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Agricultural Experiment Station News July 1989

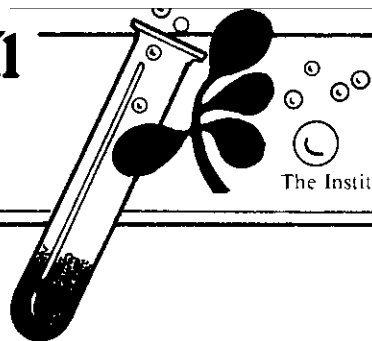
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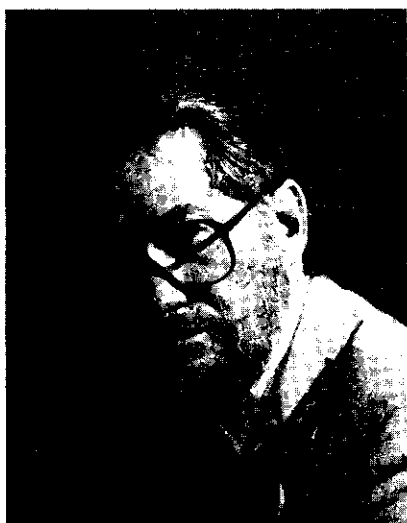
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July 1989

Volume 22 Number 5



DAVID W. STANLEY-SAMUELSON

Dr. Stanley-Samuels is a native Californian who graduated from a small, rural high school in central Florida. He has previously served in the US Navy as a computer programmer. He was a Teaching Assistant at CSU, Fullerton, UC Berkeley and was a Graduate Research Entomologist at UC Berkeley. He has been a Post-doctoral Research Entomologist - UC Berkeley and an Insect Physiologist - SRI, Menlo Park, CA.

Dr. Stanley-Samuels has a BA in Biology from California State University, Fullerton (1975) and a Ph.D. in Entomology from University of California, Berkeley (1983).

He received the Magi Memorial Scholarship for outstanding graduate student performance at UC Berkeley and has received broad professional recognition for work on significance of certain mammalian hormones (prostaglandins and related eicosanoids) in insects and other invertebrate animals. He has been an invited symposium participant in entomological and basic biochemical professional societies.

He will develop a basic insect biochemistry/physiology research program in the Department of Entomology at UN-L.

BIOMETRY HEAD IS MARX

David Marx began his duties as head of the UNL biometrics department on March 16.

Marx, a Virginia native, came to IANR from the University of Arkansas. He received his bachelor's degree from the College of Wooster in Chemistry, his master's in statistics from the University of Missouri and his doctorate in statistics from the University of Kentucky.

He has been a consultant for federal, state and private organizations, including USAID - Rwanda/Burundi, Africa program last year.



ARDC NEWS

At a May 11th evening meeting at the Mead Community Building, the U. S. Corps of Engineers and State Officials assured Mead residents, Saunders County farmers and ARDC employees that the contamination problems caused by the former Nebraska Ordnance Plant pose no danger to the community.

Testing of water wells by the Corps and the IANR lends assurance that the ARDC has excellent water sources for the visiting public, our employees, and the research animals on site.

Corps investigators have found trace levels of TCE, (trichloroethylene), and explosive residues in 3 wells in the eastern part of ARDC and some explosive materials such as RDX have been found in soil adjacent to the former Load Lines. Corps officials indicate that clean-up is their first priority. Officials at this time do not know the full extent of the contamination. The next phase of their study may take two years, i.e., drilling more wells, analyzing soil samples, and periodic analyzing of water samples. An estimate of the total clean-up cost is \$10 million.



The Agricultural Research Division provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.



AGRICULTURAL RESEARCH DIVISION- CURRENT GRANTS AND AWARDS

The Agricultural Research Division administers several grant and award programs using ARD funds, NU Foundation funds and funds from other sources. Some of these are awarded annually on a regular schedule and some on an ad hoc basis as funds permit. The following summary explains some of these programs and how they are currently being administered.

ARD Administered Grants and Awards Summary

1. Anna H. Elliott Fund Grants (NU Foundation Funds)

Awarded every 2 years as endowment income permits. Income is about \$70,000 annually and program is oriented to plant science research directed to Western Nebraska. RFP issued about Jan 15.

2. Widaman Trust Graduate Fellowships (NU Foundation Funds)

Awarded annually. \$1,200 added to stipend of outstanding graduate students. Nominations are awarded about May 10.

