

6-1996

## ARD News June 1996

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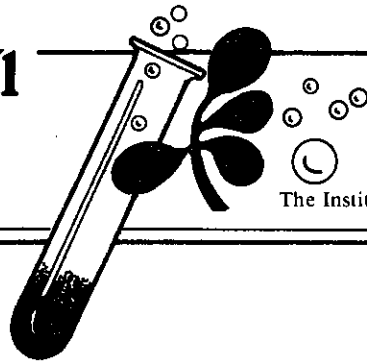


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June 1996

Volume 30, Number 6

## COMMENTS FROM THE DEAN

Dear Colleagues:

Some significant temporary changes will occur in the ARD Office June 30. I will be spending 75 percent of my time as the Interim Associate Vice Chancellor for the next six to nine months. This assignment will involve day-to-day administration and leadership for IANR as Vice Chancellor Omtvedt assumes additional responsibilities as the Interim Senior Vice Chancellor for Academic Affairs.

Associate Dean Dale Vanderholm will have responsibility for day-to-day management of ARD activities, although I will continue to be involved in some ARD programs. Dr. Elton Aberle has agreed to assist with ARD administration as an Interim Associate Dean on a one-half time basis. Hopefully, Dale, Abe and I will be able to keep the ARD "ship afloat."

Dale has hired Scott Sandquist as the IANR facilities coordinator (managerial-professional level). Scott will begin his duties June 24. Mr. Sandquist will take a major part of the facilities planning load that Dale has carried since Tom Johnson resigned. Hiring the facilities coordinator will allow Dale to devote more time to ARD administration.

Dr. Chris Calkins will finish up his ARD internship June 30 but will continue working for a few months to complete his research accomplishments data base project. Dr. Kyle Hoagland will join the ARD Office as an Administrative Intern on July 1. Dr. David Baltensperger also will be an Administrative Intern during the next year, but his primary activities will be focused at the Panhandle Research and Extension Center.

The next few months will be exceptionally challenging. We ask for your patience and support as the transitions in IANR administration take place. We expect that everything will be back to near normal by Jan. 1, 1997.

*Darrell W. Nelson  
Dean and Director*

## NEW OR REVISED PROJECTS

The following station projects were approved recently by the USDA Cooperative State Research Service:

**NEB-10-134 (Agricultural Economics) Economic and Environmental Implications of Expiring Conservation Reserve Contracts**

*Investigator(s):* M. Baker and R. T. Clark

*Status:* New Hatch project that contributes to NC-214 effective Oct. 1, 1994

**NEB-11-044 (Biological Systems Engineering) Improvement of Thermal Processes for Foods**

*Investigator:* M. A. Hanna

*Status:* Revised Hatch project that contributes to NC-136 effective Oct. 1, 1995

**NEB-12-252 (Agronomy) Biosolid Application and Soil Chemical Properties: Changes in Phosphorus and Carbon Pools**

*Investigator:* D. L. McCallister

*Status:* New Hatch project effective March 1, 1996

**NEB-16-044 (Food Science and Technology) Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation**

*Investigator:* M. Zeece

*Status:* Revised Hatch project that contributes to NC-131 effective Oct. 1, 1995

**NEB-16-054 (Food Science and Technology) Chemical and Physical Quality Characteristics of Horticultural Crops and Their Products**

*Investigator:* D. Smith

*Status:* Revised Hatch project effective April 1, 1996

**NEB-16-055 (Food Science and Technology) Allergenic Foods: Their Detection, Allergens, and Effect of Processing and Genetic Engineering**

