



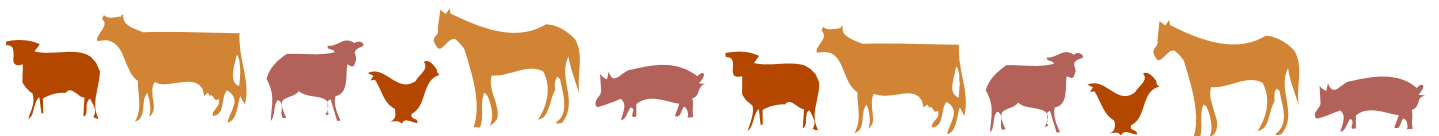
Friends of Animal Sciences Newsletter

June 2007 - Volume I, Issue I

Friends of Animal Sciences By-Laws Signed



Friends of Animal Sciences By-Laws Signing Ceremony, April 13, 2007. Standing: Barbara Zawlocki, FAS Secretary; Daniel Bernardo, CAHNRS Dean; Marvin Hoekema, FAS Vice President; Charles Gaskins 2006 Animal Sciences Department Chair; Margaret Benson, 2007-Animal Sciences Department Chair. Seated: Heidi Thomsen, FAS President.



From the President's Desk



Heidi Thomsen

Hello Fellow Alumni and Friends,

I hope all is well and that you are looking forward to the coming summer. I know I sure am!

I am happy to report that the Friends of Animal Sciences had their first Board meeting and general meeting on April 13th and it was extremely productive. We have a number of goals to complete in the coming year. Some of these goals are as follows:

- Provide \$2,500 in scholarships to students by spring 2008. The intent of the group is that this amount will increase in future years as the amount of donations to the group increases.
- Develop a plan to target businesses for donations and/or sponsorships. Our goal is to attain a minimum of \$10,000 by June 2008.
- Increase the number of memberships to 93 members by June 2008.

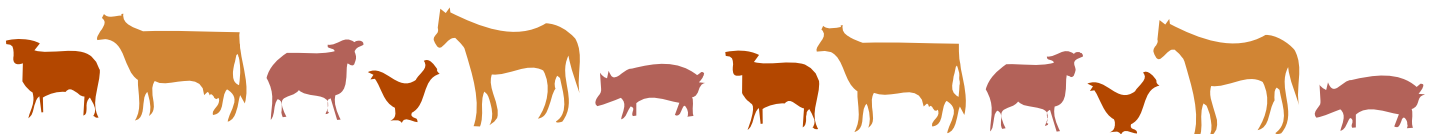
Committees have been set up to brainstorm ideas, and develop and implement a plan to attain these goals. If you are interested in serving on a specific committee, please contact one of the following Chairs:

- Scholarship Committee: Marv Hoekema—mhoekema@mhoekema.com
- Donations/Fundraising Committee: Rich Meyer—rmeyer2003@msn.com
- Membership Committee: Katrine Parmley-Gates—abbydog@pa.net

With your assistance and support, we can make this a very successful year!

Kind Regards,

Heidi Thomsen
President



Dr. Martin's Retirement Party Goes Off without a Hitch



Dr. Martin flanked by FAS Board Member Katrine Parmley-Gates (left) and Katrina Johnson.

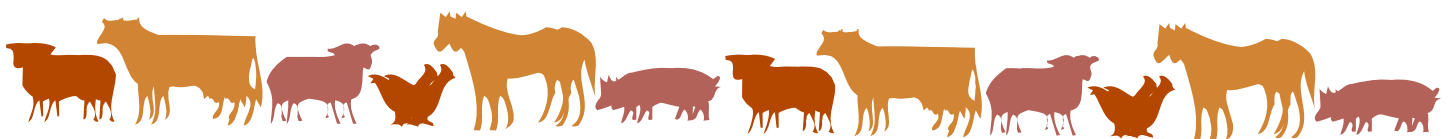
On April 14, beginning at about 5:30 pm, a retirement party was held for Dr. Everett Martin at the Clarkston Golf and Country Club. The facility was decorated in Cougar colors. There was plenty of good food, music and numerous friends and family of Dr.