3. Hardin Distinguished Graduate Fellowship in Plant Stress Physiology (NU Foundation Funds)

Awarded annually. \$2,000 added to stipend of a selected student plus \$1,000 to department to assist student's research. One grant awarded annually. Nominations are made about May 1.

4. Interdisciplinary Research Team Grants (ARD Discretionary Funds)

Awarded annually or biannually, depending on flexibility of funds. One or two grants awarded for up to 2 years duration and for up to \$15,000 annually. RFP issued about April 1.

5. ARD Foreign Travel Awards (ARD/International Programs Indirect Cost Funds)

One or more grants of up to \$1000 each awarded. \$3000+ total available annually for research-related foreign travel for professional development opportunities (not primarily for professional society meetings). RFP issued when funds made available.

6. Graduate Student Recruitment Funds (ARD Discretionary Funds)

Awarded as requested by department. Up to 2 per dept. per calendar year. Award pays up to 50% of expenses or \$200 per student. Purpose is to reimburse recruitment visits to UNL for students offered assistantships.

7. ARD Research Equipment Awards (ARD/State Budget Funds)

Awarded annually, as provided in state appropriations approximately. \$225,000 awarded annually to all ARD units, according to prioritized requests. RFP issued about September 1.

8. Calf Scours Vaccine Royalty Fund Grants (ARD Royalty Income)

Awarded annually or biannually, depending on income. Approximately \$60,000 awarded annually for animal health related research by competitive RFP or to discretionary research laboratory improvement needs.

9. Other Programs Coordinated by ARD

Layman Awards (NU Foundation Funds) - awarded annually for research support. Size of awards vary from \$1,000 to \$15,000. RFP issued about October.

Nebraska Commodity Check-off Board Grants

Annual research grants usually in \$5,000-\$20,000 range. RFP issued about October.

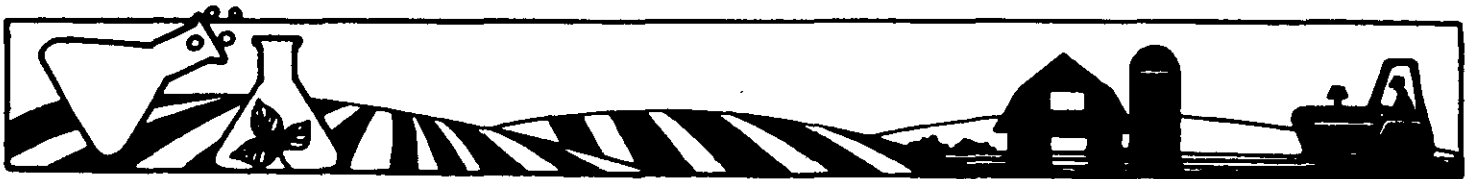
Anyone with questions regarding these programs is encouraged to contact the Agricultural Research Division office.

GRANT AND CONTRACT INCOME DURING THE LAST THREE CALENDAR YEARS EXPRESSED ON DOLLARS PER RESEARCH FTE BASIS

UNIT	1986	1987	1987	AVERAGE
	\$/research FTE/year			
Ag Economics	14,900	12,600	3,800	10,400
Ag Engineering	35,800	50,500	15,600	33,900
Agronomy	33,200	49,500	38,500	40,400
Animal Science	34,700	36,100	52,800	41,400
Biochemistry	18,200	67,600	59,600	48,500
CAMaC	118,600	175,100	197,900	163,900
Entomology	25,500	53,600	26,900	35,300
Environ Programs	140,800	71,600	76,400	96,200
Food Sci & Tech	96,500	45,300	93,100	78,300
FFW	94,900	87,200	69,600	83,900
Horticulture	38,200	128,000	90,000	85,400
HNFSM	13,000	23,700	14,900	17,200
NEREC	43,500	42,900	40,000	42,100
PREC	50,500	17,000	26,000	31,100
Plant Pathology	55,900	86,500	43,700	62,100
SCREC	27,900	23,000	60,600	37,100
TC & D	-0-	-0-	13,000	4,300
Vet Science	5,900	86,600	68,700	53,700
WCREC	22,600	19,900	34,700	25,700
Average	39,500	56,200	50,700	48,800

Thought for the Day -

There's no rest for the wicked and the righteous don't need it.



