

Sugar, Food Safety, Sustainability, & GMOS

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@PrometheusGreen

About ITIF

- Independent, nonpartisan research and education institute focusing on intersection of technological innovation and public policy, including:
 - Innovation and competitiveness
 - IT and data
 - Telecommunications
 - Trade and globalization
 - Life sciences, agricultural biotech, and energy
- Mission to formulate and promote policy solutions that accelerate innovation and boost productivity
- Ranked by University of Pennsylvania as top science and technology think tank in United States and number two in world

Contents

- 1 Consumers Top Food Priority = Safety
- 2 Consumers No. 2 Priority = Sustainability
- 3 Choice, Labeling, & the “Right to Know”
- 4 What Does the Marketplace Say?
- 5 What Does The Future Hold?

Food Safety

- We know what causes unsafe food
 - Microbial contamination (NB – organic over-represented)
 - Adulteration
 - Production process (e.g., plant breeding) is not on the list



What Do We Know About GM Food Safety?

- Substantial equivalence
 - This is a conclusion, not a presupposition
 - OECD: SE is a finding based on data & analysis
- Global Scientific Consensus
 - More than 275 scientific organizations
 - 11 US National Academy studies; 2000+ papers
 - Research by independent scientists & industry reaches the same conclusions
 - “There is no there there” (Gertrude Stein)

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Sustainability

- Which human activity has the biggest negative impact on the environment?
 - Agriculture; even hunting/gathering
 - Stewardship: there is a moral imperative to improve ag efficiency
- Sugar Beets vs Sugar Cane
 - Neither is perfectly “green”; Both can be improved
 - 25+ environmental advantages of GM sugar beets
 - GMO sugar cane is on the way (Brasil, Indonesia, Costa Rica)

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Sugar from GM Beets: The Greenest Option

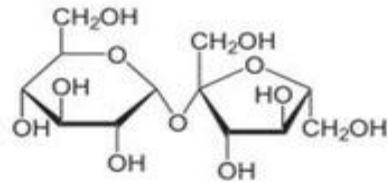
- No source of sugar is more sustainable than GM sugar beets



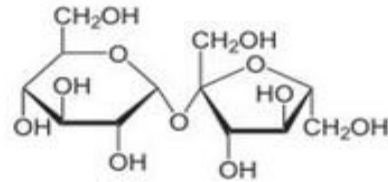
Labelling, Consumer Choice & the “Right to Know”

- Claim: Polls show 60-90% Want GM Labels
 - “Lies, Damn Lies, & Statistics”
 - Not all polls are equal; some are lousy, some are push polls
- Do polls predict POP behavior?
 - Worldwide, consumers decide based on cost, quality
 - ~4% want GMO info on labels (IFIC data; StarLink)

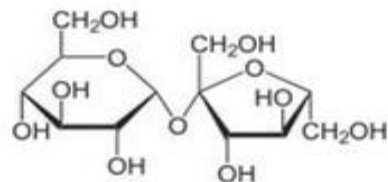
Why Do We Label?



A _____



B _____



C _____

The molecules to the left are sucrose, (table sugar)

Your assignment. Label the one from conventional sugar beets, label the one from organic sugar beets and label the one from GMO herbicide resistant sugar beets.

If you can't tell the difference and label them correctly, do they really need to be labeled?

@kevinfolta

Source: Kevin Folta

“GM” Label Controversy Is a Stalking Horse



GM Labels Have Nothing to do With Consumer Choice & the “Right to Know”

- Is Labeling Really About Consumer Choice?
- IS It Really About “Right to Know?”
 - USRTK is a stalking horse for special interests
 - “Black” marketing
 - Roberts-Stabenow

“We are going to force them to label this food. If we have it labeled, then we can organize people not to buy it.”

—Andrew Kimbrell, Executive Director, Center for Food Safety

“Personally, I believe GM foods must be banned entirely, but labeling is the most efficient way to achieve this. Since 85% of the public will refuse to buy foods they know to be genetically modified, this will effectively eliminate them from the market just the way it was done in Europe.”

—Dr. Joseph Mercola, Mercola.com

“By avoiding GMOs, you contribute to the tipping point of consumer rejection, forcing them out of our food supply.”

