	8.0	5.3
AL 352	3.1	2.2	1.8	1.6	0.6	9.3	100.2%	8.3	102.4%	17.6	101.2%	6.0	5.8
Alliant	3.0	2.1	1.8	1.6	0.7	9.2	99.7%	8.4	102.6%	17.6	101.1%	6.0	6.5
Tango	3.1	2.1	1.9	1.6	0.7	9.3	101.0%	8.2	100.3%	17.5	100.7%	6.0	8.5
Ruccus	2.9	2.1	1.8	1.6	0.6	9.0	97.6%	8.3	102.0%	17.3	99.7%	6.8	8.0
Reward II	3.1	2.0	1.7	1.5	0.5	8.9	95.9%	8.4	103.4%	17.3	99.4%	5.0	4.5
53VO8	3.3	2.2	1.8	1.7	0.6	9.6	103.5%	7.7	94.3%	17.3	99.2%	8.0	4.8
AL 355	3.2	2.0	1.8	1.6	0.6	9.1	98.7%	8.0	98.2%	17.1	98.5%	5.5	5.5
AL 223	3.3	2.2	1.8	1.6	0.6	9.4	101.7%	7.7	94.3%	17.1	98.3%	5.5	4.3
Laser	3.1	1.9	1.7	1.5	0.6	8.8	94.5%	8.2	100.9%	17.0	97.5%	5.5	6.0
*GP 98 FR	3.3	2.1	1.7	1.6	0.5	9.2	99.5%	7.4	91.4%	16.7	95.7%	5.5	5.0
Vernema	3.0	1.9	1.6	1.4	0.5	8.4	90.4%	8.2	100.5%	16.6	95.1%	4.5	4.8
*GP 00 TC	3.2	2.0	1.7	1.5	0.6	8.9	96.6%	7.6	92.8%	16.5	94.8%	6.3	6.0
Vernal	2.6	1.6	1.4	1.3	0.4	7.4	79.7%	7.4	91.3%	14.8	85.1%	3.3	2.0
<b>Mean</b>	<b>3.2</b>	<b>2.1</b>	<b>1.8</b>	<b>1.6</b>	<b>0.6</b>	<b>9.3</b>	<b>100.0%</b>	<b>8.1</b>	<b>100.0%</b>	<b>17.4</b>	<b>100.0%</b>	<b>6.1</b>	<b>5.8</b>
<b>LSD 5%</b>	<b>0.35</b>	<b>0.18</b>	<b>0.17</b>	<b>0.10</b>	<b>0.15</b>	<b>0.72</b>	<b>7.8%</b>	<b>0.70</b>	<b>8.59%</b>	<b>1.25</b>	<b>7.18%</b>	<b>1.18</b>	<b>0.96</b>
<b>CV %</b>	<b>7.6</b>	<b>6.1</b>	<b>6.6</b>	<b>4.5</b>	<b>17.4</b>	<b>5.4</b>	<b>5.4</b>	<b>6.3</b>	<b>6.3</b>	<b>5.0</b>	<b>5.0</b>	<b>13.4</b>	<b>11.5</b>

