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Selecting Alfalfa Varieties for Nebraska

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Yield potential, pest resistance and seed price should be considered when selecting alfalfa varieties in Nebraska.

The most important variety decision on many farms and ranches is the selection of alfalfa. The choice of alfalfa variety affects production for three to ten or more years, whereas varieties of annual crops can be changed annually.

Many alfalfa varieties are available from private and public plant breeders. Over the years, yield trials conducted at widely distributed Nebraska locations have tested most varieties sold in the state.

The originator or distributor of each variety is listed in *Tables I and II* as a source of seed information. Public varieties are usually available in certified seed channels. Some varieties may be difficult to obtain due to low seed supply or limited distribution. Only buy seed of certified quality to assure genetic identity of the variety and avoid planting common seed for forage production.

Select alfalfa varieties according to three criteria:

1. Yield potential
2. Pest resistance
3. Seed price

Use *Tables I and II* to identify high yield varieties. Then select from this list those varieties with desirable pest resistance. Finally, compare seed price. Use *Table III* to identify sources of seed.

Fall Dormancy and Winter Survival

Low dormancy ratings indicate varieties have slower regrowth after harvest and grow slowly in the fall. Slow fall growth has been considered desirable for developing winter hardiness, but some recently released varieties have high winter survival (lower WS rating) and faster fall growth (higher dormancy rating).

Resistance to Disease

Bacterial wilt. Historically, this has been the primary disease of alfalfa in Nebraska. All varieties listed in this publication have sufficient bacterial wilt resistance for most

long-term stands. There are different degrees of resistance within varieties classified as bacterial wilt-resistant.

Anthracnose. Anthracnose is a fungal disease often occurring in alfalfa under irrigation or high moisture conditions. Select varieties with anthracnose resistance.

Phytophthora root rot. Phytophthora root rot is a serious disease, especially on poorly drained soils. It can make stand establishment difficult and often kills young seedlings during wet seasons. It also can reduce the productivity and longevity of established stands.

Other diseases. Common leafspot, lepto leafspot and blackstem are foliar diseases that cause leaf losses and reduce alfalfa yield and quality. Fusarium wilt and verticillium wilt have not caused severe problems in Nebraska.

Varieties listed in *Tables I and II* have been developed with resistance to some of these diseases. Select varieties that have resistance to anthracnose, phytophthora root rot and bacterial wilt.

Resistance to Insects

Insects can cause losses in hay yield and quality, stand establishment and persistence. Varieties with high levels of resistance to pea aphids or spotted alfalfa aphids, or both, are available.

Alfalfa Yields

Table I lists varieties that have been tested in Nebraska with commercial seed for two or more years since 1991 and are marketed in the state. Data collected from these varieties since 1982 are included in the table. Yield comparisons are relative to production from the check varieties Vernal and Wrangler included in the same tests. A yield of 115 percent indicates that the variety produced 15 percent more yield than the average yield of Vernal and Wrangler. Each station year represents data from one location during one year. Greater confidence can be placed in data from four or more station years. Small yield differences (2 or 3 percent) may be due to natural variation, especially for varieties tested three station years or less.

The ratings of varieties tested only two years often changes substantially with additional testing.

Table 1. Characteristics and relative yields (percent) of alfalfa varieties in selected Nebraska tests, 1982—2002.

