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2005 CALIFORNIA ALFALFA VARIETY TRIALS: YIELD AND FALL DORMANCY RESULTS INCLUDING ROUNDUP READY ALFALFA RESULTS

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ABSTRACT

This publication details alfalfa yield trial data for single harvest, single year, and multiple-year summaries for the year 2005, and results from the 2005 Alfalfa Fall Dormancy trials. Both conventional and Roundup-Ready (RR) lines have been tested. Yield trials are conducted in 4 regions in California: the Intermountain area, the Sacramento Valley, the San Joaquin Valley, and the Imperial Valley (Figure 1). The alfalfa variety trial data from the University of California are routinely placed on the World Wide Web; often well in advance of this published Report (http://alfalfa.ucdavis.edu/).

INTRODUCTION

Choosing superior varieties of alfalfa is a significant economic factor for alfalfa growers. A large number of commercial varieties are currently available, enabling a wide range of options for producers. These UC trials provide unbiased data from a wide range of environments related to variety performance of alfalfa. In California, alfalfa is grown from the Oregon border to the Mexican border, and throughout the Great Central Valley, which consists of the Sacramento and San Joaquin Valleys (Figure 1). These sites represent 3-4 cut systems (dormant varieties) in the Intermountain Region, 6-8 cut systems (semi-dormant varieties) in the Northern Central Valley, and 7-8 cut system (non-dormant varieties) in the Southern Central Valley and 8-10 cuttings in the Desert Environments.

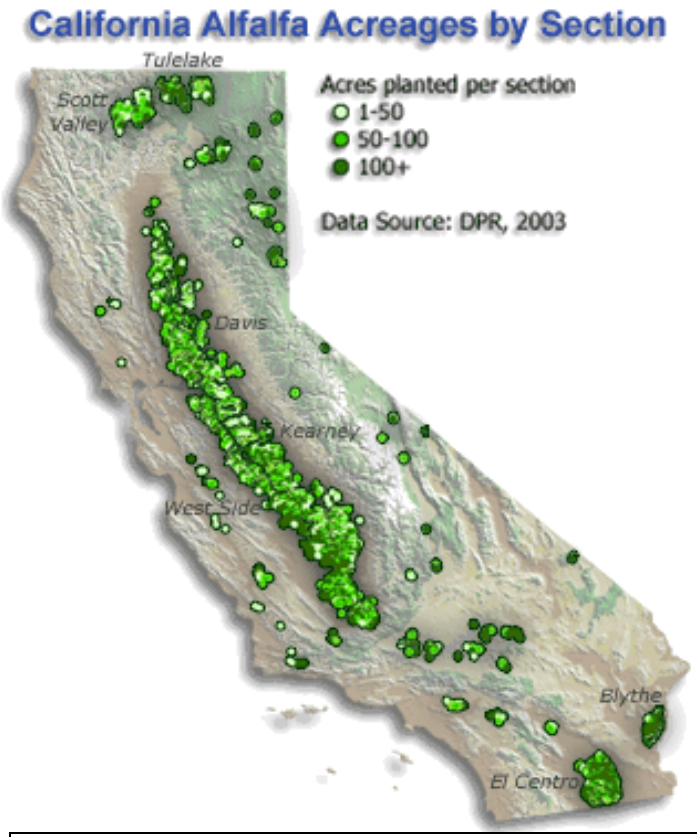

Figure 1. *California alfalfa acreage. The Intermountain region is represented by Tulelake and Scott Valley, Sacramento Valley by the Davis trial, San Joaquin Valley by the Kearney Trial, and Low Desert by the El Centro trial.*

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Both private and public varieties are tested in these trials, as well as the experimental lines destined for release within the next few years. These data are frequently used by growers to choose varieties, and by breeders to help guide further selection. This report provides single year and over-the-year summaries from alfalfa trials harvested in California in 2005.

2005 ALFALFA PRODUCTION YEAR

Throughout California, the 2005 production season was wetter than normal earlier in the season (particularly in the southern part of the state), fairly normal during summer months, and unusually favorable during fall months. 2005 was characterized also by very high alfalfa hay prices, probably destined to be the highest price year ever for California, tempered by much higher costs of production, particularly fuel and electricity. Winter rainfall continued much later into the spring, affecting the first two (or three) cuttings in many parts of the state. The spring and early summer was much cooler than usual, but when temperatures warmed and turned hot, it remained so much of the summer. Late August saw temperatures unseasonably cool for about 10 days. This was followed by a very warm and dry fall lasting well into November. As a result, some excellent late production (high yields and high quality) was obtained for many growers in the Central Valley, offsetting the many rained-on lots that were produced earlier. Quite a number of growers obtained one additional cutting in comparison to less-favorable years. Research plots in Davis and Kearney had the first cutting at mid April. As the year draws to a close, hay stocks are down, demand is high, and thus hay prices appear to continue to be high, a condition which is expected to continue into 2006. New plantings of alfalfa will undoubtedly temper this trend, depending upon magnitude. The Imperial Valley and Intermountain had good alfalfa production and improved prices for 2005, but not as significantly as in the Central Valley.

IMPORTANCE OF FALL DORMANCY

Fall Dormancy (FD) is probably the single most important factor in determining the adaptation of an alfalfa cultivar. Dormancy is defined as the reduction in growth during the fall that is associated with reducing photoperiod (day length) and temperature. Fall Dormancy is more important in the varied climatic zones of California than in other, more uniform climates. Therefore, comprehensive trials are conducted each year comparing and defining Fall Dormancy characteristics for alfalfa lines tested at different environments. Evaluation of fall dormancy in a single year (and/or a single location) can lead to misclassification of some cultivars, resulting in either serious winter-kill or loss of the production potential (if a cultivar from the wrong fall dormancy group is chosen). The trials include standard check cultivars and uniform methods across three environments which are reported below.

TESTING ALFALFA VARIETIES - METHODS

Yield Trials. The California Alfalfa Cultivar Yield, Fall Dormancy, and Forage Quality Trials are open to any certified alfalfa cultivar, which is sold or is likely to be sold in California. Blends or brands (unless they are certified blends) are not included in these trials. Experimental cultivars with a high likelihood of release within the next few years are tested as space permits. Five alfalfa variety yield trials were harvested from Tulelake, Davis, Parlier (2 trials), and El Centro, CA in 2005. One new trial at Parlier was established spring 2005. Specific planting dates for each trial are given on the results table for that trial. The plantings were at

approximately 25 lbs/acre live seed. Plots were 3' to 4' wide and 15 to 20 feet long, depending upon location and specific layout. Three to six replicates of each cultivar were planted at each location, depending upon the expected variation at that site. Experimental design was a randomized complete block design. Harvests for yield estimation were obtained from approximately a 3' x 18' area using a flail-type or cutter-bar type forage harvester, and dry matter yield determined by oven-drying sub samples to a constant weight. A representative group of 5-6 varieties were taken at each harvest, and the average dry matter used for yield determination. Three to four harvests were taken in intermountain California, while up to ten cuttings are taken in the Imperial Valley. Cutting schedules were determined by the most common practice in that region and are the same for all varieties within a trial. A separate trial comparing varieties and cutting schedules has been completed at the Davis campus, and has been reported at the 2005 California Alfalfa Symposium (Putnam et al., 2005, see website). The data is obtained from each of the locations and analyzed and summarized at UC Davis campus.

Fall Dormancy Trials. The 2005 dormancy tests were planted at three locations in California (Intermountain Research and Extension Center, Tulelake, CA - 41o53'N, Mean Temp. 44.2^{o}F; the Agronomy and Range Science Field Research Facility Davis, CA - 38^{o}32'N, Mean Temp. 60.3^{o}F, and the Desert Research and Extension Center, Imperial, CA - 32^{o}48'N, Mean Temp.72.7^{o} F). The three-location trial represents Intermountain (Tulelake), Mediterranean (Davis), and Desert (El Centro) environments. Planting dates this year were May 10 at Imperial, May 3 at Tulelake, and May 26 at Davis. Single row plots were established on 30" centers. Each plot is 30' in length separated by a 5' alley. Individual plants within a plot are 18" apart. The 2005 trial had 42 entries. Included in the list of entries are the 11 standard check cultivars adopted by the North American Alfalfa Improvement Conference in 1998 (http://www.naaic.org/stdtests/Dormancy2.html). When plants reached the second or third trifoliolate leaf stage, the plot was thinned to the spacing defined above. Watering was appropriate for a forage production field. The first clipping, if taken, occurs between July 1 and July 15 (no data are taken at this time). The studies at each location remained well-watered with weed and rodent control until the fall clipping date. Each year, fall clip-back occurs as near as possible to September 7, Tulelake; October 3, Davis; and October 24, Imperial. On these respective dates, the study was swathed to a height of 5 cm (2 inches) and any uncut stems removed. Water application continues after swathing in amounts appropriate for forage production at each location. Approximately three and one-half weeks after clipping, individual plants were evaluated for fall growth on a 1 to "n" scale. Each increment in the scale is equal to 5 cm (2 inches) of growth, measured as a score. Data is then transformed using the square root to remove any heterogeneity of variance. Transformed values are reported as natural plant height (NPH). The fall dormancy class (as designated in the standard evaluation protocol) of the check cultivars is then regressed against the NPH value across locations. The resulting regression is used to assign a Fall Dormancy Rating (FDR) to each of the entries in the trial based on their average NPH over locations

2005 YIELD RESULTS

Intermountain Region

2004 UC Tulelake Yield Trial **-** This trial was planted with 36 entries May 21, 2004 at UC Intermountain Research and Extension Center, Tulelake, CA. Single year results from the ‘05 Tulelake trial are provided in Table 1. Four cuttings were completed in this second year of production (first year of full production, since it was a spring ’04 planting). The yield averages in 2004 and 2005 are given in Table 2. In 2005, yield average was 9.6 tons/acre, which was about

3.5 ton per acre more than the yield averages in 2004. One ton difference between the highest and lowest yield average of varieties were found. Some shifting of varieties from year 1 to year 2 were found.

Sacramento Valley

2002 UC Davis Yield Trial – This trial has entered its 3rd year of this multiple dormancy trial (with fall dormancies ranging from 3 to 9), which was established in the fall of September 30, 2002. This trial was a part of a variety and wheel traffic interaction trial located at the UC Davis Agronomy Research Farm (only those which did not receive wheel traffic are reported here). A total of seven cuttings were concluded in the 2005 season (Table 3). Total yield average was 9.6 tons/acre compared to 12.1 and 9.6 tons/acre in 2004 and 2003 respectfully (see Table 4). Due to the large range of Fall Dormancies, the differences between high and low yields across the varieties were up to 3 tons/acre, about 25% yield differences. There is some slight shift of yield rank between the total tonnages in all three years.

2003-Planted UC Davis Roundup-Ready Trial - The second year yield results of a roundup ready (RR) trial grown at UC Davis campus is presented in Table 5. This trial includes several that have been commercialized in 2005. These lines have been developed by Forage Genetics International, and compared with 'check varieties'. These plots were grown under regulation until de-regulation in June 2005. In general, yields of RR varieties for the 2nd year of this trial were generally no different than the yields of non-RR check varieties within the same dormancy group (Table 5). Differences in yield potential as related to Fall Dormancy Rating of those varieties were observed, but this was an effect that was independent of whether the variety was RR or not (Table 5). The difference between high and low yield entries was only 1.7 tons/acre, while the FD ranges where from 6-10. The average yields fell 1.3 tons/acre from 2004 to 2005 years (Table 6). It is important to remember that yields during the first year of production are not always predictive of yields over a 2-3 year period. It should be noted that the Fall Dormancy scores reported in Tables 9-10 are those estimated by the company, not those measured in the UC multiple-location Fall Dormancy trial. More careful measurements of Fall Dormancy may enable better prediction of adaptation of a variety.

San Joaquin Valley

2003 UC Kearney Yield Trial – This is the 3rd year of this variety trial, which was planted on late spring, May 12, 2003 at UC Kearney Research Center. Eight cuttings were conducted during the season. The yield average across all the varieties was about 10.7 tons/acre (Table 7). This trial had considerable sclerotinia infection during winter months of January through February due to extended cloudy moist weather. However, the trial appeared to grow out of the effects of the disease and exhibited relatively normal yields. The yearly yield average between the high and low varieties is greater than 5.4 tons/acre difference. The rankings of varieties had some major changes between 2004 and 2005 (Table 8).

2005 UC Kearney Yield Trial-- This newly planted trial on March 15, 2005 has 54 entries at UC Kearney Research Center. Six cuttings were conducted during the season with the first cutting taking place on June 14, 2005. The yield across all varieties was about 10 tons/acre (Table 9). The yearly yield average between high and low varieties was greater than 2.4 tons/acre difference.

Low Desert

Alfalfa is grown in the low desert of California, consisting of about 24% of the state's production, and on the high desert, consisting of about 1% of the state's production. Trials for non-dormant cultivars commonly grown on the low deserts of California are conducted at El Centro and sometimes Blythe, CA. The UC Desert Research and Extension Center, El Centro plots are managed by UC Staff Research Associate Francisco Maciel.

