2011

Washington State Hay Growers Association

ALFALFA VARIETY

YIELD TRIALS

Conducted by Washington State University Extension

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Alfalfa Variety Trials
Conducted by Washington State University Extension

Eight alfalfa trials were harvested for yield in irrigated central Washington State in 2011. 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 15 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, however, this year two experiments were maintained for 4 years. 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 provides information on dormancy, pest resistance, and seed marketers for the same varieties as found in the National Alfalfa and Forage Alliance's web site
http://www.alfalfa.org/pdf/2012%20NAFA%20Variety%20Leaflet.pdf

Forage yields for each harvest, total season yield for 2011 and the totals for all years of the trials to date are reported in Tables 4 through 11. Yields are determined from whole plot fresh weights converted to a dry matter basis using a constant dry matter fraction. Regrowth is recorded in inches of height at the date of measurement on Tables 4, 5, 6, 7, 9, 10, and 11.

The region experienced unusually cold spring conditions during 2011. These conditions delayed normal alfalfa greenup and spring growth. Below seasonal temperatures persisted well into June affecting both first and second cutting alfalfa yields. The first cutting at the

Pasco location was not harvested due to vole and gopher damage, however, the following harvest were measured.

Ratings for regrowth after 4th cutting were taken on October 31, 2011 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.

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. 2011 was an excellent year to test abiotic stresses in the Columbia Basin.

I want to especially thank John Fouts, Tim Waters, Andy McGuire, and many others for keeping the experiments after Phil Petersen left. Without them, this report would not be possible.

Table 1: 2011 Summary of Alfalfa Yield Trials since spring of 2008 - Pasco, Washington.

	Seeded March 2008						Seeded August 2008				Seeded March 2010				Seeded August 2010				Site-years avg.	
Entry	**2008**	**2009**	**2010**	**2011**	**3 Yr.**	**4 Yr.**	**2009**	**2010**	**2011**	**3 Yr.**	**2010**	**2011**	**2012**	**2 Yr.**	**2011**	**2012**	**2013**	**3 Yr.**	**%**	**#**
45417											108.9%	95.1%		101.2%					102.0%	2
54V09	102.1%	101.3%	102.6%	102.3%	102.0%	102.0%	106.2%	98.4%	96.7%	101.7%									101.4%	7
64Q22											100.0%	103.8%		102.2%	92.8%				98.9%	3
AmeriStand 407TQ											109.1%	105.1%		106.9%	98.8%				104.3%	3
AmeriStand 444NT	104.2%	104.0%	102.8%	102.3%	103.8%	103.9%													103.3%	4
AmeriStand 445NT															100.4%				100.4%	1
Archer III	105.6%	98.5%	101.8%	105.0%	99.5%	100.3%					96.2%	98.1%		97.3%	103.1%				101.2%	8
CW 044018	97.2%	103.0%	101.9%	106.2%	101.7%	102.2%													102.1%	4
CW064004											94.1%	103.4%		99.4%					98.8%	2
CW 25006	95.8%	103.5%	100.4%	100.8%	100.9%	101.2%													100.1%	4
DG 4210															112.4%				112.4%	1
DKA 42-15											92.3%	89.1%		90.6%					90.7%	2
DKA 43-13							105.8%	103.0%	106.1%	104.9%					95.0%				102.5%	4
DKA 50-18							108.1%	103.9%	107.1%	106.5%					102.0%				105.3%	4
DS707-5	101.4%	101.7%	99.8%	100.4%	100.8%	100.7%													100.8%	4
FG 44W204	100.0%	98.1%	97.0%	104.5%	99.9%	100.5%	96.0%	101.6%	93.1%	97.3%									98.6%	7
FG 45W271							104.2%	101.1%	107.1%	103.5%	100.3%	105.3%		103.1%					103.6%	5
FG 45W273											100.5%	108.3%		104.9%					104.4%	2
FG 46W201											98.9%	98.0%		98.4%					98.5%	2
FG 46W202							103.3%	106.1%	107.1%	105.0%	108.1%	100.0%		103.6%					104.9%	5
FSG 429SN							102.2%	105.4%	103.2%	103.5%									103.6%	3
FSG 528SF	105.6%	102.0%	97.2%	98.4%	99.5%	99.7%													100.8%	4
FSG 639ST							97.0%	96.5%	95.3%	96.5%									96.3%	3
GrandStand	97.2%	103.5%	108.5%	93.9%	104.2%	102.8%	107.7%	102.6%	105.3%	105.5%	108.2%	99.2%		103.2%	102.2%				102.8%	10
HybriForce Exp 802											100.2%	102.4%		101.5%					101.3%	2
HybriForce Exp 807											97.6%	92.1%		94.6%					94.9%	2
IS-1055	91.4%	93.8%	95.3%	95.5%	93.5%	93.8%													94.0%	4
Lightning IV							99.7%	100.8%	107.2%	101.6%									102.6%	3
Integra 8400	97.2%	101.9%	106.3%	102.1%	104.1%	103.9%					97.8%	101.3%		99.8%					101.1%	6
LS401	98.6%	101.6%	100.6%	91.9%	102.2%	100.9%													98.2%	4
Magna 551											107.2%	98.5%		101.0%					102.9%	2
Masterpiece	98.6%	96.7%	100.6%	95.0%	98.4%	97.9%													97.7%	4
MasterPiece II											99.6%	102.1%		101.1%					100.9%	2
Medalist	100.0%	105.5%	101.9%	101.9%	102.7%	102.6%													102.3%	4
Mountaineer 2.0							94.2%	97.1%	96.5%	95.7%	109.5%	95.6%		101.8%					98.6%	5
McSunstra 810															97.5%				97.5%	1
PGI 557											96.9%	107.7%		103.0%					102.3%	2
Plumas	96.3%	96.9%	94.5%	89.0%	95.9%	95.1%													94.2%	4
Prosementi											96.3%	114.3%		106.4%					105.3%	2
Rebound 5.0	104.2%	98.1%	94.1%	104.2%	96.7%	97.7%	97.5%	101.9%	103.9%	100.3%									100.6%	7
Rebound 6.0															93.6%				93.6%	1
Summit											86.2%	101.9%		95.0%					94.1%	2
TS-4027							95.3%	97.5%	91.7%	95.3%									94.8%	3
TS-4028	98.6%	99.2%	103.6%	103.3%	99.5%	100.0%	102.3%	100.1%	95.6%	100.2%									100.4%	7
TS-5026	98.6%	97.8%	103.2%	97.5%	99.4%	99.2%	100.2%	95.2%	99.8%	98.4%									98.9%	7
Vernal	93.0%	98.9%	97.5%	94.9%	97.9%	97.5%	81.4%	91.4%	81.5%	84.8%	88.5%	76.4%		82.3%					89.3%	9
Vernema																				
Whitney	100.0%	92.5%	88.5%	105.6%	93.8%	95.4%													96.7%	4
Winchester															93.6%				93.6%	1
WL 343 HQ	97.2%	97.5%	94.2%	97.8%	100.8%	97.2													96.7%	4
WL 363HQ	97.2%	104.0%	107.3%	105.5%	109.8%	105.8	99.1%	97.3%	103.7%	99.4%	103.5%	102.1%		102.8%	108.5%				102.8%	10
AV-T/AC	**7.10**	**10.30**	**6.90**	**6.30**	**8.10**	**28.02**	**9.46**	**7.04**	**4.04**		**3.12**	**3.98**		**7.10**	**4.51**			**Avg.**	**99.9%**	**4.08**
LSD (for %'s) (0.05)	**8.06**	**6.84**	**NS**	**8.84**	**9.60**	**5.54**	**7.3**	**NS**	**9.43**	**6.73**	**12.30**	**13.10**		**10.10**	**9.14**					
CV(%)	**18.7**	**4.9**	**7.8**	**6.3**	**4.0**	**3.9**	**7.3**	**6.4**	**6.6**	**4.7**	**8.5**	**9.2**		**7.1**	**6.5**					

