



started this copy of the Blizzard Watch in late December so "Best Wishes for a Merry Christmas and a Happy New Year" from all of us in the Dept. of Plant Sciences. Somewhere after the first of January, my progress ground to a complete halt. It is now April Fool's Day, the first of April, so "Happy Easter." I had better get going or we will need to change the title of "Blizzard Watch" to "Spring Flood Watch." The end of December found us basking in temperatures in the high 20's and low 30's (above zero). We had

about two inches of snow on the ground here in Fargo and I would guess many parts of the state, except the North Central and northeastern part of the state, had no snow at all. This was the situation most of the winter. There was no snow on the ground most of March and we are having some really nice and generally warm days. This does not look good for soil moisture next year -unless things change. There, aren't you proud of me? I managed to complain about the weather, even when it is beautiful and relatively warm most of the winter. After over 30 years of living in North Dakota, I have finally arrived and am a true North Dakotan. I complain even when things are good. Speaking of weather, last summer was one of the strangest that I have ever seen. Much of the southwestern part of the state and, in fact, south of Interstate 94 and west of Mandan was extremely dry. In going to field days last summer at Hettinger, I saw many wheat fields that were about four inches high, headed out, and brown. The stands were very good, as there had been sufficient moisture to establish the crop. It just never rained after that. Grass fires were a common occurrence. In the northeastern part of the state, especially between Hillsboro and Grand Forks, a series of severe storms dumped 12 plus inches of rain in only a matter of hours and crops were lost to flooding. Throughout much of the state, however, crops were generally very good.

The year in review -

- Dapps HRSW released
- Woody plants released
- New faculty and staff
- Update on graduate students
- Departmental gifts & scholarships
- Awards to faculty, staff, students
- Other department highlights
- Greetings from Dr. Carter

Because of disease problems, the farm program, and crop prices, the acreage of different crops and the areas of their production continue to change dramatically. Eastern North Dakota in 2002 was primarily corn (1.2 M acres), soybeans (2.6 M acres), and dry edible beans (.75 M acres), along with sugarbeet and potatoes to a lesser degree. Hard red spring and durum wheat (8.8 M acres) and barley production has moved out

of the eastern part of the state toward the Montana border. Canola (1.3 M) and sunflower (1.3 M) acreage has remained stable. Barley acreage statewide has plummeted from 4.1 M acres ten years ago to 1.4 M acres in 2002 due to disease problems, but is projected to increase in 2003. Flax acreage has increased from about .2 M acres a few years ago to .75 M acres in 2002.

It was good to see and visit with those of you that attended the ASA meetings and the Blizzard Party in Indianapolis, Indiana. We had a total of seven faculty, three graduate students and nine undergraduates attend the meetings. The undergraduates stole the show as our NDSU team won the ASA quiz bowl, defeating Colorado State University. GO BISON! More information on this event is provided later. We had five faculty, one post doc, three research specialists, and two graduate students attend the North Central Weed Association meetings in St. Louis in December. The Western Weed Science Society meetings were held in Hawaii this year and four faculty and four graduate students attended -- even though North Dakota is in the North Central, not the Western region. Obviously, the interest must be due to the good papers presented. Same old thing with me . . . I go to all the field days and sometimes my faculty even turns me loose in Grand Forks. My life is complete.

For the first time in several

years, scab was not a real severe problem in any of the small grains. Alsen HRSW, which was released a couple of years ago, occupied 30% of the state's acreage last year. We still have not released a durum wheat or a barley variety with an adequate level of scab resistance, although we are making progress. This spring (2003) we released the HRSW "Dapps." The variety is named after Dr. Bert D'Appolonia, former chair of the Department of Cereal Science, who always was, and continues to be, a strong proponent of high quality spring wheat. Dapps is one of the highest quality lines we have ever released and has a protein content about 1.2 percentage points higher than most varieties currently grown. NDSU also coreleased "Sierra" chickpea in cooperation with the USDA, Washington State University, and the Universities of Idaho and California.

There were a number of woody plant introductions from Dr. Herman's program – Prairie StatesmanTM Swiss Stone Pine - *Pinus cembra* 'Herman'; Prairie DreamTM Paper Birch - *Betula papyrifera* 'Varen' (PPAF, collaborative release with Drs. Cheng and Dai); Prairie VisionTM Asian White Birch - *Betula platyphylla* 'VerDale' (collaborative release with Dr. Dai); Prairie HorizonTM Manchurian Alder - *Alnus hirsuta* 'Harbin'.

There has been major controversy about the university's in-

volvement in the development of Roundup resistant hard red spring wheat. A high percentage of North Dakota's HRSW is exported to foreign markets and there is resistance from some foreign buyers to purchase transgenic wheat. In addition, North Dakota has about 90,000 acres of organic production, much of it in wheat. Organic groups have been very vocal in their objections to the development of transgenic wheat. Their main concern is the possible contamination of non-transgenic seed sources. In speaking to producers at field days and at other events, I have found that a very significant percentage of the producers support the continuation of research on transgenic wheat. This year another company that is developing transgenic wheat and barley with scab resistance will have trials in North Dakota. There will be more support statewide for this trait as the disease has caused significant financial losses and major shifts in the areas of cereal crop production. The ND Agricultural Experiment Station has developed a protocol list concerning the criteria to be used in testing transgenic crops -- especially wheat. This has defused much of the criticism. The last legislature defeated a bill to create a moratorium on transgenic wheat research. This session there was a bill introduced to create a board, along with the regular variety release committee, to determine the timing of release of the first transgenic variety in a few years. This has been defeated. This fall and

winter, I spent about 10% of my time dealing with transgenic wheat issues.

Several new faculty have been hired. Dr. Joel Ransom joined us as Extension Agronomist in small grains and corn. Dr. Ransom, a graduate of the University of Minnesota, had worked overseas for CIMMYT for over 20 years in



Dr. Joel Ransom

Mexico, Kenya, and, most recently, Nepal. Dr. Ransom attended all of the NDSU summer field days, and then went back to Nepal. He returned to the United States and joined the department permanently in September.

Dr. Deying Li, a recent graduate of Iowa State University, joined us the end of July. Dr. Li heads our new Sports and Urban Turfgrass Management program. He has an 80% teaching/20% research appointment. This new



Dr. Deying Li

major has created a large amount of interest among the students and is expected to significantly increase undergraduate enrollment.

In August 2002, Dr. W. David Dai was hired in the area of woody plant genetics and physiology. Dr. Dai is a NDSU Ph.D. graduate, who had been working at Rutgers University. In addition to his research responsibilities, Dr. Dai will teach two horticulture classes.



Dr. David Dai

Our newest faculty is Dr. Joseph Zeleznik, a recent Michigan State University graduate. He joined us in September, 2002 as our Extension Forestry Specialist. He will also teach PLSC 219 - Introduction to Prairie and Community Forestry fall semester of odd numbered years.



Dr. Joseph Zeleznik

Dr. Steven Xu, a research geneticist at the USDA-ARS, Northern Crops Science Lab and a 1994

Ph.D. graduate of our department, is a new adjunct faculty member.



Dr. Steven Zu

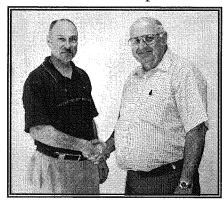
Dr. Paul Schwarz transferred from Cereal Science to Plant Sciences this year. Paul is known nationally and internationally for his research and expertise in barley malting. He has worked closely with our barley breeders for many years and is a welcome addition to our department.



