
Farm Safety Commitment Grows

Students and faculty in the department have supported farm safety programs in a number of ways this year.

Dr. Charles Schwab has been working with Farm Safety 4 Just Kids and Farmland Insurance to create a 1993 calendar for children. The monthly drawings, by children, do an excellent job of illustrating the dangers around the farm. Text is provided to assist children and their parents with eliminating as many hazards as possible. If you are interested in the 1993 *Farm Youth Safety Calendar* (AE-3076), contact Extension Publications at 515-294-5247. The cost is \$2.

Our agricultural engineering students have continued to volunteer their time to build the model grain trailers used to teach people how to prevent suffocation by grain. Information about the project is available from Farm Safety 4 Just Kids (515-758-2827).

Interest in farm safety is increasing, and special legislation in Iowa has provided additional support for our farm safety programs. As an indication of the support for farm safety, Dr. Schwab reports he has witnessed the audience for the governor's signing of farm safety proclamations grow from six to thirty-five people in just two years.

Gifts Make A Difference

The gifts of equipment and software made a difference this year, and each will continue to improve our teaching and research. Thank you!

Carl Anderson

An Apple II Plus computer system was donated to the department by Carl Anderson, Associate Professor, Agricultural and Biosystems Engineering Department.

Grieve Corporation

Three ovens were donated to the department by George Price Grieve, BSAE'34, Chairman, Grieve Corporation. One will be used in the water quality laboratory, and the other two will be used in the new biomaterials teaching and research laboratory. Grieve industrial ovens and furnaces are known throughout the industry for their high quality.

J.I. Case

A loader/backhoe, Model 590 was donated by the J.I. Case Co. The equipment will be well used by the faculty and staff working in the areas of water management and water quality.



Pioneer Hi-Bred

Three software programs were donated to the department by Pioneer Hi-Bred Business Information Services. The programs deal with farm equipment size calculation, machinery cost comparisons and sprayer calibration. These programs will be used for instruction.

Caterpillar Inc.

A lift-truck, Model VC 60E, was donated to the department. A new lift-truck has been on the "wish list" for some time. We owe a big thanks to Bert Born, of the Caterpillar Inc. Public Affairs Office in Peoria for facilitating this gift. Also a big thanks to our faculty member Mort Boyd (pictured) for working with Bert and the Caterpillar staff on this much appreciated gift.

In addition, a tractor engine was donated to the department this year and is being used for teaching.



International Visitors

Ken Casey from the Queensland Department of Primary Industries visited in February.

Oleg Levchij, Associate Dean, Farm Mechanization Department, Ukrainian Academy of Agrarian Sciences, and **Viktor Teplijuk**, Professor and Computer Engineer, visited the department as guests of Dean Topel in April. Oleg Levchij, an agricultural engineer, presented a paper on "Agricultural Engineering Education and the Economic Situation in the Ukraine" to the department.

Dr. Alexander G. Tarariko, Professor, and **Dr. Viktor A. Vergunoff**, Agricultural Specialist, from the Ukrainian Academy of Agrarian Sciences visited the soil and water group in July to discuss possible research exchanges.

Collin Dahlenberg, a Churchill Scholar from Australia, visited the department in July and discussed soil compaction with harvesting equipment with Stu Melvin and Don Erbach.

Dr. Nikolai I. Aldoshin visited from Moscow, Russia in October.

Dr. Terrence O'Connor, from the Ontario Ministry of Agriculture, and **Dr. J.R. Morris**, from Ridgeway College (Ontario) visited Tom Glanville and the poultry composting research site near Webster City in October. They were interested in alternative methods for on-farm disposal of animals.

MidWest Plan Service Activities

by *Dr. Glenn Church, Manager*

Major projects completed during the past year include, completion of two new publications and a symposium proceeding, sponsorship of a national symposium and continued progress toward becoming an organization for the 21st century.

