



# BLIZZARD WATCH

Department of Plant Sciences

March 1999

## Dear Friends of NDSU Plant Sciences

Greetings to all our *Blizzard Watch* readers. It is hard to believe that another year has passed by. I hope you all enjoy this annual update. We hoped to get this issue out to you a little earlier than usual. This past fall I had been teasing Eileen, my secretary, about how long it takes to get the *Blizzard Watch* out of the office once I had written it. In a moment of weakness, Eileen assured me that she would have it out a week after I had given my copy to her. I seized the opportunity and wrote out what she had said and then asked her to sign it. In another moment of weakness, she signed the sheet. Now every once in a while, especially when she is really busy, I give her a copy of the agreement just to remind her. Are we bored in the office or what?

Thus far it has been another easy winter, the second in a row. As I look out the window I see a lot of bare fields with occasional patches of snow. We probably had our roughest weather in early November with an early blizzard piling up a lot of snow especially in Bismarck and Minot. In the valley we had just a little snow but very high winds. After that storm, the weather warmed up and I was beginning to wonder if we would even have any snow at Christmas. We did have some snow

a few days before Christmas and some cold weather in January. February was more like a typical March.

Last spring was quite early for the first time in years. Crops across the state, especially in western North Dakota, were very good. Unfortunately the prices are extremely low, resulting in continuing concerns for many farm operations. The Fargo Forum indicated that Minnesota had lost over 1700 farms in the past five years. The same trend is evident in North Dakota. We are continuing to lose a number of farming families. Estimates of the number of N.D. farm youth under 18 years of age were 63,500 in 1970, 34,000 in 1980, 17,300 in 1990 and about 10,000 now. Where is the next generation of farmers and ranchers coming from? Farms are becoming larger and many farmers and their wives, if the opportunity exists, have jobs in town. There were isolated areas in the eastern part of the state where crops were drowned out, replanted, and drowned out again. Because of disease problems the last few years, acreage of wheat and barley were down significantly. In the eastern part of the state there were significant increases in the acreage of soybean, corn and canola. As I indicated last year, the majority of the durum acreage is now located in an area west of Minot and into eastern Mon-



Special points of interest:

- *New Faculty Members Hired*
- *Faculty Retirements*
- *New Varieties Released*
- *Honors and Awards*
- *Dr. Carter Honored*

tana. Sunflower acreage remains strong and acreage of flax has begun to rebound. Plant diseases continue to be a major problem. Scab was still evident this year, as were tan spot and septoria. I feel that one of the major factors that has caused the increased disease pressure is that producers have changed their tillage system, going from more black field tillage production to conservation tillage where the diseased stubble is not buried. We certainly cannot go back to the type of tillage we had because of the erosion problems that it causes. Often we forget that whenever we change cultural practices, Mother Nature also changes in response.

As I indicated last year, the Legislature established the State Board of Agricultural Research (SBAR), which consists of producers and agricultural administrators from NDSU. This board, for all practical purposes, controls the Experiment Station. It is quite likely that in the future they will also control the ex-



ernor decided to cut the cost of all state government by 5%. This resulted in days and weeks of work by all of us to decide what was to be cut. Later in the year, he decided that maybe it was not such a good idea and for all practical purposes canceled the exercise. In the meantime, the SBAR had developed a series of initiatives. When the governor changed his mind, a list combining prioritized initiatives and restoration of the areas that had been cut were developed. These were then submitted to the Legislature. There are, as usual, more requests for funds than there is money to go around. Grand Forks has requested \$50M for a dike to divert water from the Red River around the city the next time there is a flood. There inevitably will be quite a bit of opposition to this because after the 1997 flood, work was begun on the "Aurora", a building similar to the Fargo Dome. Many residents in the state felt that the dome project should have been put on hold until after the dike was built. At this point it is hard to know what the Legislature will do but it will probably pass.

If the current salary increase trend continues, I am going to have a hard time keeping many of our faculty, which are the poorest paid in the nation. The current thinking is that we will get a 2% increase. When I visit with producer groups, I find that they are not really aware of the problem, because it is never mentioned in the press. I intend to do my best to start informing the commodity groups and anyone else who will listen about the situation. NDSU has a policy which allows for salary overload up to a

17.2% salary increase as long as it is paid from grants and gifts. I intend to do what I can to use this option to the fullest.