—Jeffrey Smith, Founder, Institute for Responsible Technology

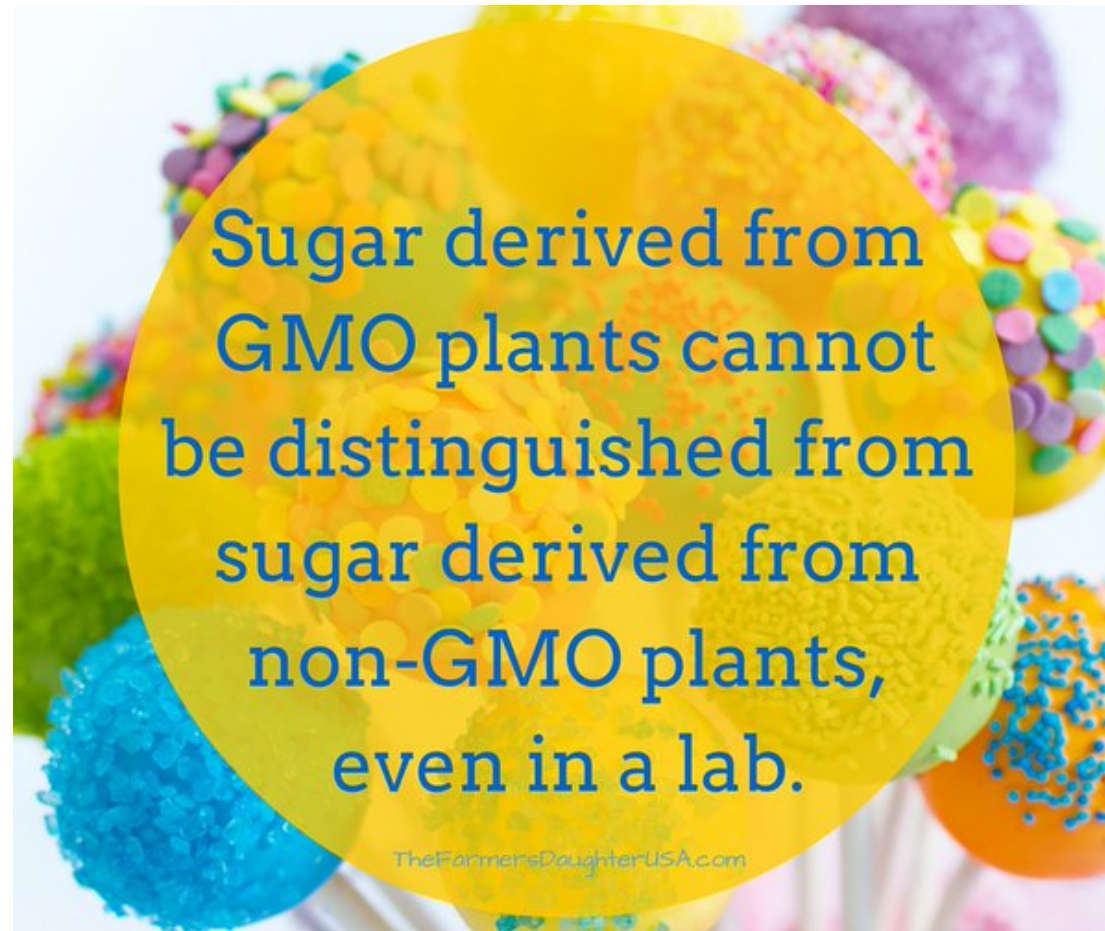
“With labeling it (GMOs) will become 0%... For you the label issues is vital, if you get labeling then GMOs are dead-end.”

—Vandana Shiva, environmental activist

“The burning question for us all then becomes how—and how quickly—can we move healthy, organic products from a 4.2% market niche, to the dominant force in American food and farming? The first step is to change our labeling laws.”

