Opinion: Meat production a huge user of water

By James McWilliams, New York Times

California is experiencing one of its worst droughts on record. Just two and a half years ago, Folsom Lake, a major reservoir outside Sacramento, was at 83 percent capacity. Today it's down to 36 percent. In January, there was no measurable rain in downtown Los Angeles. Gov. Jerry Brown has declared a state of emergency. President Obama has pledged $183 million in emergency funding. The situation, despite last week's deluge in Southern California, is dire.

With California producing nearly half of the fruit and vegetables grown in the United States, attention has naturally focused on the water required to grow popular foods such as walnuts, broccoli, lettuce, tomatoes, strawberries, almonds and grapes. These crops are the ones that a recent report in the magazine *Mother Jones* highlighted as being unexpectedly water intensive. Who knew, for example, that it took 5.4 gallons to produce a head of broccoli, or 3.3 gallons to grow a single tomato? This information about the water footprint of food products – that is, the amount of water required to produce them – is important to understand, especially for a state that dedicates about 80 percent of its water to agriculture.

But for those truly interested in lowering their water footprint, those numbers pale next to the water required to fatten livestock. A 2012 study in the journal Ecosystems by Mesfin M. Mekonnen and Arjen Y. Hoekstra, both at the University of Twente in the Netherlands, tells an important story. Beef turns out to have an overall water footprint of roughly 4 million gallons per ton produced. By contrast, the water footprint for "sugar crops" like sugar beets is about

52,000 gallons per ton; for vegetables it’s 85,000 gallons per ton; and for starchy roots it’s about 102,200 gallons per ton.

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