Dr. Tom Plough, President of NDSU resigned in the spring of 1998. He was replaced by Dr. Allan Fischer, Dean of the College of Science and Mathematics, who is currently serving as Interim President. Dr. Plough was President for three years and was instrumental in improving the morale of the faculty, staff, and students and in restoring some confidence in NDSU throughout the state. He will be missed. Following a national search, Dr. Joe Chapman, currently Provost at Montana State University, was selected as our new president. He will begin his duties on June 1, 1999. I have met Dr. Chapman and in my opinion, he will do an excellent job. He is a very warm person and is a good fit to represent NDSU throughout the state. His background is in biology.

Pat Jensen continues to do an excellent job as the VP of Agriculture. Dr. Cole Gustafson, the former Chair of Ag. Economics, is now the Assistant Director of the Experiment Station. He has found himself on a fast learning track. If anyone knows any ag. economist jokes, let me know so I can pass them on to Cole. Cole replaced Dr. Bob Todd who returned as a faculty member to the Soils Dept. Dr. Sharon Anderson continues as the Director of Extension and Dr. Glen Statler currently serves as Interim Associate Dean. I am the chair of the search

committee for a permanent associate dean.

We have several new faculty members in the department. Following a national search, Dr. Burton Johnson, who many of you know, replaced me as the project leader of the Sunflower, Minor, and New Crops Project. Burton had served as my technician for many years and in effect took over leadership of the project when I became Interim Chair of Plant Sciences in 1995. He is currently in the midst of his first semester of teaching, having taken over Dr. Lund's crop production class. Paula Peterson has been hired as the research specialist for the project. On January 1, Dr. George Kegode joined us, replacing Bill Ahrens. George has a Ph.D. in weed science from Iowa State and was a postdoc with the USDA at Morris, MN. On March 1, Dr. Denise McWilliams joined our department. She is a weed scientist and will fill a joint Minnesota-North Dakota appointment to do weed, corn, and soybean extension in western Minnesota and eastern North Dakota. This should take a lot of the pressure off Drs. Berglund and Zollinger who are very overloaded. Denise has a Ph.D. from Iowa State University.

We have had retirements of a number of faculty members this year. Dr. Harold Cross retired on April 1, 1998 and moved to Grand Junction, Colorado. He has returned to NDSU a number of times to help keep the corn project going until a replacement is hired. We have just begun advertising to refill the corn breeding position and hope to have someone



here by late summer.

Dr. John Nalewaja retired in early August and still lives in Fargo. We are currently looking for a re-



*Harold and Glenda Cross  
Retirement Reception, April 1998*

placement.



*John and Donna Nalewaja  
Retirement Reception,  
August 1998*

Dr. Roald Lund retired December 31<sup>st</sup>. He returned to the department several years ago and taught Crop Production and advised numerous undergraduates.



*Roald and Janet Lund  
Retirement Reception,  
December 1998*

*The department is trying to establish scholarships in honor of Dr. Lund and Dr. Nalewaja.* Dr. Lund's scholarship would support an incoming freshman majoring in Plant Sciences while Dr. Nalewaja's would support a graduate student. **Any donations to the department for the two scholarships would be greatly appreciated.** By the way we are still accepting donations for the **Dr. Jack F. Carter Endowment.** Dr. Don Galitz and Dr. Murray Duysen who have 40% and 60% appointments in the department, respectively, have announced they intend to retire on July 1<sup>st</sup>.

Our adjunct faculty also continues to change with the retirements of Dr. Leonard Joppa in October and Dr. Garry Smith in December, 1998. Dr. Joppa was a long time adjunct member of the department, having worked closely with our wheat breeders. His basic research on durum cytogenetics has had an impact worldwide. He will continue to live in Fargo. Dr. Smith joined us a few years ago and served as the Research Leader of the USDA sugarbeet/potato projects. Garry was also known and respected nationally and internationally. Garry and his wife

Patsy have returned to Colorado. Patsy was a part-time secretary in our office for a few years. She had resigned that position about a year ago. Many of you may know Dr. Al Cattnach, a member of the Soils Dept. He resigned his position to begin a career as an agronomist for American Crystal Sugar. A search for a replacement has just been completed and Mohammad Khan from Auburn was hired.

