BOISE STATE RESEARCHER LOOKS TO REDUCE CO2

In today’s world, everyone wants to reduce their carbon footprint, whether by consuming less energy, using more recycled products, buying carbon credits or through other means.

Boise State University associate biology professor Kevin Feris is taking it a step further. He’s part of a collaborative team working to reduce the carbon footprint of dairies.

The project is funded by a $680,000 grant from the USDA, supporting work by Feris’s group and collaborators at the University of Idaho and Idaho National Lab, facilitated by the Center for Advanced Energy Studies. The project explores greenhouse gas mitigation and renewable power generation for agricultural systems.

The grant builds on previous research aimed at converting solid wastes from dairy farms into bio-power and carbon-neutral jet and diesel bio-fuel. While overall inputs are the same, the output for this project is different, focusing instead on carbon sequestration.

“Cows make a lot of manure, and that makes methane and carbon dioxide,” Feris said, noting that methane is a much stronger greenhouse gas than CO2. “Part of this project is to take that methane from decomposition to energy.”

The other part of the project is to capture the carbon dioxide in algal biomass, which is then used for bioplastics production. The bioplastics produced by this project could be used in a variety of ways, including the manufacture of polar fleece, but are best suited to industrial uses such as to make curb covers, car seats and other rigid plastic objects.

Funding is for three years, and although commercial application could be further down the road, part of this project is dedicated to developing partnerships with the agricultural sector to test research outcomes at the pilot scale at regional dairies. Boise State’s portion will fund up to three graduate student researchers and several undergraduates.

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About Boise State University
A public metropolitan research university with more than 22,000 students, Boise State comprises seven academic colleges, serving undergraduate and graduate students in nearly 200 majors and programs. Located in Idaho’s capital city, the university plays a crucial role in the region’s knowledge economy and famed quality of life. Learn more at www.BoiseState.edu.