The *National Symposium on Pesticide and Fertilizer Containment: Design and Management* was an overwhelming success in every way. The two and a half day program featured 31 presentations in six sessions with 28 speakers; 318 people attended. Most of the attendees were unfamiliar with MWPS and came from a variety of backgrounds. *Designing Facilities for Pesticide and Fertilizer Containment*, MWPS-37, was released at the symposium along with a proceedings of speakers' addresses. The symposium will continue to have many positive benefits for MWPS.

Conservation Tillage Systems and Management, MWPS-45, was completed in late December 1992. MWPS-45 is the first of a new breed of publication for

MWPS involving agricultural engineers in the P&M area and specialists from all related disciplines of crop production. It has provided MWPS the opportunity to employ its skills in publication development to benefit these groups and show that what has made MWPS so important to S&E engineers can in fact be employed to benefit others. MWPS-45 was first presented as an idea in the January 1990 Newsletter and is a reality three years later. This represents a major accomplishment by authors and Headquarters Staff.

MWPS continues to refine and improve on the strong foundation that has been established by those who led it in the past. Change is the word of the 90's and it is no stranger to MWPS. Part of remaining viable today requires constant improvement and attention to customer needs. MWPS has and will continue to be an activity of the 12 North Central Regional Land-grant Universities that is committed to producing quality publications in a timely manner that address the critical issues of agriculture.

National Science Foundation - Research Experiences for Undergraduates

Once again the department was able to offer undergraduate summer research experiences thanks to Dr. Carl Bern's efforts to seek continued funding of this program from the National Science Foundation. The objective of the program is to offer talented engineering undergraduates a chance to plan, carry out, and report on a research project, under the direction of a professor, in order to spark an interest in advanced study and research. The program strives to include women, minority, and handicapped students among its participants.

The following students and faculty participated in the Summer 1992 program:

Doug Allen - AE3, Iowa State University, "Natural Ventilation of a Swine Facility," Dr. Dwaine Bundy, ISU Advisor

Jonathan Bulter - ME4, Dordt College, "Development of a Hog Growth Index Based Environmental Conditions," Dr. Steve Hoff, ISU Advisor

Arron Heinerikson - ChE4, University of Kansas, "Determining Sensitivity of Pesticide Transport to Half-life and Distribution Coefficients Using Parametric Modeling," Dr. Carl Anderson, ISU Advisor

Kurt Munson - ME3, Michigan Technological University, "Effect of Tire Inflation on Soil Strain," Dr. Don Erbach, ISU Advisor

Kevin Paarlberg - AE4, University of Illinois, "Development of a Flapper Nozzle Valve Laboratory Exercise," Dr. Richard Smith, ISU Advisor

Steve Siegel - AE4, Iowa State University, "Best Management Practice Research Database," Dr. Sunday Tim, ISU Advisor

New Appointments

Faculty

Dr. Steve Mickelson, Assistant Professor, Engineering Fundamentals and Multidisciplinary Design Department, College of Engineering, has accepted a Joint Appointment with the Agricultural and Biosystems Engineering Department. His office is 202 Marston.

Dr. Zivko Nikolov, Assistant Professor, Food Science and Human Nutrition Department, College of Agriculture, has accepted a Joint Appointment with the Agricultural and Biosystems Engineering Department. His office is 2312 Dairy Industry, and his lab is located in the new Center for Crops Utilization Research.

Staff

Susan Dutton, Paula Abbott, and Jean Carter have accepted secretarial positions in the department this year and will be assisting faculty with teaching, research, and extension activities.

Mary Ellen Hurt, Administrative Assistant, has joined the department. She will be assisting Dr. Gilley and the faculty with departmental budgeting, statistics, grant proposal preparation, promotion, development, publications, and special projects.

Nancy Wheeler, MIS Specialist, accepted a shared appointment with MidWest Plan Service and the department. She will be assisting Dr. Richard Smith with software purchases, installation, and training.

Graduate Students

Our enrollment is up this year, and we are pleased to introduce our new graduate students.

