

A-843 (Revised)

# North Dakota

# SOYBEAN

## Performance Testing

## 2007

**Hans Kandel** Extension Agronomist  
Plant Sciences – NDSU

**Ted C. Helms**, Professor  
Plant Sciences – NDSU

**Berlin D. Nelson**, Professor  
Plant Pathology – NDSU

**R. Jay Goos**, Professor  
Department of Soil Science – NDSU

**Brian Johnson**, Research Associate  
Department of Soil Science – NDSU

**Bryan Hanson**, Agronomist  
Langdon Research Extension Center

**Blaine Schatz**, Director and Agronomist  
Carrington Research Extension Center

**Steve Zwinger**, Research Specialist  
Carrington Research Extension Center

**Walt Albus** Agronomist  
Oakes Irrigation Research Center

**Eric Eriksmoen**, Agronomist  
Hettinger Research Extension Center

**Mark Halvorson**, Agronomist  
North Central Research Extension Center – Minot

**Neil Riveland**, Agronomist  
Williston Research Extension Center

# NDSU

**N.D. Agricultural Experiment Station**  
**NDSU Extension Service**

North Dakota State University, Fargo, North Dakota 58105

DECEMBER 2007

## ACKNOWLEDGEMENTS

We would like to thank the following producer cooperators for contributing their time, labor, land and other material to the 2007 soybean yield trial program in the central and southern Red River Valley and soybean cyst nematode (SCN) sites.

Gebeke Bros.....Arthur, N.D.  
 Jon McSparron .....Grandin, N.D.  
 Jeff Leinen.....Great Bend, N.D.  
 Dan Wiltse.....Lisbon, N.D.  
 Paul and Vanessa Kummer.....Colfax, N.D.  
 Scott and Willard Pedersen.....Northwood, N.D.  
 Roger and Dennis Feiken.....LaMoure, N.D.  
 Mike Pikarski, Allen Ward and Pat Freese.....SCN sites

Presentation of data for the varieties tested does not imply approval or endorsement by the authors or agencies conducting the tests. NDSU approves the reproduction of any table in this publication only if no portion is deleted, if appropriate footnotes are given, and if the order of the data is not rearranged and NDSU is credited for the data.

Trials are supported in part by fees collected from entrants of private varieties. We acknowledge the North Dakota Soybean Council's support of Ted Helms' research project.

**Table 1. Soil test report - 2007.**

<b>Location</b>	<b>N</b>	<b>P</b>	<b>K</b>	<b>pH</b>	<b>EC</b>	<b>O.M.</b>
Arthur	49	29	405	7.1	0.78	3.5
Colfax	12	21	180	6.1	0.12	1.6
Grandin	30	8	320	7.8	0.52	4.9
Great Bend	27	12	175	7.4	0.60	3.4
LaMoure	36	10	350	7.1	0.28	4.0
Lisbon	25	8	150	7.5	0.38	3.6

Soil sample: 0 to 6 inches

## PERFORMANCE

Soybean planted acreage increased from 500,000 in 1990 to 2.3 million in 2001, to 3 million acres in 2005 and to 3.9 million acres in 2006. Total acres in 2007 were down to 3.05 millions. Varieties perform differently across years because environmental conditions vary from year to year. Variety rankings from 2007 could be different in 2008 due to different weather conditions. Using the two- or three-year averages is a good way to choose a variety that may perform well in next year's unknown weather conditions.

