

























**Table 9. Dry matter yields (tons/acre) of flood irrigated alfalfa varieties sown 9 September 1996, at NMSU's Agricultural Science Center at Los Lunas.**

Variety	1997	1998	1999	2000 Harvests				2000	4-yr	
	Total	Total	Total	9 May	15 Jun	24 Jul	2 Sep	1 Nov	Total	Mean
Archer	6.59**	8.23**	7.86**	2.21**	2.31*	1.77*	1.76**	1.29*	9.34**	8.04**
ABI9252	6.11*	8.11*	7.52*	2.19*	2.32**	1.64*	1.75*	1.37**	9.27*	7.73*
6B77	6.04*	7.85*	7.31*	1.96*	2.13*	1.80**	1.72*	1.15	8.76*	7.44*
WL414	5.88*	7.68*	7.08*	1.93*	2.02*	1.57*	1.64*	1.18	8.34*	7.35*
Pecos	5.67*	7.35*	7.24*	1.99*	2.07*	1.69*	1.66*	1.25*	8.66*	7.26*
WL325HQ	5.76*	7.82*	7.14*	2.13*	2.07*	1.56*	1.45*	1.02	8.23*	7.15*
LSD	ns	ns	ns	ns	ns	ns	ns	0.15	ns	ns
CV%	9.26	6.99	6.86	14.40	12.27	10.09	8.84	8.36	9.32	13.64

Harvest dates:

1997: 29 May, 27 Jun, 15 Aug, and 27 Sep.

1998: 19 May, 29 Jun, 1 Aug, 8 Sep, and 12 Oct.

1999: 1 Jun, 2 Jul, 10 Aug, and 4 Oct.

\*\*Highest numerical value in the column.

\*Not significantly different from the highest numerical value in the column based on the 5% LSD.

LSD (0.05) stands for the Least Significant Difference at the 5% level. If the difference between two numbers within a column is equal to or greater than the LSD, then we are 95% certain that they are truly different.

ns means there are no significant differences between the varieties at the 5% level.

**Table 10. Dry matter yields (tons/acre) of flood irrigated alfalfa varieties sown 1 September 1999, at NMSU's Agricultural Science Center at Los Lunas.**

Variety	2000 Harvests					2000
	9 May	13 Jun	24 Jul	2 Sep	1 Nov	Total
C/W 55112	2.67*	2.22*	3.01**	1.67**	1.85**	11.42**
Evergreen 2.0	2.67*	2.26*	2.86*	1.63*	1.82*	11.24*
C/W 5567	2.74**	2.31**	2.58	1.62*	1.79*	11.04*
C/W 6699	2.38*	2.08*	2.37	1.54*	1.73*	10.10*
LSD (0.05)	ns	ns	0.31	ns	ns	ns
CV%	11.99	9.61	6.91	4.09	3.12	5.70

\*\*Highest numerical value in the column.

\*Not significantly different from the highest numerical value in the column based on the 5% LSD.

LSD (0.05) stands for the Least Significant Difference at the 5% level. If the difference between two numbers within a column is equal to or greater than the LSD, then we are 95% certain that they are truly different.

ns means there are no significant differences between the varieties at the 5% level.

**Table 11. Dry matter yields (tons/acre) of sprinkler irrigated alfalfa varieties sown 26 August 1996, at NMSU's Agricultural Science Center at Farmington.**