2003 UC Imperial Yield Trial – This is the 2nd year of the variety trial, which was planted and established on October 3, 2003. The second year production had 9 cuttings with average of 7.2 tons/acre (Table 10). The overall field variability was also high in 2005, especially towards the end of season when the CV value increased higher than 10%. The difference between high and low yield entries was only 2.6 tons/acre, while the FD merely ranging from 8-10. Total yield average was 7.2 tons/acre compared with 8.7 tons/acre in 2004 (see Table 11). The rankings of varieties had some major changes between 2004 and 2005.

2005 FALL DORMANCY RESULTS

Results from the 2005 Fall Dormancy Trial are presented on Table 12. Winter rainfall was generally higher than normal and continued much later into the spring. This delayed planting dates for each of the trials. The spring and early summer was much cooler than usual, but when temperatures warmed and turned hot, it remained so much of the summer. Late August saw temperatures unseasonably cool for about 10 days. This was followed by a very warm and dry fall, lasting well into November.

The trials at Tulelake and Davis experienced no management problems and fall growth was excellent. Plant growth at Tulelake was less than normal; however, the ranking of the check cultivars was as would be expected. Fall growth at Davis was normal and much like Tulelake, the check cultivars ranked as expected for the exception of FDR 3 and FDR 4, which come out reversed. After the trial at the Desert Research and Extension Center was scored, it was determined that a number of serious mistakes were made at planting. These were not systematic errors and the errors could not be reliably resolved, so no data are being reported from DREC. This year's regression equation is based on the Tulelake and Davis data and is 7.4892 (NPH)-8.7135 with a r^2 of 0.9918. This is not statistically different from the long term average regression. The C.V.s for Tulelake and Davis were 5.23 and 3.42, respectively. These are very good CV's and indicative that the data are very consistent. The overall ranking of the check cultivars was as expected. However, two cultivars, Legend and 5246, were reversed at Davis. The difference at Tulelake was significant and large enough to influence the overall ranking of these two check cultivars. We do not feel this is a major concern. However, this is the second year this has occurred and we will be monitoring this situation closely in future years.

Choosing Varieties to Resist Pests. Often the ONLY strategy to combat specific pests is the choice of alfalfa variety. Growers should take advantage of decades of plant breeding which will enable them to plant crops more resistant to diseases insects and nematodes than older varieties. While pest resistance is important, pests do not occur <u>every</u> year. But even if pests or diseases occur only 1 year out of 10, choice of a resistant variety will pay for itself. Table 13 lists the recommended pest resistance ratings for alfalfa varieties for the different regions of California. This will guide you in choosing varieties which have resistance to important pests. Data on the

Fall Dormancy and Pest Resistance Ratings of Alfalfa Varieties is at:
http://www.alfalfa.org/falldormancy.html and is updated each year for new varieties.

INTERPRETING YIELD TRIAL RESULTS

We suggest the following procedure for selecting varieties:

1. Select a group of high-yielding varieties for your region (generally the top 1/3 of a trial which is closest to your area) from Tables 1-11.
2. Determine the Pest Resistance and Fall Dormancy needs for your region (Table 13).
3. Order a copy or view on the web the current information on Fall Dormancy and Pest resistance at the Alfalfa Alliance Website (www.alfalfa.org).
4. Double-check those fall dormancy scores with those on Tables 11-12.
5. Choose those high yielding varieties with the best Pest Resistance package for your region.
6. Consider evidence for high quality if available (such information is not always widely available, but generally more dormant varieties tend to be higher in quality).
7. Last consideration is the price of seed or whether the seed sales person buys you lunch.

ACKNOWLEDGMENTS

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TABLE 1. 2005 YIELDS, UC TULELAKE ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 5/2/04
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

		Cut 1	Cut 2	Cut 3	Cut 4	YEAR		% OF
		6/15/05	7/19/05	8/19/05	9/20/05	TOTAL		VERNAL
	FD			Dry t/a				%
Released Varieties								
Xtra-3	4	3.7 (1)	2.4 (13)	2.0 (2)	1.1 (20)	9.2 (1)	A	115.4
Expedition	5	3.3 (16)	2.5 (3)	2.1 (1)	1.2 (5)	9.1 (2)	A B	113.8
C316	4	3.5 (7)	2.4 (6)	1.9 (22)	1.1 (11)	9.0 (4)	A B C	112.2
WL357HQ	3	3.2 (25)	2.6 (1)	2.0 (10)	1.2 (8)	8.9 (5)	A B C D	112.0
WL325HQ	3	3.6 (2)	2.3 (19)	2.0 (5)	1.0 (25)	8.9 (6)	A B C D E	111.9
WL319HQ	3	3.5 (5)	2.5 (2)	2.0 (14)	1.0 (28)	8.9 (7)	A B C D E	111.6
Rebound5.0	4	3.5 (4)	2.4 (17)	2.0 (16)	1.1 (15)	8.9 (8)	A B C D E	111.6
AlfaStarII	4	3.4 (10)	2.4 (12)	2.0 (3)	1.1 (17)	8.9 (9)	A B C D E	111.5
Boulder(4M125)	5	3.3 (15)	2.4 (11)	2.0 (12)	1.2 (7)	8.9 (10)	A B C D E F	111.1
LegenDairy5.0	3	3.5 (6)	2.4 (14)	1.9 (20)	1.1 (22)	8.8 (11)	A B C D E F	110.8
Recover	5	3.2 (26)	2.5 (4)	2.0 (7)	1.1 (10)	8.8 (12)	A B C D E F G	110.5
Mountaineer2.0	5	3.3 (20)	2.4 (9)	2.0 (4)	1.1 (12)	8.8 (14)	A B C D E F G H	110.2
DS309Hyb	4	3.2 (27)	2.5 (5)	2.0 (13)	1.1 (14)	8.7 (15)	A B C D E F G H I	109.6
MasterPiece	4	3.2 (23)	2.3 (28)	2.0 (8)	1.2 (2)	8.7 (16)	A B C D E F G H I	109.5
Vitro	3	3.4 (13)	2.3 (27)	2.0 (6)	0.9 (30)	8.6 (17)	B C D E F G H I J	108.0
HybriForce-420Wet	4	3.2 (24)	2.4 (18)	2.0 (18)	1.1 (21)	8.6 (18)	B C D E F G H I J K	107.7
Dura512	5	3.4 (9)	2.3 (25)	1.9 (26)	0.9 (31)	8.6 (19)	B C D E F G H I J K	107.6
SW435(SW4A135)	4	3.3 (19)	2.4 (8)	1.9 (23)	1.0 (27)	8.6 (20)	B C D E F G H I J K L	107.3
54Q25	4	3.2 (30)	2.4 (7)	1.9 (25)	1.0 (23)	8.5 (21)	C D E F G H I J K L M	106.9
HybriForce-600(DS218)	6	3.3 (17)	2.2 (34)	1.9 (27)	1.1 (18)	8.5 (22)	C D E F G H I J K L M N	106.1
LM459WD	5	3.0 (31)	2.4 (10)	2.0 (9)	1.1 (19)	8.4 (24)	E F G H I J K L M N	105.4
CW5440	4	3.4 (14)	2.3 (29)	1.8 (33)	0.9 (29)	8.4 (25)	E F G H I J K L M N	105.4
Magna601	6	2.9 (32)	2.3 (30)	2.0 (17)	1.2 (4)	8.3 (26)	F G H I J K L M N	104.7
RewardII	4	3.2 (28)	2.3 (26)	2.0 (11)	0.9 (33)	8.3 (27)	G H I J K L M N	104.1
BlazerXL	3	3.3 (22)	2.3 (21)	1.9 (21)	0.8 (34)	8.3 (28)	G H I J K L M N	104.0
Innovator+Z	3	3.5 (8)	2.3 (20)	1.8 (36)	0.7 (35)	8.3 (29)	H I J K L M N	103.8
9429	4	3.4 (12)	2.0 (36)	1.8 (32)	1.0 (26)	8.2 (30)	I J K L M N O	103.2
Plumas	4	3.3 (21)	2.1 (35)	1.8 (34)	0.9 (32)	8.1 (33)	L M N O	100.9
Vernal	2	3.3 (18)	2.2 (33)	1.8 (35)	0.7 (36)	8.0 (35)	N O	100.0
Experimental Varieties								
CW94023	4	3.6 (3)	2.4 (15)	1.9 (19)	1.1 (13)	9.0 (3)	A B C	112.7
CW05009	5	3.4 (11)	2.4 (16)	1.9 (29)	1.1 (9)	8.8 (13)	A B C D E F G H	110.4
SW4329	4	3.2 (29)	2.3 (24)	1.9 (24)	1.0 (24)	8.4 (23)	D E F G H I J K L M N	105.5
SW5307	5	2.9 (33)	2.3 (23)	1.8 (31)	1.2 (6)	8.2 (31)	J K L M N O	102.8
SW5310	5	2.7 (35)	2.3 (22)	1.9 (30)	1.2 (1)	8.1 (32)	K L M N O	101.3
SW4328	4	2.7 (34)	2.3 (31)	2.0 (15)	1.1 (16)	8.0 (34)	M N O	100.4
SW6330	6	2.4 (36)	2.2 (32)	1.9 (28)	1.2 (3)	7.7 (36)	O	96.9
MEAN		3.25	2.34	1.93	1.04	8.56		
CV		8.4	7.6	7.5	12.6	4.9		
LSD (.05)		0.34	0.22	NS	0.16	0.53		

Trial seeded at 25 lb/acre viable seed at UC Intermountain Research and Extension Center, Tulelake CA.
Entries followed by the same letter are not significantly different at the 5% probability level according to Fishers (protected) LSD
FD = Fall Dormancy reported by seed companies.

TABLE 2. 2004-05 YIELDS, UC TULELAKE ALFALFA CULTIVAR. TRIAL PLANTED 5/2/04

		2004 Yield	2005 Yield	Average		% OF Vernal
			Dry t/a			%
Released Varieties	FD					
Expedition	5	5.3 (6)	9.1 (2)	7.2 (1)	A	113.6
Xtra-3	4	5.1 (23)	9.2 (1)	7.1 (2)	A B	112.9
Mountaineer2.0	5	5.4 (1)	8.8 (14)	7.1 (3)	A B C	112.6
WL325HQ	3	5.3 (7)	8.9 (6)	7.1 (4)	A B C D	112.4
Rebound5.0	4	5.2 (16)	8.9 (8)	7.1 (6)	A B C D E	111.7
AlfaStarII	4	5.2 (18)	8.9 (9)	7.0 (7)	A B C D E	111.4
Recover	5	5.2 (9)	8.8 (12)	7.0 (8)	A B C D E	111.3
DS309Hyb	4	5.2 (10)	8.7 (15)	7.0 (9)	A B C D E F	110.6
MasterPiece	4	5.2 (12)	8.7 (16)	7.0 (10)	A B C D E F	110.5
WL319HQ	3	5.1 (25)	8.9 (7)	7.0 (11)	A B C D E F	110.4
C316	4	4.9 (31)	9.0 (4)	6.9 (12)	A B C D E F G	109.9
WL357HQ	3	4.9 (30)	8.9 (5)	6.9 (14)	A B C D E F G	109.8
Boulder(4M125)	5	5.0 (27)	8.9 (10)	6.9 (15)	A B C D E F G	109.8
Vitro	3	5.2 (13)	8.6 (17)	6.9 (16)	A B C D E F G	109.5
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LegenDairy5.0	3	4.9 (32)	8.8 (11)	6.9 (19)	A B C D E F G H	108.6
Magna601	6	5.3 (5)	8.3 (26)	6.8 (20)	A B C D E F G H I	108.3
DS218	6	5.2 (14)	8.5 (22)	6.8 (21)	A B C D E F G H I	108.3
54Q25	4	5.1 (21)	8.5 (21)	6.8 (23)	B C D E F G H I J	107.9
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RewardII	4	5.0 (26)	8.3 (27)	6.7 (29)	F G H I J K	105.5
BlazerXL	3	5.0 (28)	8.3 (28)	6.7 (30)	F G H I J K L	105.3
Innovator+Z	3	4.8 (35)	8.3 (29)	6.5 (33)	I J K L	103.1
9429	4	4.8 (34)	8.2 (30)	6.5 (34)	J K L	102.9
Plumas	4	4.8 (33)	8.1 (33)	6.4 (35)	K L	102.0
Vernal	2	4.7 (36)	8.0 (35)	6.3 (36)	L	100.0
Experimental Varieties						
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SW5329	5	5.2 (11)	8.4 (23)	6.8 (22)	B C D E F G H I J	108.0
SW5307	5	5.4 (2)	8.2 (31)	6.8 (24)	C D E F G H I J	107.6
SW4310	4	5.4 (3)	8.1 (32)	6.7 (28)	E F G H I J K	106.5
SW4328	4	5.3 (8)	8.0 (34)	6.6 (31)	G H I J K L	104.9
SW6330	6	5.3 (4)	7.72 (36)	6.5 (32)	H I J K L	103.5
Mean		5.12	8.56	6.84		
CV		5.4	4.9	4.9		
LSD (.05)		0.34	0.53	0.34		

Variety X Year interation is significant

Trial seeded at 25 lb/acre viable seed at UC Intermountain Research and Extension Center, Tulelake CA.

Entries followed by the same letter are no significantly different at the 5% probability level according to Fishers (protected) LSD.

FD = Fall Dormancy reported by seed companies.

