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THE AGRICULTURAL EXPERIMENT STATION
INSTITUTE OF AGRICULTURE
AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA-LINCOLN 68583-0704



Agricultural Experiment Station News

September 1983

VOL 17 NO 3

ASSOCIATE DIRECTOR NAMED

Dale Vanderholm, University of Illinois, has accepted the position of Associate Dean and Director of the Agricultural Experiment Station contingent upon approval by the Board of Regents at their October meeting. Vanderholm is a native of Visca, Iowa and received his BS degree in Agricultural Engineering in 1962, his MS degree in 1969 in Water Resources from Iowa State University, and his Ph.D. degree in Agricultural Engineering in 1972 from Colorado State University. He was on the faculty at Iowa State University before moving to the University of Illinois in 1973. Vanderholm is currently an Assistant Director of the Illinois Agricultural Experiment Station and Professor of Agricultural Engineering. He plans to assume his new responsibilities on December 1, 1983.

RETIREMENT

John Wehling, Director of the University of Nebraska Panhandle Station, has announced his retirement effective December 31, 1983. A retirement dinner is scheduled for Wednesday evening, October 19th, 7:00 p.m. at the Scotts Bluff Country Club. Reservations, \$10.00 per person, are due October 17th. Donations for a combined gift and letters of congratulation may be sent to John Wehling Recognition Committee, c/o Marilyn Miller, Panhandle Station, 4502 Avenue I, Scottsbluff, Nebraska 69361.

UNIVERSITY FIELD LABORATORY SUPERINTENDENT

To provide greater on-site coordination and facilitate full development of the University Field Laboratory, the appointment of **Warren Sals** is being changed to Superintendent of the University Field Laboratory. He will continue to carry a .20 FTE appointment as Assistant Director of Agricultural Experiment Station operations. The University Field Laboratory has made great strides since it was established as a research facility in 1961 and major improvements are anticipated in the future to enhance its effectiveness in serving IANR research and educational needs.

DEADLINES

Programs With Quarterly Deadlines

Travel to Scholarly Meetings, Research Grants-in-Aid, and Visiting Scholars:

<i>Deadline</i>	<i>For Support From:</i>
December 1, 1983	January 1, 1984 to March 31, 1984
March 1, 1984	April 1, 1984 to June 30, 1984
May 1, 1984	July 1, 1984 to September 30, 1984
September 7, 1984	October 1, 1984 to December 31, 1984

PROJECT ACCOMPLISHMENTS

Lowell Klepper, Associate Professor, Agronomy.
Project: Nitrogen Metabolism of Plants.

During this project period, six papers were published, five in different professional journals. Two graduate students were trained, one at the master's level (now a postdoc at Harvard), the other, at the Ph.D. level (now, vice pres, and technical director, American Malting Barley Association). Considerable research was conducted using salicylate compounds to cause branching and increased seed set on soybeans. This process is under patent application now. Further research and publication was accomplished showing and explaining the interactions between nitrogen metabolism and herbicidal action. This adds to the understanding of how herbicides work. The most exciting find during this period was that the soybean plant and other plants, when treated with certain herbicides or placed under appropriate environments, formed gaseous oxides of nitrogen and evolved them into the atmosphere. Collectively, the gases are denoted as NO_x, and are considered air pollutants (the same pollutants as in exhaust gases of the automobile engine or industry's smokestacks or present in acid rain). The mechanism by which these gases are formed in the plant or the reasons for the formation are not yet known.

AES ADVISORY COUNCIL REPORT

During 1982-83, the Experiment Station Advisory Council:

1. Completed work on a new format for Experiment Station project proposals.
2. Reviewed draft versions of the new IANR staff activities report and provided suggestions to the Liaison Committee pertaining to research and nontraditional activities.
3. Debated the merits of sponsoring Station seminars and sponsored "Futurist" seminar, featuring Dr. Nelson Otto. Concluded that opportunities for seminars of interest and value to the entire Station staff are somewhat limited.
4. Discussed mode of operation of commodity coordinating committees. A poll of past and current commodity committee members yielded widely differing views on effectiveness of commodities. The issue was tabled during the transition in Station directorship.
5. Evaluated Widaman Trust nominations and made recommendations to the Dean/Director.
6. Discussed budget problems and alternatives for allocating shortfalls.
7. Discussed policies and procedures for allocation of Layman Fund awards. Voiced concern that traditional peer evaluation procedures were being by-passed.
8. Met with Vice Chancellor Goebel to discuss a wide range of concerns about the management of the Physical Plant, Motor Pool, General Stores and Purchasing Departments. Gerald Bodman, former Advisory Council Chairman, participated in the meeting and subsequently provided Goebel with a comprehensive written statement of concerns. The Vice Chancellor was most responsive to the critical comments and Council members are hopeful that improvements will result.
9. Discussed reported problems in mode of operation of the University Human Subjects Committee and supplied the IANR Liaison Committee with resulting views.
10. Recommended a formula for redistricting the Station Advisory Council to provide for a more democratic representation of Station members' interests.
11. Interviewed candidates for the Station Directorship.
12. Discussed formulas used in assessing indirect costs and graduate assistant tuition to grants and contracts. Suggested that a \$5,000 threshold beyond which costs are assessed might be preferable to the present \$2,500 level. Expressed concern that IANR projects are assessed more than their fair share of tuition costs. Provided input to Professors **Burnside** and **Klopfenstein** of ad hoc University committee studying indirect cost issues.
13. Discussed role of "Instrumentation Advisory Committee".
14. Discussed the issue of research duplication and how it might be avoided.
15. Discussed the relative merits of adding an associate director position to the Station administration.