Dr. Dave Ebeltoft passed away this year. Dave retired from NDSU a number of years ago. Dave, at his retirement, had been the leader of the Seedstocks Project. A kinder person never existed as far as I am concerned. Many of us had tremendous admiration for Dave because at 62 he received his Ph.D. from Oregon State University just because it was a personal goal.

There have also been major changes in the office staff. Linette Knoll has moved to Ag. Economics. Jennifer Moe has been hired to replace her. Joann Swanson transferred to a similar bookkeeping position in Restricted Fund Accounting in Old Main. She was replaced internally by Letha Cattnach. Melissa Welter was hired to fill Letha's position. Shirley Bertsch, who worked with the Pesticide Certification Program, was married in July and moved to Grand Forks, ND. She was replaced by Mary Beth Odegaard. Patsy Smith was replaced by Tammy Erdmann. Tammy is a nine-month employee. There are so many changes that sometimes I walk in and wonder if I



am in the right office.

There have also been a few changes in the field and lab support staff. Wayne Larson replaced Myron Thoreson with Dr. Lorenzen's potato breeding/physiology project. Wayne was previously with the Physical Plant Building and Grounds. Gene Leach was hired as a research specialist with the white wheat/sawfly resistant/specialty wheat project. Gene is a former undergraduate advisee of mine and received a M.S. with Dr. Mike McMullen. Before joining our department, he worked for Hybrid-Tech in wheat breeding and with Interstate Seed in sunflower breeding. Jeff Prischmann, who had worked with Dr. McClean, accepted a job at the State Seed Department. A replacement is being sought. Michelle Berg was hired as a research specialist to work with Dr. Messersmith, and Jeremy Pederson was hired as a research specialist to work with Dr. Peel in Plant Sciences and Dr. Marcia McMullen in Plant Pathology. They will work together on small grains scab research. Mitch Montgomery, who formerly worked with Dr. Hanzel's project, now works on a wheat breeding project at the University of Nebraska.

We graduated 5 Ph.D., 7 M.S. and 25 B.S. students this year. Our graduate student enrollment is down to about 40 now. In recent months, there has been a significant increase in interest by students in the weed science graduate program. No such increase has been evident in the areas of plant breeding or crop production and physiology. New graduate students

and their advisors since last year include Trevor Dale (Dexter), Kenneth Lamb (B. Johnson), Carla Otto (Kianian), Joel Roehl (Messersmith/Lym), Nathalie Vignaux (Kianian), Malay Saha (Lorenzen), Doug Whited (Lym). Postdoctorates during 1998 were Nikolay Balbyshev, Asfaw Mesfin (who recently moved to the University of Minnesota), Mike Christoffers, Vijay Nandula, and

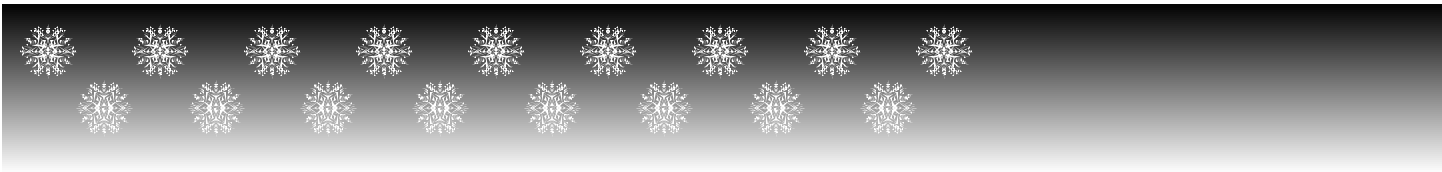
John Zhang. John recently left for the University of Minnesota.

Our undergraduate numbers continue to climb with a lot of interest in both Horticulture and Forestry and Crop and Weed Sciences. All upon graduation have numerous job opportunities at quite good salaries. This is one of the reasons that our graduate student numbers are down. Almost all of our undergraduates intern with companies during the summer months. In an attempt to increase interest in graduate school, the department will offer seven internships with faculty this summer. In order to qualify, the students must be a junior in the department, have a good GPA and have at least some interest in attending graduate school. The students are able to select an area of interest and then visit with faculty in that area and make a decision about which project they will join. One-half of their salary will be paid by the department and 1/2 will be paid by the project. I am also going to require all of them to attend at least two field days during the summer. Our hope is that it will entice some of

the students to go to graduate school. Of the seven we have selected, most have chosen to go into the weed science option.