Table 3. 2005 YIELDS, UC DAVIS ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 9/30/02
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

		Cut 1	Cut 2	Cut 3	Cut 4	Cut 5	Cut 6	Cut 7	YEAR		% OF
		4/18	5/23	6/20	7/15	8/11	9/8	10/14	TOTAL		CUF101
	FD					Dry tons/acre					%
Released Varieties											
Magna901	9	1.4 (1)	1.9 (14)	1.7 (6)	1.9 (9)	1.7 (6)	1.0 (8)	1.1 (6)	10.7 (2)	A B	108.4
Magna801FQ	8	1.3 (14)	2.0 (12)	1.8 (3)	1.9 (11)	1.7 (7)	1.0 (2)	1.0 (12)	10.6 (3)	A B C	107.3
Dura843	8	1.3 (8)	1.9 (24)	1.6 (14)	1.9 (4)	1.7 (5)	1.0 (15)	1.1 (5)	10.5 (5)	A B C D	106.3
Beacon	9	1.3 (11)	2.0 (9)	1.7 (7)	1.9 (6)	1.5 (14)	1.0 (7)	1.1 (4)	10.5 (6)	A B C D	106.1
WL525HQ	8	1.3 (5)	1.8 (27)	1.7 (13)	1.9 (7)	1.8 (2)	1.0 (1)	0.9 (20)	10.5 (7)	A B C D	105.9
Sequoia	9	1.2 (24)	1.8 (32)	1.7 (12)	1.9 (5)	1.7 (8)	1.0 (5)	1.1 (3)	10.4 (8)	A B C D E	105.1
Magna788(DS788)	7	1.4 (2)	2.0 (10)	1.8 (5)	2.0 (2)	1.5 (15)	0.9 (20)	0.9 (21)	10.4 (9)	A B C D E F	104.9
58N57	8	1.1 (30)	2.0 (4)	1.7 (8)	1.8 (16)	1.5 (16)	0.9 (19)	0.8 (22)	9.9 (14)	C D E F G H I	100.1
CUF101	9	1.1 (34)	1.6 (37)	1.6 (15)	1.8 (17)	1.8 (4)	1.0 (10)	1.0 (8)	9.9 (15)	C D E F G H I	100.0
DelRio(CW55067)	6	1.3 (12)	2.0 (6)	1.6 (16)	1.8 (19)	1.4 (21)	0.9 (24)	0.8 (23)	9.8 (16)	D E F G H I J	99.5
CW704	7	1.1 (32)	1.9 (13)	1.7 (11)	1.8 (18)	1.4 (28)	0.9 (27)	0.9 (19)	9.7 (18)	E F G H I J K	97.9
Pershing	8	1.1 (29)	1.7 (33)	1.5 (34)	1.8 (15)	1.5 (12)	0.9 (16)	1.0 (15)	9.6 (20)	G H I J K L	97.5
WL530HQ	8	1.3 (15)	1.9 (17)	1.6 (21)	1.7 (22)	1.4 (22)	0.9 (29)	0.7 (29)	9.5 (22)	H I J K L	95.9
Moapa69	8	1.0 (38)	1.7 (35)	1.6 (18)	1.7 (24)	1.4 (20)	1.0 (6)	1.0 (10)	9.4 (24)	I J K L M	95.5
C-241	6	1.3 (16)	1.9 (18)	1.5 (35)	1.5 (36)	1.3 (30)	0.9 (27)	0.9 (18)	9.3 (28)	I J K L M N O	93.9
Dura765	7	1.2 (22)	1.9 (20)	1.6 (22)	1.6 (29)	1.4 (26)	0.9 (31)	0.7 (30)	9.3 (29)	I J K L M N O	93.8
LM459	5	1.3 (18)	1.8 (25)	1.6 (26)	1.6 (34)	1.3 (31)	0.9 (23)	0.6 (34)	9.0 (31)	K L M N O P	91.6
Recover	5	1.2 (27)	2.0 (11)	1.5 (29)	1.7 (27)	1.2 (37)	0.9 (33)	0.7 (32)	9.0 (32)	K L M N O P	91.5
Tulare	8	1.2 (19)	1.8 (31)	1.5 (33)	1.5 (37)	1.3 (29)	0.8 (37)	0.8 (26)	8.9 (34)	L M N O P	90.3
Dura512	5	1.3 (3)	2.1 (2)	1.5 (30)	1.5 (38)	1.1 (38)	0.8 (39)	0.4 (40)	8.7 (35)	M N O P Q	88.2
59N49	9	1.0 (40)	1.5 (38)	1.4 (39)	1.6 (32)	1.5 (13)	0.9 (17)	0.8 (24)	8.7 (36)	N O P Q	88.1
Sutter	7	1.1 (31)	1.8 (26)	1.4 (37)	1.6 (33)	1.3 (34)	0.8 (36)	0.5 (35)	8.6 (37)	O P Q R	87.2
C-316	4	1.1 (28)	2.1 (3)	1.5 (32)	1.5 (40)	1.1 (40)	0.8 (38)	0.4 (39)	8.4 (38)	P Q R	84.8
WL325HQ	3	1.1 (35)	1.8 (28)	1.4 (38)	1.5 (35)	1.1 (39)	0.7 (40)	0.5 (37)	8.1 (39)	Q R	82.3
Experimental Varieties											
SW9217	9	1.2 (23)	2.0 (5)	1.8 (1)	2.0 (1)	1.9 (1)	1.0 (3)	1.0 (14)	10.9 (1)	A	110.5
SW9218	9	1.3 (8)	1.9 (21)	1.8 (4)	1.9 (3)	1.8 (3)	1.0 (9)	0.9 (17)	10.6 (4)	A B C	107.0
DS288	8	1.2 (20)	1.9 (16)	1.7 (10)	1.8 (14)	1.6 (11)	1.0 (12)	1.1 (7)	10.2 (10)	A B C D E F G	103.4
SW8718	8	1.2 (26)	1.8 (29)	1.7 (9)	1.9 (8)	1.6 (10)	0.9 (18)	1.1 (2)	10.2 (11)	A B C D E F G H	103.2
CW87089	7	1.3 (10)	1.9 (23)	1.6 (17)	1.8 (12)	1.5 (17)	0.9 (22)	1.0 (11)	10.0 (12)	B C D E F G H I	101.1
DS282	7	1.2 (21)	2.0 (7)	1.6 (19)	1.9 (10)	1.5 (18)	1.0 (4)	0.7 (27)	9.9 (13)	C D E F G H I	100.5
4S42	4	1.3 (17)	2.2 (1)	1.8 (2)	1.8 (20)	1.2 (36)	0.9 (32)	0.7 (31)	9.7 (17)	E F G H I J K	98.3
Y56S82	6	1.3 (12)	2.0 (8)	1.6 (23)	1.7 (23)	1.4 (24)	0.9 (25)	0.8 (25)	9.6 (19)	F G H I J K L	97.6
UC-2589	9	1.0 (37)	1.7 (34)	1.5 (31)	1.8 (21)	1.6 (9)	1.0 (14)	1.0 (9)	9.6 (21)	G H I J K L	97.4
6R628	6	1.3 (6)	1.9 (19)	1.6 (25)	1.6 (31)	1.3 (32)	0.9 (35)	0.9 (16)	9.5 (23)	I J K L	95.8
DS266	6	1.3 (4)	1.9 (22)	1.6 (24)	1.7 (26)	1.4 (27)	0.9 (29)	0.7 (28)	9.4 (25)	I J K L M N	95.4
ZX9894		1.2 (25)	1.6 (36)	1.6 (28)	1.7 (25)	1.4 (25)	1.0 (11)	1.0 (12)	9.4 (26)	I J K L M N	95.2
UC-2705	9	1.0 (39)	1.5 (39)	1.5 (36)	1.7 (28)	1.4 (19)	1.0 (13)	1.2 (1)	9.3 (27)	I J K L M N	94.6
CW86085	6	1.3 (7)	1.9 (15)	1.6 (20)	1.6 (30)	1.3 (33)	0.9 (26)	0.5 (36)	9.1 (30)	J K L M N O P	92.2
Y57Q75	7	1.1 (33)	1.8 (30)	1.6 (27)	1.8 (13)	1.4 (23)	0.9 (33)	0.5 (38)	9.0 (33)	K L M N O P	91.0
ABI700	6	1.0 (36)	1.5 (40)	1.2 (40)	1.5 (39)	1.2 (35)	0.9 (21)	0.6 (33)	8.0 (40)	R	80.7
MEAN		1.21	1.86	1.6	1.73	1.44	0.92	0.84	9.59		
CV		11.8	7	7.6	8.6	11	11	28.9	5.4		
LSD (.05)		0.2	0.18	0.17	0.21	0.22	0.14	0.34	0.73		

Trial seeded at 25 lb/acre viable seed on Yolo clay loam soil at the Univ. of California Agronomy Farm, Davis, CA.
Entries followed by the same letter are not significantly different at the 5% probability level according to Fisher's (protected) LSD.
FD = Fall Dormancy reported by seed companies.

Table 4. 2003-2005 YIELDS, UC DAVIS ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 9/30/02

		2003 Yield	2004 Yield	2005 Yield	AVERAGE	% OF CUF101
		Dry t/a				%
Released Varieties	FD					
Magna788(DS788)	8	10.3 (3)	13.6 (1)	10.4 (9)	11.4 (1) A	109.5
Magna901	9	10.3 (6)	13.2 (6)	10.7 (2)	11.4 (2) A	109.0
WL525HQ	8	10.0 (8)	13.3 (2)	10.5 (7)	11.3 (4) A B	108.1
Magna801FQ	6	10.1 (7)	12.7 (14)	10.6 (3)	11.1 (6) A B C D	106.7
Dura843	8	9.5 (21)	13.1 (7)	10.5 (5)	11.1 (7) A B C D E	106.0
Sequoia	9	9.5 (26)	13.0 (8)	10.4 (8)	11.0 (10) A B C D E	105.0
DelRio(CW55067)	6	10.4 (2)	12.6 (17)	9.8 (16)	10.9 (11) A B C D E F	104.7
Beacon	9	9.4 (29)	12.7 (13)	10.5 (6)	10.9 (12) A B C D E F G	104.2
Moapa69	8	9.7 (16)	13.3 (3)	9.4 (24)	10.8 (14) A B C D E F G	103.8
58N57	8	9.6 (20)	12.9 (10)	9.9 (14)	10.8 (15) A B C D E F G	103.4
Pershing	8	9.8 (15)	12.6 (16)	9.6 (20)	10.7 (16) B C D E F G H	102.3
Dura765	7	10.3 (4)	12.2 (21)	9.3 (29)	10.6 (18) C D E F G H I	101.4
CW704	7	9.7 (17)	11.9 (23)	9.7 (18)	10.4 (21) E F G H I J	100.1
CUF101	9	9.0 (38)	12.4 (18)	9.9 (15)	10.4 (22) E F G H I J	100.0
WL530HQ	8	9.5 (27)	12.3 (20)	9.4 (23)	10.4 (23) E F G H I J	99.7
C-241	6	9.8 (13)	11.8 (26)	9.3 (28)	10.3 (25) F G H I J	98.5
59N49	9	9.8 (14)	11.8 (28)	8.7 (36)	10.1 (29) H I J K	96.5
Tulare	8	9.9 (12)	11.0 (35)	8.9 (34)	9.9 (33) J K L	95.0
LM459	5	9.3 (30)	11.2 (32)	9.0 (31)	9.9 (34) J K L	94.6
C-316	4	9.5 (28)	10.8 (36)	8.4 (38)	9.5 (36) K L M	91.4
Dura512	5	9.3 (32)	10.3 (38)	8.7 (35)	9.4 (37) K L M	90.4
Recover	5	8.8 (39)	10.3 (37)	9.0 (32)	9.4 (38) L M	89.9
WL325HQ	3	9.3 (31)	9.7 (40)	8.1 (39)	9.1 (39) M	86.8
Sutter	7	8.0 (40)	10.3 (39)	8.6 (37)	9.0 (40) M	85.9
Experimental Varieties						
DS288	8	10.5 (1)	13.2 (4)	10.2 (10)	11.3 (3) A B	108.4
SW9217	9	9.5 (25)	13.2 (5)	10.9 (1)	11.2 (5) A B C	107.3
DS282	8	10.3 (5)	13.0 (9)	9.9 (13)	11.0 (8) A B C D E	105.9
SW8718	8	9.9 (11)	12.9 (11)	10.2 (11)	11.0 (9) A B C D E	105.2
SW9218	9	9.2 (34)	12.9 (12)	10.6 (4)	10.9 (13) A B C D E F G	104.1
ZX9894	9	10.0 (9)	12.4 (19)	9.4 (26)	10.6 (17) C D E F G H I	101.4
Y56S82	6	10.0 (10)	12.0 (22)	9.6 (19)	10.5 (19) D E F G H I J	100.9
UC-2589	9	9.2 (33)	12.7 (15)	9.6 (21)	10.5 (20) D E F G H I J	100.6
CW87089	7	9.1 (35)	11.8 (27)	10.0 (12)	10.3 (24) F G H I J	98.7
DS266	4	9.5 (22)	11.8 (25)	9.4 (25)	10.3 (26) G H I J	98.2
6R628	6	9.6 (19)	11.6 (30)	9.5 (22)	10.2 (27) G H I J	98.1
4S42	4	9.5 (24)	11.5 (31)	9.7 (17)	10.2 (28) G H I J	98.0
UC-2705	9	9.1 (37)	11.7 (29)	9.3 (27)	10.0 (30) H I J K L	96.2
Y57Q75	7	9.1 (36)	11.8 (24)	9.0 (33)	10.0 (31) I J K L	95.4
CW86085	6	9.5 (23)	11.2 (33)	9.1 (30)	9.9 (32) I J K L	95.2
ABI700	6	9.7 (18)	11.0 (34)	8.0 (40)	9.5 (35) K L M	91.5
Mean		9.61	12.09	9.59	10.43	
CV		6.2	6.0	5.4	5.5	
LSD (.05)		0.83	1.01	0.73	0.66	

Variety X Year interation is significant

Trial seeded at 25 lb/acre viable seed on Yolo clay loam soil at the UC Davis Agronomy Farms, CA.

