

# DAVIDSON DISPATCH

winter 1992-1993

volume 4, no. 1

Agricultural and Biosystems Engineering / Davidson Hall / Iowa State University / Ames, Iowa 50011-3080

## Thoughts and Views

By James R. Gilley, ABE Dept. Head

My, has it been over a year since the last issue of the *Davidson Dispatch*? It truly has been an exciting year in the department and at Iowa State University. Like many other universities across the U.S., we faced periods of budget difficulties. Fortunately, we emerged in relatively good health, with our only reductions being in the extension budget. These periods of reversions and budget cuts hopefully will take place with reduced frequency in the future.

On the brighter side, undergraduate enrollments in both Agricultural Engineering and Agricultural Systems Technology continue to rise. Enrollment in Ag Eng has grown to 102, from a low of 59 in 1988, and the enrollment in AST is now 75, from a low of 35 in 1988. Class sections are full, additional sections have been added, and we have waiting lists for many of our classes. These problems are small, however, compared to lack of students. We are really pleased with our recruiting efforts, both on-campus and across the state, and we plan to expand our recruiting in the future. In addition, we have seven new graduate students who have just enrolled for the 1993 Spring Semester. Please help us by spreading the word about the great opportunities in Agricultural Engineering.

I want to express a special thanks to all those alumni and friends who contributed to the departmental scholarship fund this year. Those undergraduate students receiving scholarships are listed in this newsletter. Scholarship support from our alumni help us recruit quality students, and we really appreciate your assistance.

We have also been busy making renovations to Davidson Hall to house new and expanding programs. The former carpentry shop has been converted to an environmental laboratory, and the former arc welding area is now being converted to a biomaterials laboratory. These changes will provide room for research and teaching labs in these growth areas. Additional improvements are under discussion, and we will keep you informed of our progress through future issues of the *Davidson Dispatch*.

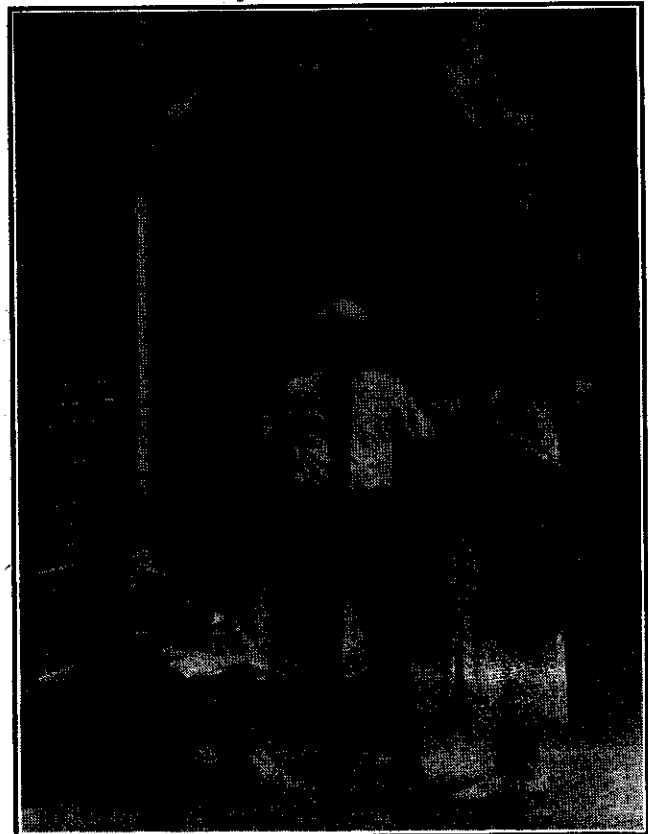
During the last year Harold Mesenbrink and Dr. Tom Hoerner retired, and soon two more long time faculty will be retiring. Dr. Vern Meyer, who has served the department in Extension for over 34 years, will be retiring from ISU in March, 1993. A celebration honoring Vern's contribution to the department and the livestock industry will be held on campus this spring. Professor Larry VanFossen will also be retir-

ing this spring after serving ISU for over 35 years. A retirement reception will be held in the department for Larry. They have both served the department with distinction, and we will certainly miss them. I'm sure each of them would enjoy hearing from you.

As highlighted in other sections of the newsletter, several faculty and alumni received national awards and recognition for their outstanding teaching, research, and extension programs. These are another example of the excellent people and programs in the Agricultural and Biosystems Engineering Department at ISU.

I'm pleased to introduce Mary Ellen Hurt, the new administrative assistant in the department. She joined the department in mid-November after serving as a faculty member in the Library. We welcome Mary Ellen to the department.

One of the really fun activities of the department head is to meet and visit with department alumni. Please keep us informed of your activities and remember, you are always welcome to revisit Davidson Hall and have a cup of coffee.



Professor Mort Boyd and ABE students visit in front of Davidson Hall.