*Investigator(s):* S. L. Taylor and S. L. Hefle

*Status:* Revised Hatch project effective Jan. 4, 1996



**NEB-16-058 (Food Science and Technology) Occurrence, Control and Prevention of Pathogenic Bacteria in Foods**

*Investigator:* S. S. Sumner

*Status:* Revised Hatch project effective April 1, 1996

**NEB-16-070 (Food Science and Technology) Alliance for Food Protection**

*Investigator:* S. L. Taylor

*Status:* New Special Grant effective March 1, 1996

**NEB-16-071 (Food Science and Technology) Enhancing Food Safety Through Control of Foodborne Disease Agents**

*Investigator(s):* S. S. Sumner and C. L. Weller

*Status:* New Hatch project that contributes to S-263 effective Oct. 1, 1995

**NEB-19-005 (Food Processing Center) Development and Quality/Safety Enhancement of Specialty Food Products**

*Investigator:* S. L. Taylor

*Status:* New Special Grant effective July 1, 1996

**NEB-31-001 (Center for Sustainable Agriculture) Integrated Crop/Livestock Research for Sustainable Systems**

*Investigator(s):* C. A. Francis, T. J. Klopfenstein and J. R. Brandle

*Status:* New Special Grant effective April 1, 1996

**NEB-43-058 (West Central Research and Extension Center) Biology, Ecology, Economics and Control of Major Insects Affecting Cattle in Nebraska**

*Investigator:* J. B. Campbell

*Status:* New Hatch project effective Nov. 1, 1995

**NEB-92-024 (Family and Consumer Science) Development of a Protocol for Assessment and Intervention of Domestic Violence and Abuse**

*Investigator:* B. L. Jory

*Status:* New Hatch project effective Feb. 27, 1996

**NEB-92-025 (Family and Consumer Science) Family Functioning of Interracially Constituted Families**

*Investigator:* S. Baugher

*Status:* New Hatch project effective April 4, 1996

**NEB-94-022 (Textiles, Clothing and Design) Development of Textile End-Uses for Wheat Gluten and Other Farm Commodity Derived Materials**

*Investigator:* L. Hamilton

*Status:* New Hatch project effective Feb. 27, 1996

**PROPOSALS SUBMITTED FOR FEDERAL GRANTS**

The following is a listing of proposals that were submitted after April 1, 1996 by faculty for federal grant programs. While not all grants will be funded, we applaud the faculty member's effort in submitting proposals to the various agencies.

**David Stanley-Samuelson — USDA/ARS — Pest Control by Manipulation of Insect Eicosanoid Mediated Immune Responses to Bacterial Infections — \$4,000**

**Shasha Verma — NASA — Field Micrometeorological Measurements, Process-Level Studies and Modeling of Methane and Carbon Dioxide Fluxes in a Boreal Wetland Ecosystem — \$10,000**

**Albert Weiss, Timothy Arkebauer, P. Stephen Baenziger, Kent Eskridge, Jerry Maranville, and Dave Shelton — NSF — Biological and Physical Interactions of Global Change and Wheat Ecosystems — \$630,181**

**Blair D. Siegfried and Kyle D. Hoagland — NSF — Mechanisms of Selective Atrazine Toxicity in Freshwater Algae — \$311,174**

**Robert Kuzelka and Sanford Kaplan — NSF — Examination of the Institutional and Behavioral Factors that Influence Groundwater Protection Policy — \$636,391**

**George Meyer, Tom Franti and Dave Mortensen — NSF — Advanced Sensors for Spot Spraying Plants to Reduce Chemical Input and Improve Water Quality — \$84,439**

**Linda Young and Carol Gotway — NSF — Statistical Assessment of Environmental Indicators, Stability, and Scale — \$626,929**

**Z B Mayo and Lisa Silberman — USDA/NRI — Biological and Chemical Integration to Manage Insecticide Resistant Greenbugs — \$105,210**

**Gary Yuen, Tyler Kokjohn and Gerald Horst — USDA/NRI — Ultraviolet Effects on Turfgrass Phylloplane Colonization by Bacterial Biocontrol Agents — \$219,729**

**Dean Eisenhauer and Vitaly A. Zlotnik — U.S. Department of the Interior — Field Verification of Dipole Flow Test: A New Approach for the In-situ Determination of Transport Parameters — \$61,373**

**Martin Dickman — USDA — Multi-Institutional Research Coordination Group Proposal: Genetic Basis for Pathogenicity in the Genus *Colletotrichum* — \$50,000**