Dr. Paul Schwarz

The department still has two vacant positions, one in potato genetics and one in dry bean breeding. Because of a hiring freeze, we are unable to recruit for either of these positions at this time. The potato genetics position has been vacant for just over a year. The dry bean breeding position became vacant July 1st when Dr. Ken Grafton, who had been our dry bean breeder for

over 20 years and Associate Graduate Dean on a part-time



basis, became the new Director of the ND Agricultural Experiment Station following a national search.

State budgets are in tough shape in a number of states. NDSU is currently looking at a budget reduction of about 5% this year. This is very mild compared to what we are hearing from many of the other universities in the U.S., where there is talk of reductions of 10 to over 20%. Minnesota has a \$4.6B shortfall, which is almost as large as all of North Dakota's budget. In addition, the new governor of Minnesota has pledged not to raise taxes. I wish him luck.

We have only one new office staff person since last year. The newest one in our group of hard-



Edie Nelson

working ladies is Edie Nelson, who lives in Rosholt, SD and commutes every day. She and her three daughters are planning to move to the Fargo area next summer. Edie will spend much of her time keeping the department's various web sites up to date and assisting Louise with the undergraduate students. Andrea Carlson is a work-study student in our department, who works with many of the secretaries and Ron Smith. That completes the entire office crew. We have fewer office staff per faculty member than most of the other departments so we are very fortunate to have the high caliber of office staff that we have.

Each year I take them on a one-day tour in North Dakota or Minnesota. Previous visits have been to the potato processing plant at Jamestown, the potato research lab at East Grand Forks, and the Ekre Ranch (a few miles south of Kindred). The ranch belongs to NDSU and Dr. Lym conducts some of his leafy spurge control research at the ranch. Other visits have been to a nursery in Detroit Lakes and



(back) Eileen Buringrud, Michelle Blaskowski, Robin Aanstad, Louise Heinz, (front) Melissa Welter, Mary Beth Odegaard, Char Perrin, Tammy Erdmann, Lisa Johnson, Al Schneiter

the Anheuser-Busch malting plant in Moorhead. This year we visited an organic farm near Park Rapids, Minnesota and then had lunch in Park Rapids. It is a day I look forward to each year and I hope shows the ladies in the office how much the rest of the faculty, staff, students, and I appreciate them.

New employees include Martin Hochhalter from Ashley, ND, who joined Dr. Horsley's sixrow barley breeding project. Martin replaced Jeremy Peterson, who left NDSU for Nebraska. Fortunately for us, Jeremy returned to North Dakota and NDSU after six months, where he was hired in Dr. Elias's durum breeding project as a replacement for Jerry Johnson -who retired after 33 years of service with the department. Erik Doehler from Perth, ND works with Dr. Faris, a graduate of our department and now an adjunct faculty member with the USDA/ ARS unit in Fargo. David Hanson from Adrian, ND works with Dr. Helms in soybean breeding, while Sam Lockhart, a M.S. graduate in PLSC this past summer, works with Dr. Messersmith in weed control research. Robert Nudell from Buffalo, ND replaced Wayne Norby, who retired as the forages technician. John Barr, James Gillespie, Debra Hatzenbeller and Heather McNamara, chemists who work with Paul Schwarz, also joined our department. Other hires are Mary Wentz, a M.S. graduate in Plant Sciences, who now works in Dr. Kianian's germplasm enhancement project, and last but not least, John Gulleson, originally from Rutland, ND, who joined Dr. Mergoum in the HRSW breeding project. Mary replaced Sara Kleven, who decided to stay home to care for her and her husband's newborn son. John replaced Chad Anderson, who is nearing completion of his M.S. degree and accepted a position as director of the seed increase program at the North Central Research Extension Center at Minot.

Resignations include Bill Hodous, who is now the extension agent in Ransom County; Dan Mullan, a visiting scientist from Australia who returned home -- as did Dr. Edward Szealezniak and Dr. Zenon Woznica, visiting scientists from Poland. Michael Schwalbe resigned his position in the potato breeding project to take a position at MeritCare Hospital. Arla Malmedal, who worked with the extension pesticide program, moved to Shoreview, MN when her husband was accepted into the Veterinary Medicine program at the University of Minnesota. Dr. Venugopal Kalavacharla, a graduate of NDSU and former post doc in the germplasm enhancement project, accepted a position with Delaware Biotech Institute in Newark, DE. Dr. Muthusamy Manoharan, a post doc with the USDA barley genetics project, resigned to take a position as Assistant Professor at the University of Arkansas, Pine Bluff. Darrin Hauf, who worked in Dr. Grafton's dry edi-







Martin Hochhalter

Jeremy Pederson

Erik Doehler







David Hanson

Sam Lockhart

Robert Nudell







John Barr

James Gillespie

Debra Hatzenbeller







Heather McNamara

Mary Wentz

John Gulleson

ble bean breeding project, is completing his M.S. and has accepted a position with Pioneer in Johnstown, IA. His wife, Shannon (Oltmans) Hauf, received a Ph.D. with Dr. Richard Zollinger in weed science and works for Monsanto in Iowa.

In addition to Shannon at last

fall semester's graduation, we graduated 14 undergraduates in CWS, four in Horticulture, five M.S. and three Ph.D. students. We are very proud of them all. The Ph.D. graduates and their advisors are Dr. Ines Rothe with Dr. Dexter; Jean Robert Gelin with Dr. Elias and Malay Saha with Dr. Lorenzen -- both have

submitted their theses to the Graduate School. Ines works for Beta Seed in Germany; Robert is a post doc in charge of our dry edible bean breeding program, while Malay is employed at the Noble Foundation in Ardmore, OK. Gioconda Garcia (Dr. Horsley) and Mike Bosela (Dr. Cheng) finished their Ph.D. degrees this past spring & summer respectively. Gioconda is a post doc at The Ohio State University and Mike is a post doc at the USDA Forest Service Hardwood Tree Imp. and Regeneration Center, Purdue University.

Other new post docs in the department are Dr. Gonzalo Rojas-Cifuentes in the dry edible bean breeding project; Dr. Huangjun Lu, who works with Dr. Faris in wheat genetics; and Dr. Valluri Satyavathi, who works with Dr. Jauhar.

Two visiting scientists have recently joined us – Wesam Abu Hammad from Jordan, who is



Jean Robert Gelin



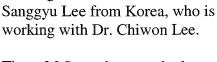
Dr. Valluri Satyavathi



Dr. Gonzalo Rojas-Cifuentes



Wesam Abu Hammad



working with Dr. Elias, and Dr.

Those M.S. graduates, who have finished their degrees this past year, their advisors, and their present positions are: David Boehm (Dr. Berzonsky) with Agripro Wheat in West Fargo; John Davies (Dr. Berzonsky), a doctoral candidate with Dr. Berzonsky; Shana (Forster) Pederson (Dr. Grafton), working with Dr. Neil Gudmestad in the Dept. of Plant Pathology; Sarah Gehlhar (Dr. Kianian), a doctoral candidate at Oregon State University; Sam Lockhart (Dr. Howatt), a research specialist with Dr. Messersmith; Ryan Moeller (Dr. Meyer), an agronomist with Agriliance in Morris, MN; Eric Nelson (Dr. Kegode), a doctoral candidate at Michigan State University; Jeremy Pederson (Dr. Horsley), a research specialist with Dr. Elias in our department; Chad Ringdahl (Dr. Messersmith), with Pioneer Hi-



Dr. Huangjun Lu



Dr. Sanggyu Lee

Bred Int'l in Moorhead, MN; and Todd Wehking (Dr. Howatt), a crop analyst with Cargill in Minnetonka, MN.