Martin were there. Many of the Friends of Animal Science (alumni) association were there, and one in particular (Marvin Hoekema) not only discussed Dr. Martin's impact on students, but also threw a few jolts at Hillers as well. Although it rained, and kept everyone inside, a good time was had by all. Perhaps the fact the Butch Booker sponsored a hosted bar helped, but it could have just been the occasion. After Dr. John Unruh (Kansas) opened up the event, the Tyler Vance trio performed numerous musical pieces. Subsequently, everyone had some food....then the fun began. Numerous stories were told about Dr. Martin (all true of course), and there were even some in attendance that expressed their thanks to him for his 35 (+) year career at WSU. Finally, Dr. Martin had his chance to talk....after thanking everyone, he spoke of the fun he and Gloria will have, now that he does not have to be at work (at WSU) every day.



Dr. Line Estergreen, Professor Emeritus (left), Distinguished Graduate Dr. Steven Aust and wife, Dr. Hillers in background.

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Dr. Martin's Retirement Party Goes Off without a Hitch *Continued*

Dr. Martin Thanks FAS

MARTIN (*Continued from Page 3*)

A Thanks from Dr Martin



Heidi Thomsen presenting Dr. Martin with a Life Membership in FAS.

Heidi,

Thanks to you, the other officers, and board members of the Friends of Animal Sciences Alumni Association for honoring me with a lifetime membership. Friday evening April 13 was a big day in my life. I thought the occasion of the Dedication of the Ensminger Pavilion was a perfect form for the Friends of Animal Sciences Alumni Association to announce the formation of the association and gain support from friends and alumni and faculty.

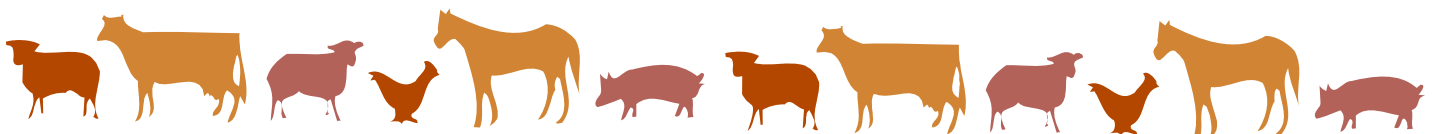
Your kind words, when you presented with with lifetime membership and the plaque, will be in my memory for a long, long time!! So, I thank you again and the organization again for the recognition. Dr. Dodson gets some credit too. Mike is a true friend of mine and the Department of Animal Sciences at WSU.

Rest assured that I will support the association any way I can. This offer includes the opportunity to pull together some of the history of the department from 1962 to present. To accomplish this I will have to solicit the help of several to include Dr. Timothy Blosser and other department chairs. All I ask is that the Association be patient with me as I don't know how long it will take to properly do this task.

I will look forward to working with and supporting the association in the future. Please pass along my thanks to others in the association.

Most sincerely,

Everett Martin



Dr. Reeves to Retire

Dr.'s Janine Brown [Endocrine Lab Head, Smithsonian National Zoo Conservation & Research Center], Holly Neibergs [WSU, Animal Science Department], and numerous others at WSU are organizing a retirement party for Dr. Jerry Reeves. Dr. Reeves has indicated that he would like a simple party, so the Ensminger Pavilion has been reserved for September 29 (Saturday). We are looking for email addresses of Jerry's former students, postdocs and staff so we can send more

information about this special event. Help us celebrate Jerry's long, distinguished career as a scientist and mentor. Beer, BBQ and music will ensure a good time for all. Send your contact information, especially an email address, to (brownjan@si.edu) Ticket price and more information will be sent to alumni, as soon as we receive it from Janine, Holly and others. Mark this date on your calendar!

Department Research

This article by Becky Phillips first appeared in the February 2, 2007 issued of WSU Today.

Health and Nutrition Diet/gene breakthrough

By Becky Phillips, WSU Today

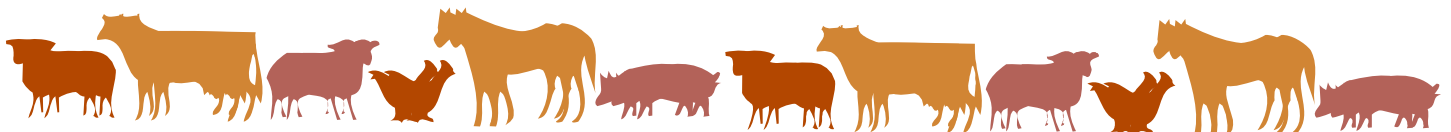
In the first study to show that a specific nutrient could alter the expression of genes in the body fat of dairy cattle, **John McNamara** and **Jennifer Sumner** have raised the bar for animal production standards while adding to the greater understanding of human health issues.