Entries followed by the same letter are not significantly different at the 5% probability level according to Fishers (protected) LSD.

FD = Fall Dormancy reported by seed companies.

TABLE 5. 2005 YIELDS, UC DAVIS ALFALFA ROUNDUP-READY TRIAL . TRIAL PLANTED 8/28/03
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

		Cut 1 4/13	Cut 2 5/25	Cut 3 6/22	Cut 4 7/18	Cut 5 8/16	Cut 6 9/13	Cut 7 10/14	YEAR TOTAL		% OF CUF101
	FD					Dry t/a					%
Control Varieties											
SW7410	7	1.3 (2)	1.8 (4)	2.0 (3)	2.0 (3)	1.7 (5)	1.1 (9)	0.9 (14)	10.9 (2)	A	105.4
TANGO	6	1.3 (1)	2.0 (1)	1.8 (13)	1.8 (7)	1.7 (4)	1.0 (17)	1.1 (3)	10.8 (3)	A	105.1
Magna801FQ	8	1.2 (9)	1.7 (13)	1.9 (9)	2.0 (4)	2.0 (1)	1.1 (12)	0.9 (13)	10.8 (4)	A	105.0
CUF101	9	1.2 (12)	1.6 (17)	1.8 (12)	1.8 (10)	1.6 (11)	1.1 (14)	1.3 (1)	10.3 (8)	A B C	100.0
WL525HQ	8	1.2 (10)	1.5 (20)	1.9 (11)	1.7 (14)	1.4 (19)	1.1 (11)	1.0 (6)	9.8 (15)	A B C D	95.0
PARADE	6	1.3 (5)	1.7 (14)	1.6 (17)	1.5 (18)	1.4 (16)	1.0 (18)	0.9 (12)	9.4 (17)	B C D	91.1
WL325HQ	3	1.1 (15)	1.8 (11)	1.6 (20)	1.5 (17)	1.8 (2)	0.7 (20)	0.5 (20)	8.9 (19)	D	86.7
Sutter	6	1.2 (6)	1.8 (7)	1.7 (16)	1.5 (19)	1.3 (20)	0.9 (19)	0.6 (19)	8.9 (20)	D	86.3
Roundup Ready® Varieties											
RR03BD196	10	1.2 (7)	1.7 (12)	2.2 (1)	1.9 (5)	1.6 (10)	1.2 (2)	1.0 (7)	10.9 (1)	A	105.4
REVOLUTION(RR03BD-181)	8	1.2 (11)	1.8 (6)	2.1 (2)	2.0 (2)	1.6 (9)	1.2 (5)	0.9 (16)	10.8 (5)	A	104.7
RR03BD194	10	1.2 (13)	1.8 (9)	2.0 (5)	2.1 (1)	1.4 (18)	1.1 (7)	1.0 (8)	10.5 (6)	A B	102.2
WL550RR(RR03BD-101)	8	1.1 (14)	1.6 (18)	1.9 (10)	1.9 (6)	1.6 (8)	1.1 (8)	1.1 (2)	10.4 (7)	A B	101.0
RR03B182	9	0.9 (20)	1.6 (15)	2.0 (4)	1.8 (12)	1.7 (6)	1.2 (4)	1.1 (4)	10.3 (9)	A B C	100.0
RR03BD164	10	1.3 (3)	1.8 (3)	2.0 (6)	1.7 (16)	1.5 (14)	1.1 (10)	1.0 (10)	10.3 (10)	A B C	99.9
RR03BD176	10	1.1 (16)	1.8 (5)	1.8 (15)	1.8 (11)	1.5 (13)	1.2 (1)	1.1 (5)	10.2 (11)	A B C	99.0
RR03B115	9	1.0 (18)	1.6 (16)	2.0 (7)	1.7 (13)	1.7 (3)	1.2 (3)	0.9 (15)	10.1 (12)	A B C D	97.6
RR03B189	9	1.0 (19)	1.5 (19)	1.9 (8)	1.8 (9)	1.6 (12)	1.2 (6)	1.0 (9)	10.0 (13)	A B C D	96.8
DKA84-10RR(RR03BD-140)	8	1.2 (8)	1.8 (10)	1.8 (14)	1.7 (15)	1.7 (7)	1.1 (13)	0.8 (17)	9.9 (14)	A B C D	96.0
RRALF6R100(RR03BD-161)	6	1.1 (17)	1.8 (8)	1.6 (19)	1.8 (8)	1.4 (17)	1.0 (15)	0.9 (11)	9.6 (16)	B C D	92.6
RR03BD127	7	1.3 (4)	1.9 (2)	1.6 (18)	1.4 (20)	1.5 (15)	1.0 (16)	0.6 (18)	9.2 (18)	C D	89.3
MEAN		1.16	1.73	1.86	1.78	1.59	1.07	0.92	10.10		
CV		12.5	7.9	10.5	18.6	19.1	10.1	24.3	8.3		
LSD (.05)		0.20	0.19	0.28	NS	NS	0.15	0.32	1.18		

Trial seeded at 25 lb/acre viable seed on Yolo clay loam soil at the Univ. of California Agronomy Farm, Davis, CA.
Entries followed by the same letter are not significantly different at the 5% probability level according to Fisher's (protected) LSD.
FD = Fall Dormancy reported by seed companies.

Table 6. 2004-2005 YIELDS, UC DAVIS ALFALFA ROUNDUP READY TRIAL. TRIAL PLANTED 8/28/03

		2004 Yield	2005 Yield	AVERAGE		% OF CUF101
	FD		Dry t/a			%
Control Varieties						
Magna801FQ	8	12.5 (1)	10.8 (4)	11.7 (1)	A	106.6
TANGO	6	12.2 (2)	10.8 (3)	11.5 (2)	A B	105.4
SW7410	7	11.8 (4)	10.9 (2)	11.4 (3)	A B C	103.9
CUF101	9	11.6 (10)	10.3 (8)	10.9 (10)	A B C D E	100.0
WL525HQ	8	11.4 (12)	9.8 (15)	10.6 (14)	C D E F G	97.0
PARADE	6	11.3 (14)	9.4 (17)	10.3 (17)	E F G	94.6
Sutter	6	10.8 (18)	8.9 (20)	9.8 (19)	G H	90.0
WL325HQ	3	9.7 (20)	8.9 (19)	9.3 (20)	H	85.1
Roundup Ready® Varieties						
REVOLUTION(RR03BD-181)	8	11.8 (6)	10.8 (5)	11.3 (4)	A B C D	103.2
RR03BD196	10	11.6 (9)	10.9 (1)	11.2 (5)	A B C D	102.9
RR03BD194	10	11.8 (5)	10.5 (6)	11.2 (6)	A B C D E	102.3
RR03BD176	10	11.9 (3)	10.2 (11)	11.0 (7)	A B C D E	101.1
RR03BD164	10	11.7 (7)	10.3 (10)	11.0 (8)	A B C D E	100.7
WL550RR(RR03BD-101)	8	11.5 (11)	10.4 (7)	11.0 (9)	A B C D E	100.5
DKA84-10RR(RR03BD-140)	8	11.7 (8)	9.9 (14)	10.8 (11)	B C D E	98.6
RR03B182	9	11.2 (15)	10.3 (9)	10.8 (12)	B C D E F	98.4
RR03B115	9	11.4 (13)	10.1 (12)	10.7 (13)	B C D E F	98.1
RR03B189	9	10.9 (17)	10.0 (13)	10.5 (15)	D E F G	95.7
RRALF6R100(RR03BD-161)	6	11.1 (16)	9.6 (16)	10.4 (16)	E F G	94.7
RR03BD127	7	10.6 (19)	9.2 (18)	9.91 (18)	F G H	90.7
Mean		11.42	10.10	10.76		
CV		5.5	8.3	5.6		
LSD (.05)		0.88	1.18	0.86		

Variety X Year interation is significant

Trial seeded at 25 lb/acre viable seed on Yolo clay loam soil at the UC Davis Agronomy Farms, CA.

Entries followed by the same letter are not significantly different at the 5% probability level according to Fishers (protected) LSD.

FD = Fall Dormancy reported by seed companies.

Table 7. 2005 YIELDS, UC KEARNEY ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 5/12/03
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