Variety	Originator or Distributor	Pest Resistance										Saunders County Irrigation		Dixon County Dryland		Dawson County Sub-Irrigation		Panhandle Irrigation					
		WS	FD	Bw	An	Prr	Fw	Vw	Saa	Pa	S/Y	%	S/Y	%	S/Y	%	S/Y	%	S/Y	%			
A 30-06	MBS Genetics	—	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	2	104	—	—	—	—	—	—		
A 395	PGI/MBS	—	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	4	107	—	—	—	—	—	2		
Abound	Asgrow	2.2	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	3	102	—	—	—	—	—	—		
ABT 350	Allied Seed	2.8	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	3	107	—	—	—	—	—	—		
ABT 400 SCL	W-L Research	—	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	3	103	—	—	—	—	—	—		
Abundance	Brett-Young	3.4	4	HR	R	HR	HR	HR	HR	HR	HR	MR	R	2	103	—	—	—	—	—	—		
ACE	UAP Seeds	3.1	4	HR	HR	HR	HR	HR	HR	HR	HR	MR	R	6	104	—	—	—	—	—	—		
Achieva	Allied Seed	—	3	R	HR	HR	HR	HR	HR	HR	R	R	R	4	97	—	—	—	—	—	2		
Abilene +Z	America's Alfalfa ¹	—	5	MR	R	HR	HR	HR	HR	HR	MR	HR	HR	—	—	—	—	—	—	—	105		
Affinity+Z	America's Alfalfa ¹	—	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	3	107	—	—	—	—	—	—	—	
Alfagraz	America's Alfalfa ¹	—	2	MR	MR	HR	LR	HR	R	HR	R	S	R	2	102	—	—	—	—	—	—	—	
AlfaStar	Shepherd Seeds	—	4	HR	HR	HR	HR	HR	HR	HR	HR	R	HR	6	103	—	—	—	—	—	—	—	
Alpha 2001	Great Lakes Hybrids	—	4	HR	HR	HR	HR	HR	HR	HR	HR	R	R	4	102	—	—	—	—	—	—	—	
AmeriStand 302 +Z	America's Alfalfa ¹	—	—	—	—	—	—	—	—	—	—	—	—	3	98	—	—	—	—	—	—	—	
AmeriGraze 401 +Z	America's Alfalfa ¹	—	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	6	104	—	—	—	—	—	—	4	
Arapaho	Tri-West	—	3	HR	R	HR	HR	HR	HR	HR	HR	R	HR	2	104	—	—	—	—	—	—	—	—
Arrowhead	Tri-West	—	2	HR	R	HR	HR	HR	HR	HR	HR	HR	HR	2	103	—	—	—	—	—	—	—	—
Aspen	Superior Hybrids	3.2	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	4	104	—	—	—	—	—	—	—	—
Aspen	Allied Seed	—	4	HR	R	HR	HR	HR	R	HR	R	R	R	8	105	—	—	—	—	—	—	2	
Avalanche +Z	America's Alfalfa ¹	2.1	2	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	—	—	—	—	—	—	—	—	2	
Awesome	Bellamy	—	4	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	3	99	—	—	—	—	—	—	—	—
Baker	Public	—	2	HR	LR	HR	S	HR	R	HR	S	HR	HR	43	94	—	—	—	—	—	—	7	
Baralfa 32 IQ	Barenburg	2.9	3	HR	HR	HR	HR	HR	HR	HR	R	R	R	3	97	—	—	—	—	—	—	16	
Big Horn	Cargill	3.1	4	HR	HR	HR	HR	HR	HR	HR	R	R	R	7	105	—	—	—	—	—	—	2	
Blazer XL	Sharp Bros. Seed	—	3	R	HR	HR	HR	HR	HR	HR	R	HR	R	—	—	—	—	—	—	—	—	2	
Choice	FFR Coop.	3.2	4	HR	R	HR	HR	HR	R	HR	R	R	MR	4	104	—	—	—	—	—	—	—	—
Columbia 2000	Allied Seed	3.0	4	HR	LR	HR	LR	HR	HR	HR	HR	LR	HR	3	104	—	—	—	—	—	—	—	—
Complete	Arrow/Fontanelle	2.7	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	7	104	—	—	—	—	—	—	—	2
Crystal	PGI/MBS	—	4	HR	R	HR	HR	HR	R	HR	R	LR	R	11	109	—	—	—	—	—	—	—	2
Dart	AgriPro	3.2	3	HR	R	HR	R	HR	R	HR	R	HR	HR	14	110	—	—	—	—	—	—	4	
Dawson	Public	—	2	R	S	R	S	R	S	R	S	R	R	55	92	—	—	—	—	—	—	12	
Defense +EV	AgriPro	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	16	
Demand	AgriPro	—	3	HR	HR	HR	HR	HR	HR	HR	HR	MR	R	4	104	—	—	—	—	—	—	2	
Depend +EV	AgriPro	—	4	HR	HR	HR	HR	HR	HR	HR	HR	MR	R	7	107	—	—	—	—	—	—	2	
DK 122	DEKALB Genetics	—	2	HR	HR	HR	HR	HR	R	HR	R	MR	R	—	—	—	—	—	—	—	—	2	
DK 127	DEKALB Genetics	2.7	3	HR	HR	HR	HR	HR	R	HR	R	HR	HR	4	104	—	—	—	—	—	—	3	
DK 134	DEKALB Genetics	2.6	3	HR	HR	HR	HR	HR	HR	HR	HR	HR	R	3	103	—	—	—	—	—	—	2	
DK 140	DEKALB Genetics	2.6	4	HR	HR	HR	HR	HR	HR	HR	R	HR	R	5	109	—	—	—	—	—	—	3	
DK 141	DEKALB Genetics	3.5	4	HR	HR	HR	HR	HR	HR	HR	HR	R	R	6	102	—	—	—	—	—	—	2	
DK 142	DEKALB Genetics	2.9	4	HR	R	HR	HR	HR	R	HR	R	R	HR	9	102	—	—	—	—	—	—	3	
DK 143	DEKALB Genetics	—	—	—	—	—	—	—	—	—	—	—	—	3	103	—	—	—	—	—	—	—	
Dominator	AgriPro	—	4	HR	HR	HR	HR	HR	HR	HR	R	HR	R	15	108	—	—	—	—	—	—	—	2
Emperor	America's Alfalfa ¹	2.7	4	HR	HR	HR	HR	HR	HR	HR	HR	MR	—	6	100	—	—	—	—	—	—	—	—
Enhancer	Arrow Seed	2.5	4	HR	R	HR	HR	HR	R	HR	R	R	—	11	111	—	—	—	—	—	—	3	
Envy	Peterson Seed	—	3	HR	HR	HR	R	HR	R	HR	R	HR	R	11	110	—	—	—	—	—	—	2	