**Table 2. Locations and planting dates, 2007 North Dakota soybean trials.**

<b>Location/Cooperator/Investigator</b>	<b>Planting Date</b>
Arthur, N.D. ....Gebeke Bros./Ted Helms	Roundup Ready and conventional.....May 24
Grandin, N.D. ....Jon McSparron/Ted Helms	Roundup Ready and conventional ..... May 15
SCN sites..... Pikarski/Ward/Freese/Ted Helms	SCN infested..... May 18
Great Bend, N.D. .... Jeff Leinen/Ted Helms	Roundup Ready and conventional ..... May 18
Lisbon, N.D. ....Dan Wiltse/Ted Helms	Roundup Ready and conventional .....May 18
Colfax, N.D. .... Paul and Vanessa Kummer/Ted Helms	Roundup Ready and conventional ..... May 28
Barnes County Trials, Dazey, N.D. .... Blaine Schatz	Dryland, Roundup Ready ..... May 17 Dryland, conventional.....May 17
Carrington Research Extension Center ..... Blaine Schatz/Steve Zwinger	Dryland, Roundup Ready ..... May 17 Irrigated Roundup Ready.....May 16 Conventional dryland.....May 17 Conventional irrigated..... May 16
Carrington Research Extension Center Wishek ..... Blaine Schatz/Steve Zwinger	Direct-seeded Roundup Ready ..... May 21
Oakes Research Site Walt Albus/Blaine Schatz	Irrigated Roundup Ready.....May 16
LaMoure County Trials ..... Feiken Bros./Ted Helms, Blaine Schatz	Roundup Ready and conventional ..... May 16
Langdon Research Extension Center..... Bryan Hanson	Roundup Ready ..... May 21 Conventional.....May 21
Pembina County, Cavalier..... Bryan Hanson	Roundup Ready.....May 31 Conventional..... May 30
Walsh County, Park River, N.D. .... Bryan Hanson	Roundup Ready ..... May 17 Conventional.....May 17
Nelson County, Pekin, N.D. .... Bryan Hanson	Roundup Ready ..... May 18 Conventional.....May 18
Steele County, Finley, N.D. ....Ayanava Majumdar, County Agent	Roundup Ready.....May 18
North Central Research Extension Center, Minot ..... Mark Halvorson	Roundup Ready ..... June 5 Conventional.....June 4
Pierce County.....Mark Halvorson	Roundup Ready ..... May 18
North Central Research Extension Center, Minot multicounty.....Mark Halvorson	Roundup Ready ..... May 17
Williston Research Extension Center..... Neil Riveland	Roundup Ready ..... May 11 Irrigated Roundup Ready..... May 16 Conventional..... May 11
Hettinger Research Center..... Eric Eriksmoen	Roundup Ready ..... May 9

## **Variety Selection and Adaptation**

Soybean variety selection should be based on maturity, yield, lodging, iron deficiency chlorosis tolerance and disease reaction.

Later-maturing varieties tend to yield more than early maturing varieties when evaluated at the same location. For this reason, only comparing yield of varieties that are of similar maturity is relevant. Although later maturity increases yield potential, later-maturing cultivars are more risky to grow than earlier-maturing cultivars because an early fall frost may kill a late-maturing cultivar before the beans have filled the pods, which will greatly reduce yield.

Maturity is the first consideration when choosing a variety suited to your geographical region. Cultivars of maturity groups 00,0 and 1 are suitable to eastern North Dakota and northwestern Minnesota. Maturity group 00 is very early and primarily grown in the northern Red River Valley. Maturity group 0 is adapted to Traill, Cass, Richland, Barnes, Sargent and Richland counties. Maturity group 1 primarily is suitable for southern areas. These maturity groups are further subdivided. For example, a 0.1 maturity group is an early group 0 variety and a 0.9 is a late-maturity group 0 variety.

Generalized areas of adaptation in North Dakota are indicated by zones. In general, plant seed maturity group 1 in Zone 1, maturity group 0 in Zone 2, maturity group 00 in Zone 3 and as early a variety as available with group 00 for Zone 4. When evaluating private company performance data and descriptions, make comparisons with public varieties grown for several years in your local area. See the back page of this publication for a soybean zone map.

The best way to select a high-yielding variety is to use data averaged across several locations and years. Because weather conditions are unknown in advance, averaging across several years' data will identify a variety that likely will yield well across different weather conditions. For example, one year may have a dry August and another year will have adequate moisture during seed filling in August. Selecting a variety that has performed well in dry and moist conditions is the best way to identify a cultivar that does relatively well, regardless of weather fluctuations.