McNamara, professor in the Department of Animal Sciences and (intercollegiate,



John McNamara and Jennifer Sumner in WSU Pullman's Knott Dairy Center. (Photo by Becky Phillips)

See **McNamara** | Page 6



Department Research *Continued*

McNamara (*Continued from Page 5*)

multidisciplinary) Nutrition Program, and Sumner, his doctoral student and postdoctoral research associate, have demonstrated that chromium in the diet changes the metabolism of body fat in dairy cattle by stimulating the expression of certain genes while simultaneously decreasing the expression of others.

Though it had long been known that the mineral chromium is required in the diet for good health in both animals and humans, the specific role it played in fat metabolism and milk production had not been described.

Adipose tissue is key
For more than 20 years, McNamara and his team have been working to identify genetic factors related to efficient milk production in dairy cattle. Knowing that adipose (fat) tissue plays an active role in successful reproduction and lactation, they centered their studies on identifying the metabolic functions of body fat. One of their main goals was to identify cows that gained neither too much nor too little weight during pregnancy and lactation.

“When cows store too much body fat, energy is diverted away from milk production and instead goes toward storing more fat,” McNamara said. “Yet if a cow does not store enough fat — or

loses it too quickly — her immunity is impaired, causing inefficient production and leading to diseases like ketosis, milk fever and mastitis. Adipose tissue, in

addition to being a major energy storage organ, is also a source of several powerful hormones that control food intake, inflammation and immunity.”

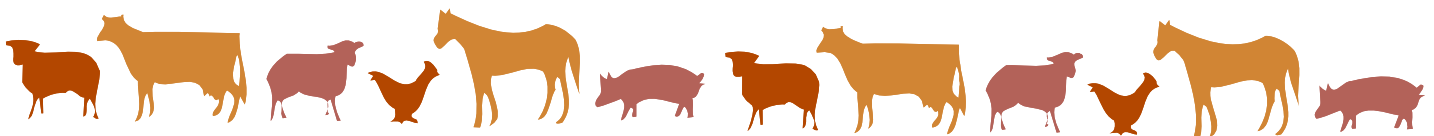
Chromium supplementation

In 2003, McNamara expanded his focus to include how cows vary in their use of specific nutrients — particularly in the time just before and after giving birth. His research showed that chromium supplementation increased feed intake and milk production in dairy cows.

“The unique part of this work was showing that chromium changed the body fat metabolism. It actually caused the cows to gain a little fat, which allowed them to make more milk but also prevented them from losing too much fat — it’s a very fine balance.”

The work had been funded by Kemin Industries, Inc., a nutritional ingredient manufacturer in Iowa. The company, intrigued with the results, wanted to know if chromium was affecting gene expression in fat metabolism. Using adipose samples from their previous studies, McNamara, Sumner and the

See **McNamara** | Page 7



Department Research *Continued*

McNamara (*Continued from Page 6*)

Kemin team extracted the RNA and ran microchip array analyses to determine gene function. The study convincingly showed that chromium supplementation “upregulated” a number of genes — causing them to become more active — while others were “downregulated.”

This is the first study to document nutrigenomic activity in the body fat of dairy cattle. A provisional patent application for the discovery has been filed by McNamara and Kemin Industries.

Basic mammalian biology

At the same time, Sumner was conducting a companion study to measure gene activity in the adipose “lipolysis pathway” — which follows the breakdown and mobilization of fat tissue — a major contributor to milk production. Her work proved — also for the first time — that the point of highest gene activity coincided with the point of greatest lipolysis.

In essence, she confirmed that five major genes were upregulated during lactation, allowing the cow to utilize stored body fat for milk production.

“This is a novel finding for any mammalian species,” said McNamara.

These breakthroughs won McNamara and Sumner an invitation to the International Symposium on Energy and Protein to be held in Paris in September. They also garnered McNamara a grant from the U.S. Department of Agriculture and National Research Initiative to continue his work.

