AG2PI
Agricultural Genome to Phenome Initiative

WORKSHOP

Virtual fence technology: From raw data messages to animal energetics models

Virtual fence (VF) systems operate via GPS-enabled collars on each animal and a three-way interaction between the VF collars, a base station in the field, and a user interface (software) on a computer that allows users to digitally 'draw' their pasture boundaries. Advancement of precision land management technologies has tremendous potential to manage the landscape with grazing animals to strategically improve ecosystem health and sustainability. Virtual fence collars generate large amounts of GPS data which can be challenging for researchers to develop methods to acquire, process, warehouse, and analyze efficiently. This workshop will focus on 1) open source tools developed to download and process virtual fence data via an API in Python and program R, 2) standards for database design, and 3) incorporating precision livestock data into animal nutrition models to inform livestock management.

****This workshop is a product of an AG2PI seed grant.****

Presenters:

Dr. Jameson Brennan earned his PhD in biological sciences with a specialization in range science and data science from South Dakota State University. His research interests include implementing precision technology to manage livestock production on extensive rangelands.

Andrew Antaya received his M.S. in Natural Resources Management from the University of Arizona. Andrew's research interests include the application of precision livestock management technologies for rangeland management in semi-arid ecosystems.

Dr. Hector Menendez is an assistant professor in the Department of Animal Science at South Dakota State University and extension livestock grazing specialist. His research interests include using systems modeling and mathematical modeling to evaluate livestock production systems.

August 7, 2023

2:00 PM - 4:00 PM

(Central Time, UTC–5)

Purpose:
Demonstrate how to generate, analyze and utilize precision livestock data via GPS.

Register for this Zoom virtual workshop:
https://tinyurl.com/AG2PI-w24

Upon registration, you will receive a confirmation email with information about joining the meeting.

A recording will be available at a later date at: www.ag2pi.org.

Registration is not required to view the recording.

Iowa State University · The University of Arizona · University of Idaho · University of Nebraska Lincoln

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