Many of our plant breeders, and their cooperating scientists in other departments and the research extension centers, became parents this year as their children were released to face the world. These included 'Cathay' and 'Pembina' flax from Dr. Hammond's program, 'Maier' and 'Mountrail' from Dr. Elias' durum program, and 'NorPro' (tofu type), 'Daksoy' and 'Jim' soybean from Dr. Helms' breeding program. Jim is named after Dr. Jim Helm, former extension agronomist in our department. In March 'Parshall' and 'Reeder' HRSW were released from Dr. Frohberg's project. These two varieties are adapted to western North Dakota. We continue to make progress toward the development of varieties with some resistance to scab. 'Snow Cap™' and 'Snow Mantle™' Gray Dogwood were released, as was 'Dakota Pinnacle®' Birch by Dr. Herman's project.

Our efforts in developing a scab resistant spring wheat suffered a setback when a 30 acre seed increase field of an experimental line was frozen just as it was heading. The increase field was in southern California a few miles west of Yuma, Arizona. Some of the top growth was immediately cut off and fertilizer applied in the hope that tillers would develop so some seed increase could be salvaged. Time will tell if our efforts were successful. Approximately 2 acres of the same line are under seed



increase in New Zealand. Progress is being made to increase scab resistance in barley and durum, but it will be several years before varieties will be released.

The number of Plant Sciences faculty, staff and students involved in professional organizations and in service at the national, state, regional, university and college level continues to be very high as do the number of awards.

Dr. Duane Berglund received the 'Extension Communicator of the Year Award'. This award has only been given a few years and our faculty have won almost 1/2 of the awards.

Prem Jauhar, an adjunct member of the department, was awarded the 'Outstanding Scientist Award by the Assoc. of Agric. Scientists of Indian Origin'.

Al Schneider was named a 'Fellow of the Crop Science Society of America'.

Dr. H.R. Lund was honored with the '1998 Agri-Business Award' at the Harvest Bowl. He also received an 'Honorary FFA State Degree'.

Dr. Dale Herman received the 'R.L. Wodarz' Award at the North Dakota State Horticultural Society Meeting. Also, the *North Dakota Tree Handbook*, edited by Dale E. Herman, Craig M. Stange, and Vern Quam received state and national recognition from the American Library Association's Government Documents Round Table. Dr. Herman also received the 1998 Excellence in Teaching Award, Senior Career.

Bryce Farnsworth was named a 'Lifetime Member of the National Potato Association of America'. The annual meetings were held in Fargo this year. Bryce also received the 1998 Professional Staff Award for Excellence.

Dr. Deckard was selected by Mortar Board as an Outstanding Organization Advisor.

Dr. Phil McClean received the '1998 Peltier Award for Innovation in Teaching'.

Dr. Rod Lym, a weed scientist, was awarded the 'Outstanding Achievement Award from the Society of Range Management'.

Tom Teigen, a Plant Sciences graduate and the Director of the Agronomy Seed Farm at Casselton was awarded the 'Distinguished Service Award' by the North Dakota Crop Improvement and Seed Handlers Association.

Bob Baumann & Ron Roach became members of the 'Quarter Century Club'.

Dr. Rich Zollinger won the Advanced Crop Advisor Distinguished Service Award and the Epsilon Sigma Phi-State Early Career Award.

Wayne Norby, who works with the forage project, received the 1998 Technical Staff Award for Excellence.

Dr. Alan Dexter received the 1998

Excellence in Extension Award, Senior Career.

Dr. Phil Miklas, a NDSU graduate, and now with the USDA/ARS at Prosser, Washington has been awarded the Distinguished Achievement Award from Dry Bean Researchers in the U.S.

Dr. Charlotte Eberlein, a former extension weed scientist in our department, has been elected President-Elect of WSSA.

Dr. Carl Johnson, a 1967 S.



