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INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES

University of Nebraska Lincoln

Agricultural Research Division News

February/March 2009, Volume 41, Number 7

Comments from Dean Gary Cunningham

The current world-wide economic downturn can and is having a discouraging influence on attitudes and expectations for the future. These discouraging influences could be very strong for those of us who are dependent on public support to finance our creative efforts to discover new knowledge. When the economy is bad, it is easy for the general public to see scientific research as a luxury that can be postponed until times are better. The unavoidable decreases in public support for higher education will have real impacts on university research programs across the nation. The University of Nebraska will not be an exception. All signs point to less of an economic impact for Nebraska than in other states, but we will not escape some damage. Slowing of the growth and improvement of ARD research programs that you have achieved over the past several years, will be difficult to avoid without leveraging our state investments by seeking additional competitive funding.

There are some positive signs from the federal government. I don't want to sound like a Pollyanna, but both the American Recovery and Reinvestment Act of 2009 (the stimulus package) and the FY 2009 omnibus appropriation bill (for the federal fiscal year that started October 1, 2008) contain funding for research and research infrastructure Funding for which ARD scientists should be very competitive.

You should have already begun seeing email notices from the ARD and other University offices and from the relevant federal funding agencies about some of these opportunities. The ARD office will continue to keep you informed as new opportunities are announced. I know that many of you have been responding to these newly emerging opportunities. I am confident that you will continue to have the level of great success that has characterized ARD scientists in the recent past. If you do, then we should all be able to not only survive, but flourish during the economic downturn. As always, the ARD office is ready to assist you in obtaining grant support for your work.

Gary Cunningham
Dean and Director

Online @: http://ard.unl.edu/Feb09News/deansnote.shtml

New Funding Opportunities

Please click on the topics to view the information:
USDA Agriculture and Food Research Initiative (AFRI)
NIH Equipment Grants
ARD Funding Opportunities

Other Articles

Please click on the topics to view the information:
ARD Summary of Graduate Student Enrollment - Fall 2008
New or Revised Projects (November and December 2008)
Proposals Submitted for Federal Grants (November and December 2008)
Grants and Contracts Received (November and December 2008)

Agriculture and Food Research Initiative (AFRI)

AFRI replaces the former National Research Initiative and the Initiative for Future Agriculture and Food Systems programs and addresses six priority areas:

1.) plant health and production and plant products
2.) animal health and production and animal products
3.) food safety, nutrition and health
4.) renewable energy, natural resources and environment
5.) agriculture systems and technology
6.) agriculture economics and rural communities

- USDA AFRI Request for Application

USDA AFRI Program Web Links:

- Letter of Intent Dates and New Deadline Dates
- AFRI Program Website

Archived Webinar: January 6, 2009, "Research Opportunities"

Power Point Presentations for AFRI Workshops

January 6, 2009

AFRI Research Proposal Opportunities:

- AFRI Research Program Areas - Deb Hamernik
- Observations for a Panel Member - Clinton Jones
- Proposal Development Services - Tisha Gilreath Mullen
- Submitting Your Proposal - Lynne Smejdir

AFRI Integrated Proposal Opportunities:

- AFRI Integrated Program Areas - Deb Hamernik
- Important Considerations for the Teaching Component - Dann Husmann
- Features of a High Impact Extension Component - Rick Koelsch
- Evaluation of Impact - Jason Ellis
- Observations of a Panel Member - Linda Boeckner

Other Funding Programs

- Funding Announcements
- Guidelines for Commodity Board Proposals

Specialty Crop Research Initiative (SCRI)

The Specialty Crop Research Initiative (SCRI) was established to solve critical industry issues through research and extension activities. Specialty crops are defined as fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops, including floriculture. SCRI will give priority to projects that are multistate, multi-institutional, or trans-disciplinary; and include explicit mechanisms to communicate results to producers and the public. Projects must address at least one of five focus areas: research in plant breeding, genetics, and genomics to improve crop

characteristics; efforts to identify and address threats from pests and diseases, including threats to specialty crop pollinators; efforts to improve production efficiency, productivity, and profitability over the long term; new innovations and technology, including improved mechanization and technologies that delay or inhibit ripening; and methods to prevent, detect, monitor, control, and respond to potential food safety hazards in the production and processing of specialty crops.