Some varieties have phytophthora root rot resistance genes. Each gene for resistance confers resistance to different races of phytophthora. A gene may confer resistance to Race 3 but not Race 4. Select a cultivar that has resistance to the common races in your area. Races 3 and 4 are the most common in the Red River Valley and North Dakota. Phytophthora root rot tends to be more of a problem in the southern part of the Red River Valley and more of a problem on poorly drained, heavy soils.

Genetic differences occur among varieties for tolerance to white mold. Varieties that are less susceptible to white mold should be grown on fields where white mold has a past history of causing problems.

Iron deficiency chlorosis (IDC) is a major problem. Iron chlorosis symptoms are present during the two- to seven-trifoliate leaf stage. Plants tend to recover and start to turn green again during the flowering and pod filling stages. However, IDC during the early vegetative stages can reduce yield severely. Some varieties are more tolerant to IDC than others. For high pH soils, select an iron chlorosis-tolerant variety of suitable maturity that is high yielding. See Jay Goos' IDC scores in this publication.

## **Soybean Cyst Nematode (SCN)**

The soybean cyst nematode (SCN), *Heterodera glycines*, is a small plant-parasitic roundworm that attacks the roots of soybeans. Soybean cyst nematodes are found in Cass and Richland counties of North Dakota and are causing yield losses in infested fields. Crop rotation is one of the most important management practices growers must use to control the nematode disease. Growers may want to send soil samples to a laboratory, such as the NDSU Plant Diagnostic Lab at P.O. Box 5012, Fargo ND 58105 or call (701) 231-7854, to determine SCN egg numbers. Such information is useful for SCN management. Varieties with resistance to SCN should be used if a field has a nematode problem. For performance of adapted SCN-resistant soybean varieties, see the table "NDSU Soybean SCN-infested Soil Fee Testing" in this publication.

**Table 3. Agronomic characteristics on public soybean varieties suitable for North Dakota production.**

Variety	Group Maturity	Fargo Relative Maturity	Height	Hilium Color	Zone**	Remarks***
Pembina	00.5	early	short	yellow	3, 4	2, 5
Jim	00.6	early	short	yellow	3, 4	7
RG6008RR	00.8	early	short	yellow	3, 4	2, 5, 9
RG7008RR	00.8	early	short	yellow	3,4	2,5
RG600RR	0.0	early med.	med.	yellow	2, 3, 4	2, 5, 9
RG601NRR	0.1	early med.	med. tall	gray	2, 3	2, 5, 9
Traill	0.0	early med.	med.	yellow	2, 3, 4	2, 7
RG200RR	0.0	early med.	med.	yellow	2, 3, 4	2, 7, 9
Walsh	0.0	early med.	med.	yellow	2, 3, 4	2, 5
RG603RR	0.3	med.	med.	yellow	2, 3	2, 5, 9
RG604RR	0.4	med.	med.	gray	2, 3	2, 5, 9
MN0201	0.2	med.	med.	yellow	2, 3	3, 7
MN0302	0.3	med.	med.	buff	2, 3	2, 5
Barnes	0.3	med.	med.	buff	2, 3	3, 5
Nornatto	0.3	med.	short	yellow	2, 3	3, 7, 10
Nannonatto	0.3	med.	short	yellow	2, 3	3, 7, 10
Norpro	0.6	med.	med.	yellow	1, 2	3, 7, 11
Prosoy	0.8	med. late	tall	yellow	1, 2	4, 7, 11
RG607RR	0.7	med. late	med.	brown	1, 2	2, 4, 5, 9
Sheyenne	0.8	med. late	med.	yellow	1	2,6
Hamlin	0.9	late	med.	black	1	2, 4, 5
Surge	0.9	late	med.	imp. black	1	2, 4
SD1091RR	0.9	late	tall	imp. black	1	2, 4, 9

\* Listed in order of maturity (earliest to the latest).

\*\* Zone - see map – back page for soybean maturity zones.