New Ph.D. graduate students include Rongshuang Lin from China (Dr. Horsley), Kiran Oberoi from India (Dr. Kianian), and Vijaya Varanasi from India (Dr. Thompson). Also, new Cereal Science Ph.D. graduate students who joined our department with Dr. Paul Schwarz are Mark Hatzenbeller from Fargo, Genaro Odron from the Phillipines, and Paul Sadosky from Atlanta, GA.

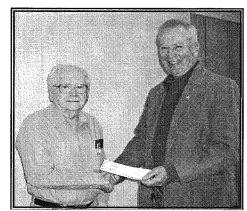
New M.S. students are Juan Caffarel from Uruguay (Dr. Franckowiak); Eric Dvorak from Warren, MN (Dr. Howatt); Chris Johnson from West Fargo (Dr. Dai); Ruth Lewis - Natural Resource Management from Soldotna, AK (Dr. Lym); Sudeep Mathew from India (Dr. Hatterman-Valenti); Brian Otteson (part time) from Portland, ND (Dr. Mergoum); Jamie Rust from Sawyer, ND (Dr. Kianian); Angela Sebelius from Overly, ND (Dr. McMullen); Snigdharani Dash from India (Dr. Johnson) and William Werk from Herman, MN (Dr. Helms).

The department offers B.S. degrees in Crop and Weed Sciences, Horticulture, and Sports and Urban Turfgrass Management (SUTM). Enrollment in horticulture, which draws from a more urban clientele, has been stable at around 50. We expect the new SUTM major may at-

tract many new students. Undergraduate enrollment in CWS has declined from 110 undergraduates in 1999 to 63 this year. Unless something is done, I expect enrollment to plummet the next few years. The projected drop of high school graduates in North Dakota, from 2002-2003 to 2011-2012 is -20%. Statewide, only three to four counties have shown an increase in population -- all of them in urban growth. The rural populations continue to decline dramatically. A -20% drop in high school graduates statewide translates to probably a -50% or more drop in the rural areas where CWS students historically have originated. I have appointed a committee to address the problem and try to come up with ways to make crop agriculture more appealing to students. Any suggestions from any of you would be greatly appreciated.

Sadly, six-month-old Robert (Bobby) Christoffers, son of Mike and Collette Christoffers passed away on June 6, 2002 at Children's Hospital of Minneapolis. Also, Robert Heintz, Professor Emeritus, formerly extension forester at NDSU from 1967-1987, passed away on September 14th. I am also very saddened to report the death of Ying Lu, wife of Dr. Xiwen Cai, an assistant professor in our department, on September 16th. She is also survived by their 14-yearold daughter. Roland Timian, a USDA/ARS barley researcher who had worked with many of the barley researchers in our department, passed away on August 14th.

The department received a number of gifts this year. The Anheuser-Busch Foundation contributed \$40,000 to the J. F. Carter Endowment. The purpose of this endowment is to provide or enhance salary, benefits, research and teaching expenses of a selected individual whose position is primarily dedicated to research in plant sciences, crop rotation, and other research in sustainable agriculture designed to improve farming practices and techniques in North Dakota. The department is making one



Dr. Carter and Dr. Lund with check from Anheuser Busch Foundation to Carter Endowment.

final effort to collect funds to support the J. F. Carter Endowment. More information about the endowment is included in the Blizzard Watch in the form of a letter from Dr. Lund.

In other gifts, the two-row barley project received a used plot combine from Busch Agriculture. In addition, the six-row barley breeding project received funding for a Ph.D. assistantship from Busch Ag. The assistant-

ship is named after Dr. Mel Anderson, President of Busch Ag. Mel is a graduate and former faculty member in our department. In addition, Dr. Carena was the recipient of a corn breeding fellowship from Pioneer International. The fellowship is \$25,000 per year and can be used to fund a graduate student assistantship, plus provide operating funds to support the student. Dr. Mergoum's HRSW breeding program became the benefactor of \$50,000 from the Burlington Northern/ Santa Fe Endowment. The money, provided over a five year period, will be used to supplement operating costs. The department received an \$85,000 gift for undergraduate scholarships from George Meagher. The interest earned from the gift will be used to support students in plant breeding, genetics and crop production. This will result in a significant increase in scholarships provided each year. Because of the current economy, the dollar value of many of the endowments has been reduced. The department is trying to find funds to supplement the scholarships to their historic level.

One of our former students, Dr. Ian Edwards, will receive an honorary degree from NDSU at commencement this spring. Dr. Glenn Smith, who served as HRSW breeder prior to Dr. Frohberg, was inducted into the ND Agriculture Hall of Fame at the ND Winter Show. He joins Drs. Carter and Lund in the Hall of Fame.

Speaking of scholarships, 2002-2003 recipients were as follows: (hometowns are in ND, unless otherwise noted)

Horticulture Curriculum: Harry C. Baker Memorial Scholarship, \$200: Stephanie Koudela from Fargo; Harry A. **Graves Memorial Scholarship**, \$250: Gayle Ferber from Northwood; Margaret Haedt Memorial Scholarship, \$230: Jeri Dykshoorn from Mandan; Horticulture and Forestry Club Scholarship, \$300: Tom Lee from Fargo; Hovland-Jensen Scholarship Fund, \$450: Kari Wanner from Hebron: Ruth M. Johnson Scholarship, \$325: Colleen Rasmussen from Lakefield, MN; Mainline Potato Company, \$175: Aaron Siek from Jamestown; North Dakota **State Horticultural Society** Scholarship, \$500: Melody Webster from Beulah; Henry R. & Corinne Foley Peterson Hort. Scholarship, \$760: Carrie Schumacher from Reynolds; H. Donald Piepkorn Scholarship, \$500: Joshua Peterson from Lakota: Earl Scholz Scholarship, \$125: Cory Fladeboe from Willmar, MN; A.D. Stoesz Memorial Scholarship, \$590: Marnie Aasheim from Enderlin; W. Allan and H. Lucile Watt Scholarship, \$325: Angela Carlson from Lisbon.

CWS Curriculum:

Arthur Companies/Joe Burgum, \$500: Ryan Johnson from Hatton; John Breker Crop Science Scholarship, \$310: Eric Delahoyde from Cogswell; CHS (Cenex Harvest States) Coop.