Direct Link to the RFA: http://www.csrees.usda.gov/funding/rfas/pdfs/09_specialty_crop.pdf
Letter of Intent Due: March 23, 2009
Application Deadline: April 15, 2009

Funding for Range/Pasture/Grassland

Range/Pasture/Grassland RFP

Proposal Deadline: Friday May 1st, 2009, at 4 PM Central Time

Income from the Helen Porter Van Spronssen Charitable Trust, Sampson Range and Pasture Management Endowment, Ralph H. Bainbridge Memorial Fund, and Arch and Frances Jorgensen Fund is used to support research on:

- Pasture Management
- Rangeland Management
- Beef Production and Grassland Research and Development
- Rangeland Management and Ecology of Beef/Range Systems
- Range and Livestock Research at the Gudmundsen Sandhills Laboratory*
- Rangeland Natural Resource Management
- Rangeland Ecology
- Study of Native Grasses

[*Does not exclude range and livestock research at other locations]

A RFP is issued in mid-March in odd-numbered years for 2-year projects. Fund income can typically support funding at approximately $30,000/year per project.

Fall 2008 Graduate Census

Graduate student data represents students enrolled on the sixth-day census (Fall 2008) and non-enrolled students actively pursuing graduate degrees. The graduate program in the Agricultural Research Division (College of Agricultural Sciences and Natural Resources and the College of Education and Human Sciences) increased 6.5% from Semester 2007 to the Fall Semester 2008. Thirty-three percent of the graduate students in CASNR degree programs are supported by assistantships (state appropriated GTA; fellowships; and international agency or foreign country support). Nineteen percent of the students in the College of Education and Human Sciences are supported. Twenty-nine and one half percent of CASNR students were not enrolled in IANR graduate programs on the sixth day of the semester.

Institute of Agriculture and Natural Resources

	M.S.				Ph.D.										
Major/Unit	**GRA**	**GTA**	**Other**	**Self**	**GRA**	**GTA**	**Other**	**Self**	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**	**Chg. 07-08%**
College of Agricultural Sciences and Natural Resources															
Agricultural Economics	10.5	0	5	7.5	9	0	0	4	36	33	33	31	33	36	9.1%
Ag. Leadership, Education & Comm.	0	1	5	71	1	4	2	39	123	115	101	87.5	82	86.5	6.5%
Agronomy	6	1	7	13.5	11.5	0	21	11	71	68	59.5	66.5	69	80.5	4.2%
Animal Science	20.5	1	1	6	12	0	0	11	51.5	63.5	60.5	64	62.5	72.5	-23.3%
Biochemistry	5	1	0	1	19.5	1.5	1	0	29	28.5	29.5	37.5	36	31	1.7%
Biological Systems Engineering	2.5	0	11.5	6	5.5	0	7.5	2	35	25.5	24	30	20	26	27.1%
Entomology	1	2	5.5	69	3.5	0	9.5	2.5	93	98	102	121.5	116	108	-5.4%
Food Science and Technology	29	0	0	8	14	0	0	0	51	43	30.5	26	33.5	33	15.7%
Horticulture	4	1	0	4	0	0	1	0	10	12	12	10	12.5	14	-20.0%
Master of Agriculture	0	0	0	35	NA	NA	NA	NA	35	33	39	32	23	8	5.7%
Mechanized Systems Management	2	0	3	1	NA	NA	NA	NA	6	5	6	3	3	4	16.7%
Plant Pathology	4	0	1.5	1	4	1	4.5	1	17	17.5	13.5	14	16	16	-2.9%
School of Natural Resources	5	5	17.5	14	6.5	3.5	13.5	21	86	91	83.5	73.5	72.5	73	-5.8%
Statistics	4	5.0	0.0	10	5.5	7	7	6	44.5	41	40.5	39.5	43	37.5	7.9%
Veterinary and Biomedical Sciences	6	0	0	7	13	0	0	0	26	26.5	37	24.5	26	30	-1.9%
Total	99.5	17	57	254.0	105	17	67	97.5	**714**	**700.5**	**671.5**	**660.5**	**632**	**656**	**1.9%**
Grand Total		**427.5**				**286.5**									
College of Education and Human Sciences															
Child, Youth and Family Studies	6	6	0	86	NA	NA	NA	NA	98	90	58	67	70	42	8.2%
Nutrition and Health Sciences	11	1	10	34	0	0	5	4	65	35	26	33	44	28	46.2%
Textiles, Clothing and Design (MA /MS)	5	3	3	18	0	0	4	2	35	31	28	26	32	25	11.4%
Interdepartmental Nutrition	3	0	3	1	4	1	3	5	20	20	21	20	6	16	0.0%
HUMS (FACS, NUTR, TXCD) (PhD)	NA	NA	NA	NA	6	3	2	23	34	31	29	27.5	34	30	8.8%
Total	25	10	16	139	10	4	14	34	252	207	162	173.5	186	141	27.8%
Grand Total		190				62									
Grand Total CASNR & CEHS		**617.5**				**348.5**			**966**	**907.5**	**833.5**	**834.0**	**818**	**797**	6.1%

10/28/2008

New or Revised Projects (November and December 2008)