\*\*\*Remarks:

- |   |  |
|---|--|
| (1) Sensitive to Sencor/Lexone                              | (7) Susceptible to phytophthora root rot |
| (2) Good iron-chlorosis resistance                          | (8) Susceptible to white mold            |
| (3) Sensitive to iron-chlorosis on high pH soils            | (9) Roundup Ready variety                |
| (4) Plant early   | (10) Natto bean                          |
| (5) Resistant to Races 1-4 of phytophthora root rot         | (11) Tofu bean                           |
| (6) Resistant to Races 1, 2, and 3 of phytophthora root rot |  |

### Soybean Maturity

Soybeans respond to day length and heat units, so the actual calendar date a variety will mature is highly influenced by latitude location because each variety has a narrow range of north to south adaptation. Soybean yield and quality are affected if a season-ending freeze occurs before a variety reaches physiological maturity. Dates of maturity are listed in the performance tables and indicate when the plants in a variety are observed and estimated to be physiologically mature. Usually harvest can commence approximately seven to 14 days after the soybeans are physiologically mature.

Relative maturity ratings also are provided for many of the varieties entered in the trials at various locations. These ratings consist of a number for the maturity group designation, such as 00, 0 or 1, followed by a decimal and another number, ranging from 0 to 9, which indicates maturity rankings within each maturity group. For example, the variety Jim is described or identified as 00.6, making it a medium-maturing variety in the 00 group. Walsh is a 0.0, making it one of the earliest varieties in the 0 group. Sargent is a 0.8, making it one of the later varieties in the 0 group.

Values in the tables of public varieties were developed after observing them for a number of years and at a number of sites. Relative maturity ratings for private varieties in the tables were provided by their owners and were developed in a similar manner.

## Screening Soybean Varieties for Resistance to Iron Chlorosis, 2007

R. Jay Goos and Brian Johnson, Department of Soil Science, NDSU, Fargo, ND 58105  
e-mail: [rj.goos@ndsu.edu](mailto:rj.goos@ndsu.edu)

Field studies were set out at five locations in 2007 to measure the resistance of about 140 soybean varieties to iron chlorosis. The sites were near Ayr, Colfax, Galchutt, Hunter and Galesburg, N.D. The sites ranged in pH from 7.6 to 8.3, salinity (EC) from 0.2 to 2 millimhos per centimeter (mmho/cm) and CaCO<sub>3</sub> contents from 3 percent to 19 percent. Thirty-five seeds were planted in short (5-foot) rows on 30-inch centers. The experimental design was a randomized complete block with four replications at each site.

Visual ratings were made on a 1-5 scale, with 1 = no chlorosis and 5 = the most severe chlorosis. Ratings were planned for the 2- to 3-trifoliolate, 5- to 6-trifoliolate and two weeks after the 5- to 6-trifoliolate stage. The Ayr site was completely hailed out after the first rating. The Galchutt site greened up after the second rating, so a third rating was not taken at this site. Three ratings were made at the other three sites.

Six “standard” varieties were entered to help in the interpretation of the results. The varieties, listed in expected order from the most resistant to most susceptible, were Iowa State ISU A11 > Traill ≥ Council > Glacier > Mycogen 5072 = Stine 0480. The variety ISU A11 represents the highest level of chlorosis resistance available in current breeding lines. All standards were entered twice to illustrate the reproducibility of our ratings.

The summary of the chlorosis scores is shown in Table 4. Each chlorosis rating in Table 4 represents the average of 48 observations taken from five locations. As far as we know, our program of testing is the most comprehensive program in the U.S. with regard to number of sites and observations.

The 2007 growing season started out wet and chlorosis was moderate to severe at all sites. The “standard” varieties are listed in bold typeface in Table 4. The ranking of the six standards came out exactly as anticipated and good reproducibility typically occurred within 0.1 chlorosis units.

Chlorosis severity differs from year to year and giving exact recommendations as to what level of chlorosis resistance is appropriate for a specific field is impossible. In general, the more severe the chlorosis a field produces, the higher on the list it should be, consistent with other agronomic considerations, such as maturity.

This report also is available online at [www.yellowsoybeans.com](http://www.yellowsoybeans.com).

