



Sesnon Chair in Sustainable Animal Agriculture



Ermias Kebreab
*Professor, Associate Vice
Provost of Global Affairs*

Department of Animal
Science
animalscience.ucdavis.edu
ekebreab@ucdavis.edu

ENDOWMENT PURPOSE

The Sesnon Endowed Chair in Animal Science was established through a property gift made by Porter Sesnon, Barbara Sesnon Cartan, and William T. Sesnon, Jr. The Sesnon family conveyed their Paiute Meadows Ranch in Humboldt County, Nevada, to the Cal Aggie Foundation, which managed the property pursuant to the terms of the gift deed. When the ranch was sold, a large portion of the proceeds, totaling almost \$1.3M, was allocated to the Department of Animal Science to endow the chair.

RESEARCH

My research focuses on sustainable animal agriculture. In the last year the focus was primarily mitigation of methane emissions from enteric sources and determination of nutrient requirements of dairy cattle. The Sesnon endowment fund has supported my research activities by allowing me to explore areas of studies that would not normally be funded through other sources. The fund allowed me to hire post-doctoral and graduate students in order to investigate the potential of seaweed as anti-methanogenic additive. After initial results the work was funded and got a lot of media attention.

TEACHING

I continued to teach the undergraduate course, "ANS 112 - Sustainable Animal Agriculture", which I developed 6 years ago. It is now part of the required set of courses for the college major in Sustainable Agriculture and Food Systems and has a wide appeal across campus. The diversity of students in the course makes it unique and interesting to teach. Two students graduated this year with a PhD and I serve as major professor to 4 graduate students currently. I also trained 2 post-doctoral fellows, one of whom joined Iowa State University as Assistant Professor. In addition, 5 visiting scientists were trained in my lab. About 15 undergraduate students participated as interns on a project which was partly supported by the endowment.

STUDENTS

The following students received some support from the Sesnon Endowment:

- Breanna Roque - Worked on the effect of seaweed to reduce methane emissions from lactating dairy cattle.
- Ranga Appuhamy - Developed nutrient utilization model in lactating dairy cows and also models to predict methane emissions which has been published in high impact journal. He co taught a graduate class on modeling biological systems

OUTREACH

The endowment allowed me to continue to be engaged fully in two National Academy of Science, Engineering and Medicine Committees

- Worked on updating nutrition requirements for dairy. This is extremely important as the end product will be used by scientists all over the world. The previous version was the most cited document in my field and the new edition will be used even more frequently.
- Completed a report on Anthropogenic Methane Emissions from the US. I expect this will be used widely by several federal and state organizations.

The work on seaweed partly supported by the endowment has been reported in the New York Times, Chicago Tribute, San Francisco Chronicle, Sacramento Bee, National Public Radio, ABC News to name but a few.

The endowment also provides support for travel engagements, visiting stakeholders and professional organizations.



NOTEWORTHY ACCOMPLISHMENTS

- Report on Anthropogenic Methane Emissions from the US has been published and presented at the Capitol
- A paper on mathematical modeling of methane emissions has been published in high impact journal (Global Change Biology), which will be used by international and national organizations to update their estimates of emissions
- Won an Award for International Agriculture leadership and engagement from American Society of Animal Science

FUTURE USE

I am very excited to be part of the International Panel for Climate Change Committee that is updating how national inventories should be calculated. The impact is that every nation in the world will be using these guidelines. Similarly I am chairing a United Nations committee on developing standards of measurement for feed additives.

THANKS

I would like to thank the Sesnon endowment donors personally as it continues to elevate my research program and allowed it to have a global impact. This is evident by the number of international and national committees I am currently involved in. The continued support is very much appreciated as we take on one of the biggest challenges of the century which is producing safe and affordable food without harming the environment.

College of Agricultural and Environmental Sciences

Office of the Dean
Development

One Shields Avenue
Davis, CA 95616

(530) 752-1639

caes.ucdavis.edu

supportcaes@ucdavis.edu