Variety	1997	1998	1999	2000 Harvests				2000	4-yr
	Total	Total	Total	31 May	6 Jul	8 Aug	21 Sep	Total	Mean
Monsanto 127	5.01*	6.37*	5.87**	2.33**	1.88*	1.60*	1.15*	6.96*	6.04**
Legend	5.13*	6.78**	5.83*	1.98*	1.78*	1.33*	1.20*	6.29*	5.99*
C/W 4599	4.61*	6.00*	5.61*	2.28*	1.83*	1.68**	1.25*	7.04*	5.81*
WL324	4.48*	6.36*	5.61*	2.05*	2.08*	1.58*	1.15*	6.86*	5.81*
Champ	4.52*	6.07*	5.55*	2.10*	2.10**	1.60*	1.28**	7.08**	5.79*
UN 44	4.73*	6.16*	5.31*	2.28*	1.88*	1.38*	1.23*	6.77*	5.74*
Rushmore	4.62*	6.40*	5.78*	1.90*	1.68*	1.43*	1.13*	6.14*	5.73*
Evergreen	5.05*	6.22*	5.23*	1.78*	1.75*	1.45*	1.20*	6.18*	5.68*
Archer	4.72*	5.76*	5.56*	1.98*	1.80*	1.50*	1.28*	6.56*	5.65*
Rio	5.34**	6.30*	5.67*	1.55*	1.40*	1.18*	0.93*	5.06*	5.59*
WL325HQ	4.59*	5.76*	5.49*	1.88*	1.63*	1.55*	1.15*	6.21*	5.52*
CW 4693	4.69*	6.16*	5.19*	1.65*	1.78*	1.38*	1.05*	5.86*	5.47*
Benchmark	4.62*	5.36*	5.56*	2.03*	1.98*	1.30*	1.03*	6.34*	5.46*
Vernema	4.48*	5.66*	5.24*	1.88*	1.93*	1.43*	1.03*	6.27*	5.39*
Union 330	4.36*	5.64*	5.65*	1.88*	1.50*	1.38*	0.95*	5.71*	5.36*
3L171	4.69*	5.71*	4.70*	1.78*	1.68*	1.40*	1.03*	5.89*	5.25*
Ranger	3.87*	5.42*	5.19*	2.08*	1.68*	1.48*	0.98*	6.22*	5.19*
Parade	4.25*	5.07*	4.86*	2.03*	2.03*	1.35*	1.13*	6.54*	5.17*
LSD (0.05)	ns	ns	ns	ns	ns	ns	ns	ns	ns
CV%	14.18	17.55	9.37	16.04	20.77	17.43	18.20	12.37	21.87

Harvest dates:

1997: 3 Jun, 8 Jul, 29 Aug, and 8 Sep.

1998: 9 Jun, 10 Jul, 12 Aug, and 23 Sep.

1999: 4 Jun, 7 Jul, 24 Aug, and 4 Oct.

\*\*Highest numerical value in the column.

\*Not significantly different from the highest numerical value in the column based on the 5% LSD.

LSD (0.05) stands for the Least Significant Difference at the 5% level. If the difference between two numbers within a column is equal to or greater than the LSD, then we are 95% certain that they are truly different.

ns means there are no significant differences between the varieties at the 5% level.

**Table 12. Dry matter yields (tons/acre) of sprinkler irrigated alfalfa varieties sown 13 August 1999, at NMSU's Agricultural Science Center at Farmington.**

Variety	2000 Harvests				2000
	30 May	5 Jul	8 Aug	20 Sep	Total
IFA-07	2.18*	2.43**	2.25**	1.53*	8.39**
Geneva	2.28**	2.40*	2.18*	1.35*	8.21*
Monsanto	2.05*	2.28*	2.13*	1.68**	8.14*
Pinnacle	2.10*	2.25*	2.05*	1.50*	7.90*
Affinity	2.20*	2.23*	2.05*	1.40*	7.88*
Millenni	2.00*	2.30*	1.95*	1.53*	7.78*
ZX9351	1.88*	2.23*	1.98*	1.40*	7.49*
Novartis 58	1.85*	2.10*	2.08*	1.33*	7.36*
Archer II	1.73*	2.00*	2.10*	1.53*	7.36*
LSD (0.05)	ns	ns	ns	ns	ns
CV%	31.12	14.30	8.53	10.50	12.09

\*\*Highest numerical value in the column.

\*Not significantly different from the highest numerical value in the column based on the 5% LSD. LSD (0.05) stands for the Least Significant Difference at the 5% level. If the difference between two numbers within a column is equal to or greater than the LSD, then we are 95% certain that they are truly different.

ns means there are no significant differences between the varieties at the 5% level.