The authors thank the North Dakota Soybean Council and the participating seed companies for their support of these trials.

Table 4. Average chlorosis scores across two ratings and five locations, North Dakota, 2007.

Company	Variety	Avg.
<b>Standard</b>	<b>ISU A11</b>	<b>1.6</b>
<b>Standard</b>	<b>ISU A11</b>	<b>1.6</b>
Syngenta	XR0170	1.8
NuTech	NT-6051 RR	2.1
Gold Country Seeds	7806 RR	2.1
Univ. of MN	MN0095	2.2
Asgrow	AG 00603	2.2
Thunder Seed	2807 RR	2.3
Northstar	NS 0732 RR	2.3
Pioneer	90A06	2.4
Croplan Genetics	RT 0043	2.4
Kruger Seed	KX - 0067 R	2.4
Pioneer	PH06-07	2.4
Wensman	W 20051 RR	2.4
NuTech	NT-0706 RR	2.5
ProSeed	RR 60-95	2.6
Croplan Genetics	RT 0947	2.6
NuTech	NT-0066 RR	2.6
<b>Standard</b>	<b>Trail</b>	<b>2.7</b>
<b>Standard</b>	<b>Trail</b>	<b>2.7</b>
Syngenta	NK S14-N1	2.7
Wensman	W 2064 RR	2.7
Asgrow	AG 00901	2.8
Hefty Seed Co.	H0086R	2.8
Univ. of MN	MN0502RR	2.8
Brushvale	BS 3001	2.8
Croplan Genetics	RT 0207	2.8
Pioneer	90M92	2.8
Wensman	W 2030 RR	2.8
NDSU	ND03-2225 (RR)	2.8
Peterson Farms Seed	PFS 0901 RR	2.8
Pioneer	PH03-07	2.8
Brushvale	BS 2324	2.8
Kruger Seed	K-042 RR	2.8
Univ. of MN	MN0806CN	2.8
Wensman	W 20074 RR	2.8
Wensman	W 20084 RR	2.8
Asgrow	AG 0401	2.8
Gold Country Seeds	3805 RR	2.8
Hefty Seed Co.	H026R	2.8
NDSU	ND03-8315 (RR)	2.8
Croplan Genetics	RT 0077	2.8

Company	Variety	Avg.
Seeds 2000	2030 RR	2.8
Wensman	W 2010 RR	2.8
Hefty Seed Co.	H0097R	2.9
NuTech	NT-0090 RR	2.9
ProSeed	RR 60-40	2.9
Dairyland Seed Co.	DSR-0303/RR	2.9
Seeds 2000	2060 RR	2.9
<b>Standard</b>	<b>Council</b>	<b>2.9</b>
Peterson Farms Seed	PFS 0905 RR	2.9
Roughrider Genetics	RG 601 RR	2.9
Global Soy Genetics	CA-104	2.9
NDSU	Sheyenne	2.9
Syngenta	XR1473	2.9
Thunder Seed	806 RR	2.9
Dyna Gro	39D11	2.9
Dyna Gro	32J01	2.9
Gold Country Seeds	2801 RR	2.9
NuTech	NT-0330 RR	2.9
Stine	0098-84	3.0
Univ. of MN	MN0701	3.0
Roughrider Genetics	RG 7008 RR	3.0
Peterson Farms Seed	EX 03 RR	3.0
Syngenta	XR00670	3.0
Croplan Genetics	RT 0406	3.0
Pioneer	90M93	3.0
Roughrider Genetics	RG 604 RR	3.0
Kruger Seed	K-091 RR	3.0
Dyna Gro	38C10	3.0
<b>Standard</b>	<b>Council</b>	<b>3.0</b>
Pioneer	90M02	3.0
Wensman	W 2108 RR	3.0
Global Soy Genetics	CA-107	3.1
Roughrider Genetics	RG 603 RR	3.1
NuTech	NT-5025 RR	3.1
Kruger Seed	K-009+RR	3.1
NuTech	NT 6042	3.1
Croplan Genetics	RT 0669	3.1
Roughrider Genetics	RG 607 RR	3.1
Asgrow	AG 1102	3.1
Brushvale	BS 3035	3.2
Brushvale	BS 3050	3.2
Kruger Seed	K-011RR	3.2