Last Name	First Name	Department	Project Type	Project Title	Proj. Begins	Proj. Ends	Proj. number
Shea	Patrick	SNRS	Hatch	Chemistry and toxicology of Xenobiotics in soil-water-biotic environments	01-Sep-08	31-Aug-13	38-059
Jackson	David	FS&T	Multistate	NC213, Marketing and delivery of quality grains and bioProcess coproducts	01-Oct-08	30-Sep-13	31-122
Jones	Clinton	VBS	Animal Health	Virus host interactions that regulate the latency-reactivation cycle of bovine herpesvirus 1 (BHV-1)	15-Sep-08	14-Sep-13	39-153
Smith	Durward	FS&T	Hatch	Enhancing the profitability of Nebraska fruit producers	01-Dec-08	30-Nov-13	31-121
Kelling	Clayton	VBS	Animal Health	Pathogenesis of bovine viral diarrhea virus and bovine respiratory syncytial virus infections	01-Oct-08	30-Sep-13	39-152
Levis	Don	NERE	NRI Grant	Extension and educational programs and materials for small-and medium-sized pork operations	01-Jan-09	31-Dec-10	41-036
Hutkins	Robert	FS&T	NRI grant	Assessing and enhancing stability of prebiotic oligosacchrides in foods	15-Dec-08	14-Dec-11	31-117
Bullerman	Lloyd	FST	Hatch	Biological control of molds and mycotoxins in foods and feeds	01-Sep-08	31-Aug-13	31-119
Franti	Tom	BSE	Hatch	Storm runoff simulator to evaluate conservation buffers	01-Oct-08	30-Sep-13	21-148
Harvey	F. Edwin	SNR	Hatch	Determining time of recharge (age) of groundwater resources in Nebraska using environmental isotopes	01-Dec-08	30-Nov-13	38-070
Shelton	David	NERE	Hatch	Conservation buffer design, establishment, growth, and performance	01-Nov-08	31-Oct-13	41-035

Proposals Submitted for Federal Grants (November and December 2008)

The following is a listing of proposals that were submitted during November and December 2008 by faculty for federal grant programs. While not all grants will be funded, we are appreciative of the faculty members' outstanding efforts in submitting proposals to the various agencies.

PI	Co-PI	Sponsor (Funding Agency)	Title	Amt. Requested
Black, Paul	Concetta DiRusso	NIH	Fatty acid transport in eukaryotes	$1,811,250.00
DiRusso, Concetta	Paul Black	NIH	High throughput screens for fatty acid uptake inhibitors	$328,599.00
Heng-Moss, Tiffany	Thomas Hunt	Univ. of Minnesota	Soybean aphid management	$55,575.00
Shapiro, Charles	S Knezevic, J Brandle, R Wright, M Bernards, R Ferguson, E Sarno, R Little	North Central Regional SARE	Cover crop management systems for eastern Great Plains - Utilizing winter wheat in an organic crop rotation	$164,680.00
van Donk, Simon	L Stalker, R Funston, J Volesky, R Klein, S Melvin, M Stockton	NCR-SARE	How does corn residue grazing and baling impact sustainability and profitability of crop and livestock producers?	$174,576.00
Nickerson, Kenneth	Dong Wang, Audrey Atkin	NIH	Candida albicans responses to farnesol	$1,205,967.00
Hanson, Paul	Robert Joeckel, Mark Kuzila	USGS	2009-2010 STATEMAP	$272,138.00
Wegulo, Stephen		USDA-CSREES	Cultivar characterization and prediction of stagonospora nodorum blotch severity as a decision tool	$20,001.00
Benson, Andrew	Jens Walter, Stephen Kachman	NIH	Modeling heterogeneity for safe cancer prevention and detection	$302,845.00
Herpel, Rachael		NSF	Agrichemical contaminants in the Elkhorn River Watershed: A systems analysis	$83,366.00
Barletta, Raul		Penn State Univ. Lead	JDIP: Role of MAP1152 in the biology and pathogenesis of mycobacterium avium subsp. paratuberculosis	$43,626.00