**GRANTS AND CONTRACTS  
RECEIVED  
APRIL AND MAY, 1996**

|  |                    |
|--|--------------------|
| <b>Agricultural Meteorology</b>                            |                    |
| Verma, S., Arkebauer, T., and Billesbach, D.—NSF           | \$165,000          |
| Wilhite, D.—USDA/CSREES                                    | 187,952            |
| <b>Agronomy</b>  |                    |
| Drijber, R.—USDA/ARS                                       | 40,000             |
| Graef, G.—USDA/ARS   | 13,334             |
| Specht, J.—Smith, Bucklin and Associate                    | 31,637             |
| Miscellaneous grants under \$5,000 each                    | 28,550             |
| <b>Animal Science</b>                                      |                    |
| Miscellaneous grants under \$5,000 each                    | 27,651             |
| <b>Biochemistry</b>  |                    |
| Banerjee, R.—American Heart Association                    | 132,000            |
| Chollet, R.—NSF  | 112,000            |
| Golbeck, J.—NSF  | 10,000             |
| Ragsdale, S.—NIH   | 193,297            |
| Weeks, D.—Sandoz Agro                                      | 15,000             |
| <b>Center for Sustainable Agriculture</b>                  |                    |
| Francis, C., Klopfenstein, T., and Brandle, J.—USDA/CSREES | 55,446             |
| <b>Entomology</b>  |                    |
| Miscellaneous grants under \$5,000 each                    | 41,800             |
| <b>Food Processing</b>                                     |                    |
| Miscellaneous grants under \$5,000 each                    | 4,500              |
| <b>Food Science and Technology</b>                         |                    |
| Taylor, S.—USDA/CSREES                                     | 140,964            |
| Miscellaneous grants under \$5,000 each                    | 3,200              |
| <b>Forestry, Fisheries and Wildlife</b>                    |                    |
| Jelinski, D.—Michigan Tech University                      | 83,223             |
| Jelinski, D.—NASA  | 15,000             |
| Miscellaneous grants under \$5,000 each                    | 3,000              |
| <b>Horticulture</b>  |                    |
| Miscellaneous grants under \$5,000 each                    | 14,780             |
| <b>Industrial Ag Products Center</b>                       |                    |
| Hanna, M.—USDA/CSREES                                      | 60,144             |
| Miscellaneous grants under \$5,000 each                    | 7,200              |
| <b>Northeast Research and Extension Center</b>             |                    |
| Miscellaneous grants under \$5,000 each                    | 49,946             |
| <b>Panhandle Research and Extension Center</b>             |                    |
| Baltensperger, D.—Kansas State University                  | 15,280             |
| Hibberd, C.—Nebraska Department of Agriculture             | 8,000              |
| Miscellaneous grants under \$5,000 each                    | 20,655             |
| <b>Plant Pathology</b>                                     |                    |
| Miscellaneous grants under \$5,000 each                    | 6,410              |
| <b>South Central Research and Extension Center</b>         |                    |
| Miscellaneous grants under \$5,000 each                    | 13,050             |
| <b>Veterinary and Biomedical Sciences</b>                  |                    |
| Ragharachari, N.—NIH                                       | 35,300             |
| Miscellaneous grants under \$5,000 each                    | 6,075              |
| <b>Water Center/Environmental Programs</b>                 |                    |
| Kamble, S.—USDA/CSREES                                     | 22,527             |
| Volk, B.—USGS  | 20,000             |
| Watts, D.—USDA/CSREES                                      | 200,000            |
| <b>West Central Research and Extension Center</b>          |                    |
| Miscellaneous grants under \$5,000 each                    | 10,879             |
| <b>Grand Total</b>   | <b>\$1,793,800</b> |

**PUBLICATION AUTHORSHIP**

Questions are periodically raised concerning publication authorship, particularly when joint authorship is concerned. The Agricultural Research Division strongly encourages team research activities and expects the joint authorship of publications by team members, whether faculty, staff, or students. Questions that arise include ones regarding who should be appropriately listed as authors. The following italicized paragraphs excerpted from *International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. JAMA 1993; 269:2282-6* suggest criteria for determining authorship and acknowledgments.