W. M.

**Dr. Jack Carter**  
**1999 North Dakota**

graduate in plant breeding, has been awarded 'The 1998 Distinguished Service in Agriculture Award' from Kansas State University. Carl is a rice breeder for the California Rice Institute Foundation. His varieties are grown on 96% of the California rice acreage.

**WE HAVE SAVED THE BEST FOR LAST:** Dr. Jack Carter was inducted into the North Dakota Agricultural Hall of Fame on March 6<sup>th</sup>. This is the highest agricultural award that can be received in the state. **WOW !!!!! WAY TO GO.**



## "Jack's Corner"

I'm pleased to send you a short message as it is not feasible for me or my wife to write each of you individually. First, thank you for the holiday messages that came from you to the department or to us personally--we appreciate them very much and wish to "keep track"--please tell us more about yourself and your families. Send pictures, even if you may have aged since we last met--we all do!

I've survived 11½ years of retirement successfully, I believe. I'm reading some papers in agronomy and food science and "talking flax" for food and feed for poultry, pets, etc. My wife says that I'm not doing a lot differently than in past but we start more slowly in the morning, don't work many nights or weekends, and more or less are doing the "agronomic things" as I please.

I lectured about flax-as-food twice at Concordia College, Moorhead, in 1998. Two young ladies sent me their research papers for review. I answer hundreds of letters and phone calls, now even E-mail with Eileen Buringrud as my 'middle man' about flax as food or to feed poultry, pets, etc.

I'm President of the Flax Institute

and the next two-day program is March 23-25, 2000 at Fargo, the 58<sup>th</sup> Flax Institute. We will have papers on the latest in flax research and promotion for food, feed, and coatings.

I serve as a "flax consultant" to the North Dakota Oilseed Council.

I continue to be involved in research and promotion of flaxseed and flaxseed oil as possibly beneficial to human nutrition and health because of the high fiber and linolenic acid content (omega 3) that will have some interesting and valuable developments in the future. People in the countries of some former foreign students may have consumed flax seed for hundreds of years, or should if they have not, for the omega 3 and fiber benefits.

I continue to supervise research at the University of Nebraska. The latest project will involve (1) feeding ground flax and "flaxeggs" to 2 - 6 year olds in day care re influence on aggressiveness and learning ability related to omega and fatty acid nutrition, and (2) performance of marathon runners re added omega 3 fatty acid intake.

Flax is high in anticarcinogenic LIGNANS and soluble fiber and is one of five plant products being studied in very large experiments concerning Designer Foods by the National Cancer Institute and Food & Drug Admin. for the next several years. Watch the "health press" and general press for many stories on flax as a functional food – a story in Readers Digest soon too.

Mostly at home I have been doing more cooking that formerly, some maintenance, helping an older neighbor, gardening, fishing, grafted 9 apple trees for Bidder's Bowl, and special friends, and attended Bidders Bowl in October. Also, we attend home games of Bison football and basketball, especially the lady Bison, Div. II National Championships in 1994, 1995, and 1996.

I was honored by induction into the North Dakota Agricultural HALL OF FAME, March 6, 1999. I consider this award a very nice recognition of the contribution of research, teaching, and extension by us in academia to the agricultural enterprise in North Dakota in which many of us have participated and contributed with our knowledge and skills.

Imogene, Imy to some of you, works less with clubs, church women groups, has retired playing the organ full time from church, still does the usual household duties from which women never retire, I guess. She entertained international women for their February 1999 meeting at our home--like "old times". She still has imbalance problems from a shingles infection 3 ½ years ago. A recent trip to Mayo Clinic was not helpful.

In retrospect, many of you have influenced our work and lives favorably, and we yours, we hope. We hope to see some of you at a Blizzard Party, ASA--once more at least, although I know only the older members now. Stop to see us as you pass this way and best wishes for a





HAPPY and HEALTHFUL 1999.