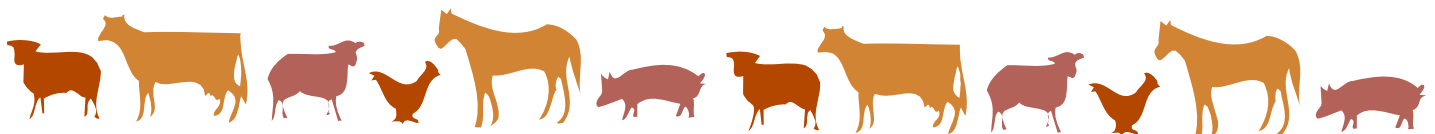
“Now that we’ve confirmed one application of nutrigenomics in dairy cattle, we plan to study it in more depth,” he said. “We can start to define exactly how genes in adipose tissue respond to different diets. It all comes back to the goal of breeding the most efficient animals for milk production.”

New world of nutrition

Is it nutrigenomics ... or nutrigenetics? Either way, the goal of these emerging fields of nutrition is to optimize health — for both people and animals — through personally tailored diets. With the availability of biotechnologies developed in the genomic era, nutritionists can take the study of the relationship between genes, diet and health to a new level.

- In nutrigenomics, the basic goal is to discover how diet affects metabolic pathways in the body and how this regulation may be disturbed in diet-related disease — i.e., humans with a certain mutated gene absorb higher levels of fat from the intestine, leading to elevated cholesterol and possible atherosclerosis.

- In nutrigenetics, the aim is to understand how genetic makeup determines response to diet and susceptibility to diet-related disease — i.e., a number of genetic variations have been shown to increase the susceptibility to Type 2 diabetes, obesity, cardiovascular diseases and some autoimmune diseases and cancers.



Department Awards

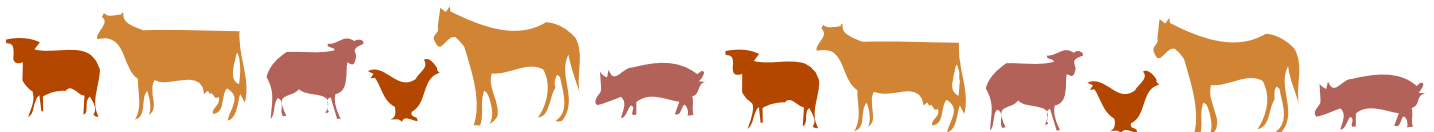
Distinguished Graduate Science, Education & Technology



Dr. Steven D. Aust

Steven Aust received a BS degree in Agriculture from Washington State University (WSU) in 1960, and intended to return to the family farm in Pacific County until introduced to research by Dr. Tim Blosser. As such, Steven obtained a MS degree from WSU in 1962, with Dr. Tim Blosser serving as Steven's graduate mentor. After obtaining his Ph.D. in Dairy Science from the University of Illinois in 1965, Steven was a postdoctoral scholar in Toxicology at the Karolinska Institute in Stockholm, Sweden. He then became a Biochemistry faculty member at Michigan State University. After a sabbatical at the Ruakura Agricultural Experiment Station in New Zealand, Steven rose through the ranks to become a full professor of Biochemistry in 1977, Associate Director of the Environmental Toxicology Center in 1980, and Director of the Center for the Study of Active Oxygen in Biology and Medicine in 1985. Steven left Michigan to become the Director of the Center of Excellence in Biotechnology,

Utah State University in 1987. Presently, Steven is a Professor (Biochemistry/Chemistry) in the Interdepartmental Program of Toxicology, Utah State University, and Founder of Intech One-Eighty Corporation, which is the exclusive licensee of Utah State University for Biodegradation of Environmental Pollutants by White Rot Fungi. Dr. Steven Aust is an internationally recognized expert in a number of fields, including the toxicology of polyhalogenated aromatic hydrocarbons, lipid peroxidation, the role of iron in the deleterious oxidation of biomolecules, and the degradation of lignin and environmental pollutants by white-rot fungi. His main research theme remains elucidation of the influence/importance of free radicals in biology and medicine. To this end, nearly 50 graduate degrees and 16 postdoctoral trainees have received mentoring under Steven's supervision. Steven's research has been funded by NIH, NSF, USDA, EPA, the US Army, the US Navy, and by numerous private corporations to over \$12 million. Steven has published over 350 total peer-reviewed research articles and invited review articles, conference proceedings, and handbooks. His work is cited some 500 times per year. Dr. Steven Aust is presently a member of six professional societies, serves on the editorial boards of many scientific journals, is the holder of six patents, and has served on grant review panels of NIH, NSF, EPA, DOE, ONR and numerous other granting agencies. Steven and his wife Karen (originally from Farmington, WA) raise and train registered performance quarter horses, and enjoy fly-fishing.