Fall 1992

Prince Dugba (MS)
Dharmesh Kumar Jain (PhD)
Jeffrey Lorimor (PhD)
Rajasekhar Sannala (MS)
Loren Steenhoek (PhD)
DeeAnna Weed (PhD)
Brian Wuebker (MS)

Spring 1993

Kapil Arora (MS)
David Bjomeberg (PhD)
Muhammad Iqbal (PhD)
Ajay Kumar (PhD)
Akhilesh Misra (MS)
James Newman (MS)
Sarwar Tahir (PhD)

Resignation

Connie Petrich, Administrative Assistant, completed her Masters in Business Administration and resigned to move with her family to Orlando, Florida. Her husband, Scott, has accepted a teaching position with the University of Central Florida. Shortly before they left for Florida, their son Jeremy Owen was born. We wish them the best and hope they might send some warm weather our way.

Tributes

Richard A. Duncan

Mr. Duncan died December 14, 1992, in Wooster, Ohio. He was born February 27, 1911, in Gainesville, Texas. He attended ISU and received his master's in Agricultural Engineering in 1937. After graduation he worked for J.I. Case for a short time and then took a position as Chief Engineer with the Hawaiian Sugar Planters Association in Honolulu. He spent 25 years with the HSPA but left in 1970 to become President of Cane Harvest, Inc. in Thibodaux, LA. The company was involved in design and development of cane harvesting equipment. He is survived by his widow, Ferrel, who lives in Wooster, Ohio, and a nephew, Dr. Donald L. Brakensiek, Ph.D.'55.

Norton C. Ives

Dr. Ives died on January 30, 1992. He was born in 1917, and received both his bachelor's (1938), and his master's (1939) from Iowa State University in Agricultural Engineering. His first positions were in extension work as an agricultural engineer. He served at the University of Minnesota, 1939-42, and at Iowa State University from 1944-45. He then moved to Costa Rica where he served as Head of the Department of Agricultural Engineering from 1945-1953. From Costa Rica he returned to Iowa State University to serve as a USDA Grain Storage Investigations Research Engineer and to complete his Ph.D. in Agricultural Engineering in 1959. Since 1961, Dr. Ives had been a consulting engineer with his own firm, Ives and Associates, Agricultural Engineering Consultants, located in Rolfe, Iowa.

Projects Funded

Not only do our faculty teach, publish, and provide information through extension services, they also write many research proposals. This is a very competitive process, and we are proud to say the faculty were awarded funding for over 30 projects during 1992 totaling just over \$1,700,000. These research funds allow the faculty to continue their research and to provide opportunities for our graduate students.

The following list provides the names of the our faculty in bold, and the title of their project. Abstracts of faculty projects are always available upon request.

James Baker, R. Horton., and T. Kasper. Localized Compaction and Doming to Increase N-Use Efficiency and Reduce Leaching.

James Baker, Thomas Colvin, Donald Erbach, and Ramesh Kanwar. Potential Water Quality and Energy and Production Efficiency Benefits from Herbicide Banding.

James Baker, Donald Timmons, and Ramesh Kanwar. Optimum Time(s) of Nitrogen Application to Improve Fertilizer Efficiency and Reduce Leaching.

James Baker and J. Hatfield. Evaluation of the Impact of Current and Emerging Farming Systems on Water Quality.

Carl Bern, and James Gilley. Undergraduate Experiences in Agricultural and Food Engineering.

Dwaine Bundy, Steven Hoff, and Vernon Meyer. Improvement and Implementation of a Dust and Bacteria Removal System in Swine Producer Buildings.

Dwaine Bundy, Steven Hoff, and Vernon Meyer. Evaluation of Odor Intensity from Swine Waste Storage System.

Dwaine Bundy, Steven Hoff, and Vernon Meyer. Prediction Model for Farm Field Odor Transmission from Swine Systems.

Thomas Colvin, and G. Miller. On Farm Demonstration of Alternate Tillage Systems for Energy Conservation.

James Gilley, Charles Schwab, and Mark Hanna. Agricultural Health and Safety.

Thomas Glanville. Mechanical Composting Equipment and Procedures for Use in the Poultry Industry.

Thomas Glanville. Evaluation of Burial and Composting as BMPs for Disposing of Dead Livestock.

Steven Hoff, Dwaine Bundy, and Vernon Meyer. Modelling Management Strategies for Naturally Ventilated Swine Facilities.

