INVESTOR'S BUSINESS DAILY®

December 8, 2015

Henry I. Miller: Chipotle's Misplaced Food Priorities

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INVESTOR'S BUSINESS DAILY

There's a regular newspaper column that includes items dubbed, "Why Do Bad Things Always Happen to Him?" — implying that unwelcome outcomes often result from flawed judgment rather than bad luck. That fits with what has been happening to restaurant chain Chipotle Mexican Grill.

Recent policy choices and operations have been so wrongheaded and fouled up that the company is facing lawsuits for false advertising, their food recently has sickened scores of customers across nine states, and the share price has plummeted.

The most recent Chipotle food poisoning outbreak is the fourth this year, one of which was not disclosed to the public. That goes beyond bad luck into the realm of negligence.

I confess to a certain degree of schadenfreude about Chipotle. Earlier this year, they claimed to have purged all their menu offerings of ingredients from "genetically modified organisms" at their more than 1,800 restaurants.

According to Steve Ells, founder and co-chief executive, "This is another step toward the visions we have of changing the way people think about and eat fast food."

If Chipotle had made good on that commitment, their menu would have been the strangest ever in an American restaurant.

For the primer on genetic modification that Mr. Ells and his colleagues desperately need, read on.

There is a seamless continuum of techniques for genetic modification of crops, animals and microorganisms that both predates and includes the advent of molecular techniques, which were invented during the 1970s. Farmers and plant breeders have been selecting and hybridizing plants to enhance their desirable characteristics for millennia.

Modern corn and its antecedents show how drastically corn has been modified by selective breeding. Tomatoes and wheat and innumerable other food plants have similar histories.

Another common way to create new plant varieties, which originated about a century ago, is radiation mutagenesis — subjecting seeds to radiation to scramble their DNA and create mutants. Thousands of plant varieties that we consume routinely — including lettuce, wheat, rice, oats and the popular Rio-Sweet and Rio Star pink grapefruit — were derived this way.

Some of the skeptics about modern genetic engineering would remonstrate that using "conventional," or pre-molecular, techniques, adds no "foreign" genes to the genome of the resulting plant. They're wrong.

Since the 1930s, plant breeders have performed "wide cross" hybridizations, in which large numbers of "foreign," or "alien," genes have been moved across what used to be thought of as "natural breeding boundaries" to create plant varieties that cannot and do not exist in nature.

In these hybridizations, which are performed between organisms of different species or genera, the parental plants may be sufficiently compatible to produce a viable zygote but not compatible enough to permit the embryo to develop into a mature plant.

To overcome this obstacle, laboratory scientists devised mechanical and biochemical ways to "rescue" the embryos and make them viable, and common commercial crops derived from wide crosses include tomato, potato, sweet potato, oat, rice, wheat, corn and pumpkin, among others.

Wide-cross hybridizations and radiation-induced mutagenesis represent far more drastic "tinkering with nature" and create far greater attendant uncertainty about the results than the modern molecular techniques.

Consider a real-world example, the man-made species Triticum agropyrotriticum, which was created by wide-cross hybridization from the combination of bread wheat and quackgrass (also known as couchgrass). The entire genome of quackgrass was transferred haphazardly into wheat.

This new variety could in theory pose several types of problems because it takes an established plant variety, wheat, and introduces tens of thousands of foreign genes into it. Concerns include the potential for increased invasiveness of the plant and the possibility that quackgrass-derived proteins could be toxic or allergenic for some humans.

But neither regulators nor activists nor, apparently, the deep thinkers at Chipotle have evinced any concern about these possibilities.

Plant varieties like T. agropyrotriticum, which harbor "foreign" genes and are indeed "genetically modified" according to any reasonable definition, are subject to no mandatory testing or review before entering the food chain.

In contrast, if a single gene from quackgrass (or any other organism) were introduced into wheat using modern, precise molecular genetic engineering techniques, the resulting variety would be subject to hugely expensive — and increasingly biased and politicized — regulation. Inevitably, it would be targeted by activists ... and shunned by Chipotle.

Where, then, does that leave Chipotle's "no genetic modification" promise? That should limit their menu to wild berries, wild game, wild mushrooms and wild-caught fish and shellfish. Virtually all the other foods in our diets come from organisms that have been genetically modified in some way, and about three-quarters of the processed foods in American markets contain ingredients from organisms genetically engineered with molecular techniques.

I hope the company's chefs are cleverer than its marketing geniuses. (Speaking of which, it's a wonder that the latter haven't tried to explain away the food poisoning as a weight-loss benefit to customers.)

Between the repeated food poisoning outbreaks this year and the company's false and misleading claims about the absence of genetically engineered ingredients on its menu, members of the plaintiffs' bar should be feasting on Chipotle. Bon appetit.

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