Found. Scholarship, \$500 each: Kristin Johnson from Kenmare and Ben Sand from Rosholt, SD: James R. Dawson Scholarship, \$500: Jim Loken from Grafton: Irvin T. Dietrich Scholarship (NDAA), \$500: Jared Nitschke from Jud: Russell and Anna **Duncan Foundation Scholar**ship, \$540 each: Matthew Kramlich from Tappen, Bryan Kenner from Maddock, and Kelly Benson from Arvilla: Ernie French CWS Scholarship, \$500: Kristie Clark from Minot; Lars A. Jensen Scholarship (NDCISA), \$1000: Jamie Kloster from Buxton; Donald Kenna Scholarship (NDAA), \$500: Brian Michels from Mohall: H.R. Lund Freshman PLSC Scholarship, \$500: Adam Larson from Willow City; Monsanto Ag. Products Co. Scholarship, \$500: Seth Fore from Mentor, MN; Glenn A. **Peterson Memorial Scholar**ship, \$700 each: Aaron Carlson from Milaca, MN and Evan Kolstoe from Ridgecrest, CA; **Chuck Rongen Scholarship** (NDAA), \$500 each: Allen Pfennig from Driscoll and Eric Braaflat from Plaza; Harry and Lillie Seidel Agriculture Scholarship, \$1,000: Heather (Davidson) Feiring from Tioga; Theodore E. & Marguerite R. Stoa Freshman Scholarship, \$420: Scott Weinlaeder from Drayton.

Graduate Students:

Mark & Mary Andrews Graduate Scholarship (College of Ag), \$600: Angela Waletzko from Harvey; H. L. Bolley

Graduate Scholarship, \$1,275: Kirk Hartel from Watford City; **BASF Graduate Student** Scholarship, \$500: Shannon Oltmans from Sherburn, MN; John H. Longwell, Jr. Memorial Scholarship, \$400: Guotai Yu from PR China; Devin Miller Memorial Scholarship, \$400: Nadejda Krasheninnik from Russia; Eric Matthew Miller Memorial Scholarship, \$1,000: Ann Erickson from Hitterdal, MN; John D. Nalewaja **Graduate Scholarship**, \$500: Mathew Carlson from Cleveland; Smith Fellowship for Foreign Graduate Students, \$690: Guillermo Van Becelaere from Argentina.

Scholarship Luncheon Photos



Mary Ann French, Kristie Clark, and Dr. Schneiter



Dr. H. R. and Janet Lund and Adam Larson



Dr. Glenn Smith and Guillermo Van Becelaere

Attending these award ceremonies is always one of the highlights of the year for me. I was the recipient of a scholarship at Montana State while an undergraduate and it turned my life around. I have paid back this scholarship many times and each year I tell the recipients that I expect them to do the same. How many of you who received scholarships are repaying that gift to either NDSU or another university? Students can always use the money and the good ones should be rewarded.

We are continuing with our intern program, which has been quite successful. Our interns and their advisors last year were: Kelly Benson from Arvilla, ND (Dr. Thompson); Lisa Dahl from Sabin, MN (Dr. Mergoum); Meelad Dawlaty - Concordia student from Afghanistan (Dr. Kianian); Kristin Johnson from Kenmare, ND (Dr. Howatt); Matthew Kramlich from Tappen, ND (Dr. Meyer); Lesley Lubenow - Concordia student from Morris, MN (Dr. Johnson); Anojinie Nagahawatte - Minnesota State University-Moorhead student from Sri Lanka (Dr. Berzonsky); Allen Pfennig from Driscoll, ND (Dr. Zollinger); Carrie Schumacher from Reynolds, ND (Dr. Hatterman-Valenti); and Megan Townsend from Andover, MN (Dr. Christoffers).

We continue to have plenty of applicants for our M.S. degree but are really struggling to find Ph.D. students. We continue to

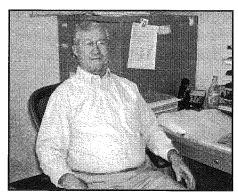
receive pressure from higher administration to train more Ph.D. graduates. The interest among prospective candidates continues to decrease. Almost all of the land grant universities are struggling with this same issue. We occasionally bring in Ph.D. students, in whom we're interested and know have applied at other universities. We have had some successes and some failures. We recently brought in a very fine potential Ph.D. student for a visit, but she chose Michigan State.

You could really give us a hand. If any of you know any students interested in graduate school – either M.S. or Ph.D., **please** ask them to contact me.



Our faculty, staff and students continue to receive a number of awards -- here on campus, statewide, and nationally. Many of them are listed below; however, there may be some we have missed and we apologize for those oversights.

Dr. Alan Dexter received the Honorary Membership Award from the American Society of Sugar Beet Technologists. The award is presented to an individual for outstanding service to the beet sugar industry or has contributed significant scientific accomplishments.



Dr. Alan Dexter

Dr. Kirk Howatt was selected as a fellow of the Faculty Institute for Excellence in Learning (FIEL) in April, 2002. He also was elected to the Board of Directors of the North Central Weed Science Society as North Dakota's representative at their annual regional society meeting.

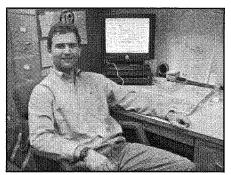
Dr. Chiwon Lee was honored as founder and retiring president of the Northern Plains Botanic Garden Society at a social and brunch on May 5, 2002.

Dr. Harlene Hatterman-Valenti was confirmed by the University Senate on May 6th as the NDSU representative on the Council of College Faculties for a three-year term.

Dr. Frohberg was granted Professor Emeritus status effective July 1, 2002.

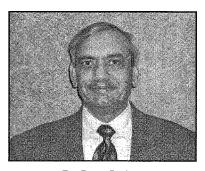
Dr. Richard Horsley and Dr. Chiwon Lee were promoted to full Professors this past summer.

Dr. Richard Zollinger received the 2002 IR-4 Meritorious Award in October at the IR-4 annual meeting in Washington, DC.



Dr. Rich Zollinger

Dr. Prem Jauhar, research geneticist with USDA-ARS and an adjunct faculty member in our department, was elected a fellow of the American Association for the Advancement of Science.



Dr. Prem Jauhar

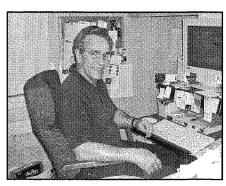
The 2002 Agriculture Faculty/ Staff Awards Ceremony was held February 27, 2003. Of the 35 nominations, nine were from the Dept. of Plant Sciences, and three from our department were award recipients. Dr. Bill Berzonsky received the Larson/ Yaggie Excellence in Research Award, Early Career; Andrew Thostenson received the Myron and Muriel Johnsrud Excellence in Extension Award, Early Career; and Dr. Ron Smith received the AGSCO Excellence in Extension Award, Senior Career.



Dr. Bill Berzonsky



Andrew Thostenson



Dr. Ron Smith

At the 2003 NDSU Extension Spring Conference, the Pesticide Training and Certification Program received a Program Excellence Award - Large Team. Team members include Andrew Thostenson, Mary Beth Odegaard, Tammy Erdmann, Osman Keric, Jackie Erovick, Mark Schickendanz, Dustin Olmschenk, and Jerry Thompson.



Andrew Thostenson, Mary Beth Odegaard, Tammy Erdmann & Jackie Erovick

A paper, "Effect of Arabinoxylans, Beta-Glucans, and Dextrins on the Viscosity and Membrane Filterability of a Beer Model Solution" by graduate student Paul Sadosky, Dr. Richard Horsley, and Dr. Paul Schwarz won the Eric Kneen Award. This award is presented annually by the American Society of Brewing Chemists (ASBC) for the "best" paper published in their journal.

At the annual College of Agriculture, Food Systems and Natural Resources faculty meeting, Dr. Shahryar Kianian was elected to the University Senate Faculty Development Committee and Dr. Rich Horsley and Dr. Alan Dexter were elected to the College PTE committee.