*Dr. and Mrs. Carter*

**Plant Sciences Faculty**

A. A. Schneiter, Prof. & Chair  
D. R. Berglund, Prof., Ext., Row Crops, Specialty Crops  
W. A. Berzonsky, Asst. Prof., Hard Spring Wheat Breeding  
L. G. Campbell, Adj. Prof., Sugarbeet Genetics (USDA)  
P. M. Carr, Adj. Prof., Sustainable Agriculture  
Z. M. Cheng, Assoc. Prof., Woody Plants, Biotechnology  
L. S. Dahleen, Adj. Prof., Barley Biotechnology (USDA)  
E. L. Deckard, Prof., Crop Physiology  
A. G. Dexter, Prof., Ext., Weed Control in Sugarbeet  
M. E. Duysen, Prof., Cellular Regulation  
E. M. Elias, Assoc. Prof., Durum Wheat Breeding, Genetics  
M. E. Foley, Adj. Prof., Weed Science (USDA)  
J. D. Franckowiak, Prof., Barley Breeding, Genetics  
R. C. Frohberg, Prof., Wheat Breeding, Genetics  
D. S. Galitz, Prof., Plant Physiology  
K. F. Grafton, Prof., Dry Bean Breeding, Genetics  
J. J. Hammond, Prof., Flax Breeding, Genetics, Computer Programming  
T. C. Helms, Assoc. Prof., Soybean Breeding, Genetics  
R. A. Henson, Adj. Prof., Small Grains and Row Crops Breeding  
D. E. Herman, Prof., Woody Plants, Propagation, Ornamentals  
R. D. Horsley, Assoc. Prof., Barley Breeding, Genetics  
D. P. Horvath, Adj. Prof., Weed Science (USDA)  
M. B. Jackson, Extension Forester  
C. C. Jan, Adj. Prof., Sunflower Cytogenetics (USDA)  
P. P. Jauhar, Adj. Prof., Wheat Cytogenetics (USDA)

B. L. Johnson, Asst. Prof., Crop Production  
G. O. Kegode, Asst. Prof., Weed Science  
S. F. Kianian, Asst. Prof., HRS & Wheat Germpl. Enhancement  
C. W. Lee, Assoc. Prof., Vegetables, Floriculture, Biotechnology  
J. H. Lorenzen, Assoc. Prof., Potato Physiology, Germplasm Enhancement  
E. C. Lulai, Adj. Prof., Potato Physiology (USDA)  
R. G. Lym, Prof., Weed Science, Perennial Weeds  
S. S. Maan, Prof., Wheat Genetics, Cytogenetics  
P. E. McClean, Assoc. Prof., Dry Bean Genetics, Biotechnology  
M. S. McMullen, Assoc. Prof., Oat Breeding, Genetics  
D. A. McWilliams, Ext. Crop Production Specialist  
C. G. Messersmith, Prof., Weed Science  
D. W. Meyer, Prof., Forage Crops  
J. F. Miller, Adj. Prof., Res. Geneticist, Flax & Sunflower Breeding (USDA)  
R. G. Novy, Asst. Prof., Potato Breeding/Genetics  
M. D. Peel, Ext. Agronomist, Small Grain Production, Variety Selection  
G. J. Seiler, Adj. Prof., Sunflower & Sugarbeet Germplasm (USDA)  
R. C. Smith, Prof., Turfgrass Management  
J. R. Sowokinos, Adj. Prof., Potato Physiology (USDA)  
L. A. Spilde, Assoc. Prof., Seedstocks, Crop Production  
J. C. Suttle, Adj. Prof., Potato Physiology (USDA)  
A. A. Thostenson, Ext. Specialist, Pesticide Program  
D. A. Whited, Prof., Genetics Teaching  
N. D. Williams, Adj. Prof., Wheat, Rust Genetics (USDA)  
M. E. Zarnstorff, Adj. Prof., Small Grains and Row Crops Breeding  
R. K. Zollinger, Assoc. Prof., Weed Science-Applied Weed Control

**Professor Emeritus/Retired**

R. G. Askew, Prof. Emeritus, Ext.

Horticulture  
A. A. Boe, Prof. Emeritus, Vegetable Breeding/Tissue Culture  
J. F. Carter, Prof. Emeritus, Flax Promotion  
H. Z. Cross, Prof. Emeritus, Corn Breeding  
A. E. Foster, Prof. Emeritus, Barley Breeding  
N. Holland, Prof. Emeritus, Fruits, Woody Plants  
L. R. Joppa, Retired Adj. Prof., Res. Geneticist, Durum Genetics (USDA)  
E. P. Lana, Prof. Emeritus, Vegetable Crops  
H. R. Lund, Prof. Emeritus, Potato Breeding/Genetics  
J. D. Nalewaja, Prof. Emeritus, Weed Science  
D. C. Nelson, Prof. Emeritus, Potato Physiology  
G. A. Smith, Retired Adj. Prof., Sugarbeet Genetics (USDA)  
G. S. Smith, Prof. Emeritus, Wheat Brdg

