

Food labels can reduce livestock environmental impacts

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With global food demand expected to outpace the availability of water by the year 2050, consumers can make a big difference in reducing the water used in livestock production.

"It's important to know that small changes on the consumer side can help, and in fact may be necessary, to achieve big results in a production system," said Robin White, lead researcher of a Washington State University study appearing in the journal *Food Policy*.

WSU economist Mike Brady demonstrated that the willingness of consumers to pay a little more for [meat products](#) labeled to reflect a single, environmentally friendly production practice, such as [water](#) conservation, can add up to real change.

But such single-focus labels don't yet exist, and labels that are available can be confusing and misleading.

The study shows that meat packers and retailers can play a key role in creating incentives for water-saving [livestock production](#) with labels that appeal to consumer values, White said.

White and Brady found that by paying 10 percent more for environmentally labeled meat products, consumers could bring about huge water savings in livestock production. In 2013, the U.S. produced 26 billion pounds of beef. Based on this number, White estimated that 76 to 129 billion gallons of water could be saved annually.

On the upper end, this equals the water used annually by 3.5 million people, roughly the population of the greater Seattle metropolitan area.

White, a postdoctoral scholar with the National Animal Nutrition Program, conducted the research as part of her doctoral studies in the Department of Animal Sciences at WSU.

"It is difficult to tease out a product's true environmental impact from currently available labels," said White. "Consumers may believe a label represents an environmental, health or animal welfare benefit but it's difficult for them to really know."

White and Brady were able to distinguish and compare consumers' willingness to pay for meat products with labels that reflect a single attribute of reducing environmental impact and labels that represent a suite of attributes. Among the purely environmental labels, they evaluated different price premiums to find the sweet spot – where the lowest premium that consumers found palatable would also cover the costs to the producer of reducing water use.

The study also demonstrated that moderate price premiums for all cuts of meat that are acceptable to the average consumer will have a greater impact on water conservation than high premiums for a few niche products.

White explained that cow/calf operations represent an opportunity to significantly reduce water use in beef production. Feeding pregnant cows and suckling calves typically requires pasture or rangeland and represents a substantial maintenance cost. Yet, in the U.S., intensive, more efficient pasture management is not what it could be, White said.

Growing grass more efficiently through strategic irrigation, fertilization and grazing strategies can significantly improve yield and save water but adds to producer cost. However, the price premiums associated with environmental labels can offset those costs.

The livestock industry wants to demonstrate improvements in sustainability, White said. To do so, growers need consumer cooperation and willingness to pay a little more for products

produced with a reduced environmental impact.

"This study demonstrated that consumers are willing," White said. "Now we just need to connect the dots to accurately represent a product's environmental impact in a way that is meaningful, understandable and attractive to consumers."

Provided by Washington State University

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