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## Friends of ABE

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Thanks to the following alumni, friends, and corporations who gave so generously to the department in 1992. Your gifts were used for scholarships, faculty and staff development, and the Davidson Hall Building Fund.

Alcoa Foundation  
Allied Signal Foundation  
Arthur Anderson & Co. Foundation  
James Baker  
Marilyn and Theodore Barnes  
Craig Beer  
Patricia and Douglas Bosworth  
Lila and Landis Boyd  
Caterpillar Foundation  
Jeffrey Coon  
Madeline Dadds  
Harold DeBuhr  
Sherwood DeForest  
John Dresser  
Wendell Finer  
Alan Gaul  
Karen and James Gilley  
Deane Glen

Wesley Goecker  
Russell Grainer  
Sarah and Harold Guy  
Ronald Haddock  
Mary Jane and Thamon Hazen  
William Hibbing  
Lavohn and Marvin Isvik  
Steve Junge  
Roy Keppy  
James Koch  
George Kriz  
John Laffen  
Esther and Howard McColly  
Fred McNamee  
David Metzger  
Monsanto Co.  
Stuart Nelson  
Patrick O'Brien

J. Oliver  
Ila Parsley  
Robert Peart  
Donald Pederson  
Dean Petersen  
Phillip Morris Inc.  
William Ritter  
Richard Rowe  
Virginia and Raymond Rystrom  
Robert Schafer  
Helen and Donald Sedrel  
Dorothy and Donald Shimon  
Toro Foundation  
Union Oil Co.  
Curtis Wenger  
Daniel Willhoite  
David Williams

A special thanks to the **Iowa Section of ASAE** for increasing scholarship funding to \$1500 for the 1993/94 academic year. This increase was due to the success of the annual "Steaks for Scholarship" steak fry held at the fall meeting.

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## Alumni Days

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Alumni gathered on campus this year to visit ISU, their colleges, and their departments on June 5th and 6th. The following alumni celebrated their graduation from ISU by visiting the campus this year:

William Adams '42  
Kenneth Bower '32  
Francis Brinkmeyer '42  
Eldon DeWall '42  
Paul Jacobson '32  
Loren Norby '42  
Paul Walter '27  
Leon Wilson '42

The department enjoyed hosting a reception for our alumni in 110 Davidson, on Friday, June 5th. We look forward to next year and an opportunity to visit with alumni from around the country.



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## Alumni Meet at ASAE Meetings

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The department sponsored an ISU Social at both the ASAE Summer Meeting in Charlotte, NC, and the ASAE Winter Meeting in Nashville, TN. If you plan to attend future ASAE national meetings, please read the premeeting announcements describing the ISU Alumni events. We have had over 50 alumni at each of the two previous meetings. We will be hosting a social for our alumni at each meeting. Please stop by and visit fellow alumni.

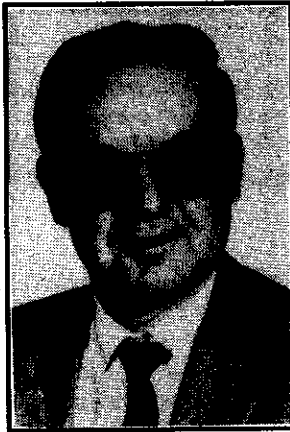
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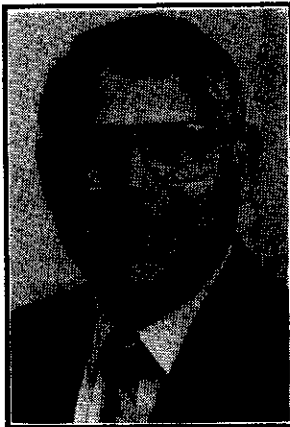
## Alumni - Honors & Awards

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**Joe M. Bunn**, Ph.D.'60, was elected a Fellow of the American Society of Agricultural Engineers. Dr. Bunn is a Professor of Agricultural Engineering at Clemson University. He was honored for his high standards of excellence in education. He has made a permanent impact through his contributions to instrumentation, Burley tobacco curing, grain drying, stray voltage, and international efforts.



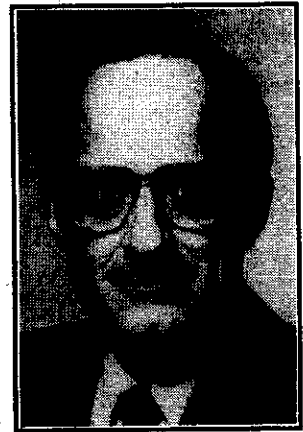
**John M. Laflen**, Ph.D.'72, was elected a Fellow of the American Society of Agricultural Engineers. Dr. Laflen, P.E., is a research leader with the USDA-ARS NSERL and was honored for his soil and water research. His design of tile outlet terrace and development of the USDA-ARS Water Erosion Prediction Project computer model have been important contributions to soil conservation.