Steven Hoff, Dwaine Bundy, and Vernon Meyer. Animal-Level Airspeed and Temperature Distributions as Affected by Inlet Air Conditions.

Steven Hoff, Dwaine Bundy, and Vernon Meyer. Modelling Ammonia Distribution in a Swine Confinement Facility.

Charles Hurburgh. 1992 Annual Soybean Quality Survey.

Ramesh Kanwar, Thomas Colvin, and D. Karlan. Evaluation of Tillage and Crop Rotation Effects on Quality: Nashua Project.

Ramesh Kanwar. Evaluating the Impact of Farming Systems on Water Quality.

Ramesh Kanwar, and A. Austin. National Needs Fellowships (Water Science).

L. Somesundaram, J. Coats, and Ramesh Kanwar. Fate and Significance of Major Degradation Products of Atrazine in the Soil and Water Environment.

Stephen Marley, Mark Hanna, Stewart Melvin, and Donald Erbach. Training in Conservation Crop Production Systems for Istran Sörös.

Stewart Melvin and James Baker. Agricultural Drainage Well Studies.

Stewart Melvin. Animal Waste Management Demonstration Project.

Stewart Melvin, and L. Lewis. The Effects of Organic vs. Chemical Fertilizer on Insect Pathogens.

Stewart Melvin. Targeted Education Program.

Manjit Misra, and Y. Shyy. Computerized Seed Cleaner Based on Laser and Photoelectric Technology.

Charles Schwab, Mark Hanna, and A. Ralston. Agricultural Health Promotions Systems.

Charles Schwab, C.V. Warme, and M.H. Yearns. Iowa Farmers Adapt: An Educational and Technical Assistance Program for Farm Families Affected by Disability.

Sunday Tim. Climate Change Impacts on Hydrology and Water Quality in Iowa: A Case Study Using Integrated Hydrologic/Water Quality Modeling and GIS.

Sunday Tim, R. Jolly, and D. Otto. GIS-Based Environmental and Economic Analysis of an Integrated Crop-Livestock Production System in Southern Iowa.

R. Jolly, Sunday Tim, and S. Padgitt. Managing Water Quality & Livestock Production in a Southern Iowa Watershed.

Recruitment Efforts Continue

Although enrollment is up, it is important to continually encourage potential students to consider our agricultural engineering programs at Iowa State University. We have been busy with the following activities:

- Award-winning recruitment brochures for both programs, Agricultural Engineering and Agricultural Systems Technology, are mailed to prospective students.
- Faculty members participate in the Visiting Scholar Program for Iowa high schools. This year we have seven faculty who have volunteered to present a "seminar" on a special agricultural engineering topic and are glad to discuss careers in agricultural engineering.
- The Iowa Section of ASAE has given the department \$500 to be used for student recruitment.
- Four graduate fellowships have been funded by the USDA National Needs Fellowship Program. Each fellow receives \$17,000 plus \$1,000 for tuition fees.

- Six promising undergraduate students, including two from ISU, spent the summer working on research projects under the direction of senior faculty. These students were funded by the NSF-Research Experiences for Undergraduates program.

If you know of interested students, or have the opportunity to speak about agricultural engineering to potential students, please let us know, and we will be glad to send you recruitment materials.

Engineers Don't Drive Trains

The College of Engineering has produced a coloring book, *Engineers Don't Drive Trains*, to encourage young students to consider engineering as a profession. Although it does not specifically illustrate agricultural engineering, it does provide a glimpse of engineering and diversity in the workplace. The coloring book was funded by NSF and Rockwell International, and copies are available from the College of Engineering by calling 515-294-9295.

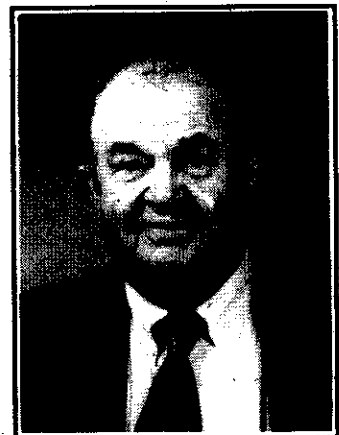
Retirements

A joint retirement reception and buffet was held for Tom Hoerner and Harold Mesenbrink on May 30, 1992.