Company	Variety	Avg.
NDSU	ND03-8688 (RR)	3.2
Kruger Seed	K-006 RR	3.2
Univ. of MN	MN1106RR	3.2
NDSU	ND01-2019	3.2
Northstar	NS 0943 RR	3.2
<b>Standard</b>	<b>Glacier</b>	<b>3.2</b>
Asgrow	AG 0202	3.2
<b>Standard</b>	<b>Glacier</b>	<b>3.2</b>
Stine	0708-4	3.2
Brushvale	BS 3029	3.2
Brushvale	BS 7917	3.3
Dairyland Seed Co.	DSR-0401/RR	3.3
Syngenta	NK S00-K5	3.3
Thunder Seed	2804 RR	3.3
Syngenta	XR1170	3.3
Croplan Genetics	RT 0088 S	3.3
Dairyland Seed Co.	DSR-C700/RR STS	3.3
Peterson Farms Seed	PFS EX 007 RR	3.4
Peterson Farms Seed	PFS 0806 RR	3.4
Peterson Farms Seed	PFS EX 04 RR	3.4
Syngenta	NK S02-M9	3.4
Univ. of MN	MN0604	3.4
Dyna Gro	34C06	3.4
Asgrow	AG 0604	3.4
NDSU	ND03-8313 (RR)	3.4
Pioneer	PH04-07	3.4
Kruger Seed	K - 056 RR	3.5
Syngenta	NK S08-C3	3.5
Peterson Farms Seed	PFS 0906 NRR	3.5
Unity Seed	UN-121	3.5
Thunder Seed	2806 RR	3.6
Roughrider Genetics	RG 600 RR	3.6
<b>Standard</b>	<b>Stine 0480</b>	<b>3.6</b>
Syngenta	NK S13-K2	3.6
Dyna Gro	36B14	3.6
ProSeed	RR 70-60 N	3.6
Dyna Gro	SX 07713	3.7
Dyna Gro	32G06	3.7
<b>Standard</b>	<b>Stine 0480</b>	<b>3.8</b>
<b>Standard</b>	<b>Mycogen 5072</b>	<b>3.8</b>
<b>Standard</b>	<b>Mycogen 5072</b>	<b>3.8</b>
Brushvale	BS 3030	4.0

## Privately Developed Varieties

Contact addresses and brand names for privately developed varieties entered in the 2007 tests conducted by Helms are:

### AgSource

Josh Lapp, (515) 382-8880  
1800 L Ave.  
Nevada, IA 50201

### Midwest Seed Genetics

Wayne Hoerner, (515) 597-5903  
1551 Highway 210  
Huxley, IA 50124

### Renk Seed

Alex Renk, (218) 643-1797  
6809 Wilburn Road  
Sun Prairie, WI 53590  
[www.renkseed.com/](http://www.renkseed.com/)

### BioGene

Tim Brakke, (701) 326-4189  
RR 2 Box 2  
Aneta, ND 58212-9303

### Monsanto–Asgrow Seed

Diane Freeman, (815) 754-4809  
800 Lindbergh Blvd. N.  
St. Louis, MO 63167

### Richland Organics

Andy Finkral, (218) 643-1797  
100 10th St. N.  
Breckenridge, MN 56520

### Brushvale Seed Inc.

Paul Holmen, (218) 643-2311  
1656 280th St.  
Breckenridge, MN 56520

### Mustang Seed

Dale Nelson, (605) 256-6529  
Box 466  
Madison, SD 57042

### Roughrider Genetics

[www.roughridergenetics.com/](http://www.roughridergenetics.com/)