**William F. Lalor**, Ph.D.'68, was awarded the Mayfield Cotton Engineering Award at the 1991 ASAE Winter Meeting in Chicago. Dr. Lalor is Vice President of Agricultural Research for Cotton, Inc., located in Raleigh, NC, and received this award to recognize his engineering contributions to the cotton

industry. He has participated in the development, field testing, and commercialization of the modular system of handling seed cotton, the caged gin, the belt drier for seed cotton, the multi-saw machine, and the coupled lint cleaner.

**Glenn A. Kranzler**, Ph.D.'77, was elected Information and Electrical Technologies (IET) Director, ASAE Technical Council, for a two year term. Dr. Kranzler is a Professor of Agricultural Engineering at Oklahoma State University in Stillwater, OK. He has authored over seventy publications and holds a patent for an electronic control system for low temperature grain drying. As IET Director he will help guide policy affecting engineering technology related to the use of electric power in agriculture and electronic controls used on the farm, in food processing, and in distribution systems.



**Wayne A. Maley**, BSAE'49, retired this summer as Director of Special Projects, ASAE. He was recently recognize by the ASAE Board of Directors for his creativity in developing the ASAE Forum format which provided ASAE members a way to focus their attention and talents on important issues of humankind. Wayne is now turning his attention to developing technology workshops and tours for groups, and will specialize in international visitors wishing to learn more about engineering developments in food and agriculture. He and his wife, Marianne, will continue to reside in St. Joseph, MI.

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## Alumni News

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### 1930's

**Charles E. Loudon**, BSAE'32, is retired and living in Grinnell, IA. He is active in the community serving as the Chairman for the Poweshiek County Council on Aging and the Chairman of the Mayflower Home Residents Association. He is also a member of the Advisory Council for the Hawkeye Valley Area Agency on Aging.

**Gus H. Bliesner**, BSAE'39, is retired from his own engineering consulting firm in Newberg, OR, and has been quite active in genealogy. He has published books on family history including books on the Bliesner, Irmer, Stecks and Zehm families.

### 1940's

**Melvin J. Happe**, BSAE'41, is retired and living in Pinehurst, NC. He retired from Sperry New Holland as Vice-President for Engineering Worldwide. He is currently a member of the Planning & Zoning Board in Pinehurst. His family includes five married children and ten grandchildren. His wife, Marian, died October 12, 1990.

**Eldon W. De Wall**, BSAE'42, is retired and active in the community of Columbia, MO. He retired from the Soil Conservation Service, USDA, as a Hydrologist and Planning Leader. One daughter is an Engineer Production Manager with Proctor & Gamble, and his other daughter is a Nursing Coordinator with the Harry S. Truman Veterans Hospital in Columbia.

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## Alumni News

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### 1940's continued

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**Walter J. Stefan**, BSAE'48, recently retired from the position of Director, Product Support, Aircraft and Marine Systems Division of the Boeing Co. located in Seattle, WA. Walter retired with thirty-four years of service.

**William T. Robison**, MS'49, is President of the American Plywood Association located in Tacoma, WA., and he planned to retire in December 1992.

**Morton W. Bittinger**, BSAE'49, MS'51, is a part-time consultant in his own firm located in Phoenix, AZ. He reports he enjoys watching news about Iowa snow storms.

### 1950's

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**Robert While Okey**, BSAE'50, is Research Associate Professor with the Civil Engineering Department at the University of Utah in Salt Lake City, UT. He is also President of C.R.M., Inc., an engineering consulting firm located in Draper, UT, and he is interested in environmental engineering.

**G. Dean Rohweder**, BSAE'52, is Director, Engineering, Building Construction Products Division with Caterpillar, Inc. in Peoria, IL. He has four children. One son, an ISU graduate, is with Ford Heavy Truck.

**Clark A. Rosenberger**, BSAE'52, is Manager, Quality Check & Administration for the Carolina Power & Light Co. located in Raleigh, NC. He serves as President of the Raleigh North Gideon Camp, and he is a member of the ASQC.

**Robert R. DeLay**, BSAE'58, is Vice President, Marketing with Aluminum Co. of America, Forging Division in Cleveland, OH.

**Charles Packard**, BSAE'59, has recently been promoted to Vice President, Engineering, with Exmark Mfg. Co., Inc. located in Beatrice, NE.

### 1960's

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**Ceferino L. Folloso**, MS'62 is Secretary, Dept. of Science & Technology and a member of the Cabinet of the Philippines under President Aquino in Manila. He has also served as UnderSecretary of the Dept. of Trade & Industry from 1986-1989. Dr. Folloso is the founder of Alpha Machinery & Engineering Corp. and the Folloso Manufacturing & Industrial Corp.

