Feedstuffs are 12.5 lb. of cheese per 100 lb. of cheese, expected yields for the manufacture of cheddar cheese, milk has a substantially higher nutritional value than other milks, measured by volume, but the smaller Jersey cow (1,000 lb.) produces 62% less milk than the Holstein cow (3,000 lb.) of the same age mature bodyweight of 1,500 lb. Characteristically, the Jersey cow is 20% smaller than the Holstein cow. Capper and Cady quantified the environmental impacts of producing cheddar cheese from two of these sources of milk. The production system model factored in all primary and crop milk production practices up through and including the manufacturing plant, production and sales systems. They determined that to produce 500,000 mt of cheddar cheese:

- Just 8.8 billion lb. of Jersey milk was needed — 15% less than the required amount of Holstein milk (10.9 billion lb.).
- More Jerseys (91,460 animals) were needed to produce the same amount of cheese as Holsteins, but that represents just 0.5% of the total U.S. dairy cattle population.
- Despite the greater number of animals, the total body mass of the Jersey population was 26% smaller (272 million fewer total pounds) compared to the Holstein population.
- Jerseys consumed 1.75 million tons less total feed and produced 2.5 million tons less manure compared to Holsteins.
- Water use was reduced 32% for Jerseys, conserving 66.5 billion gal. of water, equivalent to the needs of 657,889 U.S. households.
- The land required for Jersey milk production dropped 240,798 acres — 11% less than the land required to support the equivalent cheddar production from Holsteins.
- The Jersey system used 20% less fossil fuels than the Holstein system. The savings of 517,602 million BTU in fossil fuel consumption is equivalent to freeing up the energy necessary to heat 6,335 U.S. homes per year.
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JERSEYS vs. HOLSTEINS: A study of the environmental impacts of producing cheddar cheese from two sources of milk. The production system model factored in all primary and crop milk production practices up through and including the manufacturing plant, production and sales systems. They determined that to produce 500,000 mt of cheddar cheese:

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THE study’s findings can be explained by Jersey breed-specific characteristics that both reduce and dilute maintenance overhead in the production system. The lower total body mass of Jerseys reduces maintenance costs per animal, and the greater nutrient density of Jersey milk dilutes maintenance resource requirements — especially for water — over more units of cheese. “Water use in Jerseys comes down because there is more fat and protein in milk,” Capper noted. “The savings is not just water intake for the smaller animals but will carry through in transport and processing the milk into cheese.”

This study demonstrates that the number of animals in a population is not a good proxy for body mass,” Capper added in previous work, we assumed that the number of animals in a system equaled bodyweight. More animals meant greater bodyweight and, thus, greater environmental impact. In this study, where Jerseys weigh 20% less than Holsteins, even though more animals are needed to produce the same amount of cheese, the total body mass comes down. Going forward, we need to account for differences in body size among animals.

THE new Sustainable Beef Resource Center (SBRC) has been created to provide useful, science-based information to the entire food chain. SBRC was formed at the suggestion of beef producers and branded-beef marketers who recognized the need for a centralized source of facts about technologies used in sustainable beef production. SBRC currently is working with third-party experts to create an environmental impact model and economic analysis of technologies used to help producers wholsale, affordable beef. It also maintains a library of data previously assembled around the Keough Enhancement Technology Information Team (GET IT). “SBRC members clearly see our organization’s role as that of a go-to resource for associations, coalitions, academia and other industry stakeholders — organizations that already are trusted information sources regarding how beef is produced,” SBRC chairman Paul Parker said. “This allows us to zero in on research that can fill information gaps as the industry continues to improve its ability to produce safe, wholesome beef affordably while using fewer natural resources.”

The SBRC’s library of research includes six white papers on topics ranging from the 50-year impact of pharmaceuticals on the environment and economic benefits of current-day beef management practices. The organization’s web site, at SustainableBeef.org, features beef production facts and talking points about the environmental and economic benefits of beef technologies.

The SBRC web site additionally highlights materials used in a recent eco-friendly and eco-nomical marketing campaign that focused on two topics of interest to consumers: food affordability and environmental sustainability. SBRC members include marketing and technical representatives from leading U.S. animal health companies.

Resource center to provide facts on sustainable beef

USDA seeks comments on sheep, goat program

THE U.S. Department of Agriculture announced July 23 that it is seeking comments on an interim final rule that establishes a National Sheep Industry Improvement Center (NSIBC) program, consistent with the 2008 farm bill. The purpose of NSIBC is to strengthen and enhance production and marketing of sheep and goat products in the U.S. through infrastructure development, business development, and enhanced education and market and environment. The American Sheep Industry Assn. (ASI) president Glenn Fishel said a group is pleased to have the rules issued as interim final rule in order to get a board appointed and the program operational by the end of the year. “ASI secured the farm bill authority and sought for the center to be overseen by the Agricultural Marketing Service at USDA,” Fishel added. A board of directors will manage NSIBC’s general operations. Board members will include four active sheep or goat producers, two finance and management experts, one person experienced in lamb, wool, goat or goat product marketing and other individuals. Nominations for board membership may be submitted by any eligible national sheep or goat organization whose membership consists primarily of active sheep or goat producers. The interim final rule was published in the July 25 Federal Register.