**RESEARCH GRANTS AND CONTRACTS
RECEIVED APRIL & MAY 1989**

AGRICULTURAL ECONOMICS	
Miscellaneous Grants Under \$5,000 each	2,000
AGRONOMY	
Mortensen, D. - NCR-PIAP	15,000
Shea, P. - NCR-PIAP	13,412
Shea, P. & Jawson, M. - US Army	71,734
Stubbendieck, J. - Nebr. Game & Parks Commission	32,700
Miscellaneous Grants Under \$5,000 each	48,512
ANIMAL SCIENCE	
Mandigo, R. - Nat'l. Livestock & Meat Board	9,350
Miscellaneous Grants Under \$5,000 each	16,950
BIOCHEMISTRY	
O'Leary, M. - National Institute of Health	580,492
CENTER FOR AGRICULTURAL METEOROLOGY & CLIMATOLOGY	
Weiss, A. - USDA/ARS	5,500
Wilhite, D. - National Climate Program Office	29,891
ENTOMOLOGY	
Miscellaneous Grants Under \$5,000 each	5,000
FOOD PROCESSING CENTER	
Froning, G. - Nutra Sweet	29,755
Taylor, S. - Penwalt	10,000
Miscellaneous Grants Under \$5,000 each	10,000
FORESTRY, FISHERIES & WILDLIFE	
Miscellaneous Grants Under \$5,000 each	1,600
HORTICULTURE	
Shearman, R. C. - U.S. Golf Association	25,000
Miscellaneous Grants Under \$5,000 each	13,513
NORTHEAST RESEARCH & EXTENSION CENTER	
Miscellaneous Grants Under \$5,000 each	7,195
PANHANDLE RESEARCH & EXTENSION CENTER	
Miscellaneous Grants Under \$5,000 each	37,173
PLANT PATHOLOGY	
Miscellaneous Grants Under \$5,000 each	2,300
SOUTH CENTRAL RESEARCH & EXTENSION CENTER	
Miscellaneous Grants Under \$5,000 each	12,800

VETERINARY SCIENCE

Cray, P. - Pfizer, Inc.	18,298
Miscellaneous Grants Under \$5,000 each	41,980

**WEST CENTRAL RESEARCH & EXTENSION
CENTER**

Miscellaneous Grants Under \$5,000 each	11,706
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TOTAL **\$1,051,861**



NEW PROJECTS

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

15-049 (Biochemistry) Enhancing Beneficial Microorganisms in the Rhizosphere

Investigator: R. V. Klucas

Status: New Hatch project effective October 1, 1988 contributing to S-226

42-014 (Northeast Research & Extension Center) Biology & Control of the European Corn Borer Bean Leaf Beetle & Other Selected Insects

Investigator: J. F. Witkowski

Status: New Hatch project effective March 1, 1989

93-023 (Human Development and the Family) The Social and Psychological Aftermath of Serious Motor-Vehicle Accidents

Investigator: J. DeFrain

Status: New Hatch project effective March 1, 1989

94-017 (Textiles, Clothing & Design) Rural Retailing: Impact of Change on Consumer and Community

Investigator: R. C. Kean

Status: New Hatch project effective October 1, 1988 contributing to NC-192

COMMODITY BOARD FUNDING

The following projects were approved by the Nebraska Pork Producers Association for FY 89-90 Funding:

A. M. Azzam, A. Wellman	A Quantitative Assessment of Possible Impacts of Vertical Integration on Prices & Quantities in the Pork Industry with Implications for the State of Nebraska	\$ 6,000
F. A. Osorio D. L. Rock	A Rapid and Specific Test to Determine the Pseudorabies Infection Status of a Herd	5,000
S. Srikumaran C. L. Kelling R. A. Moxley	Alternatives to Conventional Vaccines Against Transmissible Gastroenteritis Virus (TGEV)	6,000
C. L. Kelling S. Srikumaran R. A. Moxley	Characterization of Isolates of Transmissible Gastroenteritis Virus	6,000
T. A. Powell	Determinants of Profitability in Swine Operations Using Enterprise Records	1,000
J. I. Johnson	Endogenous Nitrate Production in Pre- and Perinatal Swine	1,800
R. W. Mandigo C. R. Calkins	Pork Lion Study, Year 2 - Improving Fresh Pork Loin Cookery Procedures for Food Service	4,900
R. A. Moxley	Study of Passive Immunity for Edema Disease	6,500
L. Bitney M. Brumm J. Mohrmann	Swine Enterprise Records and Analysis Program	8,000
	TOTAL:	\$ 45,200