**Victor C. Pierrot**, BSAE'63, MS'64 is Supervisor, Demonstration Site with John Deere in Davenport, IA. Deere has two demonstration sites, one in Coal Valley, IL and one in Phoenix, AZ. Victor supervises five professional operators who demonstrate construction equipment to customers. In addition, he provides training for Deere industrial equipment dealers.

### 1970's

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**Eric A. Lantz**, BSAE'72, is Facilities Manager/Engineer with Interwest Services, Ltd. in Red Oak, IA. He and his wife, Janie Hummel Lantz, have a son, Karl, and a daughter, Kristina. He is also a veteran of Operation Desert Storm.

**Bill McGuire**, BSAGM'76, owns McGuire Construction, which specializes in hog confinements, home improvements, as well as management of stock-cow herds. He is a member of Operation T-Bone. Bill and his wife Karen have a daughter, Katie, who is 7 years old, and they reside in Audubon, IA.

**Ray Wainwright**, MS'76, is Senior Scientific Officer, Overseas Division of the Silsoe Research Institute in Bedford, UK. He is currently managing a tractor rehabilitation project in Sri Lanka, planning extension training for farmers in Yemen, and planning to travel to India to undertake the training of technicians engaged in tractor testing.

**David W. Nelson**, BSAE'77, is General Manager for Agro Globe Engineering, Inc. located in Urbandale, IA. The firm specialized in facilities related to seed production and conditioning.

**Darrell Christensen**, BSAE'78, has been the District Conservationist in the Bedford Field Office, Soil Conservation Service, USDA for the last seven years. His son Kevin is studying engineering at Iowa State.

**Lung-Siang Huang**, BSAE'78, is Chief Engineer with the Taiwan Sugar Research Institute in Tainan, Taiwan, Republic of China.

**John LaFratte**, BSAE'78, is self-employed as a farmer in Winterset, IA. He serves as a member of the ISU Extension Council in Madison County, as a financial counselor for the Madison County Extension Service, and as a Crawford Township trustee. He and his wife, Shirley, have two children, a son Brad, who is 6 years old, and a daughter, Marcy, who is 3 years old.

**David Smith**, MS'78, PhD'81, is Engineering Research Scientist, Process Engineering Division of the Silsoe Research Institute in Bedford, UK.

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## Alumni News

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### 1980's

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**Carl Sitzman**, BSAE'80, is Plant Manager, Noodles & Pasta Plant with Thomas J. Lipton Co. in Harrisburg, PA.

**Joel David Palmer**, BSAE'80, MS'82, is an Agricultural/Civil Engineer with Palmer Engineering in Corvallis, OR. Joel is active in the community in wetland restoration projects, and also serves as designer/writer for Oregon Tilth, a sustainable agriculture advocacy organization.

**Kurt McMullin**, BSAE'82, is a Design Engineer with Martin, Middlebrook & Louis in San Francisco, CA. Kurt received his MS in Structural Engineering in 1988, and he is currently working on a PhD in Structural Engineering at the University of California at Berkeley.

**Vu Nguyen**, PhD'82, is an Operational Expert in Agricultural Engineering at the University of Malawi, Bunda College of Agriculture, Lilongwe, Malawi, Africa.

**Din-Sue Fon**, PhD'84, is Head, Dept. of Agricultural Machinery Engineering at the National Taiwan University in Taipei, Taiwan, Republic of China. Dr. Fon also serves as the Director of the Taiwan Agricultural Mechanization Research & Development Center.

**Mitch Hushak**, BSAE'84, is Project Engineer for Tone Brothers in Des Moines, IA. He is registered as a P.E. with the State of Wisconsin and joined Tone's in December, 1990. His son Darren was born in November, 1990.

**Jeffrey L. Coon**, BSAE'85, is an Environmental Engineer with the firm of James M. Montgomery Consulting Engineers, Inc. located in Des Moines, IA. He received his P.E. license in February, 1991. He and his wife, Shelly, have one son, Ryan John, who was born January, 1992.

**Alan Lukens**, BSAE'85, MS'87, is an Engineer with Klingner & Assoc. P.C., a consulting engineering firm located in Quincy, IL. Alan is busy with community work as well as his family. He and his wife Lisa have three daughters, Amy and Nicole, 5 years olds, and Laura who is 2 years old.

**Jeffrey J. Klahs**, BSAE'86, is Senior Mechanical Engineer, Ross Laboratories Division of Abbott Laboratories in Casa Grande, AZ. He designs, procures, and manages new packaging/filling lines. He and his wife, Sara, live in Casa Grande.

**Doug Luzbetak**, BSAE'86, is a Civil Engineer with the Soil Conservation Service in Centerville, IA. He received his MS in Civil & Environmental Engineering from the University of Iowa in December, 1987. He and his wife, Melinda, have one daughter, Rebecca, born December 23, 1991.