		Cut 1 4/14	Cut 2 5/19	Cut 3 6/15	Cut 4 7/13	Cut 5 8/10	Cut 6 9/2	Cut 7 10/6	Cut 8 11/3	YEAR TOTAL		% OF CUF101
	FD					Dry t/ac						%
Released Varieties												
WL625HQ	9	1.0 (6)	1.7 (16)	1.8 (4)	1.8 (3)	1.6 (4)	1.6 (1)	1.5 (1)	1.2 (2)	12.3 (1)	A	138.7
Sequoia	9	1.0 (2)	1.7 (14)	1.8 (3)	1.8 (5)	1.7 (1)	1.5 (5)	1.5 (3)	1.1 (6)	12.1 (3)	ABC	136.4
AL999	9	1.0 (17)	1.7 (13)	1.8 (1)	1.9 (2)	1.6 (5)	1.6 (3)	1.3 (13)	1.1 (7)	11.9 (5)	ABCD	134.5
Magna995(DS995)	9	1.0 (4)	1.8 (10)	1.8 (6)	1.6 (16)	1.5 (8)	1.5 (8)	1.3 (18)	1.1 (3)	11.5 (7)	ABCDEF	129.6
CW1010(CW89064)	10	1.0 (11)	1.7 (30)	1.7 (10)	1.7 (8)	1.5 (9)	1.5 (6)	1.3 (17)	1.1 (8)	11.4 (9)	BCDEFGH	128.3
Dura843	8	1.1 (1)	1.7 (19)	1.7 (17)	1.6 (12)	1.5 (7)	1.4 (10)	1.3 (15)	1.0 (10)	11.3 (10)	CDEFGH	127.7
MeccaIII	9	1.0 (7)	1.7 (22)	1.7 (12)	1.6 (13)	1.5 (12)	1.4 (14)	1.3 (10)	1.1 (4)	11.3 (12)	CDEFGH	127.7
Magna901	9	1.0 (12)	1.8 (9)	1.7 (16)	1.7 (10)	1.5 (10)	1.4 (12)	1.3 (14)	0.9 (21)	11.2 (13)	DEFGHI	125.7
WL530HQ	8	1.0 (20)	1.9 (1)	1.6 (21)	1.5 (29)	1.4 (26)	1.3 (26)	1.4 (6)	0.9 (18)	10.9 (14)	EFGHIJ	123.0
58N57	8	0.9 (23)	1.7 (23)	1.6 (20)	1.6 (20)	1.4 (22)	1.2 (31)	1.4 (8)	1.0 (15)	10.8 (17)	FGHIJKLM	121.5
Magna801fq	8	0.9 (22)	1.7 (32)	1.7 (14)	1.6 (14)	1.5 (14)	1.3 (17)	1.1 (30)	1.0 (16)	10.8 (18)	FGHIJKLM	121.4
Westan	8	0.9 (21)	1.8 (5)	1.7 (11)	1.5 (24)	1.4 (17)	1.3 (18)	1.2 (27)	0.8 (29)	10.7 (19)	FGHIJKLM	120.8
CW801(CW58073)	8	1.0 (14)	1.8 (4)	1.7 (15)	1.5 (30)	1.3 (29)	1.4 (16)	1.2 (28)	0.9 (23)	10.7 (20)	FGHIJKLMN	120.6
Magna788(DS788)	8	1.0 (8)	1.7 (17)	1.6 (22)	1.5 (23)	1.4 (18)	1.2 (30)	1.2 (24)	0.9 (19)	10.6 (22)	FGHIJKLMN	119.7
Pershing	8	0.9 (25)	1.6 (35)	1.6 (25)	1.5 (25)	1.3 (28)	1.4 (11)	1.4 (9)	0.9 (26)	10.6 (23)	GHIJKLMNO	119.2
CW907	9	0.9 (24)	1.7 (21)	1.7 (18)	1.7 (9)	1.4 (25)	1.3 (23)	1.1 (32)	0.8 (28)	10.5 (24)	HIJKLMNO	118.6
Westar	8	1.0 (19)	1.7 (31)	1.6 (27)	1.5 (21)	1.4 (19)	1.3 (19)	1.2 (26)	0.8 (32)	10.4 (25)	IJKLMNO	117.4
CW704	7	0.9 (28)	1.7 (15)	1.6 (28)	1.5 (27)	1.3 (31)	1.2 (32)	1.2 (25)	0.9 (27)	10.3 (27)	IJKLMNOP	116.0
C-241	5	0.9 (33)	1.8 (6)	1.6 (31)	1.4 (35)	1.3 (33)	1.2 (36)	1.3 (11)	0.8 (31)	10.2 (28)	JKLMNOP	115.2
59N49	9	0.8 (35)	1.6 (38)	1.5 (32)	1.6 (19)	1.5 (15)	1.2 (33)	1.2 (23)	0.9 (24)	10.2 (29)	JKLMNOP	115.2
Salado	9	0.9 (30)	1.7 (27)	1.6 (23)	1.5 (26)	1.3 (30)	1.3 (25)	1.0 (37)	0.8 (34)	10.1 (30)	JKLMNOP	113.9
SW100(SW101)	10	0.8 (36)	1.6 (34)	1.5 (33)	1.5 (32)	1.3 (32)	1.3 (20)	1.0 (35)	1.0 (17)	10.0 (33)	LMNOP	112.7
DelRio	6	0.9 (31)	1.8 (12)	1.6 (30)	1.4 (33)	1.3 (34)	1.2 (35)	1.1 (33)	0.7 (37)	9.9 (35)	MNOP	111.7
Dura765	7	0.9 (29)	1.7 (24)	1.5 (38)	1.3 (37)	1.3 (35)	1.2 (37)	1.2 (22)	0.8 (35)	9.8 (36)	NOP	110.6
ArtesiaSunrise	7	0.9 (27)	1.7 (20)	1.5 (35)	1.3 (38)	1.2 (36)	1.1 (39)	1.2 (19)	0.7 (38)	9.7 (37)	OPQ	109.3
FG03-01	8	0.8 (37)	1.6 (36)	1.5 (37)	1.4 (34)	1.2 (39)	1.2 (34)	1.1 (34)	0.8 (30)	9.5 (38)	PQ	107.4
CUF101	9	0.8 (38)	1.5 (39)	1.3 (39)	1.3 (39)	1.2 (37)	1.2 (38)	0.9 (39)	0.7 (39)	8.9 (39)	Q	100.0
WL325HQ	3	0.6 (40)	1.6 (33)	1.3 (40)	1.1 (40)	1.1 (40)	1.1 (40)	0.8 (40)	0.4 (40)	7.9 (40)	R	89.1
Experimental Varieties												
SW9218	9	1.0 (10)	1.8 (3)	1.8 (2)	1.9 (1)	1.7 (3)	1.6 (4)	1.5 (4)	1.1 (9)	12.2 (2)	AB	137.9
SW9215	9	1.0 (3)	1.7 (26)	1.8 (8)	1.7 (7)	1.5 (11)	1.6 (2)	1.5 (2)	1.2 (1)	12.0 (4)	ABCD	134.6
SW9217	9	1.0 (15)	1.8 (11)	1.8 (7)	1.8 (4)	1.7 (2)	1.3 (24)	1.4 (5)	1.1 (5)	11.8 (6)	ABCDE	132.5
CW09052	9	1.0 (5)	1.8 (8)	1.8 (5)	1.7 (6)	1.6 (6)	1.4 (9)	1.3 (12)	0.9 (22)	11.4 (8)	ABCDEFG	128.8
00I11PN1	8	1.0 (9)	1.8 (7)	1.7 (9)	1.7 (11)	1.4 (16)	1.5 (7)	1.3 (16)	1.0 (13)	11.3 (11)	CDEFGH	127.7
UC445	9	0.9 (32)	1.7 (28)	1.6 (24)	1.6 (15)	1.4 (21)	1.4 (15)	1.4 (7)	1.0 (12)	10.9 (15)	EFGHIJK	122.8
DS8181	8	1.0 (16)	1.7 (18)	1.7 (13)	1.6 (17)	1.4 (20)	1.4 (13)	1.2 (20)	0.9 (20)	10.8 (16)	FGHIJKL	122.2
00I10PN1	9	1.0 (18)	1.6 (37)	1.6 (26)	1.5 (22)	1.5 (13)	1.3 (27)	1.2 (21)	1.0 (11)	10.6 (21)	FGHIJKLMN	119.9
DS288	8	1.0 (13)	1.7 (25)	1.6 (19)	1.5 (28)	1.4 (24)	1.3 (22)	1.1 (29)	0.8 (33)	10.4 (26)	IJKLMNOP	117.2
Y56582	6	0.9 (26)	1.9 (2)	1.6 (29)	1.4 (36)	1.2 (38)	1.3 (29)	1.0 (36)	0.8 (36)	10.0 (31)	KLMNOP	112.9
UC450	9	0.8 (39)	1.4 (40)	1.5 (36)	1.6 (18)	1.3 (27)	1.3 (21)	1.1 (31)	1.0 (14)	10.0 (32)	LMNOP	112.8
Y57Q75	7	0.8 (34)	1.7 (29)	1.5 (34)	1.5 (31)	1.4 (23)	1.3 (28)	1.0 (38)	0.9 (25)	10.0 (34)	LMNOP	112.6
MEAN		0.92	1.71	1.63	1.55	1.41	1.33	1.22	0.92	10.68		
CV		8.8	9.7	5.6	9.4	8.9	13.5	15	17.6	5.9		
LSD (.05)		0.11	NS	0.13	0.2	0.17	0.25	0.26	0.23	0.89		

Trial seeded at 25 lb/acre viable seed on Hanford fine sandy loam soil at the Univ. of California Kearney Agricultural Center, Parlier, CA.
Entries followed by the same letter are not significantly different at 5% probability level according to Fishers (protected) LSD.
FD = Fall Dormancy reported by seed companies.

Table 8. 2003-2005 YIELDS, UC KEARNEY ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 5/12/03

		2003 Yield	2004 Yield	2005 Yield	Average		% OF CUF101
		dry t/a					%
Released Varieties	**FD**						
AL999	9	9.0 (1)	12.4 (7)	11.9 (5)	11.1 (1)	A	121.0
WL625HQ	9	8.3 (3)	12.8 (2)	12.3 (1)	11.1 (2)	A	120.9
Sequoia	9	8.0 (8)	12.6 (4)	12.1 (3)	10.9 (3)	A B	118.3
Magna995(DS995)	9	8.4 (2)	12.4 (9)	11.5 (7)	10.8 (5)	A B C D	117.0
Magna901	9	8.1 (6)	12.7 (3)	11.2 (13)	10.7 (6)	A B C D	115.9
CW1010(CW89064)	10	7.8 (13)	12.5 (5)	11.4 (9)	10.6 (8)	A B C D E F	114.8
MeccaIII	9	7.8 (10)	12.4 (10)	11.3 (12)	10.5 (10)	A B C D E F G	114.1
Dura843	8	7.5 (28)	12.1 (11)	11.3 (10)	10.3 (12)	A B C D E F G H	111.9
Westan	8	7.6 (25)	12.0 (13)	10.7 (19)	10.1 (15)	B C D E F G H I J	109.6
58N57	8	7.6 (24)	11.6 (17)	10.8 (17)	10.0 (17)	C D E F G H I J K L	108.7
Westar	8	8.0 (9)	11.6 (21)	10.4 (25)	10.0 (18)	C D E F G H I J K L M	108.5
Salado	9	8.2 (4)	11.6 (18)	10.1 (30)	10.0 (19)	C D E F G H I J K L M	108.4
WL530HQ	8	7.7 (16)	11.2 (26)	10.9 (14)	10.0 (21)	D E F G H I J K L M N	108.1
CW801(CW58073)	8	7.7 (18)	11.0 (30)	10.7 (20)	9.8 (22)	E F G H I J K L M N	106.6
Magna801fq	8	7.7 (20)	10.9 (32)	10.8 (18)	9.8 (24)	E F G H I J K L M N	106.3
59N49	9	7.6 (26)	11.6 (19)	10.2 (29)	9.8 (25)	E F G H I J K L M N	106.2
Magna788(DS788)	8	7.6 (22)	11.1 (29)	10.6 (22)	9.8 (26)	E F G H I J K L M N	106.2
Pershing	8	7.8 (11)	10.8 (35)	10.6 (23)	9.7 (27)	F G H I J K L M N	105.6
SW100(SW101)	10	7.7 (21)	11.4 (23)	10.0 (33)	9.7 (28)	G H I J K L M N	105.1
CW704	7	7.4 (30)	11.4 (24)	10.3 (27)	9.7 (29)	G H I J K L M N	105.1
CW907	9	7.3 (32)	11.1 (28)	10.5 (24)	9.6 (30)	H I J K L M N	104.6
ArtesiaSunrise	7	7.8 (15)	11.2 (27)	9.7 (37)	9.5 (31)	H I J K L M N	103.7
FG03-01	8	7.8 (12)	10.9 (34)	9.5 (38)	9.4 (33)	I J K L M N	102.0
C-241	5	7.5 (27)	10.4 (38)	10.2 (28)	9.4 (34)	I J K L M N	101.8
CUF101	9	7.2 (35)	11.6 (20)	8.9 (39)	9.2 (36)	K L M N	100.0
Dura765	7	6.8 (40)	10.9 (33)	9.8 (36)	9.2 (37)	L M N	99.5
DelRio	6	7.0 (38)	10.5 (37)	9.9 (35)	9.1 (38)	M N	99.3
WL325HQ	3	7.2 (36)	7.6 (40)	7.9 (40)	7.6 (40)	O	82.1
Experimental Varieties							
SW9218	9	7.3 (31)	12.9 (1)	12.2 (2)	10.8 (4)	A B C D	117.5
SW9217	9	7.6 (23)	12.4 (6)	11.8 (6)	10.6 (7)	A B C D E	115.2
SW9215	9	8.1 (7)	11.7 (16)	12.0 (4)	10.6 (9)	A B C D E F	114.7
00I11PN1	8	7.8 (14)	12.4 (8)	11.3 (11)	10.5 (11)	A B C D E F G	114.1
CW09052	9	7.4 (29)	11.8 (15)	11.4 (8)	10.2 (13)	B C D E F G H I	110.8
DS8181	8	7.7 (19)	11.8 (14)	10.8 (16)	10.1 (14)	B C D E F G H I J	109.9
UC445	9	8.2 (5)	11.0 (31)	10.9 (15)	10.0 (16)	B C D E F G H I J K	109.0
00I10PN1	9	7.7 (17)	11.5 (22)	10.6 (21)	10.0 (20)	C D E F G H I J K L M	108.3
DS288	8	7.0 (39)	12.0 (12)	10.4 (26)	9.8 (23)	E F G H I J K L M N	106.5
Y57Q75	7	7.1 (37)	11.3 (25)	10.0 (34)	9.5 (32)	H I J K L M N	102.7
UC450	9	7.2 (33)	10.7 (36)	10.0 (32)	9.3 (35)	J K L M N	101.0
Y56582	6	7.2 (34)	10.1 (39)	10.0 (31)	9.1 (39)	N	98.8
Mean		7.65	11.49	10.68	9.94		
CV		7.10	10.30	5.90	7.80		
LSD (.05)		0.76	1.66	0.89	0.85		

Variety X Year Interaction is significant

Trial seeded at 25 lb/acre viable seed on Hanford fine sandy laom soil at UC Kearney Agriculture Center, Parlier, CA

Entries followed by the same letter are not significantly different at the 5% leel of probability.

FD = Fall Dormancy reported by seed companies.

TABLE 9. 2005 FIRST-YEAR YIELDS, UC KEARNEY ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 3/15/05
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