### Circle C Seeds

Keith Chisholm, (218) 356-8214  
2493 380th St.  
Gary, MN 56545

### Mycogen Seeds

Bruce Due, (701) 642-6007  
9338 Zionsville Road  
Indianapolis, IN 46268

### Sansgaard Seed Farm

Mike Goudie, (517) 733-2101  
15 X Ave.  
Story City, IA 50248

### Dairyland Seed Co.

Ronald Secrist, (800) 236-0163  
P.O. Box 958  
West Bend, WI 53095

### NK Brand Seeds

Jeff Spieler, (605) 212-8367  
201 Weber Ave., Suite 200  
Sioux Falls, SD 57103

### Seeds 2000

Vance Johnson, (888) 786-7333  
Box 200  
Breckenridge, MN 56520  
[www.seeds2000.net/](http://www.seeds2000.net/)

### Dahco Seeds

Bob Sheuckenku  
7429 11th Ave. S.  
Fargo, ND 58103

### Northland Seed & Grain

Craig Tomero, (651) 556-4112  
495 Portland Ave.  
St. Paul, MN 55102

### S. K. Foods

Ron Schlecht, (701) 356-4106  
4749 Amber Valley Parkway, Suite 1  
Fargo, ND 58104

### Earthwise Processors

Sunopta, (218) 287-5510  
4111 30th Ave. S.  
Moorhead, MN 56560

### Northstar Genetics

Jeff Hamre, (701) 793-9257  
14602 50th St. S.E.  
Leonard, ND 58052  
[www.northstargenetics.com/](http://www.northstargenetics.com/)

### Stine Seed Co.

Paul Eby, (800) 362-2510  
2225 Laredo Trail  
Adel, IA 50003-8240

### Gold Country Seed

Dave Schwartz, (800) 795-8544  
16506 Highway 15 N.  
Hutchinson, MN 55350-0604

### NuTech Seed

Tom Thompson, (641) 567-3350  
40321 130th Ave.  
Leland, IA 50453

### Thunder Seeds

Merlyn Petermann, (218) 483-4637  
3008 210th St. N.  
Hawley, MN 56549-9433

### Hyland Seeds

Brett Sauer, (701) 594-6355  
1289 22nd St. N.E.  
Emerado, ND 58228

### Peterson Farm Seed

Ron Hegemeister, (701) 282-7476  
3104 164th Ave. S.E.  
Harwood, ND 58042

### UAP Dynagro

Stan Rund, (218) 731-6792  
11935 County Highway 1  
Fergus Falls, MN 56537

### Integra Seed

Dean Pedersen  
3079 22nd St. S.  
Fargo, ND 58103

### Pioneer Hi-Bred Inc.

Tom Fry, (507) 625-3045  
99 Navaha Ave., Suite 101A  
Mankato, MN 56001

### Wensman Seed Co.

Jeff Wensman, (218) 631-2954  
P.O. Box 190  
Wadena, MN 56482

### Kruger Seed Co.

Blair Fuessley, (800) 772-2721  
33938 160th Ave.  
Dike, IA 50624

### Prairie Brand Seed Co.

Mike Carr (515), 733-2101  
15 X Ave.  
Story City, IA 50248

### Legend Seeds

Larry Wagner, (605) 203-0763  
605 21st St. E.  
Sioux Falls, SD 57105

### Proseed

Keith Peltier, (800) 776-3121  
705 Brewster E.  
Harvey, ND 58341

This publication may be copied for noncommercial, educational purposes in its entirety with no changes. Requests to use any portion of the document (including text, graphics or photos) should be sent to [permission@ndsuent.nodak.edu](mailto:permission@ndsuent.nodak.edu). Include exactly what is requested for use and how it will be used.

**For more information on this and other topics, see: [www.ag.ndsu.edu](http://www.ag.ndsu.edu)**

County Commissions, North Dakota State University and U.S. Department of Agriculture cooperating. Duane Hauck, Director, Fargo, North Dakota. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. We offer our programs and facilities to all persons regardless of race, color, national origin, religion, gender, disability, age, veteran's status or sexual orientation; and are an equal opportunity institution. This publication will be made available in alternative formats for people with disabilities upon request, (701) 231-7861.