**Scott Yoder**, MS'87, is Account Manager, Commercial and Industrial Sales Division of Amoco Oil Co. in Canton, MI. He is responsible for fuel sales to automakers. Scott also acts as technical liaison between automakers and Amoco Fuels R & D. This follows assignments as a gasoline engineer in Marketing Tech Service, and emissions research at R & D.

**Don Lamb**, BSAE'87, MS'90, is Assistant Manager of Laboratory Automation, Pioneer Hi-Bred International in Johnston, IA. His son, Ian Patrick, was born July 22, 1991.

**Carl D. Orr**, BSAE'88, is Plant Quality Assurance Manager with the Proctor & Gamble Manufacturing Co. located in Iowa City, IA. He was promoted and transferred in September 1991, from the P & G plant in Greenville, S.C.

### 1990's

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**Jeffrey M. Higgins**, BSAE'90, is Shift Supervisor, AGProcessing, Inc. located in Dawson, MN. Jeffrey is responsible for soybean processing and quality control during production of both meal and oil.

**Sulaiman Al-Yahya**, PhD'91, has been named Head, Department of Agricultural Engineering, King Saud University in Buraydh, Qassim, Saudi Arabia.

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Extra copies of the 1991 *Davidson Dispatch* are available, and copies can be made of earlier editions. Please contact Mary Ellen Hurt, Administrative Assistant, at 515-294-2211 if you are interested in back issues.

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## New Journal

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Dr. Ramesh Kanwar has agreed to serve on the Editorial Board of a new journal, *Agricultural Engineering Journal: An International Journal on Research and Development in Agricultural Engineering* (ISSN 0858-2114), published quarterly by the Asian Association for Agricultural Engineering. The subscription rate is \$20 in Asia, \$30 outside Asia. Institutional rates are \$60 in Asia,

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## Award Winning Videos

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A video series *Quality Water* has been written by Tom Glanville and produced by Claes Jonasson. There are six video tapes in the series; Hard Water, Red Water, Coliform Bacteria, Nitrate, Man-made Chemicals, and Sulfur. This series won the ASAE Blue Ribbon award from the 1992 Educational Aids Competition, and has become a "best seller." The video series is being used by extension staff in Iowa, Kansas, Minnesota, and Missouri. For more information contact Tom Glanville at 515-294-0463.

An additional video *Pork Production in the United Kingdom* has been written by Vern Meyer and produced by Claes Jonasson. Vern and Claes won an ASAE Blue Ribbon Award this year for their work. This is their sixth video in a series on swine and is scheduled to be aired on Iowa Public Television at 12:30 p.m. on March 2nd and 9th. For additional information on this video or earlier titles in this video series contact Vern Meyer at 515-294-9806.

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## Biomaterials Lab

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The faculty have given high priority to the establishment of a state-of-the-art biomaterials laboratory in Davidson Hall. The lab will be used for:

- experiments in courses involving grain and oil-seed drying, aeration, processing and handling
- teaching activities in courses related to soil, water quality and wood properties
- independent study projects by undergraduates involving biomaterials
- graduate student research projects involving grain, oilseeds, and other biomaterials

The department has freed 1900 sq.ft. of existing space in the northeast corner of Davidson Hall to be

remodelled to contain lab cabinets, lab furniture, specialized lab equipment, sink, fume hood, audiovisual equipment, and chalkboards. The renovation and equipment for the new biomaterials laboratory is estimated to cost \$370,000.

Currently Prof. Carl Bern, P.E. and Prof. Larry Van Fossen, P.E. are working with Dr. Gilley to secure funding for the Biomaterials Laboratory. If you are interested in supporting the creation of this laboratory please contact the department, or any of the faculty working on this project. This is an opportunity to help ensure a supply of graduates who are highly competent in technical areas relating to biomaterials.

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## Club Activities

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### ASAE Student Branch

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Douglas Weiring, President 1992  
Carl Anderson and Mort Boyd, Advisors

The branch received First Place in the EMI Trophy Awards, Group B competition in June. The Equipment Manufacturers' Institute (EMI) award was given for excellence in initiative and professionalism in the conduct of student engineering activities.

The branch also received the "Most Innovative Idea Award" for 1992 from the Iowa State Agricultural Council for their work with the design and production of the scale model grain wagons used to demonstrate prevention of suffocation by grain.

Students organized a tour of Townsend Engineering located in Des Moines in November. The tour provided an excellent opportunity to see both the processing and food industry aspects of engineering.

### AST Club

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Phil Jennings, President 1991-92, President  
Chad Marshall, President 1992-93, President  
Vic Bekkum and Chuck Schwab, Advisors

The Iowa Agricultural Mechanization Branch received Second Runner-up in the EMI Trophy Awards for a high degree of professionalism in the conduct of their activities.

Students organized a convoy to attend the Iowa Section of ASAE in Waterloo in September. While

there, the members enjoyed a tour of the John Deere Tractor Assembly Plant and Product Engineering Center.

