



It All Starts and Matures Through the Orchestration of Nature's Wonder – Milk - August 2015

From too much rain all at once in the East to not enough rain in the West, environment remains the dominant subject of many discussions. Environment encompasses all facets. Air doesn't fight with water, which doesn't fight with heat and so on down the line. Environment manifests harmony. All systems work together to move forward in evolution. This harmony does not imply a stress-free situation; quite the opposite. Tension stands as the engine that agitates all in the system to move.

Enough philosophy, let's bring this down to our dairy world. Especially noteworthy out here in California one finds great drama being played out in water rights. Critics of dairy, i.e. those who are selling products that compete with dairy, hasten to point out the great consumption of water required to grow the alfalfa and the grain to feed the cows who produce the heifers who produce more cows who produce the milk. Add that to the water required directly by the cows and the milk barn and all the rest of it. Extending the discussion to the cheese/butter/powder plant usually gets ignored because the recycling of the "cow" water exemplifies water conservation in the entire food-processing world. Bottom line here finds milk's critics abandoning their old fuzzy nutrition polemics and now deride milk as a water waster.

Let's go back to that harmony concept I mentioned above. Diet, like all of nature, represents a highly orchestrated, harmonious system where the tension among the components unlocks the value of each component. Understanding even empirically how foods work together to deliver nutrition and health has led to the survival of human populations. The classic example is corn and beans. It is well understood that corn or beans as individual dietary components deliver more nutrition than either one alone. (By the same logic, adding nutritionally superior dairy foods to almost any diet will raise the nutritional quality of that diet.) Over time societies have worked out what foods work with each other for the benefit of the consumer. However, let's take a longer look into how we as humans digest our food. Every day generates more information about gastrointestinal physiology especially in regards to microbial ecology. The enzymes we produce in our pancreas and other organs do a good job of digesting our food – but not a complete job. Why is it that at the end of our long small intestine where all those endogenously produced enzymes have been breaking down food components and absorbing them into the body we find this big bag of microbial bugs? What's with that? Think about that orchestra again. Not all the polysaccharides, lipids and proteins are entirely

broken down in the small intestine. These leftovers are now food for the bacteria in the colon. The role of all those bacteria would take many more papers written by people smarter than I to elaborate but suffice to say that somehow those bugs are beneficial and not pathogenic. In fact, they fight against invading pathogens. The question is, “how did these particular bugs get there?” [Read Article](#)

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