Ken Deibert, graduate student of Dr. Lym, took 1st place in the paper contest at the Western Society of Weed Science meeting held March, 2002 at Salt Lake City, Utah. Laurie Janzen took 2nd place in the paper presentation and Eric Dyorak took 2nd

place in the poster presentation student contest at the Western Society of Weed Science meeting held March, 2003 in Kauai, Hawaii.



Laurie Janzen and Eric Dvorak

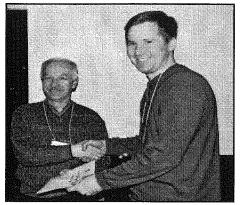
This year the department's recipient of the Gerald Mott Meritorious Graduate Student Award from the Crop Science Society

of America is John Davies, formerly a M.S. student and now a Ph.D. student work-



ing with Dr. Berzonsky's wheat breeding program. John is from Perth, Australia.

The 19th Annual Plant Sciences Graduate Student Symposium was held March 14 & 15, 2003 at the University of Manitoba. Seventeen PLSC graduate students attended with nine* giving oral presentations -- Clarissa Carvalho*, Lisa Bergh*, Suresh Bhamidimarri*, Juan Caffarel*, John Davies, Bryan Gebhard*, Nadejda Krasheninnik*, Ken Lamb*, Sudeep Mathew, Marcelo Melani, Brian Otteson, Ines Rothe, Angela Sebelius, Guillermo Van Becelaere, Ju Wang*, Xin Xu, and Guotai Yu*. Bryan Gebhard was runner-up in the Plant Breeding & Genetics competition.

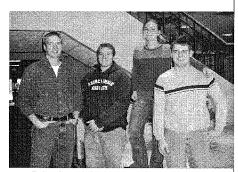


Bryan Gebhard receiving award

The 2002 North Central Collegiate Weed Science Competition was held at the Dow Agrosciences Midwest Research Center near Fowler, Indiana (near West Lafayette) on July 17-18. The contest consists of four skill sections: sprayer calibration, weed identification, herbicide symptomology identification, and resolution of grower situations. Brian Michels, Kristie Clark, John Christianson, and Jay Hansen represented NDSU as an undergraduate team. Sixteen teams participated in the 2002 competition, five of them were undergraduate teams. Brian, Kristie, John, and Jay did very well placing third in the undergraduate competition and finishing very close to the second place team.

In November, 2002, the NDSU Agronomy Club sent nine mem-

bers to the ASA-SAS meetings in Indianapolis, IN. Two club members are new national committee chairs for the Student Activities Subdivision of ASA – Adam Flaagan from Tolna, ND is Chair of the Visual Presentation Contest Committee and Melissa Jorgenson from Henning, MN is Chair of the Speech Contest Committee. As mentioned earlier, a team of undergraduates - Adam Flaagan, John Samdahl from Park River, ND, Ryan Johnson from Hatton, ND, and Angela Kazmierczak from Stephen, MN won the Quiz Bowl defeating Colorado State for the championship. Brian Michels from Mohall, ND took 1st place in the undergraduate poster competition with his presentation on the control of volunteer canola and testing for multiple herbicide resistance.



John Samdahl, Adam Flaagan, Angela Kazmierczak, and Ryan Johnson

Brian Michels was chosen as the outstanding senior from our de-



partment for the 2003 National Agronomy Student Recognition Program sponsored by the American Society of Agronomy.

Heather (Davidson) Feiring, a senior CWS student from Tioga, ND, was selected by the ND Javcees as the Outstanding Young Farmer for 2003. She will have



an opportunity to represent ND in the national competition in Austin. TX in

February, 2004 if she is selected as one of the top 25 state winners.

A recognition coffee was held on April 18, 2002 to honor the following employees for their years of service: Ann Erickson, Chad Anderson, Darrin Hauf, Marci Green, and Sandra Mark—5 years; Abbas Lafta and Mike Schwalbe—10 years; Mark Ciernia—15 years; Duane Wanner— 25 years; Lyle Lindberg—35 years. Eileen Buringrud and Duane Wanner were inducted into the Quarter Century Club.

Among the departmental "food" events held this past year were a graduate recognition coffee, an ethnic potluck, and a dessertfest. Our winter social was held at the Avalon Center in December with Dr. Ron Smith as MC. Dwain Meyer won the "Bison Chip Award" this year. Also, this past January, a chili feed was held with 14 different chili recipes to taste, along with several different desserts. Eightyeight people attended and enjoyed! This event is annually organized by Pete Gregoire, Janet Davidson-Harrington, Kathy Christianson, Brenda Deckard, and Larry Chaput.

So, as you can see, there have been a lot of things happening in

the department. We are now the largest department on campus and, I have been told, larger than some colleges. That is okay. The world can never have enough horticulturists and agronomists. Please keep us posted with information that might be of interest. We would also appreciate any comments regarding the Blizzard Watch. My e-mail address is albert. schneiter@ndsu.nodak.edu. Our fax number is 701 231 8474 and our office number is 701 231 7971. Our web site is: http:// www.ag.ndsu.nodak.edu/ plantsci/.

Have a great summer (or winter if you are south of the equator).

Al Schneiter Professor and Chair Louise Heinz Administrative Secretary



(back) Mark Ciernia, Lyle Lindberg, Darrin Hauf

(front) Mike Schwalbe, , Annie Erickson, Marci Green, Duane Wanner







Abbas Lafta, Sandra Mark, Chad Anderson

We're on the web: http://www.ag.ndsu.nodak.edu/plantsci/

Jack's Corner



Dr. Jack & Imogene Carter

First, thank you for the holiday messages that came from you to the department or to us personally, and other messages via e-mail coming mostly to Mrs. Carter at imysm@aol.com. We appreciate them very much and wish to "keep track" – please tell us more about wourself and your families. Send pictures, even if you may have aged since we last met – we all do! I passed 83 years last October 2002! Imogene is not far behind, passed 39 for sure!! And we will have our 62nd wedding anniversary October 19, 2003. Some of you donated to the Jack Carter Endowed Professorship fund, too, and thanks, or if not, it's not too late to give. Send to the NDSU Development Foundation, 1241 North University Drive, Fargo, ND 58105.

My health problem reported last year fortunately seems quite stable, no better or worse so far. However, it seems that one of us has a clinic visit every week or two for routine or other reasons. I feel good and continue usual activities at home or NDSU most days and outdoors in growing season. Imogene continues

to be troubled by an imbalance problem that is not treatable. She had a knee replacement in September of 2002 and is doing very well after the first 2 months of "recovery". Our five children and families continue to live and work as in past years -- some of you know them. Our oldest grandson was married in 2002 and we expect to be great-grandparents in June, 2003.

We enjoyed an unusual activity that occurred on campus in August, 2002. The NDSU Alumni Association organized a reunion of World War II veterans, NDSU graduates and staff. So we saw many retired faculty and many NDSU graduate veterans who were in my first classes at NDSU in the 1950's.

I'm still President of the Flax Institute and the last two-day program was March 21-23, 2002 at Fargo -- the 59th Flax Institute, with 30 papers and 98 attending from 13 states, five Canadian provinces, three from Poland, two from P.R. China, two from Belgium, and one each from Netherlands and Sweden. The 60th Flax Institute is scheduled March 17-19, 2004, at Fargo. You are invited!