Table 13. Characteristics and performance of alfalfa varieties across years and tests in New Mexico.		Varietal Characteristics <sup>1</sup>									Las Cruces		Artesia					Tucumcari										Los Lunas					Farmington																
											1999 <sup>2</sup>							1997										1996					1999																
		Pest resistance <sup>3</sup>									F <sup>4</sup>	L <sup>5</sup>	1996					99	Fall Dormancy <sup>6</sup>					D <sup>7</sup>	P <sup>8</sup>	S <sup>9</sup>	W <sup>10</sup>	99	1996					99	1996					99									
		Variety	Proprietor	FD <sup>11</sup>	BW	PRR	FW	AN	SAA	PA	BAA	00 <sup>12</sup>	00	97	98	99	00	00	97	98	99	00	99	00	99	00	99	00	99	00	99	00	97	98	99	00	00	97	98	99	00	00							
Common, CO	Colorado Variety Not Stated	?	?	?	?	?	?	?	?													*	*		*		*	**	*																				
Common, NM	New Mexico VNS	?	?	?	?	?	?	?	?	*	*																																						
Common, SD	South Dakota VNS	?	?	?	?	?	?	?	?																																								
NM Stress 94	New Mexico State University	?	?	?	?	?	?	?	?	*	*																																						
NM9D11A-PAR	New Mexico State University	?	?	?	?	?	?	?	?	**	*					*																																	
AlfaGraze	America's Alfalfa	2	R	LR	R	MR	?	R	?														*	*		*	*	*																					
Viking I	Novartis Seeds	2	R	R	HR	R	?	MR	MR																																								
ABT350	AgriBioTech	3	HR	HR	HR	HR	R	R	?																																								
Benchmark	Research Seeds	3	HR	HR	HR	HR	?	?	?																																	*	*	*	*				
Champ	Research Seeds	3	R	MR	HR	?	?	HR	?																																		*	*	*	**			
Garst 645	Garst Seed	3	HR	HR	R	HR	MR	R	?																																								
GH766	Golden Harvest	3	HR	HR	HR	HR	?	R	R																																								
Monsanto 127	Monsanto Global Seed Group	3	HR	HR	R	HR	HR	HR	?																																			*	*	*	*		
Novartis 58	Novartis Seed	3	HR	HR	HR	HR	?	?	?																																						*		
Rainier	Novartis Seeds	3	HR	HR	HR	HR	HR	HR	?																																								
Ranger	Public	3	MR	LR	LR	LR	LR	LR	LR																																			*	*	*	*		
WL324	WL Research	3	HR	HR	HR	HR	R	HR	?																																			*	*	*	*		
WL325HQ	WL Research	3	HR	HR	HR	HR	R	R	MR				*																														*	*	*	*			
330	Union Seed	4	HR	HR	HR	HR	HR	R	R																																			*	*	*	*		
3L171	Forage Genetics	4	HR	HR	HR	HR	HR	R	?																																			*	*	*	*		
54Q53	Pioneer HiBred Int'l	4	HR	HR	R	R	MR	MR	?																																								
ABT400SCL	AgriBioTech	4	HR	HR	HR	HR	R	HR	?																																								
ABT405	AgriBioTech	4	HR	HR	HR	HR	?	R	?														*	*		*	*	*																					
Affinity + Z	America's Alfalfa	4	HR	HR	HR	HR	?	R	?																																							*	
AmeriGraze 401+Z	America's Alfalfa	4	HR	HR	HR	HR	?	R	?													*	**		*		*	*	*																				
Cimarron 3i	Great Plains Research	4	HR	R	HR	HR	R	R	?																																								
Focus HSN	Arkansas Valley Seed Co.	4	HR	HR	HR	HR	HR	MR	?																																							*	
Garst 6420	Garst Seed Co.	4	HR	HR	HRR	R	R	R	?																																								
Geneva	Novartis Seeds, Inc.	4	HR	HR	HR	HR	HR	R	?																																							*	
GH750	Golden Harvest	4	H	HR	HR	HR	R	R	R																																								
IFA-07	IFA	4	HR	HR	HR	HR	R	R	MR																																							**	
Jade II	NC+ Hybrids	4	MR	R	HR	MR	R	R	MR									*																															
Landmark	Geertson Farms	4	R	HR	R	R	?	R	?									*	*																														
Legend	Cenex	4	HR	HR	HR	HR	LR	R	?																																			*	**	**	*		
Magnum V	Dairyland Seed Co.	4	HR	HR	HR	R	R	R	MR																																								
Millenea	IFA	4	HR	HR	HR	HR	R	R	?																																							*	
Monsanto 142	Monsanto Global Seed Group	4	HR	HR	HR	R	?	HR	HR																																							*	