\*Planted as experimental

\*\* 2=4 in, 9=12 in

**Table 7: PE-65 Two-Year Forage Yield: 2001 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Seeded 8/30/01	Forage Yield (Tons DM/Ac)											
	2003 Harvests				2003 Total	Percent mean	2002 Total	Percent mean	2-Year Total	2-Yr % mean	4-Jun Regrowth	18-Oct Regrowth**
20-May Cut 1	24-Jun Cut 2	29-Jul Cut 3	5-Sep Cut 4									
*DKA42-15	2.9	2.4	2.0	1.4	8.7	113.1%	8.4	103.7%	17.1	108.3%	8.0	5.5
WL 342	2.8	2.4	1.8	1.2	8.2	106.7%	8.8	108.9%	17.0	107.9%	8.0	4.5
*54Q25	2.8	2.3	1.9	1.2	8.2	106.2%	8.5	104.3%	16.6	105.3%	7.8	4.8
Magnum V	2.7	2.3	1.9	1.2	8.1	105.4%	8.4	103.2%	16.5	104.3%	7.0	5.8
53VO8	2.8	2.3	1.9	1.1	8.1	105.1%	8.3	102.2%	16.4	103.6%	7.3	4.5
Alliant	2.4	2.3	1.9	1.1	7.7	100.2%	8.5	105.2%	16.2	102.8%	7.5	4.5
Ruccus	2.5	2.2	1.9	1.2	7.8	102.0%	8.2	101.3%	16.1	101.6%	8.0	7.5
512	2.6	2.2	1.8	1.1	7.8	101.9%	8.2	101.0%	16.0	101.4%	7.5	6.8
WL 327	2.5	2.2	1.8	1.2	7.7	100.6%	8.2	101.6%	16.0	101.1%	7.8	5.5
Tango	2.3	2.1	1.8	1.2	7.5	97.0%	8.5	104.6%	15.9	100.9%	7.0	6.0
Magna 601	2.6	2.3	1.9	1.2	8.0	103.4%	7.9	98.1%	15.9	100.7%	8.3	7.3
AL 355	2.5	2.2	1.8	1.2	7.7	99.6%	8.1	99.4%	15.7	99.5%	7.3	5.3
Rebel	2.6	2.1	1.7	1.0	7.5	97.7%	8.1	99.9%	15.6	98.9%	7.0	3.5
AL 352	2.5	2.1	1.8	1.2	7.6	99.2%	7.9	97.9%	15.6	98.5%	7.3	5.5
*A30-06	2.6	2.1	1.8	1.1	7.5	97.7%	8.0	98.6%	15.5	98.2%	7.3	2.8
Hybri Force-400	2.5	2.1	1.8	1.2	7.6	98.5%	7.9	97.4%	15.5	98.0%	7.8	4.0
*ZX0059D	2.5	2.1	1.8	1.1	7.5	97.1%	8.0	98.6%	15.5	97.9%	7.0	5.3
*DS120HYB	2.5	2.3	1.9	1.1	7.8	101.0%	7.6	93.4%	15.3	97.1%	7.0	6.0
AL 223	2.3	2.1	1.8	1.1	7.3	94.4%	8.0	98.8%	15.3	96.7%	7.0	4.3
Plumas	2.4	2.1	1.8	1.1	7.3	94.9%	7.9	97.6%	15.2	96.3%	6.8	3.8
Ameristand 403T	2.5	2.1	1.8	1.1	7.4	95.8%	7.7	94.9%	15.1	95.3%	7.0	2.5
Vernema	2.4	2.1	1.7	1.0	7.2	93.6%	7.8	96.6%	15.0	95.1%	7.3	4.5
*GP 98 FR	2.4	2.1	1.7	1.0	7.2	93.4%	7.5	93.2%	14.7	93.3%	7.3	4.0
*GP 00 TC	2.3	2.0	1.6	1.0	6.8	88.6%	7.7	95.6%	14.6	92.2%	7.3	4.5
Vernal	2.2	1.9	1.6	1.1	6.8	87.8%	7.0	85.8%	13.7	86.8%	5.8	2.8
<b>Mean</b>	<b>2.6</b>	<b>2.2</b>	<b>1.8</b>	<b>1.1</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>7.3</b>	<b>4.8</b>
<b>LSD 5%</b>	<b>0.27</b>	<b>0.15</b>	<b>0.19</b>	<b>0.19</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>0.61</b>	<b>1.67</b>
<b>CV %</b>	<b>7.5</b>	<b>4.7</b>	<b>7.4</b>	<b>11.6</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>5.8</b>	<b>24.0</b>