I also serve as a "flax consultant" to the North Dakota Oilseed Council and supervise the research that they fund. Flaxseed provides healthful omega 3 fatty acid, lots of dietary fiber and anticarcinogenic lignans in human nutrition, and for other animals. I recommend your eating 30 grams of ground flax per day in orange juice, baked foods, or whatever. Flaxseed has been consumed for hundreds of years by people in the countries of some former international students.

Mostly at home I have been doing more cooking than formerly, some maintenance, gardening, and fishing. I grafted 7 apple trees to multi-variety trees to sell at Bidder's Bowl, and for special friends, and attended Bidder's Bowl (raises funds for NDSU Development Foundation) in October. Also, we attend home games of Bison football and basketball, especially the lady basketball Bison and occasionally a baseball game of Fargo-Moorhead Redhawks professional team.

In retrospect, many of you have influenced our work and lives favorably, and we yours, we hope. We are unlikely to attend future Agronomy meetings and the Blizzard Party so please stop to see us as you pass this way, or write or e-mail, and best wishes for a HAPPY and HEALTHFUL 2003.

Dr. and Mrs. Carter (personal e-mail is imysm@aol.com)

(NDSU e-mail is lisa.johnson@ndsu.nodak.edu)

W 4 67	
Plant Sciences Fa	•
Schneiter, A. A.	Prof. & Chair (crop production)
Berglund, D. R.	Prof. (ext. agr., row crops, specialty crops)
Berzonsky, W. A.	
Cai, X.	Asst. Prof (wheat genetics)
Carena, M. J.	Asst. Prof. (corn breeding and genetics)
	Asst. Prof. (weed science/genetics teaching)
Dai, W. D.	Asst. Prof (woody plant phys./biotech.)
Deckard, E.L.	Prof. (crop physiology)
Dexter, A. G.	Prof. (ext. weed phys., sugarbeets)
Elias, E. M.	Assoc.Prof. (durum wheat breeding)
	Prof. (2-row barley breeding, genetics)
Hammond, J. J.	Prof. (flax/crambe brdg, computer prog.)
Hatterman-Valenti, H.	Asst. Prof., (high value crop production)
Helms, T. C.	Assoc. Prof. (soybean breeding, genetics)
Herman, D. E.	Prof. (woody plants, ornamentals)
Horsley, R. D.	Prof. (6-row barley brdg, genetics)
Howatt, K. A.	Asst. Prof. (weed science-annual weeds)
Johnson, B. L.	Asst. Prof. (sunflower, minor, new crop prod.)
Kegode, G. O.	Asst. Prof. (weed biology & ecology)
Kianian, S. F.	Asst. Prof. (HRS, durum wheat germ. enhanc.)
Lee, C. W.	Prof. (ornamentals, turf/biotech.)
Li, D. M.	Asst. Prof. (sports turf management)
Lym, R. G.	Prof. (perennial weed control)
McClean, P. E.	Prof. (dry bean genetics, biotechnology)
McMullen, M. S.	Assoc. Prof. (oat breeding and genetics)
Mergoum, M.	Assoc. Prof. (HRSW breeding)
Messersmith, C. G.	Prof. (weed science, physiology)
Meyer, D. W.	Prof. (forage prod. and physiology)
Ransom, J. K.	Assoc. Prof. (ext. agronomist, small grains)
Schwarz, P. B.	Assoc. Prof. (barley quality)
Smith, R. C.	Prof. (extension horticulture/turfgrass)
Thompson, A. L.	Asst. Prof. (potato breeding)
Thostenson, A.	Ext. Spec. (pesticide program spec.)
Williams, M. D.	Seedstocks Director
Zeleznik, J. D.	Ext. Forester (urban/rural forestry)
Zollinger, R.K.	Assoc. Prof. (extension weed control)

AGRICL PROFESSORS	Ad	iunct	Professor:	5
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Anderson, J. V.	USDA (plant biochemistry)
Campbell, L. G.	USDA (sugarbeet genetics)
Carr, P. M.	Dickinson Res/Ext Center (sustainable ag.
Chao, W. S.	USDA (molecular biology/weeds)
Dahleen, L. S.	USDA (barley genetics, biotechnology)
Faris, J. D.	USDA (wheat molecular genetics)
Foley, M. E.	USDA (weed biology)
Henson, R. A.	Carrington Res/Ext. Center (crop prod.)
Horvath, D. P.	USDA (perennial weed physiology)
Jan, C. C.	USDA (sunflower cytogenetics)
Jauhar, P. P.	USDA (wheat cytogenetics)
Klotz, K. L.	USDA (sugarbeet physiology)
Lulai, E. C.	USDA (potato physiology)
Miller, J. F.	USDA (flax and sunflower genetics)
Seiler, G. J.	USDA (sunflower/sugarbeet germplasm)
Sowokinos, J. R.	USDA (potato physiology)
Suttle, J. C.	USDA (potato physiology)
Xu, Steven	USDA (wheat genetics)

Professor Emeritus/Retired

A LOLDONOL LDLL	THE TOWNS IN COUNTY OF THE TOWN
Askew, R. G.	Prof. Emeritus (extension horticulture)
Boe, A. A.	Prof. Emeritus (veg. brdg/tissue culture)
Carter, J. F.	Prof. Emeritus (flax utilization)
Cross, H. Z.	Prof. Emeritus (corn genetics, breeding)
Duysen, M. E	.Prof. Emeritus (cellular regulation)
Foster, A. E.	Prof. Emeritus (barley brdg., biometrics)
Frohberg, R. C	C. Prof. Emeritus (HRSW breeding, genetics)
Galitz, D.S.	Retired Prof. (physiology)
Holland, N.	Prof. Emeritus (fruits, woody plants)
Joppa, L.R.	Retired Adj. Prof., USDA (res. gen., durum)
Lund, H. R.	Prof. Emeritus (potato brdg./genetics)
Maan, S. S.	Prof. Emeritus (wheat gen., cytogenetics)
Nalewaja, J. D.	Prof. Emeritus (weed sci., physiology)
Nelson, D. C.	Prof. Emeritus (potato physiology)
Smith, G.A.	Retired Adj. Prof., USDA (sugarbeet gen.)
Smith, G. S.	Prof. Emeritus (wheat breeding)
Spilde, L. A.	Prof. Emeritus (seedstocks director)
Whited, D. A.	Prof. Emeritus (genetics teaching)

Postdoc. Research Fellow/Visiting Scientists

	Project leader, Country, Area of research
Abu Hamad,W.	. Elias (Jordan - durum wheat research)
Gelin, J.R.	Grafton (dry bean breeding/genetics)
Gonzalez, J.	Kianian (Spain - scab resistance/spr wht)
Gu, X.	Foley (PRC - weed biology)
Hossain, K.	Kianian (Bangladesh -wheat genomics)
Lee, S.	Lee (Korea - plant physiology & veg.)
Lu, H.	Faris (China - wheat genetics)
Nadella, D.	Foley (India - weed biology)
Nandula, V.	Messersmith (India - weed physiology)
Niu, Z. X.	Elias (China - durum breeding)
Ramsdale, B.	Messersmith (herbicide applic. tech.)
Rojas, G.	Grafton (dry bean breeding/genetics)
Satyavathi, V.	Jauhar (wheat genetics)
Workineth, M.	Messersmith (Ethiopia - weed mol. bio.)