Table II. Characteristics and relative yields (percent) of alfalfa varieties using experimental generation seed in selected Nebraska tests, 1993—2002. NOTE: Yield performance using experimental seed may not be identical to yield using commercial seed. Experimental seed usually produces higher yield than commercial seed.

Variety	Originator or Distributor	WS	FD	Pest Resistance						Saa	Pa	Saunders County Irrigation		Dixon County Dryland		Dawson County Sub-irrigation		Panhandle Irrigation	
				Bw	An	Prr	Fw	Vw	HR			MR	R	R	S/Y	%	S/Y	%	S/Y
53V63	Pioneer	2.7	3	HR	HR	HR	HR	HR	HR	MR	R	3	98	—	—	—	—	—	—
GH 700	Golden Harvest	—	4	HR	HR	HR	HR	HR	HR	R	HR	2	106	—	—	—	—	—	—
GH 750	Golden Harvest	—	4	HR	HR	HR	HR	HR	HR	R	R	3	106	—	—	—	—	—	—
Goldleaf	Bio-Plant Research	3.1	3	HR	R	HR	HR	R	R	—	R	3	105	—	—	—	—	—	116
Gold Plus	MBS Genetics	—	4	HR	HR	HR	R	HR	R	HR	HR	3	109	—	—	—	—	—	—
Radiant	AMPAC Seed	—	4	HR	HR	HR	HR	HR	HR	R	R	3	110	—	—	—	—	—	—
6420	Garst	3.0	4	HR	—	HR	HR	R	R	R	R	3	101	—	—	—	—	—	—
WL 342	W-L Research	—	4	HR	HR	HR	HR	HR	HR	HR	HR	2	103	—	—	—	—	—	—
WL 327	Bellamy	3.0	4	HR	HR	HR	HR	R	R	—	R	3	103	—	—	—	—	—	—

WS = Winter survival index: Based on a scale of 1 to 6. A rating of 1 indicates superior winter survival while a rating of 6 means no winter survival.