Thomas A. Hoerner, Professor, retired from his teaching position in May. Tom had been responsible for teaching Agricultural Mechanics courses, supervising student teachers, working with graduate students, and supervising the Construction & Maintenance section. During his teaching career, he was recognized twice with the Outstanding Teaching Award in the College of Agriculture. He earned his B.S. in Agricultural Education from Iowa State in 1957. Tom then earned his M.S. in 1963, and his Ph.D. in 1965 in Agricultural Engineering. Tom and his wife, Carol, will remain in Ames, and he plans to spend time on his many favorite pastimes.

Harold M. Mesenbrink, Shop Manager, retired in May, with fifty years of service with Iowa State. He had been employed in the department continuously since 1947, and he has worked with every department head including Dr. J. B. Davidson. Harold has probably been in contact with almost every graduate of the department, since the late 1940's. He continues to maintain friendships with alumni from around the world. Harold and his wife, Jean, will remain in Ames, and he plans to travel and to work on some new hobbies.



JoAnn Adair, Extension Secretary, retired in December. A reception was held on December 11th to recognize her twenty-five years with Extension. JoAnn worked with ISU Extension in Fort Dodge, but due to a reorganization she transferred to Agricultural Engineering Extension in 1986. She commuted weekly from Fort Dodge and looks forward to retirement and to the end of those long trips.

Pictured left to right: Chuck Schwab, Larry Van Fossen, Stu Melvin, Colleen Ryan, JoAnn Adair, Vern Meyer, Mark Hanna and Tom Gianville.

Student Honors and Awards

Undergraduates

Brian Fischer and **Arlyn Wilcox** have been selected by the ASAE Student Branch to receive the ASAE Student Honor Award. The award is based upon scholarship, character, and leadership. Their names will be added to a permanent plaque in Davidson Hall honoring their accomplishment.

Brian Fisher won the Student Paper Contest at the ASAE Mid-Central Conference in St. Joseph, MO, in March.

Tim H. Kaldenberg was a finalist in the National ASAE Student Paper Competition for his paper "Comparison of Predicted and Actual Crop Residue Covers." As a finalist he traveled to the ASAE Summer Meeting in Charlotte, NC, where he competed for the K.K. Barnes Student Papers Award. In the Barnes oral competition Tim tied for second.

Roger E. Meyer was named winner of the National ASAE Student Paper Competition for his paper "Tractor Noise Level Exposures for Bean-Bar Riders." Authors receive cash awards, an invitation to attend the ASAE Summer Meeting, and an opportunity to compete in the oral competition for the K.K. Barnes Student Paper Award. Roger graduated in May 1992 with his BSAE, but missed the ASAE Summer Meeting and the Barnes competition due to commitments made to the U.S. Navy.

Graduates

Prasanta Kalita was awarded a ISU University Research Excellence Award by the ISU Graduate College and Graduate Student Senate. He finished his doctoral degree in May, and has accepted a post-doctoral research assistantship at Washington State University in Pullman, WA.

Binayak Mohanty received the Taiganides Award for Outstanding Graduate Student in Agricultural Engineering. He finished his doctoral degree in December, and has accepted a post-doctoral position with the department.

Loren Steenhoek was awarded a University Teaching Excellence Award by the ISU Graduate College and Graduate Student Senate. Loren finished his master's degree in December, and has been awarded a USDA National Needs Fellowship to pursue his doctorate in agricultural engineering at ISU.

Taiganides Award Is Expanded

Dr. E. Paul Taiganides, Ph.D.'63, has increased the amount of the Rev. P.T. Taiganides Award for the Outstanding Graduate Student in Agricultural Engineering from \$100 to \$250 beginning in 1993. Not only has Dr. Taiganides increased the amount, but he has also increased the number. Starting with 1993 there will be an award for a master's candidate as well as a doctoral candidate. The awards were created in the memory of his father the late Rev. P.T. Taiganides.