Table 13. Characteristics and performance of alfalfa varieties across years and tests in New Mexico.		Varietal Characteristics <sup>1</sup>									Las Cruces		Artesia						Tucumcari										Los Lunas				Farmington							
											1999 <sup>2</sup>								1997										1996				99							
		Pest resistance <sup>3</sup>									F <sup>4</sup>	L <sup>5</sup>	1996			99	Fall Dormancy <sup>6</sup>		D <sup>7</sup>	P <sup>8</sup>	S <sup>9</sup>	W <sup>10</sup>	99	1996		99	1996		99											
Variety	Proprietor	FD <sup>11</sup>	BW	PRR	FW	AN	SAA	PA	BAA	00 <sup>12</sup>	00	97	98	99	00	00	97	98	99	00	99	00	99	00	99	00	99	00	97	98	99	00	00	97	98	99	00	00		
Magna 901	Dairyland Seed Co.	9	MR	HR	HR	R	HR	R	HR							*																								
Salado	America's Alfalfa	9	?	LR	R	LR	R	MR	HR				*				*	*			**	**	*	*																
WL612	WL Research	9	?	HR	HR	LR	HR	HR	HR	*							*	*																						
ZS9890	ABI Alfalfa	9	R	R	HR	R	HR	MR	HR							*																								
ZX9393	ABI Alfalfa	9	MR	R	HR	R	HR	R	HR							*																								
ZX9894	ABI Alfalfa	9	?	R	HR	R	?	HR	R		*																													
<sup>1</sup> FD=Fall Dormancy, Bw=Bacterial wilt, PRR=Phytophthora root rot, Fw=Fusarium wilt, An=Anthracnose, SAA=Spotted alfalfa aphid, PA=Pea aphid, BAA=Blue alfalfa aphid.																				<sup>2</sup> Establishment year																				
<sup>3</sup> Pest Resistance Ratings: S=Susceptible, LR=Low Resistance, MR=Moderate Resistance, R=Resistant, HR=High Resistance.															<sup>4</sup> Test irrigated every 14 days.					<sup>5</sup> Test irrigated every 28 days.																				
<sup>6</sup> Test sown to determine which FD category was best suited to the Tucumcari area.										<sup>7</sup> Dryland: Test irrigated once after seeding.					<sup>8</sup> Poorly drained: Soil contains 700 ppm Na; irrigated as needed.																									
<sup>9</sup> Standard: Irrigated once before each harvest.			<sup>10</sup> Winter: Same as Standard, but also irrigated monthly during winter.						<sup>11</sup> FD: 2=Vernal, 3=Ranger, 4=Saranac, 5=Archer, 6=ABI 700, 7=Dona Ana, 8=Maricopa, 9=CUF101																															
<sup>12</sup> Harvest Year		Shaded boxes indicate that the variety was not in the test.							**Highest yielding variety in the test for that year.							*Not significantly different from the highest yielding variety in the test for that year.																								
L.M. Lauriault, I.A. Ray, L.M. English, M.W. Murray, and M.K. O'Neill. NMSU CAHE AES CES																																								

**Table 14. New Mexico State University Cooperative Extension Service publications related to alfalfa management.**

<b>Number</b>	<b>Title</b>	<b>On-line ?</b>
A-107	Managing saline soils	
A-113	Selection of fertilizers	Y
A-114	Test your soil	Y
A-122	Soil test interpretations	Y
A-123	Sampling for plant tissue analysis	
A-128	Fertilizer guide for New Mexico	Y
A-128	Nitrogen fixation by legumes	Y
A-130	Inoculation of legumes	Y
A-131	Certified seed	Y
A-133	Calculating fertilizer costs	Y
A-134	Selecting synthetic fertilizers in New Mexico	Y
A-18	Micronutrient fertility guide	
A-216	Know what is in a bag of seed	Y
A-309	Alfalfa weevil and clover leaf weevil	
A-316	Structure of a hay bale	
A-317	Alfalfa fertilization in New Mexico	
A-318	Reducing alfalfa harvest losses	Y
A-325	Managing weeds in alfalfa	Y
A-327	Introduction to hay testing	Y
A-328	Sampling guidelines for hay testing	Y
A-329	Variations in hay grading	Y
A-330	Alfalfa growth stages	Y
A-331	Alfalfa quality definitions	Y
B-115	Balancing forage supply and demand	Y
CR-536	Blister beetles in alfalfa	Y
HB-11	Suggestions for managing insects in alfalfa 19 and clover 1996	
W-01	Submitting plants for plant tissue analysis	
W-13	Alfalfa disease control	

These publications are available from your county office of the NMSU Cooperative Extension Service. To view publications on-line from the internet visit <http://www.cahe.nmsu.edu/cahe>