The following projects were approved by the Nebraska Corn Development, Utilization and Marketing Board for FY 89-90 Funding:

M. A. Hanna	A Fundamental Study on Grain - Starch Quality	\$ 17,860
G. W. Hergert N. L. Klocke C. A. Shapiro W. L. Kranz	Nitrogen and Irrigation Water Management Demonstration to Protect Groundwater Quality	18,800
D. H. Sander R. A. Britton	Managing Nitrogen More Effectively for Reduced Costs and Environmental Hazards	15,700
G. W. Hergert F. N. Anderson R. B. Ferguson C. A. Shapiro	Reducing Nitrate Losses to Groundwater by Improving the Accuracy of the Residual Nitrate Nitrogen Soil Test for Corn	17,000
R. W. Elmore	White Corn Hybrid Performance Trial	3,312
M. A. Hanna	Corn-Based Biodegradable Polymers (Bioplastics)	30,000
J. H. Rupnow T. W. Sullivan M. A. Hanna	Quality of Micronized Corn for Animal Feed - Processing Variables and Nutritional Value	15,500
T. J. Klopfenstein R. A. Stock D. C. Clanton	Corn Steep Liquor in Beef Supplements	14,000
L. D. Schulze	Pesticide Safety Information Card	3,300
L. D. Clements	Conventional Polymers from Corn	10,000
L. D. Clements	Industrial Use of Corn Oil	10,000
	TOTAL	\$155,472

The following projects were approved by the Nebraska Soybean Development, Utilization and Marketing Board for FY 89-90 Funding:

C. A. Shapiro R. B. Ferguson D. H. Sander	The Effect of Phosphorus Application Methods on Soybean Yield and Phosphorus Uptake	\$ 18,800
F. W. Wagner	Leghemoglobin Structural and Functional Changes	21,930
A. R. Martin	Low Rate Herbicide Application for Weed Control in Soybeans	15,600
G. L. Graef J. E. Specht	Development of Improved Soybean Varieties for Nebraska	33,000
A. J. Jones J. Skopp E. Penas D. Duey C. Shapiro R. Ferguson L. Bashford	An Economic and Resource Analysis of Deep Tillage to Reduce Soil Compaction for Soybean Production	13,000
G. W. Hergert G. A. Wicks P. T. Nordquist N. L. Klocke R. T. Clark	Soybean Variety Evaluations Under Sprinkler Irrigation	12,804
R. W. Elmore R. W. Roeth	Soybean Research Efficiency Improvement at South Central Research and Extension Center	24,000
C. V. Kies	Soybean Oil Versus Palm Oil, Palm Olein Oil and Palm Steari Oil: Effect on Blood Serum Lipids and Metabolites of Humans	34,100
L. D. Clements	Industrial Use of Soybean Oil	10,000
	TOTAL	\$183,314

The following projects were approved by the Nebraska Grain Sorghum Development, Utilization and Marketing Board for FY 89-90 Funding:

D. T. Walters D. H. Sanders	Increasing Nitrogen Use Efficiency by Dryland Sorghum Under Conventional and No-Tillage Systems	\$ 7,250
J. D. Eastin D. J. Andrews	Sorghum Stress Research Part 1: Stress Screening Methodology Part 2: Drought/Heat Stress Screening and Testing	23,800
P. T. Nordquist	Germplasm Development to Combine Stalk Strength, Greenbug Resistance, and Grain Filling Under Cool Environments	10,000
R. A. Stock R. A. Britton	Evaluating Grain Sorghum Hybrids and Important Structural Characteristics for Finishing Cattle	16,250
P. T. Nordquist D. J. Andrews	Sorghum Seed Production in the Columbia River Basin	15,000
R. J. Wright S. D. Danielson	Field Biology and Behavior of the Chinch Bug in Nebraska	35,000
S. Von Essen	Controlling Lung Problems Resulting From Grain Sorghum Dust	2,200
L. D. Clements	Screening of Vegetable Based Oils (Grain Sorghum) as Replacements for Petroleum Based Industrial Oils and Solvents	10,000
L. D. Schulze	Pesticide Safety Information Card	720
	TOTAL	\$120,220