Department Awards *Continued*

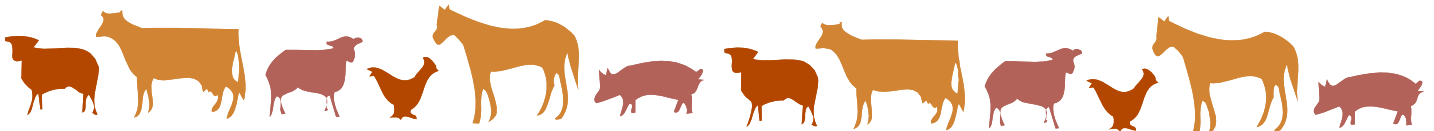
Distinguished Service



Randolph E. Gross

Randolph (Randy) Gross graduated with honors from Washington State University (WSU), with a BS degree in Agriculture Economics in 1971. However, Randy was most actively involved with the Animal Sciences Department, demonstrated by him receiving our Department's Outstanding Dairy Student Award as a senior. The linkage to the Dairy industry would never be lost, and for nearly forty years, Randy has served our department

by servicing the Dairy industry. While maintaining a full-time career with Northwest Farm Credit Services, Randy owned and operated Image Farm in Valleyford, WA, whereby he has focused on raising quality Holstein replacement heifers. His son has also stepped into the dairy business by operating the Prairie Gold Dairy in South Dakota, which currently has 3,600 cows and about the same number of heifers. Randy has served as Director, Vice President, and is presently the President of the Holstein Association, USA. In this capacity, Randy helps direct a staff of 150 persons, an annual budget of \$15 million, and 20,000 + members throughout the United States. Recently, Randy was elected to the Washington State Farm Bureau board of directors, and an appointment is pending for Randy to serve on the National Farm Bureau dairy policy committee. Although busy, Randy has helped students learn about financial benchmarking in our senior level dairy classes, and has been a CUDS advisor since 1984. Randy has received the WSU Henry Dykstra Outstanding Dairy Alumni Award, and in 2005 was the recipient of the Mel Ehlers Distinguished Dairy Booster Award.



Department Awards *Continued*

Outstanding Alumnus

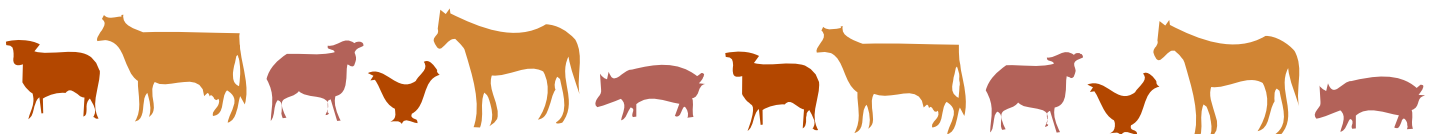


Scott Hodgson

Scott Hodgson obtained his B.S. degree in Dairy Husbandry in 1950 from Washington State University (WSU). His first official position was as a Junior Dairy Scientist, attached to the WSU Agriculture and Extension Service. In 1951, Scott was transferred to the Western Washington Research and Experiment Station (WWREC in Puyallup) as the Dairy Herdsman. For a total of 39 years, Scott served the dairy industry in Washington State, eventually reaching the rank of Associate in Animal Science (Research). Scott's scientific contributions included a variety of scientific publications (18); extension publications, bulletins and technical reports (23); and popular articles (50). Scott's main successes, however, were as a people person. For his entire career span, Scott worked with the Washington State 4-H dairy program. Whether it is a judging school, or dairy leaders training program, Scott was a focused and respected representative of