Ten members of the Agricultural Systems Technology Club and ten members of the ASAE Student Branch traveled to Moline and Peoria, Illinois, during the Thanksgiving Break. The members accompanied by AST Club advisor, Dr. Victor Bekkum and Richard VanDePol, Manager of the Agricultural & Biosystems Research Farm, enjoyed excellent tours of the John Deere Harvester Works and Caterpillar Track-Type Tractor Facility.

### AEGO

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DeeAnna Weed, President 1991-92  
Piyush Singh, President 1992-93  
Ramesh Kanwar, Advisor

In June, graduate students traveled to Charlotte, NC., to the ASAE International Summer Meeting where six students gave papers.

The Agricultural Engineering Graduate Organization invited Dr. J. P. Srivastava, Senior Agriculturalist with the World Bank, to give a seminar on the "Technological Demands for Sustainable Agriculture" on November 30th.

In December, graduate students traveled to Nashville, TN., to attend the ASAE International Winter Meeting, where four of the graduate students delivered papers.

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## Spring Banquet

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The Annual Spring Banquet, hosted by both the ASAE Student Branch and the AST Club will be held February 27, 1993, at the Scheman Continuing Education Building. The featured speaker will be Dr. Martin Jischke, President of Iowa State University. If you are interested in attending, please contact the Agricultural and Biosystems Engineering Department at 515-294-1434.

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## Congratulations

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The following graduate students finished their programs in 1992, and we wish them the best.

### Spring 92

Prasanta K. Kalita (India)	Ph.D.	Advisor, R. Karwar
Mohammed S. Mirjat (Pakistan)	M.S.	Advisor, R. Karwar

### Summer 92

Carol J. Lehtola (US)	Ph.D.	Advisor, S. Marley, S. Melvin
John-Brian Priest (US)	M.S.	Advisor, D. Bundy, S. Hoff

### Fall 92

Binayak P. Mohanty (India)	Ph.D.	Advisor, R. Karwar
Loren W. Steenhoek (US)	M.S.	Advisor, R. Smith
DeeAnna J. Weed (US)	M.S.	Advisor, R. Karwar

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## Combining New Technologies to Examine Seeds

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*By Tom Jirik*

Agricultural engineers at ISU's Seed Science Center are combining two technologies to evaluate soybeans inside and out.

Manjit Misra, Director, and Yuh-Yuan Shyy Ph.D.'84, have developed an instrument that combines ultrasound and computer imaging. The ultrasound portion of the instrument is used to measure the mass and hardness of soybeans. The computer-imaging portion is a computer-controlled video camera used to assess soybean size, shape, texture, color, and luster. "The entire analysis only takes a few seconds," Misra said.

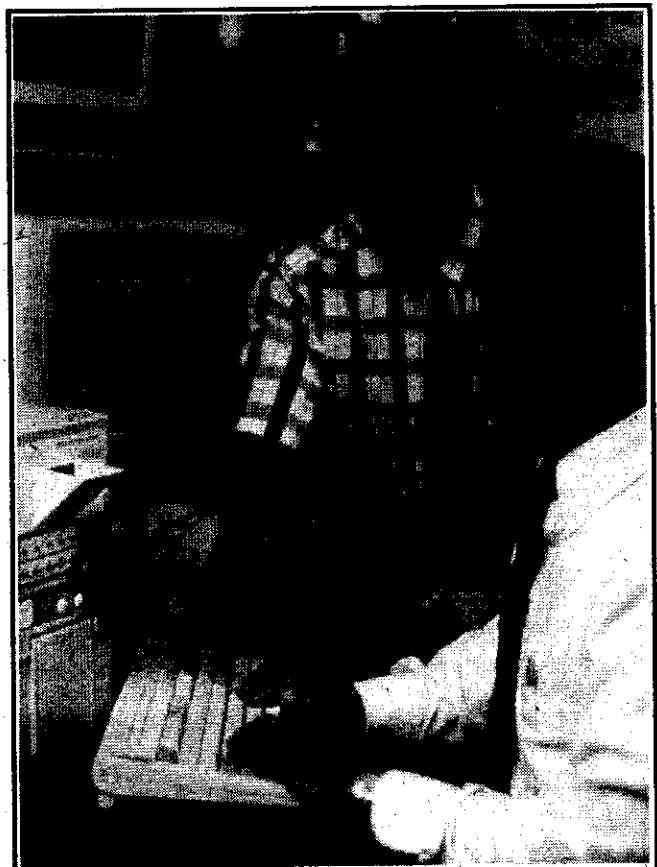
Researchers can use the analysis to determine if the soybeans are damaged, diseased, or immature.

According to Misra, the system is the first of its kind. "Our market studies indicate there is a \$40 million international market for this technology," he added. ISU has applied for a patent on the system.