*Authorship*

*All persons designated as authors should qualify for authorship. The order of authorship should be a joint decision of the co-authors. Each author should have participated sufficiently in the work to take public responsibility for the content.*

*Authorship credit should be based only on substantial contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or revising it critically for important intellectual content; and on (c) final approval of the version to be published. Conditions (a), (b), and (c) must all be met. Participation solely in the acquisition of funding or the collection of data does not justify authorship. General supervision of the research group is not sufficient for authorship. Any part of an article critical to its main conclusions must be the responsibility of at least one author.*

*Editors may require authors to justify the assignment of authorship.*

*Increasingly, multicenter trials are attributed to a corporate author. All members of the group who are named as authors, either in the authorship position below the title or in a footnote, should fully meet the criteria for authorship as defined in the Uniform Requirements. Group members who do not meet these criteria should be listed, with their permission, under acknowledgments or in an appendix (see "Acknowledgments").*

Another issue may be the order of authorship which also is mentioned in the article quoted above. The order of authorship may reflect the level of contribution to the article, whether in the writing effort or in the actual research. Students, faculty and staff may be listed in any order. The faculty with overall guidance of the research have the primary role in this decision.

The order of authorship is not a factor in the ARD faculty evaluation process. The important thing in evaluation is whether the authors listed appropriately contributed to the research effort and to preparation of the publication. In the ARD annual report, journal articles assigned journal article

series numbers by the ARD are listed under each unit that is home to a co-author.

Important contributions to the research and to the publication that deserve recognition but are not done by someone appropriately listed as an author can be identified in the publication acknowledgments. Quoting again from the JAMA article, acknowledgments of this type are described as follows:

#### *Acknowledgments*

*At an appropriate place in the article (title page, footnote, or appendix to the text; see the journal's requirements) one or more statements should specify (a) contributions that need acknowledging but do not justify authorship, such as general support by a departmental chair, (b) acknowledgments of technical help; (c) acknowledgment of financial and material support, specifying the nature of the support; (d) financial relationships that may pose conflict of interest.*

*Persons who have contributed intellectually to the paper but whose contributions do not justify authorship may be named and their function or contribution described — for example, "scientific adviser," "critical review of study proposal," "data collection," or "participation in clinical trial." Such persons must have given their permission to be named. Authors are responsible for obtaining written permission from persons acknowledged by name, because readers may infer their endorsement of the data and conclusions.*

*Technical help should be acknowledged in a paragraph separate from those acknowledging other contributions.*

Please keep in mind that the above criteria are recommendations only and should not be considered as ARD policy. They may not apply or be appropriate for all ARD situations. They do provide a framework for considering questions of authorship or acknowledgment.

Timely publication is critical to ensure dissemination of research results to users, other researchers, etc. Issues of authorship should not present a roadblock to this process.

#### **NOMINATIONS SOUGHT FOR JUNIOR FACULTY EXCELLENCE IN RESEARCH AWARD**

The Agricultural Research Division is seeking nominations for the Junior Faculty Excellence in Research Award. Given to nine individuals since 1991, the award is designed to acknowledge outstanding research activity by tenure-track ARD faculty with five years or less of service.

Any ARD faculty member or unit administrator can nominate a deserving junior faculty member. Selection criteria include publications of UNL-based research results, external funding and peer recognition. Award winners will

receive a \$3,000 grant for professional development or research expenses along with a plaque and certificate.

The deadline for submission of nominations is **Sept. 2, 1996**. Additional information can be obtained from unit administrators or by contacting Dora Dill at 479-2045.