Visiting Professor Program

The College of Agriculture has conducted a Visiting Professor Program for Iowa high schools during the past three years. Through this program the faculty discuss the work of agricultural engineers, careers in agricultural and biosystems engineering, and educational opportunities at ISU. The following Agricultural and Biosystems Engineering Faculty are participating in this program:

Carl Anderson, "Measuring the Energy From The Sun." This will be an exercise designed to illustrate that measurement of solar energy is easily done by measuring the difference in temperature between a white and black surface exposed to the sun's rays. Students will participate in taking measurements and determining the energy balance on a surface. They will learn the basic principal which make these calculations possible. Examples from everyday life will be included.

James L. Baker, "How Does Agriculture Affect Your Water Quality?" Use of fertilizers and pesticides in agricultural production can result in contamination of surface and groundwater resources. Information on the extent of the problem and what can and is being done about it will be presented.

Carl Bern, "Using Electric Motors in Agriculture." A discussion of why electric motors are widely used in agriculture and a hands-on instrumented test of an electric motor. Students will learn about the operating characteristics of electric motors.

Dwaine Bundy, "Designing Livestock Buildings for Animal Welfare" The livestock industry has been criticized for its methods of confining livestock. Building engineers are working to allow animals to have more freedom while keeping them in confinement.

Steve Hoff, "Modifying a Pig's Environment: Issues Related to Comfort, Well-Being and Productivity." Environmental factors such as temperature and humidity can adversely affect the comfort and performance of livestock in confinement. This presentation will describe how engineers evaluate and determine the environment's effect on comfort and productivity.

Steve Marley, "Energy and Environmental Effects of Ethanol Fuels." Does the use of ethanol-gasoline fuel blends, in Iowa and many other states, make sense energetically or environmentally? The energy flows in ethanol production and use plus the effects of ethanol on automobile fuel emissions will be illustrated.

Chuck Schwab, "Perceptions - Risks - Consequences." Agriculture is the most hazardous industry in the nation. Statistics reveal that 1,300 individuals die and 120,000 are injured in agricultural production per year. Students will explore how individuals perceive hazardous situations differently and subconsciously evaluate the degree of risk that is associated with those situations. An explanation about the consequences of your decisions and truths about agricultural hazards will be presented.

Undergraduate Scholarships

This year forty-two scholarships were awarded to undergraduate students for the 1992-93 academic year. Thirty-three scholarships were awarded at the department level, seven were from the College of Engineering, and two were from the Iowa Section of ASAE. Approximately 25 percent of undergraduates receive scholarships.

Agricultural Engineering

Recipient	Yr	Hometown	Scholarship
Douglas Allen	Jr	Red Oak, IA	Archer Daniels Midland & Iowa ASAE
Edwards Allen	Jr	Marion, IA	Wessman Memorial
Andy Appleton	Sr	Edgewood, IA	Arthur Collins & Wessman Memorial
Aaron Brecht	Fr	Watkins, IA	Wessman Memorial
Mark Drier	Fr	Bloomington, MN	Wessman Memorial
Michael Follman	Fr	Massena, IA	Wessman Memorial
Kevin Gaul	So	Earlville, IA	Hobart Beresford & Wessman Memorial
Alicia Gilley	So	Ames, IA	J.B. Davidson & Wessman Memorial
Lance Golvinghorst	So	Walcott, IA	Wessman Memorial
Kirk Golvinghorst	Fr	Walcott, IA	Wessman Memorial
Thad Hardeman	So	Rose Hill, IA	Wessman Memorial
Matthew Helmers	Jr	Sibley, IA	Marston Club
Margaret Herzog	Sr	Cedar Rapids, IA	Cedar Rapids Award
Karen Keppler	Fr	Lamont, IA	Wessman Memorial
John Kihonge	So	Thika, Kenya	Wessman Memorial
Eric Lang	So	Donnellson, IA	Wessman Memorial
Amy Mangold	Jr	Ames, IA	Iowa Food & Energy Council
Scott Marting	Fr	Oak Park, IL	Wessman Memorial
Alan Meek	So	Marble Rock, IA	Wessman Memorial
Todd Mentle	So	Tipton, IA	Wessman Memorial
Dan Renze	Sr	Manning, IA	L.G. Keeney
Stephen Reitz	Fr	Somers Point, NJ	Wessman Memorial
Daryl Rober	Jr	Dorchester, IA	Amoco Foundation
Steven Rodgers	Sr	Winfield, IA	G.W. Catt
Jim Ryken	Jr	New Sharon, IA	George Price Grieve
Michael Ryken	Jr	New Sharon, IA	Wessman Memorial
Jason Schneider	So	Akron, IA	Marston Club & Wessman Memorial
Troy Showers	So	Palmer, IA	Wessman Memorial
Chad Terry	So	Muscatine, IA	Wessman Memorial
Todd VanHal	So	Pella, IA	Hobart Beresford & Wessman Memorial