The technology will allow seed companies to monitor seed quality more closely and ensure uniform quality among their seed lots, Misra said.

Plant breeders and geneticists may find the system's precise measurements useful for evaluating the physical characteristics of soybean varieties. The system does not damage seeds, so researchers can safely evaluate samples of rare or valuable seeds.

Dr. Shyy shared information about this project with his colleagues at the 1992 ASAE Summer Meeting by presenting a paper entitled "High-Speed Ultrasound Signal Analysis."



Dr. Manjit Misra (left) and Dr. Yuh-Yuan Shyy (right).

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## Computer Updates for Davidson Hall

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by Nancy Wheeler, MIS Specialist

The former graduate offices in Room 125E are being remodeled for the department's Project Vincent computers and several microcomputers. When this renovation is complete, Davidson Hall will boast three computer laboratories for its students and staff; one for IBM computers, one for Apple computers, and one for Project Vincent and research/development PCs for use by students, faculty and staff.

Davidson Hall now has approximately sixty computers for use by faculty, staff, and students. We are continually trying to provide up-to-date technology for the department to help our graduates prepare for their futures. We have purchased the latest versions of AutoCad and staff will be offered the opportunity to move to a Windows environment in the near future.

Novell NetWare software has been purchased and a new Local Area Network (LAN) will be installed to provide more efficient computer access to all students and staff in the department. These changes will also facilitate access to national and international databases and information services.

AuthorWare software is being purchased so teaching faculty will be able to develop coursework using interactive and multimedia computer based software. The interactive/multimedia approach should allow students to become more involved and active with their computer training and provide instructors with better ways to demonstrate their coursework.



Dr. Sunday Tim (center) working with students in one of the department computer labs.

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## Davidson Hall Renovations Continue

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- Classroom 115 has been renovated, and it looks great! The classroom has new tables, mounted chairs for 40 students, and it is air-conditioned. Not only does it look contemporary, but most important, the audio-visual equipment in the classroom is state-of-the-art. A Sony video projector is mounted on the ceiling, and there is storage space for additional instructional equipment. The projector can directly display, on a screen in the front of the class, output from video, slides, overheads, and three types of computers: IBM compatible, MAC & Project Vincent.
- Graduate student offices were relocated to the southwest area of Davidson's first floor, with additional graduate student space located in the North Shed. The former "Bullpen" no longer exists!
- A third computer laboratory is currently being renovated. Although painting and electrical work continue, the Project Vincent Laboratory should be up and running soon.
- A bioenvironmental laboratory was developed combining animal environmental instrumentation in a single area. The laboratory combines research in modelling air distribution using a 1/6 scale model of the swine grower building at the Swine Nutrition and Management Research Center; a fan test chamber built to AMCA standards for research in the design of fans and air inlet systems; an olfactometry unit to evaluate odors, and an aerosol and bacteria evaluation and testing laboratory.
- The creation of the new Biomaterials Laboratory has begun with basic preparation of walls and electrical work. The new laboratory will be located in the space formerly used by the welding lab. The welding courses have been phased out, and the equipment removed. Dr. Carl Bern has written a grant to acquire new laboratory equipment for the new Biomaterials Laboratory, but the department could use alumni support and/or corporate support. Contact Carl Bern or Larry VanFossen (515-294-1434) if you are interested in supporting this new project.



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## Faculty Improvement Leave

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**Tom Greiner**, Associate Professor and Extension Agricultural Engineer, has been on faculty improvement leave from July 1 until March 1993. Dr. Greiner has been working with a research team at Newcastle upon Tyne Polytechnic, Newcastle upon Tyne, Newcastle, United Kingdom, in the area of indoor air quality and energy efficiency of housing facilities. In addition to his research, he has presented lectures and seminars, and he has visited other academic and industrial organizations specializing in the built environment.

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## ISU joins the National Faculty Exchange

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Historically faculty have participated in exchanges with ISU's sister institutions, but recently Iowa State University joined the National Faculty Exchange. This program will enable faculty to participate in exchange opportunities at other member institutions and organizations. Contact the department at 515-294-1434 for more information.



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## Faculty's International Travel

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In June, four faculty members traveled to Uppsala, Sweden, to present papers at the International Conference on Agricultural Engineering, AgEng 1992.

**Carl Bern** presented, "Preservation of High-moisture Maize with Rovral Fungicide."

**Dwaine Bundy** presented, "Development and Testing of a Particulate and Viable Aerosol Removal System for Livestock Housing."

**Tom Colvin** presented, "Fuzzy Logic Based Decision Support System for Crop Production Operations Scheduling."

**Steve Hoff** presented "Numerical Modelling of Ammonia Distributions in Swine Confinement Facilities."

**Don Erbach** traveled to Austria, Germany, and England in April to visit Caterpillar dealers and farmers and to present a seminar on tillage. This trip was sponsored by Caterpillar Inc. In December, Don traveled to Czechoslovakia, where he exchanged information on no-tillage and ridge-tillage research.