Table 2: 2011 Summary of Alfalfa Yield Trials since fall of 2007- Othello, Washington.

	Seeded August 2007						Seeded August 2008				Seeded August 2009				Seeded August 2010				Site-years avg.	
Entry	**2008**	**2009**	**2010**	**2011**	**3 Yr.**	**4 Yr.**	**2009**	**2010**	**2011**	**3 Yr.**	**2010**	**2011**	**2012**	**2 Yr.**	**2011**	**2012**	**2013**	**3 Yr.**	**%**	**#**
45417											103.0%	103.7%		103.3%					103.4%	2
54V09	103.3%	98.6%	97.9%	103.4%	**99.9%**	**100.5%**	94.0%	97.0%	91.2%	**94.5%**									97.9%	7
6305Q											98.8%	88.2%		94.0%	93.0%				93.3%	3
64Q22											102.2%	95.2%		99.0%	92.2%				96.5%	3
AmeriStand 407TQ											97.6%	103.3%		100.2%	99.7%				100.2%	3
AmeriStand 444NT	108.2%	102.5%	103.8%	105.7%	**104.9%**	**105.0%**									106.2%				105.3%	5
Archer III	102.3%	107.1%	107.2%	109.7%	**105.5%**	**106.2%**													106.6%	4
CW 043003	96.4%	101.5%	105.0%	106.7%	**101.0%**	**101.9%**													102.4%	4
CW 044018	90.5%	100.8%	107.7%	104.1%	**99.7%**	**100.2%**													100.8%	4
CW 064004											103.4%	108.3%		105.6%					105.9%	2
DG4210															94.9%				94.9%	1
DKA 42-15											97.7%	92.6%		95.4%					95.2%	2
DKA 43-13							105.3%	102.0%	105.9%	**104.2%**					105.7%				104.7%	4
DKA 50-18							99.3%	97.6%	99.5%	**98.8%**									98.8%	3
FG 42M134	105.0%	102.4%	101.2%	92.4%	**102.9%**	**101.2%**													100.2%	4
FG 44W204	101.2%	109.8%	105.8%	104.5%	**105.6%**	**105.5%**	108.2%	108.9%	101.1%	**106.9%**									105.7%	7
FG45W271							110.4%	102.4%	101.7%	**105.5%**	98.4%	92.9%		95.9%					101.2%	5
FG45W273											98.2%	97.2%		97.7%					97.7%	2
FG46W201											103.3%	109.0%		105.9%					106.2%	2
FG46W202							102.2%	101.0%	100.0%	**101.2%**	107.4%	102.9%		105.3%					102.7%	5
FG55W277							99.9%	93.2%	90.0%	**95.2%**									94.4%	3
FSG429SN							98.2%	99.0%	94.0%	**97.5%**									97.1%	3
FSG 528SF	98.2%	92.9%	90.5%	104.0%	**93.9%**	**95.6%**													96.4%	4
FSG639ST							94.0%	99.5%	102.2%	**97.9%**									98.6%	3
GrandStand	99.4%	106.9%	101.7%	89.7%	**102.7%**	**100.6%**	108.6%	107.8%	106.8%	**107.9%**	105.1%	98.2%		102.0%	102.3%				102.6%	10
Hybri Force Exp 240															108.7%				108.7%	1
Hybri Force Exp 802											93.9%	91.0%		92.4%					92.5%	2
HybriForce Exp 807											93.0%	103.5%		97.7%					98.3%	2
Integra 8300	97.5%	106.6%	102.2%	98.8%	**102.1%**	**101.6%**					103.8%	99.9%		102.1%					101.5%	6
Integra 8400	101.1%	100.1%	101.7%	107.9%	**101.0%**	**102.1%**					99.5%	105.6%		102.2%					102.7%	6
IS-1055	93.1%	83.0%	86.5%	96.7%	**87.5%**	**89.0%**													89.8%	4
Lariat	96.4%	102.2%	94.4%	96.9%	**97.6%**	**97.6%**													97.5%	4
LegenDairy 5.0	101.4%	107.5%	105.4%	103.3%	**104.8%**	**104.6%**									96.8%				102.9%	5
Lighting IV							102.5%	100.6%	104.7%	**102.3%**									102.6%	3
LS401							100.0%	98.6%	93.8%	**98.1%**									97.5%	3
Magna 551															102.7%				94.9%	2
MasterPiece	101.3%	94.9%	93.0%	100.1%	**96.4%**	**97.1%**													97.3%	4
Medalist	103.7%	101.2%	98.6%	100.8%	**101.2%**	**101.2%**													101.1%	4
Mountaineer 2.0							100.6%	99.4%	107.1%	**101.6%**									102.4%	3
PGI 557											105.5%	112.4%		108.6%					109.0%	2
Plumas	95.0%	86.9%	84.3%	87.3%	**88.7%**	**88.6%**													88.4%	4
Prosementi											95.1%	104.9%		99.5%					100.0%	2
Ranger							82.5%	84.0%	83.8%	**83.3%**									83.4%	3
Rebound 5.0							99.7%	106.7%	110.6%	**104.3%**	103.0%	100.7%		102.0%					104.1%	5
Rebound 6.0															100.6%				100.6%	1
Summit											102.1%	94.5%		98.7%					98.3%	2
TS 4027							98.3%	98.2%	105.1%	**99.8%**									100.5%	3
TS 4028	99.8%	95.0%	100.2%	83.9%	**98.3%**	**95.9%**	104.2%	104.4%	105.5%	**104.6%**									99.0%	7
TS-5026	103.7%	94.8%	98.3%	92.2%	**98.9%**	**97.8%**	98.7%	97.3%	100.6%	**98.6%**									97.9%	7
U-223							96.0%	96.5%	94.1%	**95.7%**									95.5%	3
Vernal											95.3%	93.2%		94.3%					94.3%	2
Vernema																				
Whitney	101.8%	91.2%	97.0%	104.9%	**96.6%**	**97.9%**													98.7%	4
WL 343 HQ	95.2%	103.4%	104.0%	102.8%	**100.9%**	**101.1%**					94.1%	103.1%		98.1%					102.7%	6
WL 363HQ	105.5%	110.6%	113.6%	104.2%	**109.9%**	**108.9%**	98.4%	106.0%	102.4%	**102.1%**					97.1%				104.7%	8
AV-T/AC	**7.20**	**7.50**	**6.60**	**4.20**	**7.10**	**25.46**	**7.50**	**7.30**	**4.28**	**18.61**	**4.53**	**3.70**		**8.20**	**4.39**			**Avg.**	**99.5%**	**3.8**
LSD for % (0.05)	**9.20**	**8.30**	**10.00**	**14.30**	**9.17**	**5.80**	**9.77**	**10.39**	**13.08**	**8.70**	**NS**	**NS**		**NS**	**NS**					
CV (%)	**6.5**	**5.8**	**7.1**	**10.1**	**6.5**	**4.1**	**6.9%**	**7.3%**	**9.3%**	**6.2%**	**10.8%**	**12.6%**		**10.3%**	**8.4%**					