\*Planted as experimental

\*\* 2=5 in, 9=11 in

**Table 8: PE-68 One-Year Forage Yield: 2002 Alfalfa Variety Trial, Pasco, Franklin Co., WA.**

Seeded 8/23/02 Entry	Forage Yield (Tons DM/Ac) 2003 Harvests					2003 Total	Percent mean	3-Jun Regrowth	17-Oct Regrowth**
	15-May Cut 1	16-Jun Cut 2	25-Jul Cut 3	20-Aug Cut 4	24-Sep Cut 5				
Plumas	3.2	2.2	2.2	1.6	1.1	10.3	103.9%	5.3	4.3
Recover	3.1	2.1	2.2	1.7	1.1	10.2	103.4%	6.8	7.0
55H05	3.0	2.2	2.1	1.6	1.1	10.0	101.6%	7.8	8.8
54Q25	3.1	2.2	2.0	1.6	1.0	10.0	101.2%	5.8	4.5
Dynamic	3.2	2.1	2.1	1.5	1.0	10.0	101.1%	5.5	3.8
Attention	3.0	2.2	2.1	1.6	1.1	10.0	101.1%	7.0	7.3
AL 366	3.1	2.1	2.1	1.5	1.1	10.0	100.9%	5.0	5.0
*FG 4A 135	3.0	2.1	2.2	1.6	1.0	9.9	100.5%	6.3	7.0
Baralfa 53 HR	3.0	2.1	2.1	1.5	1.1	9.9	99.9%	6.8	8.0
*FG 5543	2.9	2.2	2.1	1.6	1.1	9.8	99.7%	7.8	6.8
9429	3.0	2.1	2.1	1.6	1.1	9.8	99.5%	5.5	5.5
Vernal	2.7	1.9	1.9	1.4	0.7	8.6	87.1%	3.3	2.3
<b>Mean</b>	<b>3.0</b>	<b>2.1</b>	<b>2.1</b>	<b>1.6</b>	<b>1.0</b>	<b>9.9</b>	<b>100.0%</b>	<b>6.0</b>	<b>5.8</b>
<b>LSD 5%</b>	<b>0.00</b>	<b>0.18</b>	<b>0.14</b>	<b>0.24</b>	<b>0.10</b>	<b>0.54</b>	<b>5.50</b>	<b>1.32</b>	<b>1.10</b>
<b>CV %</b>	<b>4.5</b>	<b>6.0</b>	<b>4.7</b>	<b>10.6</b>	<b>6.9</b>	<b>3.8</b>	<b>3.8</b>	<b>15.2</b>	<b>13.1</b>

\*Planted as experimental

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

**Table 9: PE-67 One-Year Forage Yield: 2002 Alfalfa Variety Trial, Othello, Grant Co., WA.**

Seeded 8/23/02 Entry	Forage Yield (Tons DM/Ac)							
	2003 Harvests				2003 Total	Percent mean	4-Jun Regrowth	23-Sep Regrowth**
	20-May Cut 1	24-Jun Cut 2	29-Jul Cut 3	5-Sep Cut 4				
*4M76	3.4	2.6	2.3	1.4	9.7	108.2%	8.3	7.8
WL 319HQ	3.2	2.6	2.4	1.5	9.6	107.2%	8.3	7.8
Dynamic	3.3	2.5	2.3	1.5	9.6	107.0%	8.0	7.3
Vitro	3.2	2.4	2.3	1.5	9.4	104.5%	8.0	7.0
54Q25	3.0	2.4	2.3	1.5	9.2	102.6%	8.3	7.8
55H05	3.0	2.4	2.3	1.5	9.2	102.0%	8.5	7.5
9429	3.1	2.5	2.2	1.4	9.1	101.3%	7.8	7.5
AL 366	3.1	2.4	2.2	1.4	9.1	101.1%	7.8	7.0
*DS 9809	3.1	2.3	2.2	1.3	8.9	99.6%	7.8	7.3
Hybri Force 400	3.2	2.3	2.1	1.4	8.9	99.4%	7.5	7.0
Reward II	3.0	2.2	2.1	1.4	8.7	97.5%	7.5	7.0
*DS 108	3.0	2.2	2.1	1.3	8.7	96.7%	7.5	7.3
*DS 201	2.3	2.1	2.2	1.5	8.2	91.0%	7.0	7.3
Vernal	2.5	1.9	1.8	1.2	7.4	82.2%	6.0	7.0
<b>Mean</b>	<b>3.0</b>	<b>2.3</b>	<b>2.2</b>	<b>1.4</b>	<b>9.0</b>	<b>100.0%</b>	<b>7.7</b>	<b>7.3</b>
<b>LSD 5%</b>	<b>0.28</b>	<b>0.14</b>	<b>0.14</b>	<b>0.21</b>	<b>0.57</b>	<b>6.3%</b>	<b>0.7</b>	<b>1.1</b>
<b>CV %</b>	<b>6.5</b>	<b>4.2</b>	<b>4.6</b>	<b>10.2</b>	<b>4.4</b>	<b>4.4</b>	<b>6.8</b>	<b>10.9</b>

\*Planted as experimental

\*\* 2=5 in, 9=11 in