FD = Fall dormancy: Based on a scale of 2 to 10. Low fall dormancy ratings indicate varieties have slower fall regrowth. Varieties with faster fall regrowth have higher dormancy ratings.

Pest Resistance Ratings

Bw	An	Prr	Fw	Vw	Saa	Pa	% Resistant Plants	Resistance Class
Bacterial Wilt	Anthracnose	Phytophthora Root Rot	Fusarium Wilt	Verticillium Wilt	Spotted Alfalfa Aphid	Pea Aphid	0-5%	Susceptible (S)
							6-14%	Low Resistance (LR)
							15-30%	Moderate Resistance (MR)
							31-50%	Resistant (R)
							51 + %	High Resistance (HR)

S/Y = Station years; % = Relative yield compared to the average yield of Vernal and Wrangler; blank spaces (—) indicate the variety is susceptible or has not been adequately tested.

Table III. Seed sources.

<i>Originator or Distributor</i>	<i>Address</i>	<i>City, State, Zip</i>	<i>Phone</i>
AgriGene Seed Co.	720 St. Croix St.	Prescott, WI 54021	800-321-2867
AgriPro Seeds, Inc.	2369 330th St.	Slater, IA 50244	515-685-5000
AgVenture, Inc.	P.O. Box 29	Kentland, IN 47951	888-999-0859
Allied Seed Cooperative	P.O. Box 945	Angola, IN 46703	800-813-5025
America's Alfalfa	1870 P.O. Box 404	Princeton, IL 61356	800-873-2532
AMPAC Seed Co.	P.O. Box 318	Tangent, OR 97389	800-547-3230
Arrow Seed Co. ¹	P.O. Box 722, 126 North Tenth	Broken Bow, NE 68822	800-622-4727
Barenburg USA	P.O. Box 239	Tangent, OR 97389	800-547-4101
Bellamy Grain Corp.	P.O. Box 246	Cozad, NE 68930-9556	308-784-2666
BioPlant Research	P.O. Box 320	Camp Point, IL 62320	800-593-7708
Cargill Hybrid Seeds	P.O. 405, Hwy. 34 West	Seward, NE 68434	800-346-4853
Casterline & Sons Seed, Inc.	P.O. Box 1377	Dodge City, KS 67801	800-444-4137
Cenex/Land O' Lakes	2827 8th Ave.	Fort Dodge, IA 50501	800-369-3060
Croplan Genetics	P.O. Box 64406	St. Paul, MN 55164-0089	800-851-8810
Crows Hybrids	P.O. Box 306	Milford, IL 60953	815-758-9120
DEKALB Genetics Corp.	3100 Sycamore Rd.	Dekalb, IL 60115	800-833-5252
Drussel Seed & Supply	2197 W. Parallel Rd.	Garden City, KS 67846	800-597-2998
FFR Cooperative	P.O. Box 322	Battle Ground, IN 47920	317-567-2115
Fontanelle Hybrids	10981 8th St.	Fontanelle, NE 68044	402-721-1410
Garst Seed Co.	2369 330th Street	Slater, IA 50244	888-464-2778
Geertson Seed Farms	1665 Burroughs Rd.	Adrian, OR 97901	800-843-0390
Golden Harvest	100 J.C. Robinson Blvd., Box A	Waterloo, NE 68069	800-228-9906
The Gooding Seed Co., Inc.	P.O. Box 57	Gooding, ID 83330	208-934-8441
Great Lakes Hybrids, Inc.	9915 W. M-21	Ovid, MI 48866	800-257-7333
Gutwein Seed (Larry DeNeve)	8057 Felton Rd.	Prophetstown, IL 61277-9363	815-537-5388
Hoegemeyer Hybrids	Rt. 2, Box 126	Hooper, NE 68031	800-245-4631