16. Provided the Dean/Director with nominations for search committee membership.

17. Interviewed four candidates for the Associate Dean/Associate Director Position and met with the Director to discuss strengths and weaknesses of each candidate.

The Advisory Council is currently involved in establishing criteria for compliance with the Board of Regents Reallocation mandate. Faculty are encouraged to visit with their council District Representative regarding AES related issues.

Dale Anderson, Chairman

HONORS AND AWARDS

During the past several months, members of the Experiment Station staff have received various honors and awards.

Allen Blezek, Associate Professor, Agricultural Education, received an Award of Achievement for outstanding service and dedication to the Nebraska Vocational Association.

Kenneth D. Frank, Associate Professor, **Philip H. Grabowski**, Assistant Professor, **Robert A. Olson**, Professor—all of Agronomy Department and former Professor of Agronomy **George W. Rehm**, now a professor at the University of Minnesota, received an award as authors of the best article published in 1982 in the *Crops and Soils* magazine.

Sue Ann Groepper, staff secretary, Agronomy, was given the IANR Clerical/Service Award for the month of August, 1983.

Robert Koch, Professor, Animal Science, at the U.S. Meat Animal Research Center, Clay Center, was selected as an Honorary Fellow by the American Society of Animal Science.

David T. Lewis, Professor, Agronomy, was given a certificate of merit by the Soil Conservation Society of America.

Connie Ley, Assistant Professor in the Department of Education and Family Resources, was selected by the American Education Research Association as a distinguished research-mentor.

Roger Mandigo, Professor of Animal Science, was honored by the Nebraska Bankers Association Agriculture Committee for his accomplishments and contributions to the agricultural industry.

Lowell E. Moser and **Orvin C. Burnside**, Professors of Agronomy, were made ASA Fellows at the annual meeting of the American Society of Agronomy.

Robert A. Olson, Professor, Agronomy, was given the Bouyoucous Soil Science Distinguished Career Award by the Soil Science Society of America at the American Society of Agronomy.

Anne Vidaver, Professor, Plant Pathology, was elected a Fellow in the American Phytopathological Society.

WIDAMAN TRUST GRADUATE STUDENT AWARDS

The following graduate students were selected to receive the Widaman Trust Outstanding Graduate Student Awards for 1983-84. Their annual graduate assistantship stipend will be increased by \$1,000 as a result of being selected to receive this award by the Agricultural Experiment Station:

<u>Recipient</u>	<u>Department</u>	<u>Adviser</u>
Farouq G. Abawi	Animal Science	T. W. Sullivan
Azzeddine M. Azzam	Agricultural Economics	M. E. Baker
Sara Margareta Azzam	Animal Science	G. E. Dickerson & M. K. Nielsen
William C. Bridges, Jr.	Agronomy	C. O. Gardner
Douglas Buhler	Agronomy	O. C. Burnside
Charles S. Fowler	Agronomy	D. Swartzendruber
Kurt Anthony Frantzen	Agricultural Biochemistry	J. M. Daly
Judy Matras Glover	Food Science & Technology	C. E. Walker
Allen Thompson	Agricultural Engineering	J. R. Gilley
Abe Turgeon	Animal Science	D. R. Brink & T. J. Kloppenstein
Paul J. Whalen	Food Science & Technology	K. M. Shahani