Table 3: 2008 Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties in these Trials*

Variety	Contact for Marketing Info.	FD	BW	VW	FW	AN	PRR	SAA	PA	BAA	SN	APH	SRKN	NRKN
1S-1055	1st Select Seeds, Inc.	5	HR	HR	HR	R	HR	R	R	R	HR	MR		HR
54V09	Pioneer Hi-Bred Int'l, Inc.	4	HR	HR	R	HR	HR	R	HR		HR	R		HR
6305Q	Syngenta	3	HR	HR	HR	HR	HR	HR			R	HR		
6422Q	Syngenta	4	HR	HR	HR	HR	HR		R		HR	HR		R
64Q22	Syngenta	4	HR	HR	HR	HR	HR		R		R	HR		R
AmeriStand 407TQ	America's Alfalfa	4	HR	HR	HR	HR	HR	R	HR		MR	HR		
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	HR	HR	HR	HR	HR		HR		HR	HR		HR
DG4210	Crop Production Services	4	HR	HR	HR	HR	HR		R		R			
DKA42-15	Monsanto	4	HR	HR	HR	HR	HR	R	HR		R	HR		
DKA50-18	Monsanto	5	HR	HR	HR	HR	HR	R	R		R	HR		
FSG 429SN	Allied Seeds, L.L.C	4	HR	HR	HR	HR	HR	R	HR		HR	HR		R
FSG 528SF	Allied Seeds, L.L.C	5	HR	HR	HR	HR	R		R	R		R		
FSG 639ST	Farm Science Genetics	6	HR	R	R	R	HR		R		HR	MR	R	HR
GrandStand	Crop Production Services	4	HR	HR	HR	HR	HR	R	HR		MR	HR		
GrandStand	Western Farm Service	4	HR	HR	HR	HR	HR	R	HR		MR	HR		
HybridForce 420/wet	Dairyland Seed Co., Inc.	4	HR	R	HR	R	HR	R	R		HR	R		HR
Integra 8300	Wilbur Ellis Company	3	HR	HR	HR	HR	HR		HR		R	HR		R
Integra 8400	Wilbur Ellis Company	4	HR	MR	R	R	R	HR	HR	HR	R			HR
Lariat	J. R. Simplot Company	3	HR	HR	HR	HR	HR		HR		R			R
LegenDairy 5.0	CropPlan Genetics	3	HR	HR	HR	HR	HR	R	R		MR	HR		R
Magna 551	Dairyland Seed Co., Inc.	5	HR	HR	HR	R	HR				R	HR		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	Monsanto	4	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		
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	HR	HR	HR	HR	HR	R	R		R	HR		R
Rebound 6.0	CropPlan Genetics	4	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	HR	HR	HR	HR	HR	R	HR		HR			HR
WL 343 HQ	W-L Research, Inc.	4	HR	HR	HR	HR	HR		HR		R	HR		
WL 363HQ	W-L Research, Inc.	5	HR	HR	HR	HR	HR		HR		HR	HR		HR
Variety	**Contact for Marketing Info.**	**FD**	**BW**	**VW**	**FW**	**AN**	**PRR**	**SAA**	**PA**	**BAA**	**SN**	**APH**	**SRKN**	**NRKN**

