Image-Based Assessment Of Health Characteristics

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Inventors: Joao Ricardo Reboucas Dorea

The Invention

The UW researcher developed an automated imaging system that records images of cattle over time, processes those images to determine change of volume over time, and provides a negative energy balance score based on the change in images. The inventor partnered with the Dairy Innovation Hub on campus to acquire large sets of images of cows along with health records and blood samples. Using this information, the inventor developed a NEB scoring system which correlates the change in volume of the animals using images taken on the farm with the presence of negative energy balance as indicated by the metabolites in blood samples.

The inventor positioned the 3D cameras in a way to optimize visual field without sacrificing needed accuracy in the measurements. On the UW-Madison research farm, they have 4 cameras monitoring 500 cows, twice a day. Using machine learning algorithms, the inventor trained the computer system to analyze the images taken for each cow for changes in certain areas of the images as being indicative of negative energy balance. More work will need to be done to validate the predictive nature of the computer system he's developing.

Additional Information

For More Information About the Inventors

- Joao Ricardo Reboucas Dorea

Tech Fields

- Animals, Agriculture & Food : Animal health

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842