		Cut 1 14-Jun	Cut 2 12-Jul	Cut 3 10-Aug	Cut 4 1-Sep	Cut 5 5-Oct	Cut 6 3-Nov	YEAR TOTAL		% OF CUF101
	FD				Dry t/a					%
Released Varieties										
WL625	9	1.8 (1)	1.7 (7)	2.3 (3)	2.1 (4)	1.8 (6)	1.6 (2)	11.3 (1)	A	118.3
58N57	8	1.7 (2)	1.7 (6)	2.2 (18)	1.9 (25)	1.8 (5)	1.4 (32)	10.7 (4)	A B C D	111.6
WL525	8	1.6 (5)	1.5 (35)	2.1 (32)	2.0 (11)	1.7 (12)	1.5 (8)	10.5 (10)	A B C D E F G H	109.5
CW801	8	1.5 (12)	1.5 (28)	2.3 (4)	2.0 (18)	1.7 (16)	1.3 (34)	10.3 (13)	A B C D E F G H I J	107.6
CG9	9	1.5 (14)	1.5 (31)	2.1 (34)	2.0 (14)	1.7 (23)	1.4 (26)	10.2 (16)	B C D E F G H I J K L	106.4
MeccaIII	9	1.3 (43)	1.4 (47)	2.1 (23)	2.0 (20)	1.7 (13)	1.6 (4)	10.1 (19)	B C D E F G H I J K L M	105.7
Pershing	8	1.4 (23)	1.9 (2)	2.1 (29)	1.9 (33)	1.5 (43)	1.2 (40)	10.0 (24)	B C D E F G H I J K L M N	104.7
WL535HQ	8	1.4 (27)	1.5 (34)	2.0 (48)	1.9 (35)	1.6 (38)	1.5 (11)	9.9 (31)	C D E F G H I J K L M N O	103.2
Croplan843	8	1.2 (48)	1.6 (13)	2.1 (28)	1.9 (30)	1.6 (36)	1.5 (19)	9.9 (32)	D E F G H I J K L M N O	103.1
Yosemite	8	1.4 (32)	1.5 (30)	2.1 (40)	1.9 (37)	1.7 (21)	1.3 (33)	9.8 (33)	D E F G H I J K L M N O	102.8
57Q75	7	1.5 (17)	1.6 (15)	2.1 (21)	1.8 (45)	1.6 (39)	1.2 (44)	9.8 (36)	D E F G H I J K L M N O	102.2
Impalo	9	1.2 (50)	1.4 (48)	2.0 (49)	2.0 (9)	1.6 (35)	1.4 (28)	9.6 (41)	E F G H I J K L M N O	100.5
59N49	9	1.3 (39)	1.5 (46)	2.0 (46)	1.8 (47)	1.6 (27)	1.4 (30)	9.6 (43)	G H I J K L M N O	100.1
Cuf101	9	1.2 (49)	1.5 (44)	2.0 (47)	1.9 (38)	1.7 (26)	1.4 (24)	9.6 (44)	G H I J K L M N O	100.0
ArtesianSunrise	7	1.4 (31)	1.5 (36)	2.1 (33)	1.8 (43)	1.5 (45)	1.1 (48)	9.4 (45)	H I J K L M N O	98.5
WL711	10	1.1 (52)	1.3 (54)	2.1 (38)	2.0 (21)	1.5 (47)	1.5 (13)	9.4 (46)	I J K L M N O	98.0
Amerileaf721	7	1.5 (20)	1.5 (43)	2.0 (44)	1.8 (50)	1.6 (40)	1.0 (50)	9.3 (49)	J K L M N O	96.8
DK180ML	8	1.6 (8)	1.6 (26)	2.0 (53)	1.7 (52)	1.4 (54)	1.1 (49)	9.2 (51)	L M N O	96.3
56S82	6	1.4 (34)	1.6 (22)	2.0 (51)	1.7 (54)	1.5 (44)	0.9 (53)	9.0 (53)	N O	93.9
Experimental Varieties										
RR04BD406	8	1.4 (29)	1.7 (9)	2.3 (2)	2.1 (1)	1.9 (1)	1.5 (5)	11.0 (2)	A B	114.4
CW048069	8	1.7 (3)	1.9 (1)	2.2 (17)	1.9 (26)	1.8 (8)	1.5 (7)	10.9 (3)	A B C	114.2
AA202W	8	1.3 (41)	1.6 (14)	2.3 (1)	2.0 (16)	1.9 (2)	1.5 (9)	10.7 (5)	A B C D	111.6
FG91T403	9	1.5 (16)	1.7 (11)	2.2 (8)	2.0 (10)	1.8 (4)	1.5 (14)	10.7 (6)	A B C D E	111.5
RR04BD474	8	1.5 (20)	1.7 (5)	2.2 (6)	2.1 (3)	1.8 (9)	1.4 (29)	10.7 (7)	A B C D E F	111.3
RR04BD454	9	1.6 (7)	1.7 (8)	2.2 (11)	2.0 (19)	1.7 (15)	1.5 (17)	10.6 (8)	A B C D E F G	110.7
RR04BD435	9	1.5 (15)	1.6 (16)	2.2 (20)	2.1 (7)	1.7 (22)	1.5 (6)	10.5 (9)	A B C D E F G	109.5
FG101T407	10	1.1 (53)	1.5 (38)	2.2 (15)	2.1 (6)	1.8 (3)	1.7 (1)	10.4 (11)	A B C D E F G H I	108.2
CW04865	8	1.4 (24)	1.5 (39)	2.2 (7)	2.1 (8)	1.7 (17)	1.4 (21)	10.3 (12)	A B C D E F G H I	107.9
RR04BD436	9	1.5 (11)	1.6 (19)	2.2 (13)	1.9 (28)	1.6 (32)	1.5 (10)	10.3 (14)	A B C D E F G H I J K	107.5
X59N59	9	1.4 (35)	1.5 (33)	2.2 (9)	2.0 (13)	1.7 (18)	1.5 (16)	10.3 (15)	B C D E F G H I J K L	107.2
Y58N88	8	1.4 (25)	1.7 (12)	2.2 (12)	2.0 (15)	1.7 (24)	1.3 (38)	10.2 (17)	B C D E F G H I J K L	106.3
DS385	8	1.5 (10)	1.4 (52)	2.1 (36)	2.0 (12)	1.7 (20)	1.4 (20)	10.1 (18)	B C D E F G H I J K L M	105.9
RR04BD409	7	1.3 (42)	1.6 (20)	2.2 (19)	1.9 (29)	1.7 (14)	1.4 (22)	10.1 (20)	B C D E F G H I J K L M	105.4
RR04BD401	6	1.6 (6)	1.6 (18)	2.2 (10)	1.9 (36)	1.7 (25)	1.2 (43)	10.1 (21)	B C D E F G H I J K L M	105.3
DS381	8	1.4 (26)	1.7 (10)	2.0 (42)	1.9 (27)	1.5 (42)	1.5 (15)	10.1 (22)	B C D E F G H I J K L M	105.1
SW9434	9	1.1 (54)	1.4 (49)	2.1 (39)	2.1 (5)	1.8 (7)	1.6 (3)	10.0 (23)	B C D E F G H I J K L M	104.9
SW9332	9	1.2 (47)	1.5 (37)	2.1 (25)	1.9 (23)	1.8 (10)	1.5 (12)	10.0 (25)	B C D E F G H I J K L M N	104.7
ADF01701	7	1.3 (40)	1.5 (40)	2.1 (22)	2.0 (22)	1.7 (19)	1.5 (18)	10.0 (26)	B C D E F G H I J K L M N	104.5
RR04Bd408	9	1.3 (45)	1.5 (41)	2.1 (24)	2.1 (2)	1.6 (29)	1.4 (25)	10.0 (27)	B C D E F G H I J K L M N	104.4
FG82M204	8	1.4 (36)	1.5 (42)	2.2 (14)	2.0 (17)	1.6 (31)	1.4 (27)	10.0 (28)	B C D E F G H I J K L M N O	104.3
Magna995	9	1.4 (29)	1.6 (21)	2.1 (37)	1.8 (44)	1.6 (28)	1.4 (23)	9.9 (29)	B C D E F G H I J K L M N O	103.8
DS384	8	1.5 (13)	1.8 (4)	2.0 (45)	1.9 (40)	1.6 (41)	1.2 (41)	9.9 (30)	B C D E F G H I J K L M N O	103.6
Magna788	8	1.3 (37)	1.5 (45)	2.2 (5)	1.9 (24)	1.6 (34)	1.3 (37)	9.8 (34)	D E F G H I J K L M N O	102.8
DS382	8	1.3 (38)	1.4 (50)	2.1 (35)	1.9 (39)	1.8 (11)	1.4 (31)	9.8 (35)	D E F G H I J K L M N O	102.6
AA203W	8	1.5 (19)	1.5 (32)	2.1 (27)	1.9 (32)	1.6 (33)	1.1 (46)	9.8 (37)	D E F G H I J K L M N O	101.8
FG91M401	9	1.4 (28)	1.6 (23)	2.0 (43)	1.9 (42)	1.6 (37)	1.3 (35)	9.7 (38)	D E F G H I J K L M N O	101.6
Pacifico	8	1.4 (33)	1.8 (3)	2.0 (50)	1.9 (41)	1.5 (50)	1.2 (39)	9.7 (39)	D E F G H I J K L M N O	101.3
RR04BD407	8	1.5 (18)	1.3 (53)	2.1 (26)	1.9 (34)	1.6 (30)	1.3 (36)	9.7 (40)	D E F G H I J K L M N O	101.1
AA201W	8	1.6 (4)	1.5 (29)	2.1 (30)	1.8 (48)	1.4 (52)	1.1 (47)	9.6 (42)	F G H I J K L M N O	100.3
RR04BD487	6	1.6 (9)	1.6 (17)	2.1 (31)	1.8 (51)	1.5 (49)	0.9 (52)	9.4 (47)	I J K L M N O	97.8
DS399	9	1.2 (51)	1.4 (51)	2.2 (16)	1.9 (31)	1.5 (48)	1.2 (45)	9.3 (48)	J K L M N O	96.9
Conquistidor	8	1.3 (43)	1.6 (25)	1.9 (54)	1.8 (49)	1.5 (46)	1.2 (42)	9.3 (50)	K L M N O	96.6
DS383	8	1.4 (22)	1.6 (24)	2.0 (52)	1.7 (53)	1.4 (53)	1.0 (51)	9.1 (52)	M N O	95.1
AA200W	8	1.2 (46)	1.5 (27)	2.1 (41)	1.8 (46)	1.5 (51)	0.8 (54)	8.9 (54)	O	93.3
MEAN		1.39	1.56	2.12	1.92	1.64	1.34	9.97		
CV		15.8	15.4	7.6	7.7	13.6	14.8	7.5		
LSD (.05)		0.31	NS	NS	0.21	NS	0.28	1.05		

Trial seeded at 25 lb/acre viable seed on Hanford fine sandy loam soil at the Univ. of Calif. Kearney Agricultural Center, Parlier, CA.
Entries followed by the same letter are not significantly different at the 5% probability level according to Fisher's (protected) LSD.
FD = Fall Dormancy reported by seed companies.

Table 10. 2005 YIELDS, UC IMPERIAL VALLEY ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 10/3/2003
Note: Single year data should not be used to evaluate alfalfa varieties or choose alfalfa cultivars