FD Fall Dormancy
BW Bacterial Wilt
VW Verticillium Wilt
FW Fusarium Wilt
AN Anthrocnose 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: Four-Year Forage Yield-Spring 2008 Alfalfa Variety Trial Pasco, Franklin County, WA

Forage Yield (Tons DM/ac)

Seeded
18-Mar-08

							2011 Harvests								10/31/11
	2008 Harvest		2009 Harvests		2010 Harvests		5/20	6/18	8/23	9/22	2011	2011	08 -11 (4 yrs)		Stand
Entry	**Total**	**Mean**	**Total**	**% Mean**	**Total**	**% Mean**	**Cut 1**	**Cut 2**	**Cut 3**	**Cut 4**	**Total**	**% Mean**	**Total**	**% Mean**	**%**
IS-1055	6.48	91.4%	9.63	93.8%	6.6	95.3%	NA	0.75	1.55	1.26	3.56	95.5%	26.29	93.83%	63.9
FSG 528SF	7.03	99.3%	10.48	102.1%	6.8	97.2%	NA	0.75	1.67	1.25	3.66	98.4%	27.93	99.67%	67.9
Archer III	6.99	98.7%	10.12	98.6%	7.1	101.7%	NA	0.73	1.78	1.40	3.91	105.0%	28.09	100.26%	60.6
Ameristand 444NT	7.39	104.4%	10.69	104.1%	7.1	102.7%	NA	0.80	1.73	1.35	3.88	104.2%	29.10	103.85%	63.1
Rebound 5.0	6.88	97.2%	10.08	98.2%	6.5	94.1%	NA	0.72	1.79	1.37	3.88	104.2%	27.38	97.72%	58.5
DS707-5	7.10	100.3%	10.44	101.8%	6.9	99.8%	NA	0.80	1.55	1.39	3.74	100.4%	28.22	100.71%	69.3
Plumas	6.82	96.3%	9.95	96.9%	6.6	94.5%	NA	0.69	1.54	1.09	3.32	89.0%	26.65	95.10%	76.1
Whitney	7.14	100.8%	9.51	92.6%	6.1	88.4%	NA	0.75	1.80	1.39	3.93	105.6%	26.72	95.36%	64.2
FG 44W204	7.45	105.2%	10.07	98.2%	6.7	96.9%	NA	0.74	1.79	1.36	3.89	104.5%	28.15	100.47%	67.2
Medalist	7.04	99.3%	10.84	105.6%	7.1	101.8%	NA	0.80	1.70	1.30	3.80	101.9%	28.75	102.60%	69.9
MasterPiece	6.97	98.4%	9.93	96.8%	7.0	100.6%	NA	0.72	1.57	1.25	3.54	95.0%	27.43	97.90%	69.6
54V09	7.23	102.1%	10.40	101.3%	7.1	102.6%	NA	0.86	1.68	1.27	3.81	102.3%	28.57	101.96%	78.5
TS-5026	6.94	97.9%	10.05	97.9%	7.2	103.1%	NA	0.75	1.56	1.33	3.63	97.5%	27.78	99.15%	70.8
TS-4028	6.77	95.6%	10.19	99.3%	7.2	103.6%	NA	0.84	1.68	1.33	3.85	103.3%	28.01	99.97%	66.5
LS401	7.55	106.6%	10.33	100.6%	7.0	100.4%	NA	0.64	1.54	1.25	3.42	91.9%	28.28	100.93%	67.6
GrandStand	7.14	100.8%	10.63	103.6%	7.5	108.4%	NA	0.66	1.65	1.19	3.50	93.9%	28.81	102.80%	69.0
WL 363HQ	7.57	106.9%	10.69	104.1%	7.5	107.2%	NA	0.77	1.73	1.43	3.93	105.5%	29.64	105.78%	70.6
WL 343HQ	7.04	99.3%	10.01	97.5%	6.5	94.2%	NA	0.68	1.65	1.31	3.64	97.8%	27.24	97.20%	69.4
Integra 8400	7.44	105.1%	10.47	102.0%	7.4	106.2%	NA	0.74	1.76	1.30	3.80	102.1%	29.10	103.85%	70.8
CW 044018	7.04	99.3%	10.58	103.1%	7.1	101.8%	NA	0.73	1.80	1.42	3.96	106.2%	28.65	102.24%	63.9
CW 25006	6.95	98.2%	10.53	102.6%	7.1	102.3%	NA	0.71	1.69	1.35	3.75	100.8%	28.34	101.15%	61.5
Vernal	6.85	96.7%	10.16	99.0%	6.8	97.5%	NA	0.68	1.66	1.19	3.54	94.9%	27.32	97.50%	61.0
Mean	**7.08**	**100.0%**	**10.26**	**100.0%**	**7.0**	**100.0%**	**NA**	**0.74**	**1.67**	**1.31**	**3.72**	**100.0%**	**28.02**	**100.00%**	**67.3**
CV%	5.7	5.7	4.8	4.8	7.9	7.9	NA	13.5	8.0	8.3	6.3	6.3	3.9	3.9	11.0
LDS 5%	0.57	8.06	0.70	6.84	NS	NS	NA	NS	0.19	0.15	0.33	8.84	1.55	5.54	10.4

NA = Data was lost due to vole damage and difficulties in harvesting.