Agricultural Systems Technology

Recipient	Yr	Hometown	Scholarship
Charles Hawkins	Fr	Corydon, IA	Thomas A. Hoerner
Eric Johannsen	Jr	Harlan, IA	Wessman Memorial
Tim Kaldenberg	Jr	Albia, IA	Iowa Section of ASAE
Chad Peters	Sr	Tripoli, IA	Ag Mechanization
Macy Schikdroth	Jr	Fredericksburg, IA	Wessman Memorial
Brenda Williams	Fr	Storm Lake, IA	Wessman Memorial

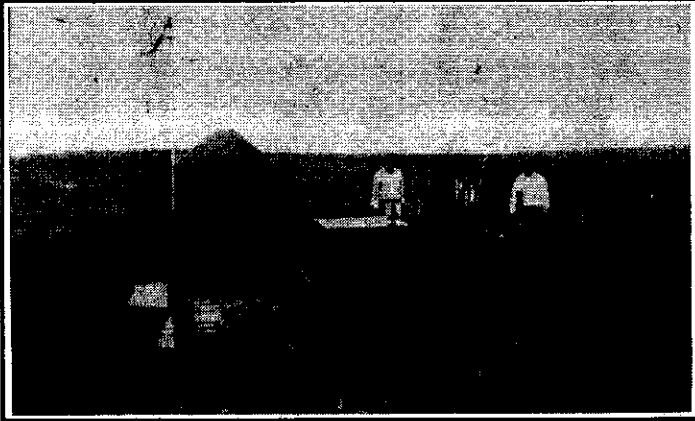
Visiting Scholars

Dr. Istvan Sörös, Head, Hungarian Institute of Agricultural Engineering, Gödöllo, Hungary, was a USDA/Cochran Fellow in the Agricultural and Biosystems Engineering Department from April 28, through May 29, 1992. Dr. Sörös worked with Dr. Stephen Marley, Dr. Mark Hanna, and Dr. Stewart Melvin to gain in-field experience with conservation tillage and no-tillage planting systems for corn and soybeans. He was also able to visit a farm machinery dealership and manufacturers of conservation tillage planters and cultivators.

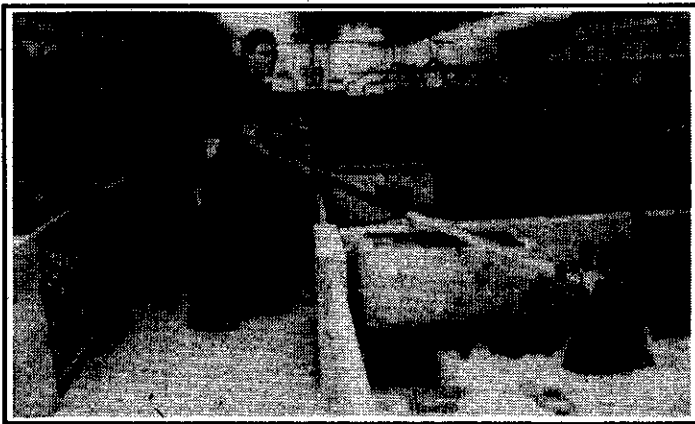
Dr. Victor Ros, Professor of Agricultural Engineering, Technical University of Cluj, Rumania, is a

Fulbright Scholar in the Agricultural and Biosystems Engineering Department from October 1, 1992, until March 1, 1993. He is working with Dr. Stephen Marley on tillage tools. Dr. Ros is also interested in exploring possibilities for long term co-operation between ISU and the Technical University of Cluj for teaching as well as conservation tillage research. Some of you may remember Dr. Ros when he was a researcher in the department with Dr. Buchele in 1970-71. If you are interested in visiting with Dr. Ros, his office is 109 Davidson, and his phone is 515-294-0461.