Lyon, Drew	Gary Hein, Paul Burgener	USDA-CSREES-NCR IPM	Management of RWA in barley	$55,053.00
Hiller, Timothy	Scott Hygnstrom, Stephen Vantassel	Animal Welfare Institute	Effectiveness of a numane, non-lethal technique for racoon removal from human-occupied structures in urban areas	$10,000.00
Van Etten, James	David Dunigan, Ming Kang, Irina Agarkova, James Gurnon	NIH	DNA repression and gene express	$1,439,860.00
Baenziger, Peter		Dept of Agriculture-CSREES	National Needs Graduate Fellowships-Plant breeding and genetics	$36,000.00
Pickard, Gary	Patricia Sollars	NIH	Retinal neurons afferent to the circadian system	$814,245.00
Xia, Yan		NSF	Agrichemical contaminants in the Elkhorn River Watershed: A systems analysis	$180,341.00
Harveson, Robert		USDA	Bacterial wilt in alternate crops	$17,483.00
Jackson, Tamra		USDA-CSREES	Regional in-field diagnostics training for IPM practitioners	$58,114.72
Pickard, Gary	Patricia Sollars	NIH	5HT presynaptic inhibition of retinal input to the SCN	$317,718.00
Vidaver, Anne		Dept of Agriculture-ARS	Developing a national recovery plan for gumming disease of grasses and ryegrass toxicity caused by rathayibacter toxicus	$19,700.00
Billesbach, David		Dept of Energy-Berkeley Nat lab	Development and field testing of a rapidly deployable cardon dioxide flux management system	$8,781.00
Mackenzie, Sally A	Tom Clemente, Dong Wang, Michael Fromm, Ismail Dweikat	NSF-IGERT	IGERT: Creating a 21st century Center of Excellence for Molecular Plant Breeding and Genomics Education	$3,000,000.00
Hruskoci, James	Paul Read, James Schild, Vaughn Hammond	USDA SCBGP	NDA Saskatoon berry production study	$8,330.00
Samal, Ashok	C Xun-Hong, M Hayes, K Hoagland, J Holz, D Marx, L Soh, A Tomkins, M Goodchild, S Shekhar	UNL - NSF-PIRE	A volunteer geographic information computing framework for global hydrologic analysis	$2,994,250.00

Francis, Charles	Mark Burbach, Gina Matkin	Environmental Protection Agency	Development of an urban food leadership coop in support of a local food system	$9,946.00
Powers, Thomas		National Science Foundation	NSF challenging dogma and correcting fundamental understanding regarding latitudinal diversity of nematodes	$45,093.00

Grants and Contracts Received (November and December 2008)

Dept/Unit	PI	Co-PI	Sponsor (Funding Agency)	Amount Funded
AGRH	Baenziger, Peter		Dept of Agriculture-CSREES	$18,000.00
AGRH	Baenziger, Stephen		USDA-Univ of Calif-Davis	$47,500.00
AGRH	Francis, Charles		USDA-SARE	$10,000.00
AGRH	Wortmann, Charles		NE Soybean Board	$16,900.00
AGRH			Miscellaneous grants under $10,000 each	$31,000.00
ANSC	Calkins, Chris		NE Beef Council	$25,250.00
ANSC	Calkins, Chris		NE Beef Council	$39,595.00
ANSC	Jones, Steven		National Pork Board	$20,000.00
ANSC			Miscellaneous grants under $10,000 each	$23,000.00
ARD	Yohe, John		USAID-Agency for International Development	$250,000.00
BIOT	Clemente, Thomas	George Graef	NE Soybean Board	$73,060.00
BSE			Miscellaneous grants under $10,000 each	$8,781.00
ENTO	Higley, Leon		US Fish & Wildlife Service	$60,000.00
ENTO			Miscellaneous grants under $10,000 each	$63,060.00
FS&T	Peterson, Daniel		NIH	$126,630.00
IAPC	Hanna, Milford		NSF	$110,836.00
IAPC	Hanna, Milford	Yixiang Xu, Scott Josiah	NE Department of Agriculture	$25,000.00
N&HS	Lee, Ji-Young		USDA-NRI	$12,065.00
NERE			Miscellaneous grants under $10,000 each	$7,850.00
PHRE			Miscellaneous grants under $10,000 each	$38,455.00
PLPT	Giesler, Loren		NE Soybean Board	$323,010.00
PLPT	Powers, Tom		MI State U	$39,485.00
PLPT	Steadman, James		USDA-ARS	$53,625.00

PLPT	Vidaver, Anne		USDA-CSREES	$19,700.00
PLPT			Miscellaneous grants under $10,000 each	$15,725.00
SNRS	Hanson, Paul		NSF	$14,334.00
SNRS	Hoagland, Kyle		US Dept of Defense	$10,000.00
SNRS	Hygnstrom, Scott		NE Dept of Roads	$94,265.00
SNRS	Lackey, Susan	James Goeke	Lower Loup NRD	$25,000.00
SNRS	Lenters, John		NSF	$138,458.00
SNRS	Ryu, Jae		Univ of IL	$86,406.00
SNRS	Thomas, Steven		Univ of California, Riverside	$46,400.00
SNRS	Tyre, Drew		Battelle Memorial Institute	$38,747.00
SNRS			Miscellaneous grants under $10,000 each	$9,292.00
VBS	Osorio, Fernando	Asit Pattnaik	National Pork Board	$125,700.00
VBS	Pattnaik, Asit	Fernando Osorio	National Pork Board	$106,000.00
WCRE	Goeke, James		NE Dept of Enviro Quality	$18,500.00
WCRE			Miscellaneous grants under $10,000 each	$19,786.00
				Total: $2,191,415.00