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

Table 5: Four-Year Forage Yield: 2007 Alfalfa Variety Trial, Othello, Grant County, WA

Forage Yield (Tons DM/ac)

Seeded 8/24/2007

	2008 Harvests		2009 Harvests		2010 Harvests		2011 Harvest						9/23/11	4-year Total	
	2008	2008	2009	2009	2010	2010	6/7/11	7/8/11	8/18/11	9/20/11	2011	2011	Stand	4-yr	4-Yr
Entry	**Total**	**% Mean**	**Total**	**% Mean**	**Total**	**% Mean**	**Cut 1**	**Cut 2**	**Cut3**	**Cut 4**	**Total**	**% Mean**	**%**	**Total**	**% Mean**
IS-1055	6.66	93.1%	6.21	83.0%	5.72	86.5%	0.81	0.65	1.62	0.98	4.06	96.7%	69.9	22.66	89.0%
FSG 528SF	7.02	98.2%	6.95	92.9%	5.99	90.5%	1.20	0.66	1.48	1.03	4.37	104.0%	67.1	24.33	95.6%
Archer III	7.32	102.3%	8.01	107.1%	7.09	107.2%	1.09	0.76	1.66	1.11	4.61	109.7%	71.7	27.04	106.2%
Ameristand 444I	7.74	108.2%	7.66	102.5%	6.87	103.8%	1.16	0.60	1.67	1.01	4.44	105.7%	63.8	26.73	105.0%
LegenDairy 5.0	7.25	101.4%	8.05	107.5%	6.98	105.4%	0.95	0.65	1.71	1.03	4.34	103.3%	69.3	26.62	104.6%
Plumas	6.80	95.0%	6.50	86.9%	5.58	84.3%	1.03	0.45	1.45	0.74	3.67	87.3%	65.4	22.55	88.6%
Whitney	7.28	101.8%	6.82	91.2%	6.42	97.0%	1.09	0.57	1.66	1.09	4.41	104.9%	67.2	24.93	97.9%
FG 42M134	7.51	105.0%	7.66	102.4%	6.70	101.2%	1.09	0.49	1.40	0.89	3.88	92.4%	76.8	25.75	101.2%
FG 44W204	7.24	101.2%	8.22	109.8%	7.00	105.8%	0.88	0.72	1.67	1.12	4.39	104.5%	68.8	26.85	105.5%
Medalist	7.42	103.7%	7.57	101.2%	6.53	98.6%	1.08	0.60	1.61	0.95	4.24	100.8%	68.3	25.76	101.2%
Lariat	6.90	96.4%	7.64	102.2%	6.24	94.4%	0.88	0.68	1.54	0.97	4.07	96.9%	68.8	24.86	97.6%
MasterPiece	7.24	101.3%	7.10	94.9%	6.16	93.0%	0.99	0.57	1.66	0.99	4.21	100.1%	62.9	24.71	97.1%
54V09	7.39	103.3%	7.37	98.6%	6.48	97.9%	1.08	0.72	1.53	1.01	4.35	103.4%	69.2	25.59	100.5%
TS-5026	7.42	103.7%	7.09	94.8%	6.50	98.3%	1.02	0.63	1.32	0.90	3.88	92.2%	63.9	24.89	97.8%
TS-4028	7.14	99.8%	7.11	95.0%	6.63	100.2%	0.95	0.49	1.25	0.84	3.53	83.9%	59.6	24.41	95.9%
GrandStand	7.11	99.4%	8.00	106.9%	6.73	101.7%	0.72	0.59	1.40	1.06	3.77	89.7%	68.3	25.61	100.6%
WL 363HQ	7.55	105.5%	8.27	110.6%	7.52	113.6%	1.05	0.61	1.56	1.16	4.38	104.2%	73.2	27.72	108.9%
WL 343HQ	6.81	95.2%	7.73	103.4%	6.88	104.0%	1.02	0.63	1.65	1.03	4.32	102.8%	71.0	25.75	101.1%
Integra 8400	7.24	101.1%	7.49	100.1%	6.73	101.7%	1.19	0.66	1.62	1.06	4.54	107.9%	71.1	25.99	102.1%
Integra 8300	6.98	97.5%	7.97	106.6%	6.76	102.2%	0.90	0.62	1.48	1.15	4.15	98.8%	74.9	25.86	101.6%
CW 044018	6.47	90.5%	7.54	100.8%	7.13	107.7%	0.88	0.70	1.73	1.06	4.37	104.1%	66.5	25.52	100.2%
CW 043003	6.90	96.4%	7.60	101.5%	6.95	105.0%	1.03	0.73	1.58	1.14	4.49	106.7%	62.6	25.93	101.9%
Mean	**7.15**	**100.0%**	**7.48**	**100.0%**	**6.62**	**100.0%**	**1.01**	**0.63**	**1.56**	**1.01**	**4.20**	**100.0%**	**68.2**	**25.46**	**100.00%**
LSD 5%	0.66	9.2	0.62	8.3	0.66	10.0	NS	NS	0.27	0.21	0.60	14.3	NS	1.48	5.8
CV %	6.5	6.5	5.8	5.8	7.1	7.1	20.0	21.0	12.3	14.4	10.1	10.1	16.1	4.1	4.1

NS = Not significant (alpha=0.05)

Table 6: Three-Year Forage Yield--2008 Alfalfa Variety Trial, Othello, Grant, WA

Forage Yield (Ton DM/ac)