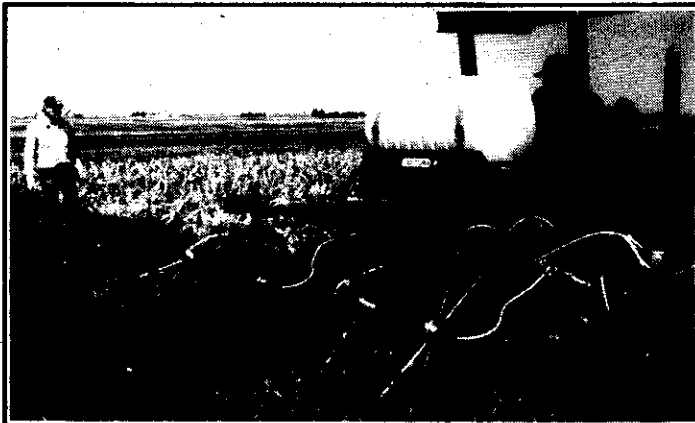
ABE in Action



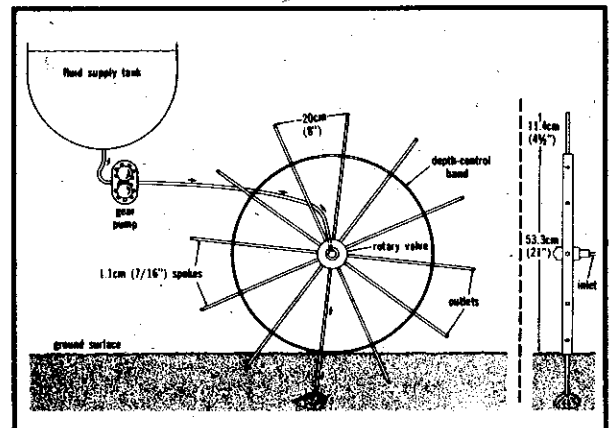
Piyush Singh and Ramesh Kanwar observe the Shallow Groundwater Quality Monitoring System at the ABE Research Center near Ames, Iowa.



Steve Hoff demonstrates to NSF undergraduate research students (Doug Allen and Jonathon Butler) the placement and operation of a Remote Data Acquisition System for swine housing analysis.



Jim Baker monitors a field test of the Point-injector Fertilizer Applicator developed at ABE/ISU. This applicator is now commercially available.



A schematic illustration of the Point-injector Fertilizer Applicator.

Keep Us Current

Please clip out and return, so we can keep updated on alumni happenings.

Where you live:

Name		Year graduated
Home address		Degree received
City	State or Country	Zip

What you do:

Business title / profession		Phone
Company / institution		
Division / address		
City	State or Country	Zip

News about you:

(community service, board memberships, professional honors, career activities, family information)

Comments/Suggestions on Davidson Dispatch:

Return to:

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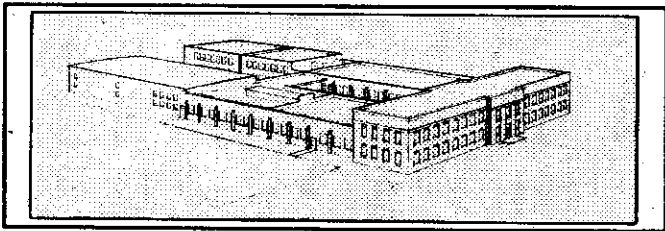
Thank you!
1/93

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**Agricultural and Biosystems Engineering Department
Iowa State University**