Research Specialists/Technicians/Chemists

Barr, John	(barley quality)
Baumann, Robert	(oat breeding)
Bellon, Mike	(seed processing)
Birdsall, David	(wheat breeding/USDA)
Bresnahan, Gail	(weed science)
Carlson, Kay	(wheat cytogenetics)
Chaput, Larry	(woody plants)
Christianson, Katheryn	(perennial weeds)
Ciernia, Mark	(weed control)
Davidson-Harrington, Janet	(weed science)
Deckard, Brenda	(student services director)
Doehler, Erik	(wheat molecular genetics/USDA)
Erickson, Ann	(potato breeding/genetics)
Faller, James	(HRS wheat breeding)
Faller, Jason	(barley breeding)
Farnsworth, Bryce	(potato breeding)
Friederichs, Steve	(high value crops)
Genoch, Roger	(barley breeding)

BLIZZARD WATCH

Research Specialists/Technicians/Chemists continued Gillespie, James (mycotoxin research)

Green, Marci Gregoire, Pete Gulleson, John

(crop physiology) Hanson, David (soybean breeding) Hatzenbeller, Debra (mycotoxin research)

Hegstad, Justin Hochhalter, Martin

Jacques, Victoria Kercher, Kreg Kimberlin, Cheryl Klindworth, Daryl Lafta, Abbas

Laschkewitsch, Barb Leach, Gene

Lee, Rian Lindberg, Lyle Lockhart, Sam

Luecke, John Maianu, Josef

Mark, Sandra Martin, Larry Mayland, Paul McArthur, Rachel (barley breeding) (HRS wheat breeding)

(wheat germplasm enhancement)

(barley breeding)

(woody plants biotechnology) (durum wheat breeding) (plant physiology/USDA) (wheat genetics/USDA) (potato physiology) (herbaceous ornamentals)

(hard spring wheat)

(dry bean genetics/biotechnology)

(flax breeding) (weed science)

(sugarbeet weed control)

(seedstocks) (weed science) (soybean breeding) (high value crop prod) (barley gen./biotech/USDA) McNamara, Heather Meyer, Scott

Nudell, Robert Pederson, Jeremy Pederson, Shauna

Petersen, Paula Rehder, Dale Ries, Jerry

Roach, Ron Sebesta, Steve Stancyk, Stan VanderWal, Jody

Wanner, Duane Wentz, Mary

Wijetunga, Theja Zhou, Zingkai

Office Staff Aanstad, Robin Blaskowski, Michelle

Buringrud, Eileen Erdmann, Tammy

Heinz, Louise

(barley quality) (ext. small grains) (forage crop production) durum breeding)

(weed science) (crop production) (sunflower breeding/USDA)

(weed survey) (weed control)

(seedstocks) (durum breeding) (dry bean breeding) (corn breeding)

(molecular wheat genetics) (molecular markers)

(weed science)

Johnson, Lisa Nelson, Edie

Odegaard, Mary Beth

Perrin, Char Welter, Melissa

Graduate M.S. and Ph.D.* Students and Advisors—Fall 2002 Semester and Spring 2003 Semester

Bergh, Lisa	Horsley
Bhamidimarri, Suresh* (India)	Kianian/Elias
Boehm, David	Berzonsky
Caffarel, Juan (Uruguay)	Franckowiak
Carlson, Mathew	
Carvalho, Clarissa (Brazil)	Carena
Casavan, Ryan	Helms
Dash, Snigdharani (India)	Johnson
Davies, John* (Australia)	
Dvorak, Eric	Howatt
Erickson, Ann	Lym
Forster, Shana	Grafton
Gebhard, Bryan	Berzonsky
Gehlhar, Sarah	Kianian
Gelin, Robert* (Haiti)	Elias
Gregoire, Pete (part-time)	Deckard
Haen, Karri	Faris
Hartel, Kirk	Berzonsky
Hatzenbeller, Mark* (CFS)	Schwarz
Hyrkas, Alyson	Carena
Janzen, Laurie (NRM)	Lym
Johnson, Chris	Dai
Karthikeyan, Manju	
Krasheninnik, Nadejda* (Russia).	Franckowiak
Jamb, Kenneth*	
Lewis, Ruth (NRM)	Lym
Lin, Rongshuang* (China)	Horsley

Mathew, Sudeep (India)	Hatterman-Valenti
Melani, Marcelo (Argentina)	
Moeller, Ryan	
Oberoi, Kiran* (India)	
Odron, Genaro* (Phillipines) (CFS)	
Oltmans, Shannon*	
Osenga, Mary	
Otteson, Brian (part-time)	
Pederson, Jeremy	_
Petersen, Paula (part-time)	
Rothe, Ines* (Germany)	
Rust, Jamie	
Sadosky, Paul* (CFS)	
Saha, Malay* (Bangladesh)	
Sebelius, Angela	
Travnicek, Andrea (NRM)	
Van Becelaere, Guillermo* (Argentina)	
Varanaski, Vijaya* (India)	
Vignaux, Nathalie* (France)	
Vincent, Don	
Waletzko, Angela	
Walker, Richard	
Wang, Ju* (China)	
Wehking, Todd	
Werk, William	
Xu, Xin (China)	
Yu, Guotai* (China)	.Franckowiak



Department of Plant Sciences North Dakota State University P.O. Box 5051 Fargo, ND 58105-5051

Phone: 701-231-7971 Fax: 701-231-8474

Email: albert.schneiter@ndsu.nodak.edu

Address Service Requested

"Snaps" during the past year . . .



Lyle Lindberg & Jerry Johnson at Jerry's Retirement Party



Dr. Duane Berglund at his "surprise" 60th Birthday Party with Dr. Alan Dexter and Dr. Marcia McMullen



Jerry & Arlyce Johnson Jerry retired after 33 years at NDSU



Dr. Messersmith at his "surprise" 60th Birthday Party



Dr. Alan Dexter & Dr. Mike McMullen at a morning gathering in Waldron Hall



Dr. Schneiter with Garrett, son of Chad & Ninette Anderson



Dr. Lym sharing some thoughts at Dr. Messersmith's birthday party



Chad Anderson & Ken Lamb at Chad's Farewell Party

LUNDVILLA ON PELICAN LAKE

H. Roald Lund, 23299 Pelican Bass Lane Pelican Rapids, MN 56572

April 2003

Dear Reader:

This is an open letter to all persons interested in production agriculture and its future as a viable part of our world economy. Some of you would know me as a faculty member of the Dept. of Plant Sciences and, for a period of time, as the Dean and Director of the ND Agricultural Experiment Station at NDSU. I am now retired and interested in generating your financial support for the J. F. Carter Endowment.

A brochure, which describes this program, is enclosed. It goes on to say: "The Endowment will provide a source for the permanent support of a teacher/researcher in crop production in the Department of Plant Sciences and graduate fellowship stipends, equip t, and travel for graduate students."

President Joe Chapman has set a high andard for excellence at NDSU in teaching, research, and service. blic funding is not sufficient to reach our goal in Plant Sciences of a sustained and holistic approach to the production of crops for food, feed, fiber, and fuel. I urge you to make an annual gift to the endowment. Dr. Carter and his wife, Imogene, have matched the individual gifts in the past, and a thousand dollars a year puts you in the President's Circle.

