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Label without a cause

Mandatory labeling of GM food in the United States will not only make all food more costly but also bamboozle consumers.

Proponents of mandatory labels for genetically modified (GM) food in the United States claim to be motivated by the interests of the consumer. They argue that labeling all foods as "may contain GMO" or "GM-free" would help consumers understand what they eat. GM labels, they say, would also give greater choice, allowing consumers to avoid GM products.

In reality, though, the campaigns to introduce labeling legislation in US state legislatures are not about consumer choice or information. Labels are veiled attempts to stigmatize GM food and its producers, based on an ideological repugnance for genetic engineering. They are designed to scare mainstream consumers away from GM products. Simply put, labeling proponents are GM food opponents. And this is a scheme to purge GM products from the US market.

GM food labeling is not mandatory in the United States. Instead, the country has a rather *ad hoc* voluntary labeling system. Many thousands of foods labeled "GM-free" or "non-GM foods" can be bought in US grocery stores like Whole Foods Markets or Walmart. The labels are not governed by any consistent standards; thus, they are devoid not only of scientific meaning but also of significance.

In 64 other countries around the world, however, GM food labeling is mandatory—largely to fall in line with the European Union's decision to promulgate non-science based regulation. Labeling supposedly indicates either that genetic engineering was used to produce one or more ingredients in a food (process-based) or that transgenes (or their products) are present in the finished foods (product-based). The former, most draconian system, is enforced in Europe. Almost as soon as Europe's mandatory GM food labeling scheme came in, GM products disappeared from supermarket shelves. Fearful of stigma, liability and bad PR, retailers pressured their supply chain to move to non-GM ingredients.

The current US approach to GM food regulation assumes that oversight should focus on the characteristics of a product, rather than on its means of production. And the lack of any scientific rationale for differentiating GM food is why the US Food and Drug Administration (FDA) has steadfastly resisted calls for mandatory labels since 1992. Without federal action, GM food opponents have recently sought to introduce laws in state legislatures.

At least 25 states have considered labeling initiatives. Most have not passed, the latest casualty being in Colorado where Proposition 105 was defeated in November by 67% to 33%. However, the pro-labelers have had successes. Last year, both Connecticut and Maine passed bills requiring GM labels. And in May, Vermont signed into law bill H.112.

The legislation in Vermont, a dairy state, illustrates the incoherence and self-interest of the motives behind labelling. Vermont's law exempts from GM labeling milk from cows fed GM feed or 'vegetarian' cheese prepared using recombinant chymosin. But it requires labels if foods contain oil or sugar from GM crops, even though no transgene or exogenous protein is detectable in those ingredients, and their chemical composition is identical to those from conventional crops. Perhaps Vermont's legislators should consider "may contain" labels for radioisotopes, mercury, cadmium, bird feces, microbial poisons and explosives—ingredients that are present in all foods, albeit at undetectable levels.

With so many discrepancies among state laws, the national US situation risks becoming an incoherent patchwork of unenforceable legislation, unless state laws can be preempted by federal law (e.g., see http://1.usa.gov/1F57nJW) or challenged on legal grounds (see p. 1180). GM fetishists suggest that FDA do an about face and oversee mandatory labeling/certification of GM foods. After all, the US Department of Agriculture's oversees organic accreditation. But this reasoning is flawed.

The foremost problem is the potentially huge cost. Establishing and enforcing a labeling system for staple crops is not just about printing more detailed labels. GM and non-GM foods would need segregation from planting to plating, necessitating intense audits and constant policing to maintain the apartheid during harvesting, transportation, storage, processing and distribution. This is a much more daunting proposition than the USDA's organic program which handles only ~4% of US foods. The cost of personnel and systems for certification/testing and compliance/enforcement was estimated by the state of Washington at $22.5 million annually, just for governmental supervision for its own territory; Oregon, with half Washington's population, estimated $11.3 million. Extrapolated nationally, the price for government supervision of labeling could approach a billion dollars. Not to mention the much larger costs for the food and feed industries, and farmers.

Consumers, ultimately, pay the price. Some studies estimate a hike in retail food prices as high as 10%, not a disaster for those who already buy premium products to 'avoid' GM food at organic or 'non-GMO' supermarkets, but a budget-breaker for the large number of Americans struggling to meet weekly food bills.

Is there some value to consumers for all that outlay? Not really. A mandatory labeling system might avoid some of the bogus "GM-free" claims from manufacturers of products like orange juice (there are no approved GM oranges). But even in countries where mandatory labeling prevails, "GM-free" is confusingly meaningless. Although Vermont labels claim a GM-containing status, despite the impossibility of detection, in ever-so-stringent Europe, legal technicalities mean that "GM-free" foods can still contain up to 0.9% of GM-derived ingredients. In Japan, that threshold is 5%! So much for the consumers' right to know when "may contain GM" means undetectable and "GM-free" means up to 5%.

All of which sounds like a very poor return on a billion dollar investment. Mandatory labeling will do nothing for those who genuinely want to avoid GM foods. It will financially penalize those who don't care. It provides no useful nutritional or allergenic information. It is not "a trace of nuts"; it's just nuts, full stop.