#### **ARD INTERDISCIPLINARY RESEARCH GRANTS PROGRAM**

Twenty-nine proposals were submitted to the ARD Interdisciplinary Research Grants Program and four proposals were selected to be funded for 1996-97. Two continuation projects also were funded. New ARD Interdisciplinary Research Grants were awarded to the following:

**Blair Siegfried, Anthony Zera, Ken Nickerson, Larry Harshman and John Witkowski:** Selection for resistance to *Bacillus thuringiensis* in European corn borer

**Raul Barletta, Rod Moxley, L. G. Adams, W.W. Laegreid and A. Fitch:** Development of a mycobacterial marker vaccine

**Daniel Pomp, Steve Jones and K. Arumuganathan:** Development of flow-sorted chromosome specific pools for mapping disease and production genes in pigs

**Gary Yuen, Garald Horst, Ken Hubbard, Elizabeth Walter-Shea, Tyler Kokjohn and L.J. Giesler:** Ultraviolet dosimetry in crop canopies

The following continuing projects have been evaluated and will continue for 1996-97:

**Pat Shea, Steve Comfort, Garald Horst, Rhae Drijber, William Powers and T. Zhang:** Integration of abiotic treatments with plant-based strategies for remediating soil contaminated with organonitrogen compounds

**Rick Koelsch, Michael Brumm, Jack Nienaber, Ivan Rush and Dan Walters:** Whole farm nutrient budgeting for livestock systems

#### **INNOVATIVE AND HIGH RISK RESEARCH PROGRAM**

Three proposals were submitted for the Innovative and High Risk Research Program during the past six months. This program is designed to provide seed money for very innovative research projects. The objective is to obtain preliminary data that can be used to support requests for grants from federal agencies or companies. Funding will not be provided for projects that are a continuation of faculty member's current research program. The proposals may be submitted at any time during the year. The proposals are

evaluated quarterly or on an as-needed basis by a subcommittee of the ARD Advisory Council.

The following proposal was funded by the Innovative and High Risk Research Program effective July 1, 1996:

**Marty Dickman** \$15,000  
*Plant Pathology Department*  
Molecular analysis of programmed cell death in plants

### **DAVID BALTENSBERGER AND KYLE HOAGLAND SELECTED FOR LEADERSHIP DEVELOPMENT COURSE**

Dr. David Baltensperger, professor of Agronomy, and Dr. Kyle Hoagland, associate professor of Forestry, Fisheries and Wildlife, have been selected to participate in the 1996-97 ESCOP/ACOP Leadership Development Program. David and Kyle will complete a three-phase program that features a week-long "introduction to leadership" workshop in Indianapolis; an administrative internship from July 1, 1996 to June 30, 1997; and a capstone seminar with federal agency leaders, lobbyists and Congressional staff personnel in Washington, D.C. Kyle will intern in the ARD Office and David will spend some time in the ARD Office but will be mentored primarily by Dr. Charles Hibberd at the Panhandle Research and Extension Center.

While serving as an intern, Kyle will participate in ARD staff meetings, lead project reviews, undertake special projects, interview senior administrators and study research administration. David will perform similar duties at the Panhandle Research and Extension Center with emphasis on administration of off-campus research programs. We are pleased that David and Kyle will be spending about 10 percent of their time in intern activities during the next year.

David and Kyle replace Dr. Chris Calkins who will finish his formal internship June 30, 1996. However, Chris will continue to work on his research accomplishments data base project during the next few months. ARD has benefited from Chris' advice and project activities during the past year. We wish him continued success in teaching and research and as President of the American Meat Science Association.

### **ADMINISTRATIVE INTERNSHIP — AN EXCELLENT WAY TO LEARN**

The administrative internship made available by the Agricultural Research Division and the Experiment Station Committee on Operations and Policy is an excellent way to learn about administration. I would highly recommend the experience to anyone wanting to know more about the issues facing ARD, management strategies, and how administrative decisions are made.

The program is divided into three phases. Phase I involves an intensive leadership workshop where leadership

style, issues and strategies are explored in a one-week interactive program. This occurs early in the internship and is one of the best personal development programs I have experienced.

Phase II includes scheduled time in the ARD office. During this period, the intern can observe procedures and styles of management, gain insight into issues facing the ARD, and participate in administration from a variety of levels. Two of the greatest benefits I found were the availability to information and the access of administrative discussions.