Seeded 8/28/2008													8/28/11
	2009	2009	2010	2010	2011 Harvests				2011	2011	3-yr		Stand
Entry	Total	% Mean	Total	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Total	% Mean	Total	% Mean	%
FSG 429SN	7.36	98.2%	6.77	99.0%	1.15	0.49	1.52	0.86	4.02	94.0%	18.15	97.5%	85.2
FSG 639ST	7.05	94.0%	6.80	99.5%	1.04	0.58	1.65	1.10	4.37	102.2%	18.22	97.9%	83.8
Mountaineer 2.(	7.54	100.6%	6.79	99.4%	1.19	0.69	1.69	1.02	4.58	107.1%	18.91	101.6%	82.1
Rebound 5.0	7.40	98.7%	7.29	106.7%	1.24	0.63	1.77	1.08	4.73	110.6%	19.42	104.3%	81.7
Lightning IV	7.68	102.5%	6.87	100.6%	1.10	0.63	1.68	1.08	4.48	104.7%	19.04	102.3%	82.3
FG 44W204	8.11	108.2%	7.44	108.9%	1.12	0.63	1.60	0.97	4.33	101.1%	19.88	106.9%	80.1
FG 45W271	8.27	110.4%	7.00	102.4%	1.09	0.59	1.59	1.08	4.35	101.7%	19.62	105.5%	78.3
FG 46W202	7.66	102.2%	6.90	101.0%	0.97	0.52	1.70	1.09	4.28	100.0%	18.83	101.2%	82.4
FG 55W277	7.48	99.9%	6.37	93.2%	0.92	0.48	1.60	0.85	3.85	90.0%	17.71	95.2%	82.1
DKA 43-13	7.89	105.3%	6.97	102.0%	1.08	0.68	1.69	1.08	4.53	105.9%	19.39	104.2%	83.7
DKA 50-18	7.44	99.3%	6.67	97.6%	1.07	0.60	1.59	1.00	4.26	99.5%	18.38	98.8%	83.1
54V09	7.04	94.0%	6.63	97.0%	1.11	0.57	1.44	0.78	3.90	91.2%	17.57	94.5%	86.2
TS 5026	7.40	98.7%	6.65	97.3%	1.13	0.61	1.57	0.98	4.30	100.6%	18.35	98.6%	81.2
TS 4028	7.81	104.2%	7.13	104.4%	1.10	0.56	1.68	1.17	4.51	105.5%	19.45	104.6%	85.5
TS 4027	7.37	98.3%	6.71	98.2%	1.13	0.70	1.60	1.06	4.49	105.1%	18.57	99.8%	82.0
LS401	7.49	100.0%	6.74	98.6%	1.00	0.61	1.53	0.88	4.01	93.8%	18.25	98.1%	81.5
U-223	7.20	96.0%	6.59	96.5%	0.93	0.54	1.57	0.98	4.03	94.1%	17.81	95.7%	73.1
WL 363HQ	7.38	98.4%	7.24	106.0%	1.19	0.52	1.64	1.05	4.38	102.4%	19.00	102.1%	80.8
GrandStand	8.14	108.6%	7.36	107.8%	1.18	0.56	1.67	1.15	4.57	106.8%	20.07	107.9%	80.6
Ranger	6.18	82.5%	5.74	84.0%	1.04	0.55	1.25	0.75	3.58	83.8%	15.50	83.3%	68.3
Mean	**7.5**	**100.0%**	**6.83**	**100.0%**	**1.09**	**0.59**	**1.60**	**1.00**	**4.28**	**100.0%**	**18.61**	**100.0%**	**81.2**
CV %	6.9	6.9	7.3	7.3	16.9	21.7	7.9	15.1	9.3	9.3	6.2	6.2	8.5
LSD 5%	0.73	9.77	0.71	10.39	NS	NS	0.18	0.21	0.56	13.08	1.62	8.70	NS

Table 7: Three-Year Forage Yield-Fall 2008 Garfield Alfalfa Variety Trial, Franklin Co. WA

Forage Yield (Ton DM/A)

Planted 8/28/2008					2011 Harvests								9-23-11
	2009 Harvests		2010 Harvests		5/20	6/18	8/23	9/22	2011	2011	3-yr	3-yr	Stand
Entry	Total	% Mean	Total	% Mean	Cut 1	Cut 2	Cut 3	Cut 4	Total	% Mean	Total	% Mean	%
FSG 429SN	9.66	102.2%	7.42	105.4%	NA	0.91	1.77	1.49	4.17	103.2%	21.3	103.5%	75.1
FSG 639ST	9.18	97.0%	6.79	96.5%	NA	0.77	1.70	1.39	3.86	95.3%	19.8	96.5%	71.5
Mountaineer 2.0	8.91	94.2%	6.83	97.1%	NA	0.80	1.76	1.34	3.90	96.5%	19.6	95.7%	71.2
Rebound 5.0	9.22	97.5%	7.17	101.9%	NA	0.87	1.90	1.43	4.20	103.9%	20.6	100.3%	72.7
Lightning IV	9.43	99.7%	7.10	100.8%	NA	0.92	1.83	1.58	4.33	107.2%	20.9	101.6%	72.4
FG 44W204	9.08	96.0%	7.15	101.6%	NA	0.74	1.70	1.33	3.76	93.1%	20.0	97.3%	62.9
FG 45W271	9.86	104.2%	7.11	101.1%	NA	0.88	1.97	1.44	4.29	107.1%	21.3	103.5%	69.0
FG 46W202	9.77	103.3%	7.47	106.1%	NA	0.89	1.87	1.57	4.33	107.1%	21.6	105.0%	73.0
DKA 43-13	10.00	105.8%	7.25	103.0%	NA	0.98	1.82	1.49	4.29	106.1%	21.5	104.9%	70.5
DKA 50-18	10.23	108.1%	7.31	103.9%	NA	0.87	1.95	1.51	4.33	107.1%	21.9	106.5%	75.5
54V09	10.04	106.2%	6.93	98.4%	NA	0.81	1.78	1.32	3.91	96.7%	20.9	101.7%	70.6
TS 5026	9.48	100.2%	6.70	95.2%	NA	0.97	1.76	1.30	4.03	99.8%	20.2	98.4%	75.0
TS 4028	9.67	102.3%	7.05	100.1%	NA	0.84	1.72	1.30	3.87	95.6%	20.6	100.2%	78.0
TS 4027	9.01	95.3%	6.86	97.5%	NA	0.78	1.69	1.24	3.71	91.7%	19.6	95.3%	72.5
WL 363HQ	9.37	99.1%	6.85	97.3%	NA	0.83	1.93	1.44	4.19	103.7%	20.4	99.4%	69.5
GrandStand	10.18	107.7%	7.22	102.6%	NA	0.98	1.85	1.43	4.26	105.3%	21.7	105.5%	74.4
Vernal	7.70	81.4%	6.43	91.4%	NA	0.68	1.54	1.07	3.30	81.5%	17.4	84.8%	65.5
Mean	**9.46**	**100.0%**	**7.04**	**100.0%**	**NA**	**0.85**	**1.80**	**1.37**	**4.04**	**100.0%**	**20.5**	**100.0%**	**71.7**
CV%	7.3	7.3	6.4	6.4	NA	13.7	8.8	7.4	6.6	6.6	4.7	4.7	9.7
LSD 5%	0.98	0.10	NS	NS	NA	0.17	0.23	0.15	0.38	9.43	1.38	6.73	NS