**James R. Gilley**, as a part of his role as technical advisor to a NATO Irrigation Project, traveled to Portugal in June. This project began in 1988, and continues through 1993. In addition, Jim was in Belgium in September as part of his continued re-

search project with the Catholic University of Leuven.

**Ramesh Kanwar** taught a soil and water quality course at the Instituto Superior de Agronomia, Technical University of Lisbon, Portugal, in April and again in December, as part of the NATO Irrigation Project. He then proceeded to India where he had been asked by the World Bank to review their Land Reclamation Project in Lucknow on December 20-24. During his visit to India he also met with the research staff at the University of Agriculture, Faisalabad, and the National Water Resources Research Institute, Islamabad. He also visited several USAID funded project sites and the International Irrigation Institute in Lahore.

**Stewart Melvin** traveled to Poland in April to review agricultural related water quality programs. His evaluation team was organized by the Center for Agricultural and Rural Development (CARD).

**Vern Meyer** visited England and Scotland in March to videotape swine facilities. In particular he was interested in changes being made on UK farms due to recent legislation on animal housing requirements. The videotape is part of a series televised on Iowa Public Television.

**Larry VanFossen** served as the department's representative on an ISU trip to the University of Costa Rica. Larry used the opportunity to do some recruiting for our graduate programs.

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## Faculty Honors and Awards

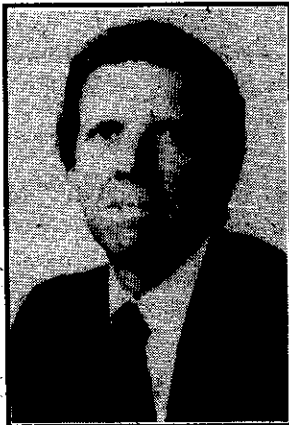
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**Morton M. Boyd** was selected as a recipient of the NACTA John Deere Award for teaching excellence in power and machinery for 1992. He received the award at the National Association of Colleges and Teachers of Agriculture (NACTA) National Conference in June.

**Dwaine S. Bundy, Ph.D.'74**, was elected to the *Rural Builder* Hall of Fame. New members of the Hall of Fame are selected by existing members as well as the staff of the *Rural Builder*. His induction took place at the 25th Annual National Rural Builder Show in Nashville, TN, in March.

**Glenn A. Church**, Manager, MidWest Plan Service, received the ASAE Mid-Central's Special Service Award for MidWest Plan Service programs and for Iowa Section program leadership at the March conference.

**Donald C. Erbach, Ph.D.'74**, was elected Director, ASAE Publications Department, for a two year term. Dr. Erbach is a leader in tillage research and conducts his research at the USDA-ARS National Soil Tilth Laboratory in Ames. As Director of ASAE Publications he will be responsible for the development of *Agricultural Engineering* as well as other society technical and information publications. He will also serve on the Board of Directors which develops policy for the society.



**James R. Gilley** was elected to the ASAE Foundation Board of Trustees for a three year term. The Board of Trustees is responsible for the management of the ASAE Foundation, and this information was announced at the 1992 ASAE Summer Meeting.

**Thomas A. Hoerner** was honored by the NVATA and the program of vocational agricultural education at the 1992 NVATA National Convention in November.

**Stewart W. Melvin Ph.D.'70** was awarded the Walnut Grove Excellence Award. The award, established by the Walnut Grove Company, Division of W.R. Grace Co., is given to recognize excellence in research, teaching, and extension related to swine and/or cattle, and it is awarded through the ISU College of Agriculture.



Dean Topel presenting Manjit K. Misra the University Excellence in Applied Research and Extension award.

**Manjit K. Misra**, Director, Seed Science Center, was presented with an University Excellence in Applied Research and Extension Award by the College of Agriculture in January.

**Manjit K. Misra**, Director, Seed Science Center, was named Engineer of the Year by the Iowa Section of the ASAE in February.

**Richard J. Smith, Ph.D.'71**, was selected as the 1992 Outstanding Agricultural Engineering Professor by the students and was honored at the Engineering Student Council banquet in April.

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## ASAE Blue Ribbon Awards

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A number of ISU faculty and staff received **ASAE Blue Ribbon Awards** in various categories of the 1992 Educational Aids Competition held by the ASAE. The following winners displayed their materials at the ASAE Summer Meeting in Charlotte, NC.

**Carl J. Bern, Duane W. Mangold, James R. Gilley, and Connie Petrich** for the recruitment brochures, "Agricultural and Biosystems Engineering," and "Agricultural Systems Technology."

**Thomas D. Glanville** for the video series "Quality Water."

**Vernon M. Meyer** for the video "Quality Air-Healthy Pigs."

**Charles V. Schwab and Mark Hanna** for the fact sheet series "Safe Farm."