this department. For his efforts, Scott was inducted into the Washington State 4-H Hall of Fame in 2001, was honored by the Washington FFA as a State Farmer (1969), and was named an associate (lifetime) member of Farmhouse Fraternity. Scott also worked with dairy producers, serving as the secretary of the Washington Purebred Dairy Cattle Association, as a Director or President of the Pierce County DHIA Association, and either as a Director or as President of the Washington State Holstein Association. Scott's expertise with dairy cattle was demonstrated through the frequent request for him to be a judge at dairy cattle shows throughout the Western United States, and for 35 years Scott served as the Dairy Cattle Superintendent of the Western Washington Fair. Closer to the Department, Scott served on the CUDS Dairy Advisory Committee for fourteen years (1979-1993), and has received the Henry A. Dykstra Outstanding Dairy Alumni Award. Scott Hodgson is a Life Member of the American Dairy Science Association and the Dairy Shrine Club. On a personal side, Scott Hodgson served the United States as a brown-water Navy man, on a Landing Craft Infantry-Gun boat, during World War II, where he received numerous medals, commendations, and a Presidential Unit Citation for meritorious service. His Navy job was to cover the

See **Hodgson** | Page 11

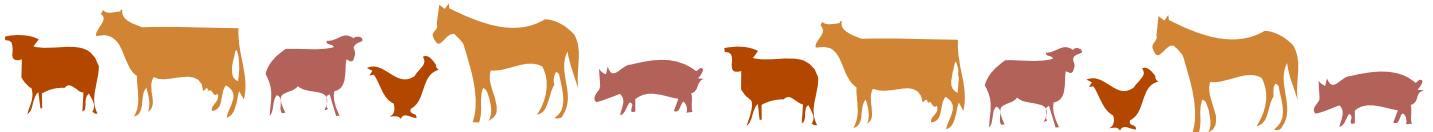


Department Awards *Continued*

HODGSON (*Continued from Page 10*)

landing of combat troops when they went ashore. Naval service took Scott to the landings on Kwajalein and Eniwetok in the Marshall Islands, the operations in the Philippine Islands (3 separate landings), at Guam and finally at Okinawa. He later served on the USS John W. Thomason (a destroyer) before being discharged in January 1946. Scott has

been an Elder for the Puyallup First Presbyterian Church. Scott and his spouse Pat are the parents of six children (4 boys and 2 girls). Unfortunately only five survive as his eldest daughter, Laurie Anne (Hodgson) Olson passed away in June 2006. Scott and Pat have 8 grandchildren and six great-grandchildren.



Friends of Animal Sciences Washington State University Membership Application Form

Annual Memberships:

\$25 Individual

Please check one:

Alumni

Affiliated

Student

Associate/Honorary

\$200 Business

Lifetime Memberships:

\$500 Individual – may be paid over the course of one year.

Please check one:

Alumni

Affiliated

Student

Associate/Honorary

\$2,000 Business

Donation: \$ _____

Membership Categories:

ALUMNI: Any person who has received an Animal Science degree from Washington State University.

AFFILIATED: Any faculty member of the WSU, Department of Animal Sciences or any faculty member who is in association with the WSU, Department of Animal Sciences.

STUDENT: Any student who is currently enrolled in a WSU, Department of Animal Sciences' class.

ASSOCIATE/HONORARY: Any person who does not qualify for the previous categories and is in support of WSU, Department of Animal Sciences, either by monetary means or volunteering his/her time, effort or skills, as deemed by the Board of Directors.

MEMBERSHIP INFORMATION

Name _____ Date of Birth _____
First/Middle or Maiden/Last Name or Name of Business

Address _____

City _____ State _____ Zip Code _____

Phone _____ E-mail Address _____

First WSU Degree _____ Major _____ Graduation Year _____

Did not graduate from WSU

PAYMENT INFORMATION

Check (Payable to Friends of Animal Sciences)

VISA Master Card

Credit Card Number _____ Exp. Date _____

Card Holder's Signature _____

EMPLOYMENT INFORMATION (optional)

Employer Name _____

Job Title _____

Employer Address _____

City _____ State _____ Zip Code _____

Phone _____ E-mail Address _____

Return your completed application with payment to:

Department of Animal Sciences
Friends of Animal Sciences Fund
Washington State University
117 Clark Hall
P.O. Box 646310
Pullman, WA 9164-6310