	FD	Cut 1 13-Jan	Cut 2 3-Mar	Cut 3 13-Apr	Cut 4 12-May	Cut 5 13-Jun	Cut 6 7/ 11	Cut 7 8/ 8	Cut 8 9/ 13	Cut 9 11 /3	YEAR TOTAL		% OF CUF101
Released Varieties						Dry t/ac							%
UCImpaloWF	9	0.6 (5)	0.9 (17)	1.2 (12)	1.1 (12)	1.3 (13)	1.1 (2)	0.7 (5)	0.4 (17)	0.8 (2)	8.1 (2)	A B	110.4
WL711	10	0.5 (16)	0.9 (22)	1.2 (11)	1.2 (6)	1.4 (3)	1.0 (4)	0.7 (6)	0.5 (1)	0.7 (3)	8.1 (3)	A B	110.2
UN900	10	0.6 (4)	1.0 (5)	1.2 (7)	1.2 (2)	1.4 (6)	1.0 (5)	0.6 (23)	0.5 (5)	0.6 (16)	8.0 (8)	A B C D	109.2
UCCibola	9	0.5 (13)	1.0 (7)	1.3 (2)	1.1 (16)	1.4 (7)	0.9 (8)	0.6 (27)	0.4 (15)	0.7 (9)	7.8 (10)	A B C D E	105.9
FG9S903	9	0.5 (9)	1.0 (3)	1.2 (13)	1.2 (7)	1.3 (15)	0.9 (11)	0.6 (13)	0.4 (25)	0.6 (12)	7.7 (11)	A B C D E	105.1
MeccaIII	9	0.5 (25)	0.9 (23)	1.2 (21)	1.1 (21)	1.4 (4)	0.8 (19)	0.7 (7)	0.5 (4)	0.7 (6)	7.7 (12)	A B C D E	104.9
59N49	9	0.5 (18)	1.0 (16)	1.1 (27)	1.2 (5)	1.2 (17)	0.8 (16)	0.6 (30)	0.4 (13)	0.6 (19)	7.4 (14)	A B C D E F	101.1
WL625HQ	9	0.5 (29)	0.9 (21)	1.2 (8)	1.1 (20)	1.2 (20)	1.0 (6)	0.6 (18)	0.3 (29)	0.6 (11)	7.4 (15)	A B C D E F	101.1
CUF101	9	0.5 (21)	1.0 (14)	1.1 (24)	1.1 (24)	1.3 (8)	0.8 (29)	0.6 (22)	0.4 (19)	0.6 (17)	7.3 (16)	A B C D E F G	100.0
CW1010(CW89064	10	0.5 (17)	0.9 (20)	1.2 (20)	1.1 (15)	1.2 (25)	0.8 (18)	0.7 (8)	0.4 (24)	0.6 (15)	7.3 (17)	A B C D E F G	99.9
FG9L400	10	0.6 (2)	1.1 (1)	1.2 (5)	1.0 (28)	1.1 (31)	0.8 (27)	0.5 (36)	0.5 (8)	0.5 (29)	7.3 (19)	A B C D E F G	99.4
Highline	9	0.5 (8)	0.9 (19)	1.2 (9)	1.1 (13)	1.1 (30)	0.8 (25)	0.6 (15)	0.3 (31)	0.6 (13)	7.2 (22)	A B C D E F G	98.8
Magna901	9	0.5 (20)	1.0 (13)	1.1 (26)	1.0 (30)	1.2 (22)	0.8 (24)	0.6 (25)	0.4 (22)	0.6 (22)	7.1 (25)	B C D E F G	96.9
Magna995	9	0.5 (27)	0.9 (27)	1.1 (35)	1.0 (26)	1.2 (24)	0.8 (15)	0.6 (19)	0.4 (10)	0.6 (20)	7.1 (26)	B C D E F G	96.7
UAP999	9	0.5 (28)	0.9 (24)	1.2 (10)	1.1 (11)	1.3 (16)	0.7 (34)	0.5 (31)	0.3 (35)	0.5 (33)	6.9 (28)	C D E F G H	94.6
Mecca	9	0.4 (35)	0.9 (29)	1.2 (15)	1.0 (32)	1.1 (32)	0.8 (21)	0.6 (12)	0.4 (20)	0.5 (34)	6.9 (29)	D E F G H I	93.7
58N57	8	0.4 (33)	0.8 (33)	1.1 (32)	0.9 (35)	1.1 (29)	0.8 (20)	0.6 (26)	0.4 (23)	0.6 (27)	6.7 (30)	E F G H I	91.3
Salado	9	0.4 (36)	0.8 (35)	1.1 (36)	0.9 (34)	1.0 (38)	0.6 (36)	0.6 (20)	0.4 (18)	0.4 (37)	6.2 (36)	G H I	84.8
Experimental Varieties													
IVM1	9	0.6 (1)	1.1 (2)	1.3 (1)	1.2 (1)	1.4 (2)	1.0 (7)	0.7 (11)	0.5 (2)	0.7 (8)	8.3 (1)	A	113.9
SW9218	9	0.5 (15)	0.9 (28)	1.2 (17)	1.2 (8)	1.3 (10)	1.1 (1)	0.8 (2)	0.5 (3)	0.7 (4)	8.1 (4)	A B C	110.1
V920Xtra(999)	9	0.5 (11)	1.0 (10)	1.2 (6)	1.2 (3)	1.3 (9)	0.9 (12)	1.0 (1)	0.4 (28)	0.6 (14)	8.1 (5)	A B C	109.9
SW9217	9	0.6 (6)	1.0 (9)	1.2 (19)	1.1 (14)	1.3 (12)	1.0 (3)	0.7 (4)	0.4 (12)	0.8 (1)	8.0 (6)	A B C	109.8
ZS0301		0.5 (7)	1.0 (8)	1.2 (4)	1.2 (4)	1.4 (5)	0.9 (9)	0.8 (3)	0.4 (16)	0.6 (10)	8.0 (7)	A B C	109.7
SW9215	9	0.5 (14)	1.0 (15)	1.2 (14)	1.1 (9)	1.5 (1)	0.9 (10)	0.7 (10)	0.5 (6)	0.7 (5)	8.0 (9)	A B C D	108.7
FG101T407	10	0.6 (3)	1.0 (4)	1.2 (3)	1.1 (10)	1.2 (19)	0.8 (23)	0.6 (17)	0.5 (7)	0.6 (21)	7.7 (13)	A B C D E	104.4
DS396	9	0.5 (30)	0.9 (18)	1.2 (16)	1.1 (25)	1.3 (11)	0.9 (14)	0.7 (9)	0.3 (36)	0.6 (26)	7.3 (18)	A B C D E F G	99.9
CW99052	10	0.5 (22)	0.9 (25)	1.1 (30)	1.1 (18)	1.3 (14)	0.9 (13)	0.6 (16)	0.4 (26)	0.6 (23)	7.3 (20)	A B C D E F G	99.2
IVM4	9	0.5 (19)	1.0 (11)	1.2 (18)	1.0 (27)	1.1 (27)	0.8 (26)	0.6 (28)	0.5 (9)	0.7 (7)	7.3 (21)	A B C D E F G	98.9
V940Xtra(899)	9	0.5 (24)	0.9 (30)	1.1 (25)	1.0 (31)	1.2 (18)	0.8 (17)	0.6 (14)	0.4 (21)	0.6 (25)	7.2 (23)	B C D E F G	97.8
CW99103	9	0.5 (12)	1.0 (12)	1.1 (31)	1.1 (17)	1.2 (21)	0.8 (22)	0.6 (21)	0.4 (27)	0.6 (28)	7.1 (24)	B C D E F G	97.2
CW99053	9	0.5 (10)	0.9 (26)	1.2 (23)	1.0 (33)	1.2 (26)	0.8 (28)	0.6 (29)	0.4 (14)	0.6 (18)	7.0 (27)	B C D E F G	96.0
ZS0300		0.5 (23)	1.0 (6)	1.2 (21)	1.1 (19)	1.0 (35)	0.7 (35)	0.5 (37)	0.3 (34)	0.5 (30)	6.7 (31)	E F G H I	91.0
IVM2	9	0.5 (26)	0.8 (32)	1.0 (37)	1.1 (22)	1.2 (23)	0.7 (30)	0.5 (32)	0.3 (30)	0.4 (36)	6.6 (32)	E F G H I	90.5
DSM1	9	0.4 (38)	0.9 (31)	1.1 (29)	1.0 (29)	1.0 (33)	0.7 (32)	0.5 (34)	0.3 (32)	0.5 (32)	6.5 (33)	F G H I	88.1
DS399	9	0.4 (34)	0.8 (37)	1.0 (40)	0.9 (38)	1.0 (36)	0.7 (31)	0.6 (24)	0.4 (11)	0.6 (24)	6.4 (34)	F G H I	87.4
DSM2	9	0.4 (31)	0.8 (34)	1.1 (28)	1.1 (23)	0.9 (40)	0.7 (33)	0.5 (35)	0.3 (38)	0.5 (35)	6.3 (35)	F G H I	86.1
IVM3	9	0.4 (37)	0.8 (36)	1.0 (38)	0.9 (36)	1.1 (28)	0.6 (39)	0.5 (33)	0.3 (40)	0.5 (31)	6.2 (37)	G H I	84.6
DSM4	9	0.4 (32)	0.8 (39)	1.1 (33)	0.9 (37)	1.0 (37)	0.5 (40)	0.5 (39)	0.3 (33)	0.4 (40)	5.8 (38)	H I	79.3
DSM3	9	0.4 (39)	0.8 (40)	1.1 (34)	0.9 (39)	0.9 (39)	0.6 (37)	0.4 (40)	0.3 (39)	0.4 (39)	5.8 (39)	I	78.6
DSM5	8	0.3 (40)	0.8 (38)	1.0 (39)	0.9 (40)	1.0 (34)	0.6 (38)	0.5 (38)	0.3 (37)	0.4 (38)	5.7 (40)	I	78.4
MEAN		0.48	0.91	1.15	1.06	1.19	0.80	0.61	0.39	0.58	7.18		
CV		11.0	8.8	9.4	13.1	19.6	20.9	25.3	25.1	19.9	11.4		
LSD (.05)		0.07	0.11	0.15	0.20	0.33	0.24	0.22	0.14	0.16	1.14		

Trial planted at 25 lb/acre viable seed in Imperial clay loam soil at the UC Desert Research and Extension Center, Holtville, CA.
Entries followed by the same letter are no significantly different at the 5% probability level according to Fishers (protected) LSD.
FD = Fall Dormancy reported by seed companies.

Table 11. 2004-05 YIELDS, UC IMPERIAL VALLEY ALFALFA CULTIVAR TRIAL. TRIAL PLANTED 10/3/2003

		2004 Yield	2005 Yield	Average		% OF CUF101
Released Varieties	FD		dry t/ac			%
WL711	10	9.3 (4)	8.1 (3)	8.7 (3)	A B C	105.1
UCImpaloWF	9	9.1 (10)	8.1 (2)	8.6 (4)	A B C	104.0
UN900	10	9.1 (8)	8.0 (8)	8.6 (6)	A B C	103.8
UCCibola	9	9.2 (5)	7.8 (10)	8.5 (8)	A B C D	102.7
FG9S903	9	9.2 (7)	7.7 (11)	8.4 (9)	A B C D E	102.0
59N49	9	9.4 (3)	7.4 (14)	8.4 (12)	A B C D E	101.5
CUF101	9	9.2 (6)	7.3 (16)	8.3 (13)	A B C D E F	100.0
WL625HQ	9	9.0 (13)	7.4 (15)	8.2 (14)	A B C D E F	99.1
FG9L400	10	9.0 (14)	7.3 (19)	8.1 (15)	A B C D E F	98.3
CW1010(CW89064)	10	8.9 (15)	7.3 (17)	8.1 (16)	A B C D E F	98.2
Highline	9	9.0 (12)	7.2 (22)	8.1 (17)	A B C D E F G	98.2
MeccaIII	9	8.5 (28)	7.7 (12)	8.1 (19)	A B C D E F G H	98.1
Magna995	9	8.6 (24)	7.1 (26)	7.8 (25)	C D E F G H I J	94.9
UAP999	9	8.5 (27)	6.9 (28)	7.7 (27)	C D E F G H I J K	93.7
Magna901	9	8.4 (30)	7.1 (25)	7.7 (28)	C D E F G H I J K	93.6
58N57	8	8.3 (32)	6.7 (30)	7.5 (31)	D E F G H I J K	90.8
Mecca	9	8.1 (34)	6.9 (29)	7.5 (32)	D E F G H I J K	90.7
Salado	9	7.7 (38)	6.2 (36)	7.0 (37)	I J K	84.3
Experimental Varieties						
IVM1	9	9.8 (1)	8.3 (1)	9.1 (1)	A	109.9
ZS0301		9.8 (2)	8.0 (7)	8.9 (2)	A B	107.9
V920Xtra(999)	9	9.1 (9)	8.1 (5)	8.6 (5)	A B C	103.9
SW9215	9	9.1 (11)	8.0 (9)	8.5 (7)	A B C D	103.0
SW9217	9	8.8 (16)	8.0 (6)	8.4 (10)	A B C D E	101.9
SW9218	9	8.7 (18)	8.1 (4)	8.4 (11)	A B C D E	101.7
FG101T407	10	8.6 (26)	7.7 (13)	8.1 (18)	A B C D E F G	98.1
DS396	9	8.7 (17)	7.3 (18)	8.0 (20)	A B C D E F G H	97.3
CW99052	10	8.7 (19)	7.3 (20)	8.0 (21)	B C D E F G H I	96.9
V940Xtra(899)	9	8.7 (21)	7.2 (23)	7.9 (22)	B C D E F G H I J	96.0
CW99053	9	8.7 (20)	7.0 (27)	7.9 (23)	B C D E F G H I J	95.2
CW99103	9	8.6 (25)	7.1 (24)	7.8 (24)	C D E F G H I J	95.0
IVM4	9	8.4 (29)	7.3 (21)	7.8 (26)	C D E F G H I J	94.8
ZS0300		8.6 (23)	6.7 (31)	7.6 (29)	C D E F G H I J K	92.4
IVM2	9	8.6 (22)	6.6 (32)	7.6 (30)	C D E F G H I J K	92.3
DSM1	9	8.3 (33)	6.5 (33)	7.4 (33)	E F G H I J K	89.3
IVM3	9	8.3 (31)	6.2 (37)	7.3 (34)	F G H I J K	87.9
DSM2	9	7.8 (36)	6.3 (35)	7.1 (35)	G H I J K	85.4
DS399	9	7.7 (39)	6.4 (34)	7.0 (36)	H I J K	85.2
DSM4	9	8.1 (35)	5.8 (38)	6.9 (38)	J K	83.9
DSM5	8	7.7 (37)	5.7 (40)	6.7 (39)	K	81.6
DSM3	9	7.6 (40)	5.8 (39)	6.7 (40)	K	80.9
Mean		8.67	7.18	7.93		
CV		8.9	11.4	5.1		
LSD (.05)		1.07	1.14	1.06		

Variety X Year interation is significant

Trial planted at 25 lb/acre viable seed in Imperial clay loam soil at the UC Desert Research and Extension Center, Holtville, CA.
Entries followed by the same letter are no significantly different at the 5% probability level according to Fishers (protected) LSD.

Table 12. 2005 UC ALFALFA FALL DORMANCY TRIAL RESULTS.
The two-location trial represents Intermountain (Tulelake) and Mediterranean (Davis) environments.