HYPerformer Seed Co.	Hwy. 1 Crop Row	Memphis, TN 38120	901-756-1771
Jirdon Agri Chemicals ¹	P.O. Box 516, 70927 Hwy. 26	Morrill, NE 69358	800-445-5454
Kaltenberg Seed Farms	5506 State Rd. 19	Waunakee, WI 53597-0278	800-383-3276
Kaup Seed & Fertilizer ¹	1101 S. Beemer St.	West Point, NE 68788	402-372-5588
Kelliher Seed and Supply ²	P.O. Box 692	Kearney, NE 68848	308-233-7648
Kinder Seed	P.O. Box 398	Buffalo, NY 14225	716-891-8955
Legend Seeds	P.O. Box 241	DeSmet, SD 57231	800-678-3346
L.G. Seeds Inc. ¹	P.O. Box 88	Tekamah, NE 68061	800-752-6574
Lynks Seeds	P.O. Box 637	Marshalltown, IA 50158	800-798-2676
MBS Genetics	225 West 1st Street	Sory City, IA 52101	515-733-5274
Miller Seed & Supply	P.O. Box 587	York, NE 68467	402-362-5516
Monsanto	3670 CR 207	Liberty Hill, TX 78642	800-798-7993
Mycogen Seeds	1340 Corporate Center Curve	St. Paul, MN 55121-1428	800-692-6436
NC+ Hybrids	Box 4408	Lincoln, NE 68504	402-467-2517
Ottillie Seed	1462 Sanford Ave.	Marshalltown, IA 50158	800-798-6884
PGI/MBS	225 West 1st Street	Story City, IA 50248	800-247-3967
Peterson Seed Co., Inc.	P.O. Box 346	Savage, MN 55378	800-328-5898
Pfister Hybrids	187 N. Fayette	Elpaso, IL 61738	309-527-6000
Pioneer Hi-Bred Intl., Inc.	210 Gateway North, P.O. Box 5307	Lincoln, NE 68505	800-228-4050
Preferred Seed Co., Inc.	575 Kennedy Rd.	Buffalo, NY 14227	716-895-7333
Producers Hybrids	Rt. #1, Box C	Battle Creek, NE 68715	402-675-2975
Research Seeds	Box 1393	St. Joseph, MO 64502	800-821-7666
The Sexauer Co.	2019 Riverside	Norfolk, NE 68701	800-642-6077
Top Farm Hybrids	P.O. Box 850	Cokato, MN 55321	800-782-4416
Tri-West, Inc.	P.O. Box 25	Bliss, ID 83314	208-352-1188
Triple T Custom Farms, Inc. ²	110651 Hwy. 92	Mitchell, NE 69357	308-641-2153
Sharp Bros. Seed Co.	101 E. 4th Street	Greeley, CO 80631	970-356-4710
Shepherd Seeds	2936 E. County P.	Beloit, WI 53511	800-383-2676
Stauffer Seeds	P.O. Box 68, 1118 N. 57	Aurora, NE 68818	800-676-7759
Superior Hybrid Co.	P.O. Box 595	North Bend, NE 68649	402-652-8626
Syngenta Seeds	7500 Olson Mem. Hwy.	Golden Valley, MN 55427	612-337-6201
UAP Seeds	P.O. Box 1289	Greely, CO 80632	970-356-4400
United Seeds ²	P.O. Box 27322	Omaha, NE 68127	402-331-4800
Wilson Seeds Inc.	P.O. Box 391, 1408 Hwy. 44 East	Harlen, IA 51537	800-747-1200
W-L Research	P.O. Box 8112	Madison, WI 53708	608-240-0630
Wyffels Hybrids, Inc.	P.O. Box 246	Atkinson, IL 61235	309-936-7833

¹America's Alfalfa - Nebraska distributors: Jirdon Agri Chemical/Arrow Seed/Kaup Seed/L.G. Seeds.²Dairyland Seed Co. - Nebraska distributors: United Seeds/Kelliher Seed/Triple T Custom.