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ENERGY & ENVIRONMENT

Eat Too Much Protein, Piss Away Sustainability

Words by 3p Contributor

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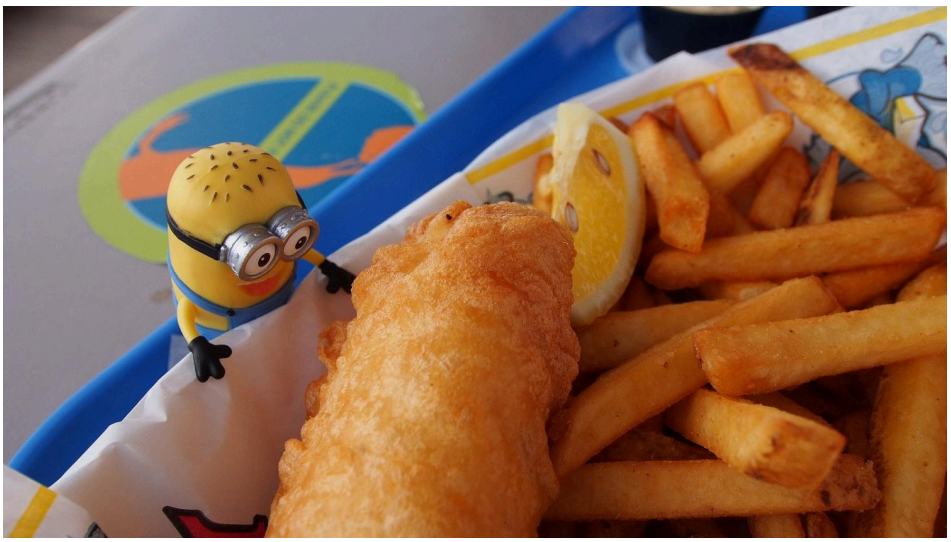

By Michael Tlusty and Peter Tyedmers

Our society is working so very hard to create ecologically and socially less impactful food. We have developed an ever increasing number of certifications and ecolabels (27 for fish alone) to ensure supply side sustainability. Yet the harsh reality is that especially for protein, we are pissing away these sustainability efforts. Figuratively, we do this by wasting food. For all this effort at being better producers, the food often does not make it into our mouths. A recent study by Johns Hopkins Center for a Livable Future estimates that approximately 45 percent of all seafood we produce is wasted after it is purchased and taken home (full study by Love et al. is here). But what is not reported

in these consumer-based food loss estimates is the actual pissing away of sustainability. In the case of proteins, we do not store it when we eat more than we need biologically. Excess protein is converted to glucose or fat, the surplus nitrogen is converted to urea, and then expelled from the body. How much is too much? For the quick review of the math behind this problem, assume 51g of protein per day per person is required (the midpoint of female / male requirements respectively). If each meal provides 1/3 of our protein, then a fast food fish sandwich (typically in the 15-18g protein range) is enough protein. Consume any more (how many fish meals are actually the size of a fish sandwich?) and we literally piss away the supply side sustainability.

Food overconsumption is a huge problem that is already burdening our health system, and the broader ecosystem impacts are only being realized. Food production is one of the most significant determinants of environmental and social impacts, and any waste (including overconsumption) only increase this burden. Including overconsumption in the estimate of waste will push the estimate half of what we produce as being wasted. Half! Any calculation of impacts, such as the energy required or green house gas emissions associated with food production needs to account for this waste , and without it, we are under-reporting the true cost of food.

We are in the midst of a sustainable food revolution. Creating supplies of food in a better, less environmentally impactful way is a key step toward greater sustainability and ultimately food security. Consumers have the right to ask for food produced in ways that are less damaging to the environment. Going beyond supply side sustainability, we need to be aware of the consumer's responsibility in inclusively creating sustainability within the food system. A sustainable food system would be one where all produced food is distributed

equitably amongst people across the globe, and enough food is produced to meet the biological needs of the global population. From where we stand now, a food system sustainability trajectory would be one that holds production constant, and decreases malnutrition, starvation and food waste. Yet when we look at World Health Organization projections, the global per capita caloric production in the 1960s was 2400 kcals per person per day (a little more than the average biological need for an adult, and yes we acknowledge the current disparity in waste and consumption patterns).Therefore, the sustainability trajectory should be to hold per capita caloric production constant and waste less food. We could even argue that a short term goal would be to increase calorie production to decrease malnutrition and starvation, assuming that some food waste will always occur. Yet that same WHO report estimates that by 2030, the global average calorie production will exceed 3,000 kcal per person per day, with developed countries producing 3500 kcal. This cannot be considered a sustainability trajectory, or even part of a sustainable food system.

To create a sustainability trajectory leading to a food secure world, we cannot rely on simply producing more food. Producing more food will merely result in new problems requiring technological fixes that we erroneously call sustainable. Instead, we need to continue to focus and the supply side sustainability by reducing the impacts of food we produce. This is critical as our collective food demands continue to soar with our global population headed to over 9 billion. Food production will increase, but this should mirror the population rise, not exceed it. Although global food systems are businesses, they can't have unchecked growth. Unchecked production leads to waste, and that compounds our problems. But above all else, we must be more

responsible consumers. It is not enough to shop with sustainability in mind. We must consume with those same goals, lest we piss away the sustainably produced food we covet so dearly.

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