Fall Dormancy Class[1]	Multi-year FDR[2]		Tulelake[3]			Davis[3]			Across locations			2005 FDR[5]
		Name	Score	NPH[4]	Rank	Score	NPH[4]	Rank	Score	NPH[4]	Rank	
11	**11.2**	**UC-1465**	**4.94**	**2.22**	**42**	**8.56**	**2.93**	**42**	**6.76**	**2.58**	**42**	**10.60**
10	**9.9**	**UC-1887**	**4.57**	**2.14**	**37**	**7.96**	**2.82**	**41**	**6.26**	**2.48**	**41**	**9.84**
		UC 2678	4.64	2.15	39	7.70	2.77	40	6.17	2.46	40	9.73
		SW 9217	4.77	2.19	41	7.53	2.74	36	6.15	2.46	39	9.74
		UC 2677	4.41	2.10	32	7.64	2.77	39	6.02	2.43	38	9.50
		UC 2546	4.44	2.10	34	7.52	2.74	34	5.98	2.42	37	9.42
		UC 2673	4.44	2.10	33	7.45	2.73	33	5.94	2.42	36	9.37
		HIGHLINE	4.25	2.06	22	7.58	2.75	38	5.92	2.41	35	9.30
		UC 2661	4.58	2.14	38	7.20	2.68	23	5.89	2.41	34	9.32
		UC 2705	4.49	2.12	35	7.28	2.70	29	5.89	2.41	33	9.31
		UC 2845	4.36	2.09	27	7.39	2.72	31	5.87	2.40	32	9.28
9	**8.9**	**CUF101**	**4.21**	**2.05**	**20**	**7.52**	**2.74**	**35**	**5.86**	**2.40**	**31**	**9.22**
		UC 2662	4.27	2.07	23	7.43	2.73	32	5.85	2.40	30	9.22
		CUF101-1	4.39	2.09	30	7.27	2.70	28	5.83	2.39	29	9.21
		SW 9218	4.75	2.18	40	6.89	2.62	18	5.82	2.40	28	9.25
		UC 2849	4.40	2.10	31	7.21	2.68	24	5.80	2.39	27	9.18
		SW 1022	4.34	2.08	26	7.22	2.69	27	5.78	2.38	26	9.14
		UC 2587	4.29	2.06	24	7.22	2.69	26	5.75	2.37	25	9.06
		CIBOLA-2	4.37	2.09	28	7.11	2.67	22	5.74	2.38	24	9.08
		UC 2549	4.53	2.13	36	6.91	2.63	20	5.72	2.38	23	9.10
		CIBOLA-1	4.21	2.05	21	7.21	2.68	25	5.71	2.37	22	9.00
		UC 2693	4.11	2.03	18	7.31	2.71	30	5.71	2.37	21	9.00
		UC 2609	4.39	2.09	29	7.01	2.65	21	5.70	2.37	20	9.04
		UC 2703	3.76	1.93	12	7.55	2.75	37	5.66	2.34	19	8.80
		UC 2607	4.29	2.07	25	6.90	2.63	19	5.60	2.35	18	8.87
		UC 2671	3.99	2.00	16	6.76	2.60	16	5.39	2.30	17	8.51
		UC 2548	3.85	1.96	13	6.88	2.62	17	5.37	2.29	16	8.46
		SW 9421	4.12	2.03	19	6.53	2.55	15	5.32	2.29	15	8.43
8	**7.8**	**Pierce**	**3.95**	**1.98**	**14**	**6.36**	**2.52**	**13**	**5.15**	**2.25**	**14**	**8.15**
		BARBARA SP	3.99	1.99	15	6.29	2.51	12	5.14	2.25	13	8.14
		ProINTA PA	4.06	2.01	17	6.22	2.49	11	5.14	2.25	12	8.14
		ProINTA LU	3.56	1.89	11	6.43	2.54	14	4.99	2.21	11	7.84
7	**6.7**	**Dona Ana**	**3.36**	**1.83**	**9**	**5.70**	**2.39**	**10**	**4.53**	**2.11**	**10**	**7.09**
		Achiever	3.46	1.86	10	5.08	2.25	9	4.27	2.06	9	6.68
6	**6.3**	**ABI 700**	**3.27**	**1.80**	**8**	**4.68**	**2.16**	**7**	**3.97**	**1.98**	**8**	**6.12**
		TiF04	2.87	1.68	7	4.88	2.20	8	3.87	1.94	7	5.83
5	**5.3**	**Archer**	**2.70**	**1.64**	**6**	**4.29**	**2.07**	**6**	**3.49**	**1.85**	**6**	**5.17**
		MP04	2.32	1.52	4	3.87	1.97	5	3.10	1.74	5	4.34
4	**3.8**	**Legend**	**2.40**	**1.55**	**5**	**3.05**	**1.75**	**3**	**2.72**	**1.65**	**4**	**3.62**
3	**3.4**	**5246**	**2.17**	**1.47**	**3**	**3.25**	**1.80**	**4**	**2.71**	**1.64**	**3**	**3.53**
2	**2.0**	**Vernal**	**1.70**	**1.30**	**2**	**2.49**	**1.58**	**2**	**2.10**	**1.44**	**2**	**2.07**
1	**0.8**	**Maverick**	**1.46**	**1.20**	**1**	**1.66**	**1.29**	**1**	**1.56**	**1.24**	**1**	**0.60**
		$LSD_{0.05}$[6]	0.14			0.12						
		CV(%)	5.23			3.42						
		$LSD_{GXL0.05}$[7]				0.14						
		CV(%)				4.44						

[1]=Number corresponds to Fall Dormancy Class of 11 check cultivars (in Bold Print) used by the Certified Alfalfa Seed Council.

[2]=Actual 4-year Fall Dormancy Rating of check cultivars using the Univ. of California regression equation (NAAIC, August 1998).

[3]=Location: Planted-cut-scored: Tulelake:5/3 - 9/7 - 9/29; Davis: 5/26 - 10/3 - 10/26.

[4]= Plant Height Score is transformed in to Natural Plant Height (NPH) using square root to remove heterogenity of variance.

[5]=Suggested single year fall dormancy rating based on two location single year regression (FDR=7.4892(NPH)-8.7135).

[6]=Fishers protected Least Significant Difference for comparison of NPH means within locations.

[7]=Fishers protected Least Significant Difference for comparison of NPH means among locations.

Table 13. SUGGESTED MINIMUM ALFALFA CULTIVAR PEST RESISTANCE AND FALL DORMANCY RATINGS [1] FOR ALFALFA PESTS FOUND IN SIX CALIFORNIA CLIMATE ZONES [2].

Zone[2]	FD	SAA	PA	BAA	PRR	BW	FW	San	Stn	RKN	VW
Intermountain	2--4	S	R	MR	R	R	HR	R	R	R	R
Sacramento Valley	4--8	MR	HR	HR	HR	MR	HR	R	R	R	R
San Joaquin Valley	7--9	R	HR	HR	HR	MR	HR	R	HR	HR	R
Coastal	5--7	MR	HR	HR	HR	MR	HR	R	HR	HR	R
High Desert	4--7	R	R	R	R	MR	HR	MR	HR	HR	R
Low Desert	8--9	HR	HR	HR	HR	S	HR	HR	R	HR	S

[1] Pest Resistance abbreviations described below.

NOTE: These pest Resistance Recommendations were originally developed by Dr. Vern Marble, Extension Agronomist, UC Davis, based upon decades of experience with alfalfa varieties in various locations in California.

[2] Zones correspond to the principle regions of alfalfa Production in California.

Pests and Diseases	
SAA	Spotted alfalfa aphid
PA	Pea aphid
BAA	Blue alfalfa aphid
PRR	Phytophthora
BW	Bacterial wilt
FW	Fusarium wilt
San	Southern anthracnose
Stn	Stem nematode
RKN	Root-Knot nematode
VW	Verticulum wilt

Resistance Abbreviations		Percent resistance[1]
HR	Highly Resistant	>51%
R	Resistant	31-50%
MR	Moderately Resistant	15-30%
LR	Low Resistant	6-14%
S	Susceptible	<5%
T	Tolerance	(see definition)

[1] Percent of plants in a population resistant to a given pest

Definitions

I - Immune -- Not subject to attack for a specified pest. Immunity is absolute, and seldom occurs in alfalfa.

R - Resistant -- The ability of plants to withstand pest attack. Resistance is not absolute. Since alfalfa varieties consist of a population of plant types, resistance occurs in only a portion of plants in a field. Even highly reistant varieties will have some plants that are susceptible (see above percentages). NOTE: Very high insect populations or very severe disease conditions can overwhelm pest resistance in alfalfa.

S - Susceptible -- Damage commonly occurs when in the presence of a specified pest. Inability of a variety to withstand adverse disease or insect conditions.

T - Tolerance -- Ability of plants to sustain yields when confronted with a pest attack or enviornmental condition (e.g. salt or grazing). Tolerant varieties are affected by the condition, but still maintain yields at high levels relative to less tolerant varieties.

Table 14. LISTING OF COMPANY CONTACTS FOR FURTHER INFORMATION ON VARIETIES.

Company	Name	Address	City & State	Zip	Phone	FAX	Email
ABI. Inc.	Neil Hayes	2280 Ave. 7 ½	Kingsburg, CA	93631	559-897-7999	559-897-8761	hayes@abialfalfa.com
ABI. Inc.	Don Miller	2323 11th Ave. N. Ext.	Nampa,ID.	83687	208-467-9523	208-466-7595	miller@abialfalfa.com
Advanced Forages	Mark Brady	P.O. Box 883	Visalia, CA	93274	559-779-2676	559-688-1674	ADForages@aol.com
Allied Seed	Ron Schmidt	1917 E. Fargo Ave.	Nampa, ID	83687	208-466-9218	208-467-9953	rschmidt@allied.com
America's Alfalfa	Joe Machado	1041 Jackson Ave.	Los Banos, CA	93635	209-826-9442	209-826-8842	machado@americasalfalfa.com
Cal/West Seeds	Lauren Johnson	P.O. Box 1428	Woodland, CA	95776	530-666-3331	530-666-1464	L.Johnson@Calwestseeds.com
Croplan Genetics	Dennis Gehler	P. O. Box 64406	St. Paul, MN	55164	651-765-5710	651-765-5727	dgehl@landolakes.com
D&D Seeds, Klamath Falls							
Dairyland Seed Co.	Dan Gardner	13147 Jackson Hwy.	Sloughhouse, CA	95683	916-682-3215	916-682-8435	dgardner@dairylandseed.com
Desert Sun Marketing Co.	Mike Malin	P. O. Box 50817	Phoenix, AZ	85076	480-940-4431	480-940-4507	mike@desertsunmarketing.com
Eureka/SeedTec	Craig Sharp	P.O. Box 1866	Woodland, CA	95776	530-661-6995	530-661-1575	eurekaseed@aol.com
Farm Valley Seeds	Mike Reed/James Scallin	624 E Service Rd	Modesto, CA	95358	209-541-3144	209-541-3191	jscallin@aol.com
Forage Genetics Intrnl.	Bill Knipe	P.O. Box 339	Nampa, ID	83653	208-466-3568	208-466-3684	bknipe@forage-genetics.com
Forage Genetics Intrnl.	Jess W. Bice	P.O. Box 339	Nampa, ID	83653	800-635-5701	208-466-3684	jbice@forage-genetics.com
Germain's Seeds	Doug Elkins	4782 E. Jensen Ave.	Fresno, CA	93777	559-233-8823	559-233-8830	delkins@seedsolutions.com
Great Plains Research	Thad Busbice	3624 Kildaire Farm Rd	Apex, NC.	27502	1-800-874-7945	919-387-7918	alfalfa@greatplainsresearch.com
IK Seeds Research Inc.	Jeffrey Kawaguchi	208 Jalisco Place	Davis, CA	95616	530-753-0592		jbkawaguchi@earthlink.net
IV Milling	Ray Johnson	P. O. Box 389	Holtville, CA	92250	760-356-2914	760-356-2916	ivmray@earthlink.net
Kamprath Seed Co.	Alan Steigerwald	205 Stockton St.	Manteca, CA	95337	209-823-6242	209-823-2582	
Kellogg's Seed Service	W.L. Bill Kellogg	3367 Neal Rd.	Paradise, CA	95969	530-877-3366	530-877-0245	wlk242@cs.com
Lockhart Seeds, Inc.	Steve Tomley	3 N. Wilson Way	Stockton, CA	95201	209-466-4401	209-466-9766	
Lohse Mill Inc.	Jim Butala	P.O. Box 168	Artois,CA	95913	530-934-2157	530-930-9106	butalaconsult@juno.com
Monsanto Golbal Seed Group	Bill Cox	810 W. Main Suite C	Visalia, CA	93291	559-627-0666	559-627-0742	bill.cox@monsanto.com
Novartis Seeds Inc.	Terry Hobson	11939A Sugarmill Rd.	Longmont,CO	80501	800-521-7021	303-682-2482	terry.hobson@seeds.novartis.com
Peterson Seed Co.	Jerry Peterson	P.O. Box 346	Savage, MN	55378	612-445-2606	612-445-1679	
PGI / MBS, Inc.	Dean Teslow	409 North St.	Decorah, IA	52101	866-744-5710	563-382-2433	dean.teslow@seminis.com
Pioneer Hi-Bred	Mark Smith	1040 Settler Rd.	Connell, WA	99326	509-234-9046	509-234-3610	mark.a.smith@pioneer.com
Pioneer Hi-Bred	Roger Vinande	3605 Beyer Park Rd.	Modesto, CA	95355	209-578-3314	209-527-3336	Roger.Vinande@pioneer.com
Pioneer Hi-Bred	Gene Gengelbach	7100 NW 62nd Ave.	Johnston, IA	50131	515-334-6426	515-334-6370	gene.gengelbach@pioneer.com
Roth Seeds	Jim Roth	278 Magnolia Ave.	Millbrae, CA	94030	415-652-4866		
Royal Seeds	Ken May	27630 Llewellyn Rd.	Corvallis,OR	97333	1-800-228-4119	1-541-758-5305	kmay@forage-genetics.com
S & W Seeds	Bob Sheesley	P.O. Box 235	Five Points, CA	93624	559-291-6195	559-291-2605	swseedco@pacbell.net
Simplot Seeds	Mike Benson	19766 So. Hiway 99	Tulare, CA	93274	559-687-2767		Mbenson@Simplot.com
Syngenta Seeds	Terry Hobson	1525 Airport Rd.	Ames, IA	50010	800-258-0498	515-239-3536	terry.hobson@syngenta.com
Syngenta Seeds	Joe Waldo	7500 Olson Memorial Hwy	Golden Valley, MN	55427	763-59-7324	763-593-7203	joe.waldo@syngenta.com
UAP/United Agri Products	Jim Kautz	3173 S Chestnut St.	Fresno, CA	93725	559-487-1516	559-487-1518	Jim.Kautz@uap.com
Union Seed	Jess W. Bice	P.O. Box 339	Nampa, ID	83653	800-635-5701	208-466-3684	jbice@forage-genetics.com
WL Research	Mike Peterson	P. O. Box 8112	Madison, WI	53708	800-406-7662	608-240-0411	mpeterson@wlresearch.com