GRANTS AND CONTRACTS

Burnside, O. C. (Agronomy) - Union Carbide	2,550
Burnside, O. C. (Agronomy) - Dow Chemical, USA	10,000
Case, R. M. (Forestry, Fisheries & Wildlife) - ICI Americas, Inc.	1,375
Danielson, M. D. (North Platte Station) - SmithKline Animal Health Products	2,400
Linsenmeyer, D. A. (Ag Economics) - Nebraska Department of Roads	100,000
Moomaw, R. S. (Northeast Station) - Rohm and Haas Company	750
Moomaw, R. S. (Northeast Station) - Dow Chemical	2,500
Peters, L. L. (South Central Station) - Union Carbide	500
Shahani, K. M. (Food Science & Technology) - Ira W. DeCamp Foundation	25,000
Sullivan, T. W. (Animal Science) - SmithKline Beckman	4,000
Sullivan, T. W. (Animal Science) - Texasgulf	4,500
VanEtten, J. L. (Plant Pathology) - Department of Energy	62,000
Vidaver, A. K. (Plant Pathology) - Illinois Foundation Sees, Inc.	250
Walker, C. E. (Food Science & Technology) Dai-Ichi Seiyaku Co., Ltd.	15,000
Wicks, G. A. (North Platte Station) - Dow Chemical	750
Wilson, R. G. (Panhandle Station) - Rohm and Haas Company	1,000
Wilson, R. G. (Panhandle Station) - BASF Wyandotte	1,800
	234,375

SEARCH COMMITTEE UPDATES

Merwin Frey, Chairman of the Search Committee for the Head of the Department of Veterinary Science, reports that announcements have been distributed with a deadline of September 30, 1983. He has already received several applications. According to **Robert Wilson**, Chairman of the Search Committee for the Director of the Panhandle Station, announcements were distributed

with a deadline of October 15. Interviewing of final candidates for the Head of the Department of Agronomy is now taking place. **Gary Peterson** is Chairman of that Search Committee. **James VanEtten**, Chairman of the Search Committee for the Head of the Department of Plant Pathology, reports that names of the finalists have been submitted to the Vice Chancellor for IANR.

CHECK-OFF BOARD RESEARCH PROPOSALS DUE NOVEMBER 15

Grant proposals for corn, sorghum, soybean and wheat Check-off Boards are due in the AES Director's Office by November 15, 1983. Grant applications should adhere to the following guidelines:

1. Be approved by the Department Head before being submitted.
2. Should not exceed two pages.
3. Continuation projects should include a brief summary of accomplishments.
4. Applications submitted to more than one Board should clearly indicate whether or not project can be initiated without funding from each of the Boards involved. If project can be initiated with support from only one Board, indicate reduced scope of project.
5. Grant application format:
 - A. Name of Check-off Board to which application is being submitted.
 - B. Project Title
 - C. Project Year/Time Period
 - D. Principal Investigator(s), Department or District Station, Phone Number
 - E. Project Location(s)
 - F. Project Description
 1. Justification
 2. Specific Objectives
 3. Procedures
 - G. Project Budget — by major category of expenses
 - H. Signatures of Principal Investigator, Department Head and District Director (if appropriate). Include a place for approval by the AES Director.

Joint research and extension projects can be submitted if deemed to have possible appeal to Board members. Major categories for projects previously funded include:

1. Utilization
2. Production Efficiency
3. Conservation
4. Marketing and Economics
5. Basic Plant Physiology/Biochemistry

Letters will be sent to Unit Administrators, but researchers are encouraged to develop their projects well in advance of the November 15 deadline. Check-off Board support for AES research projects in 1983-84 was: Corn: \$183,011; Sorghum: \$130,710; Soybean: \$261,442; and Wheat: \$62,450.

NEW OR REVISED PROJECTS

NEB 13-068 - Integration of Comfort Parameters with Feed Intake and Other Productivity Responses in Poultry

This new Hatch project has **Earl W. Gleaves** of the Animal Science Department as principal investigator. The objective of the research is to evaluate feed intake as an indicator of animal well-being.

NEB 24-019 - Preservice Evaluation of Student Teachers and of Student Teaching Centers

This new Hatch project has **R. D. Dillon** of the Agricultural Education Department as the principal investigator. Objectives of the study are: (1) to develop measurable criteria for selecting secondary school teaching centers for undergraduate vocational agriculture student teachers (2) to determine the relationships between previous occupational experience of prospective students in agricultural occupations, and performance in selected basic agriculture college courses, (3) to determine the relationships of occupational experiences of vocational agriculture teachers to the emphasis of local vocational agriculture programs being con-

ducted and (4) to develop and test a model for placement of student teachers.

FACULTY DEVELOPMENT LEAVES

Leroy L. Peters, Professor of Entomology, was on developmental leave from October 1, 1982 through March 31, 1983. He spent this time at Oregon State University, Corvallis. His primary activity during this leave was to study the taxonomy of mites. He spent most of his time preparing mite specimens for identification and subsequently identifying them. He worked in the laboratory of Dr. G. W. Krantz in the Department of Entomology at Oregon State. He had full use of the Acarology Laboratory facilities including access to described specimens and an extensive Acarology Library. Dr. Krantz currently has a \$90,000 grant from the National Institute of Health for a worldwide study of Macrochelid Mites. Peters had a courtesy appointment in the Oregon State University Department of Entomology. He observed their overall program and how it was conducted. He gave a departmental seminar on "Entomology in Nebraska." He visited with the Oregon State Extension Entomologists often and attended several of their programs.