**Research Associates/Postdocs**

M. Badaruddin, Forages  
N. Balbyshev, Potato Physiology  
M. Christoffers, Weed Science  
Y. Guo, Woody Plants, Biotechnology  
V. Nandula, Weed Science  
X. Xin, Durum Breeding

**Office Staff**

Sharon Ahrens, Admin. Sec. III  
Eileen Buringrud, Admin. Ass't. II  
Letha Cattanach, Acct. Tech. II  
Tammy Erdmann, Sec. II  
Iris Flatland, Admin. Sec. II  
Louise Heinz, Admin. Sec. III  
Jennifer Moe, Admin. Sec. II  
Mary Beth Odgaard, Admin. Sec. III  
Char Perrin, Admin. Sec. II

**Technicians/Res. Specialists**

Chad Anderson, HRSW  
 Robert Baumann, oat breeding  
 Michelle Berg, weed science  
 Gail Bresnahan, weed science  
 Kay Carlson, wheat cytogenetics  
 Larry Chaput, woody plants  
 Kathy Christianson, perennial  
 weeds  
 Mark Ciernia, weed control  
 Janet Davidson-Harrington, weed  
 science  
 Brenda Deckard, student services  
 officer  
 Steven Ellefson, barley breeding  
 Ann Erickson, potato breeding/  
 genetics  
 James Faller, HRS wheat breeding  
 Bryce Farnsworth, potato breeding  
 Scott Fitterer, weed science  
 Roger Genoch, barley breeding  
 Marci Green, barley breeding  
 Pete Gregoire, crop physiology  
 Darrin Hauf, dry bean breeding  
 Justin Hegstad, wheat germplasm  
 enhancement  
 Jeffrey Huckle, HRS wheat  
 breeding  
 Gerald Johnson, durum wheat  
 breeding  
 Daryl Klindworth, wheat genetics,  
 USDA  
 Abbas Lafta, potato physiology  
 Wayne Larson, potato physiology  
 Barb Laschkewitsch, vegetables &  
 Perennials  
 Gene Leach, hard spring wheat  
 Lyle Lindberg, flax breeding  
 John Luecke, sugarbeet weed  
 control  
 Josef Maianu, seedstocks  
 Sandra Mark, weed science  
 Larry Martin, soybean breeding  
 Wayne Norby, forage crop production  
 Jeremy Pederson, weed science  
 Paula Peterson, crop production  
 Dale Rehder, sunflower breeding, USDA  
 Ron Roach, weed control  
 Wayne Sargent, molecular biology  
 Galen Schroeder, foundation seedstocks  
 Mike Schwalbe, potato breeding  
 Stan Stancyk, durum breeding  
 Jody VanderWal, dry bean breeding  
 Duane Wanner, corn breeding  
 Theja Wijetunga, crop physiology

**Graduate Students, Fall, 1998**

Bergeson, Emilie	GRA
Bosela, Michael	GRA-DOE/EPSCOR
Bruniard, Jose	Self
Dai, Wenhao	GRA
Dale, Trevor	GRA
Garcia, Gioconda	GRA
Gelin, Jean	GRA
Gonzales, Jose Luis	Self
Gu, Weisong	GRA
Kalavacharla, V.	GRA
Lamb, Kenneth	GRA
Markle, Denise	GRA
Nelson, Jeff	GRA
Oltmans, Shannon	GRA
Otto, Carla	GRA
Ramsdale, Brad	GRF
Roehl, Joel	GRA
Rojas, Gonzalo	GRA
Rothe, Ines	GRA
Sagredo, Boris	GRA
Saha, Malay	Self
Sterling, John	GRA
Urrea, Carlos	GRA
Varberg, Jordan	Self
Vignaux, Nathalie	GRA
Vilaro, Diego	GRA
Wentz, Mary	GRA
Whited, Doug	GRA
Zhou, Jing Kai	GRA



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We're on the Web:  
<http://www.ndsu.nodak.edu/instruct/hammond/dept/>