In Phase III the interns travel to Washington, D.C. for time with Nebraska legislators and insight into the political process.

It is not necessary to have an ambition to be a Department Head or professional administrator to gain from this program. My understanding of administrative challenges and appreciation for the efforts of ARD staff on behalf of the faculty have grown significantly. Tasks I once thought of as tedious or of little value became much more important when put into perspective. Others who have participated in the program have expressed similar feelings, including David Stanley-Samuels, Alan Doster, Jeff Keown, Alice Jones and Steve Waller. ARD will have two interns next year — David Baltensperger and Kyle Hoagland. I encourage you to stop me or anyone else involved with the program and ask for additional information if you are interested. It is well worth the time spent!

*Chris Calkins*  
*Administrative Intern*

### **ARD TO DEVELOP ACCOUNTABILITY DATABASE**

The Agricultural Research Division has committed to develop an accountability database. This software-based program will provide a valuable tool for communication of ARD research to all clientele, including decision makers and commodity groups. It will contain descriptions and impact statements of research projects and will be searchable by key words, geographic impact areas and national research priorities.

By loading the database onto laptop computers, real time, interactive presentations become immediately responsive to audience demands. The effort, led by Chris Calkins — the ARD administrative intern — will generate a working model from inputs provided by the Entomology and Horticulture Departments, who have graciously agreed to help.

In this age of growing demands for accountability, it is hoped that this new tool will provide a way for the Agricultural Research Division to better communicate the breadth and depth of our programs. A similar database, developed at Oregon State University, helped their College of Agriculture minimize budget cuts in an era of rather severe cutbacks.

## FUND FOR RURAL AMERICA

A Fund for Rural America was established in the 1996 Farm Bill recently passed by Congress and signed by the President. The Fund allocates \$100 million per year for three years and will be available beginning January 1997 for the Fiscal Years '97, '98 and '99. The funds will be used as follows:

1/3 for research, 1/3 for rural development, and 1/3 at the Secretary's discretion for research or rural development.

The funds for research will be awarded by a competitive grant program for "research, extension, and education to increase international competitiveness, efficiency, and farm profitability; reduce economic and health risks; conserve and enhance natural resources; develop new crops, new crop uses, and new agricultural applications of biotechnology; enhance animal agricultural resources; preserve plant and animal germplasm; increase economic opportunities in farming and rural communities; and expand locally owned value-added processing."

Eligible grantees are: colleges and universities, including land grant colleges and universities with established programs of research, extension or higher education; federal research agencies and national laboratories; and private research organizations with established and demonstrated capacity to perform research or technology transfer.

Grants are to be used for:

- 1) Outcome-oriented research at the discovery end of the spectrum to provide breakthrough results;
- 2) Exploratory and advanced development and technology with well-identified outcomes;
- 3) National, regional or multi-state competitive programs oriented primarily towards extension programs and education programs demonstrating and supporting the competitiveness of U.S. agriculture.

Not less than 15 percent of the amount made available shall be awarded to eligible entities who are colleges and universities, including land grant institutions ranking in the lower 1/3 on the basis of federal research funds received from sources other than this section.

The Secretary shall establish criteria for allocating grants based on the priorities (listed above) in consultation with the Research, Education and Economics (REE) advisory board, and determine the relevance and merit of proposals through a system of peer and REE advisory board review.

Grants shall not exceed five years. Matching funds are required for applied research that is commodity specific and not of national scope. Cooperative State Research Education and Extension Service (CSREES) will administer the program. These are two-year funds; 4 percent administrative costs; and no funds may be used for construction.

## NEWS FLASH!

Faculty can conduct their own CRIS Search by using the World Wide Web. The CRIS Office is located at the National Agricultural Library in Beltsville, Maryland. You may be able to conduct your search by using the following number:

<http://cristel.nal.usda.gov:8080>

You will just need keywords to access the information you need (you can make up your own). Good luck on this new adventure. If you have any questions, please contact Diane Mohrhoff in the ARD Office.

### *Diane Says*

The weak days are yesterday and tomorrow.  
Watch your step!