Dr. Carter was my mentor when I was a student at the AC. He encouraged me to attain advanced degrees, faculty rank, a university administrative post for nearly 25 years, and finally, Professor Emeritus, Dept. of Plant Sciences, NDSU. He was a wonderful department chairman, 1960 - 1987, and grew a department of 6 faculty, 2 or 3 technicians, 2 or 3 secretaries, and 2 or 3 graduate MS students to 30 faculty, 4 full time research graduate fellows, 7 secretaries, 29 technicians, and 68 graduate students from the United States and 17 foreign countries. He is now over 80 years old and comes to work nearly every day to pursue an active program for the promotion of edible flax seed, not only food for humans, but also feed for animals.

It is interesting to speculate that flax was once the crop grown first in North Dakota on the new land, and after 100+ years of research on flax at NDAC/NDSU, flax may now become the "new" crop for this century as a health food for humans and a remarkable feed adjuvant to improve feeder animal health and quality beef products.

Surely, you want to join major companies such as Anheuser Busch, other students, faculty colleagues, and graduates that have joined with me to support this effort with your pledge, cash donation, or monthly payroll deduction, to promote and ensure this future effort -- which is epitomized by the life's work of this one man from Lodgepole, Nebraska that came to us for his first faculty job in 1950, and has not yet quit working for North Dakota agriculture!

The interest earned from the J. F. Carter Endowment will support "The Dr. Jack F. Carter Presidential Professorship" already promised by President Chapman, if we create the endowment. Your gift will never be spent -- only the interest, and the gift is 100% tax deductible. Send the enclosed card to the NDSU Development Foundation, Box 5144, Fargo, ND 58105.

Many thanks for this gift that keeps on giving!

All the best.

H Roald Lund

How You Can Help

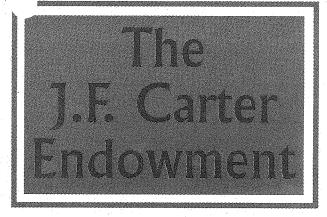
- Your contribution to the J.F. Carter Endowment will honor an outstanding teacher and scholar who has helped shape the careers of generations of undergraduate and graduate students.
- You will help attract outstanding students to graduate programs in the Department of Plant Sciences at NDSU.
- And you will help ensure continued excellence in a graduate program that Jack Carter helped build into one of the finest in the country.

The Carter Endowment is part of the Agricultural Development for North Dakota State University. For more information, contact the Department of Plant Sciences (701) 231-7971 or the NDSU Development Foundation (701) 231-8971 North Dakota State University, Fargo, North Dakota 58105.

The J.F. Carter Endowment

for integrated crop production will enhance educational and research efforts in the Department of Plant Sciences at NDSU that focus on agronomic crops including plant breeding, production, and the evaluation of major crops grown in North Dakota and the region. Excellence in graduate education and research will be a significant focus.

The endowment is named for Dr. Jack Carter in recognition of his contributions to North Dakota agriculture, to the education and careers of generations of students, and to building the NDSU Department of Plant Sciences into one of the outstanding agronomy departments in the nation.



A program of excellence for integrated crop production, research and education

Department of Plant Sciences College of Agriculture North Dakota State University

NDSU

About the Endowment

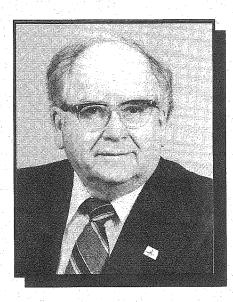
The fund will provide a source for the permanent support of a teacher/researcher in crop production in the Department of Plant Sciences that:

- Emphasizes a research, teaching and extension program that Integrates all production variables in one package including plant breeding and crop evaluation.
- This holistic outlook will provide the basis to excel in maximum economic benefit, preservation of soil quality and fertility, and while using best pest control management; all as related to producing best crop quality and value.
- Will provide vision to seek and evaluate alternative crops, practices, markets and utilization that will lead to a more profitable agriculture in North Dakota.
- Will evaluate and incorporate the rapidly advancing technologies for precision farming and site specific agriculture into an integrated crop production paradigm of the future.
- Fundamental concepts of plant growth and the accumulation of value in the products of plants be elucidated and published in order to provide a framework for continued advances of integrated crop production.

Also, the fund will provide the incentive for the accumulation of brain power at NDSU if North Dakota and U.S. agriculture are to remain strong in the face of global competition. It is crucial, therefore, that the Department of Plant Sciences attracts outstanding students and faculty to its' graduate programs. To do this, We will need:

- Excellent and continuing graduate fellowship stipends.
- State-of the-science equipment and technology.
- Opportunities and support for graduate students to attend and present papers at professional meetings.

About Jack Carter



Teacher, mentor, scientist and administrator, Dr. J.F. Carter joined the faculty at North Dakota State University in 1950 and from 1960 to 1987 served as chair of the Department of Agronomy, now Plant Sciences.

He earned a bachelor's degree in 1941 from the University of Nebraska, a master of science degree in 1947 from Washington State University, and a Ph.D. in 1950 from the University of Wisconsin, all in agronomy. He served in the U.S. Navy, 1942-45 in WWII.

Dr. Carter was instrumental in the process through which NDSU became a Ph.D. granting institution, in 1950. He subsequently led the department in building a highly respected graduate program, and he and his wife, Imogene, served as hosts and advisors to dozens of graduate students and their families from throughout the United States and the world.

His skills as a teacher were recognized by students in 1979 when he was awarded the Alpha Zeta Agricultural Teacher of the Year Award, and in 1990 when he received the Blue Key Outstanding Educator Award. Students often remark of his grain grading course, "the best course and the best teacher I have had at NDSU."

NDSU and North Dakota also have benefitted from Dr. Carter's commitment to research. He was instrumental in strengthening the department's respected plant breeding programs and in initiating a weed science research group, and is a recognized expert in the area of grain grading and on seedstocks and seed distribution systems.

Dr. Carter served as president of the Crop Science Society of America and on the Board of Directors of the American Society of Agronomy and was elected a fellow of both organizations. He received the Polish Badge of Merit in Agriculture from Agriculture University of Pozan in 1977. Also a charter member, CSSA representative and president of CAST, Council for Agriculture Science and Technology.

Following his retirement, he was named professor emeritus. He has continued to teach the department's grain grading course and has been president of the Flax Institute of the United States since 1972, and continuing after retirement in 1987. In 1995 he was awarded an Honorary Doctor of Science degree from North Dakota State University, and Loftsgard Hall 102 was dedicated as the J.F. Carter Lecture Room in his honor.

PLEASE PROVIDE THE FOLLOWING INFORMATION FOR OUR RECORDS if you have not done so in the past year.

Name	CLASS YEAR
Address	
CITY, STATE AND ZIP	
TELEPHONE	
IS THIS A NEW NUMBER OR ADDRESS?	yes no
EMPLOYER	
TION	
Luis is a gift to the CENTURY II	Fund: (1)
\$1,000 OLD MAIN CLUB \$500 Bison Club	··
Please utilize my gift for:	J. F. Carter Endowment
☐ The college of	·
I plan to give to the CENTURY II	FUND each year.
PLEASE SEND ME AN ANNUAL REMIN If applicable, is the matching gift form from	
Please send me additional informa	tion about:
PROVIDING ME LIFE INCOME FROM A	GIFT —— GIVING APPRECIATED SECURITIES —— BEING A MEMBER OF THE PRESIDENT'S MEDALLION SOCIETY

MAKE CHECKS PAYABLE TO: NORTH DAKOTA STATE UNIVERSITY DEVELOPMENT FOUNDATION