NA = Data was lost due to vole damage and difficulties in harvesting.
NS = Data was not statistically significant at the alpha = 0.05

Table 8: Two-Year Forage Yield-Fall 2010 Planting Garfield Road, Franklin Co. WA

Forage Yield (Ton DM/A)

			2011 Harvests						Mean of		
Seeded 4/15/10	**2010 Harvests**		**5/20**	**7/20**	**8/23**	**8/23**	**2011 Total**		**2010 & 2011**		**10/31/11**
Entry	**Total**	**% Mean**	**Cut 1**	**Cut 2**	**Cut 3**	**Cut 4**	**Total**	**% Mean**	**2 Yr. Total**	**% Mean**	**Regrowth***
AmeriStand 407TQ	3.41	109.1%	NA	0.94	1.88	1.37	4.19	105.1%	7.59	106.9	2.50
CW 064004	2.94	94.1%	NA	0.89	1.76	1.47	4.12	103.4%	7.06	99.4	1.75
Summit	2.69	86.2%	NA	0.84	1.68	1.54	4.06	101.9%	6.75	95.0	3.25
Mountaineer 2.0	3.42	109.5%	NA	0.84	1.61	1.36	3.81	95.6%	7.23	101.8	2.75
HybriForce Exp 802	3.13	100.2%	NA	0.95	1.79	1.34	4.08	102.4%	7.21	101.5	1.50
HybriForce Exp 807	3.05	97.6%	NA	0.81	1.62	1.24	3.67	92.1%	6.72	94.6	1.50
DKA 42-15	2.88	92.3%	NA	0.70	1.60	1.25	3.55	89.1%	6.43	90.6	1.25
FG 46W201	3.09	98.9%	NA	0.79	1.69	1.43	3.91	98.0%	6.99	98.4	2.75
FG 46W202	3.37	108.1%	NA	0.82	1.62	1.54	3.98	100.0%	7.36	103.6	4.00
FG 45W271	3.13	100.3%	NA	0.86	1.76	1.57	4.20	105.3%	7.33	103.1	4.00
FG 45W273	3.14	100.5%	NA	0.86	1.86	1.60	4.32	108.3%	7.45	104.9	4.50
45417	3.40	108.9%	NA	0.83	1.71	1.25	3.79	95.1%	7.19	101.2	1.75
PGI 557	3.03	96.9%	NA	0.87	1.93	1.48	4.29	107.7%	7.32	103.0	3.75
64Q22	3.12	100.0%	NA	0.88	1.71	1.55	4.14	103.8%	7.26	102.2	2.75
MasterPiece II	3.11	99.6%	NA	0.87	1.67	1.54	4.07	102.1%	7.18	101.1	4.75
GrandStand	3.38	108.2%	NA	0.78	1.77	1.41	3.95	99.2%	7.33	103.2	2.25
Archer III	3.00	96.2%	NA	0.82	1.73	1.36	3.91	98.1%	6.91	97.3	2.75
Integra 8400	3.05	97.8%	NA	0.90	1.75	1.39	4.04	101.3%	7.09	99.8	2.00
WL 363 HQ	3.23	103.5%	NA	0.75	1.88	1.44	4.07	102.1%	7.30	102.8	3.50
Prosementi	3.01	96.3%	NA	1.12	1.95	1.49	4.55	114.3%	7.56	106.4	5.00
Vernal	2.76	88.5%	NA	0.72	1.39	0.93	3.05	76.4%	5.84	82.3	1.00
Magna 551	3.35	107.2%	NA	0.81	1.70	1.41	3.93	98.5%	7.18	101.0	1.75
Mean	**3.12**	**100.0%**	**NA**	**0.85**	**1.73**	**1.41**	**3.98**	**100.0%**	**7.10**	**100.0**	**2.77**
CV%	8.5	8.5	NA	17.8	15.1	7.4	9.2	9.2	7.1	7.1	22.1
LSD 5%	0.4	12.3	NA	NS	NS	0.15	0.52	13.1	0.7	10.1	0.87

NA = Data was lost due to vole damage and difficulties in harvesting.

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: Two-Year Forage Yield-2009 Alfalfa Variety Trial, Othello, Grant, WA

Forage Yield (Ton DM/A)

Seeded 8/17/2009	2010	2010	2011 Harvests				2011	2011	2010 & 2011 Total		2011 Fall
Entry	**Total**	**% Mean**	**Cut 1**	**Cut 2**	**Cut 3**	**Cut 4**	**Total**	**% Mean**	**Total**	**% Mean**	**Regrowth***
AmeriStand 407TQ	4.42	97.6%	3.66	0.51	1.45	0.95	3.82	103.3%	8.2	100.2%	2.25
CW 064004	4.68	103.4%	3.48	0.64	1.50	1.00	4.01	108.3%	8.7	105.6%	2.00
Summit	4.62	102.1%	3.30	0.39	1.48	0.80	3.50	94.5%	8.1	98.7%	3.00
Rebound 5.0	4.66	103.0%	3.40	0.49	1.53	0.86	3.73	100.7%	8.4	102.0%	2.00
HybriForce Exp 802	4.23	93.6%	3.17	0.45	1.48	0.64	3.37	91.0%	7.6	92.4%	1.25
HybriForce Exp 807	4.21	93.0%	3.94	0.45	1.53	0.87	3.83	103.5%	8.0	97.7%	1.50
DKA 42-15	4.42	97.7%	2.99	0.35	1.54	0.78	3.43	92.6%	7.8	95.4%	1.75
FG 46W201	4.67	103.3%	3.78	0.50	1.59	1.00	4.04	109.0%	8.7	105.9%	3.25
FG 46W202	4.86	107.4%	3.62	0.47	1.56	0.87	3.81	102.9%	8.7	105.3%	3.25
FG 45W271	4.45	98.4%	2.89	0.35	1.50	0.86	3.44	92.9%	7.9	95.9%	3.50
FG 45W273	4.44	98.2%	3.22	0.45	1.50	0.85	3.60	97.2%	8.0	97.7%	4.00
45417	4.66	103.0%	4.26	0.51	1.49	0.78	3.84	103.7%	8.5	103.3%	1.25
PGI 557	4.77	105.5%	3.83	0.60	1.64	0.96	4.16	112.4%	8.9	108.6%	3.50
64Q22	4.62	102.2%	3.44	0.41	1.49	0.77	3.53	95.2%	8.1	99.0%	2.50
63Q05	4.47	98.8%	3.03	0.35	1.42	0.74	3.26	88.2%	7.7	94.0%	1.50
GrandStand	4.75	105.1%	3.62	0.42	1.55	0.76	3.64	98.2%	8.4	102.0%	2.00
Integra 8300	4.70	103.8%	3.37	0.45	1.53	0.88	3.70	99.9%	8.4	102.1%	2.50
Integra 8400	4.50	99.5%	4.10	0.42	1.65	0.82	3.91	105.6%	8.4	102.2%	2.25
WL 343 HQ	4.26	94.1%	3.89	0.52	1.53	0.80	3.81	103.1%	8.1	98.1%	2.25
Prosementi	4.30	95.1%	3.73	0.57	1.51	0.86	3.88	104.9%	8.2	99.5%	4.00
Vernal	4.31	95.3%	2.57	0.57	1.42	0.64	3.45	93.2%	7.8	94.3%	1.00
Mean	**4.53**	**100.0%**	**3.49**	**0.47**	**1.52**	**0.83**	**3.70**	**100.0%**	**8.2**	**100.0%**	**2.40**
CV %	10.8	10.8	22.2	27.8	9.3	21.1	12.6	12.6	10.3	10.3	28.4
LSD 5%	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.97

Table 10: One-Year Forage Yield-2010 Alfalfa Variety Trial, Othello, Grant, WA

Forage Yield (Ton DM/A)

	2010 Harvests.						
Planted Aug 17, 2010	**Harv. 6/7**	**Hav. 7/8**	**Harv.8/19**	**Harv. 9/19**			**Nov. 1, 2011***
Variety	**Cut 1**	**Cut 2**	**Cut 3**	**Cut 4**	**Total**	**% Mean**	**Fall regrowth**
AmeriStand 407TQ	0.85	0.56	1.80	1.16	4.38	99.7%	3.5
AmeriStand 445NT	1.08	0.58	1.03	0.85	4.66	106.2%	3.3
LegenDairy 5.0	1.14	0.49	1.00	0.82	4.25	96.8%	2.5
Rebound 6.0	1.18	0.62	1.06	0.84	4.42	100.6%	2.8
DG4210	1.04	0.52	0.77	0.69	4.17	94.9%	3.5
Grandstand	1.06	0.58	0.84	0.80	4.49	102.3%	2.3
HybriForce Exp 240	1.11	0.65	0.87	0.68	4.77	108.7%	2.3
Magna 551	1.25	0.57	0.99	0.82	4.51	102.7%	1.5
DKA43-13	1.20	0.60	1.19	0.85	4.64	105.7%	3.5
6305Q	0.97	0.68	1.00	0.79	4.08	93.0%	2.3
6422Q	0.95	0.45	1.00	0.78	4.05	92.2%	3.5
WL 363 HQ	1.03	0.58	0.91	0.71	4.26	97.1%	3.3
Mean	**1.07**	**0.57**	**0.97**	**0.79**	**4.39**	**100.0%**	**2.8**
CV %	17.7	17.2	8.9	20.3	8.4	8.4	32.1
LSD 5%	NS	NS	NS	NS	NS	NS	1.3

NA = Data was lost due to vole damage and difficulties in harvesting.

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 11: One-Year Forage Yield-Fall 2010 Planting Garfield Road, Franklin Co. WA

Forage Yield (Ton DM/A)

	2011 Harvests.						
Planted Aug 18, 2010	**5/20**	**7/19**	**8/23**	**9/22**			**31-Oct-11**
Variety	**Cut 1**	**Cut 2**	**Cut 3**	**Cut 4**	**Total**	**% Mean**	**Fall regrowth***
AmeriStand 407TQ	NA	0.61	1.90	1.95	4.46	98.8%	2.75
Archer III	NA	0.75	1.91	1.99	4.65	103.1%	4.25
AmeriStand 445NT	NA	0.68	1.93	1.92	4.53	100.4%	4.75
Rebound 6.0	NA	0.72	1.75	1.76	4.22	93.6%	2.50
DG4210	NA	0.73	2.13	2.21	5.07	112.4%	3.50
Grandstand	NA	0.67	1.91	2.03	4.61	102.2%	3.25
MsSunstra 810	NA	0.66	1.86	1.88	4.40	97.5%	1.50
Winchester	NA	0.63	1.81	1.79	4.22	93.6%	1.25
DKA43-13	NA	0.68	1.77	1.84	4.29	95.0%	4.00
DKA50-18	NA	0.65	1.94	2.01	4.60	102.0%	4.50
6422Q	NA	0.62	1.78	1.79	4.19	92.8%	3.00
WL 363 HQ	NA	0.75	2.04	2.11	4.89	108.5%	3.25
Mean	**NA**	**0.68**	**1.89**	**1.94**	**4.51**	**100.0%**	**3.21**
CV %	NA	15.4	6.7	7.2	6.5	6.5	30.4
LSD 5%	NA	NS	0.18	0.20	0.41	9.14	1.38

NA = Data was lost due to vole damage and difficulties in harvesting.

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.