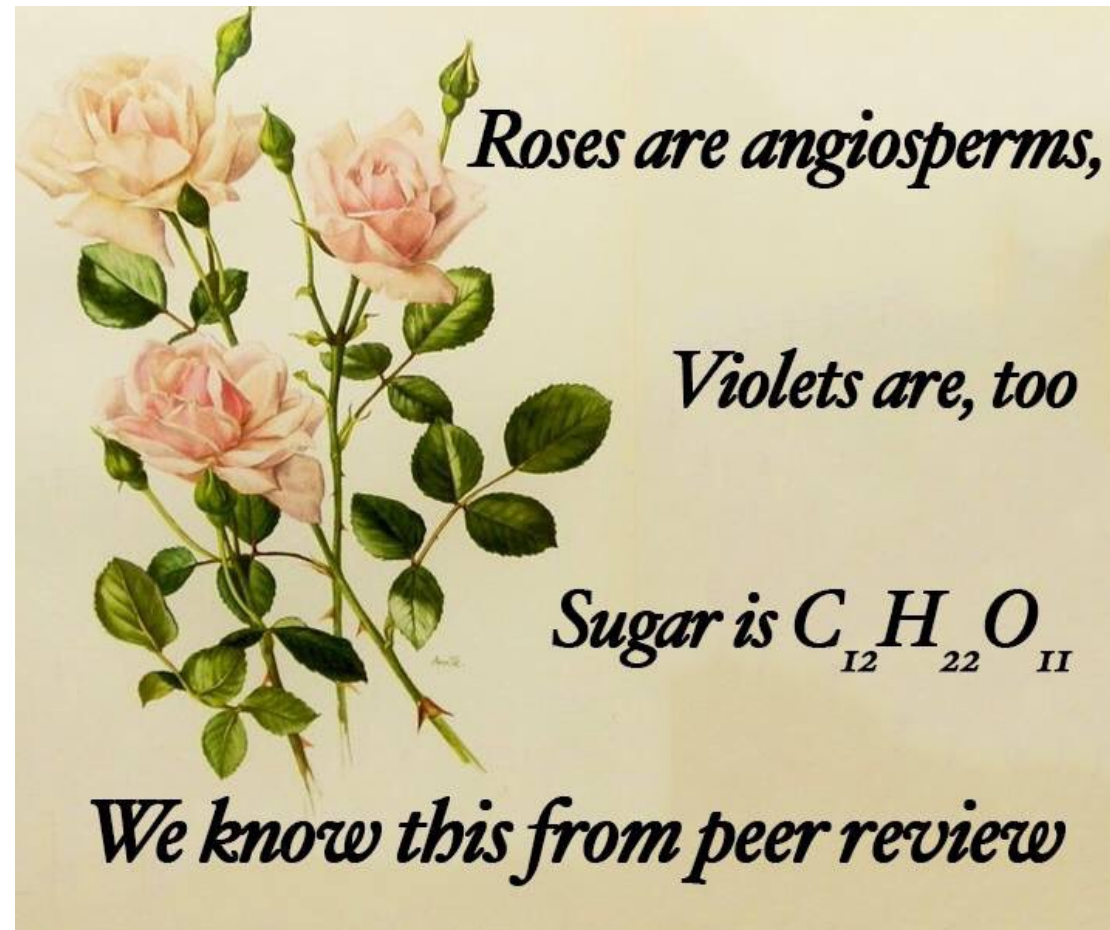
—Ronnie Cummins, Director, Organic Consumers Association

Facts Are Stubborn Things



Source: TheFarmersDaughterUSA.com

Facts Are Stubborn Things, Part 2



Remember “Made in Germany”



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What Does the Marketplace Say?

- Pew Survey Claim: 41% of consumers prefer sugar from non GMO plants
 - Do candy consumers really care? (27,421 +1)
 - Consumers do not appreciate being lied to
 - Campbell's vs Mars
- Price continues to be Primary Factor
 - “non GMO” is meaningless
 - Disrupts supply chains, logistics, reduces options: significant cost penalties on multiple levels

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What Does the Future Hold?

- Continued disinformation from special interests
 - Fighting back via deficit model counterproductive
 - Ridicule and sarcasm work for some
 - Best solution = finding common ground
- Continued, relentless economic pressure
 - Supply chain disruptions
 - Irrecoverable cost penalties

What Does the Future Hold?

- Continued innovation inescapable
 - GM beets are here; GM sugar cane is coming
 - Further genetic improvements imperative and inescapable
 - Disruptive innovations loom: algae, yeast...
 - Innovation will accelerate (CRISPR)
 - Stark choice: embrace or fall behind

One Way or Another, “GM” is the Future

“Any society goes through social movements or fads, in which economically useless things become valued or useful things devalued temporarily. Nowadays, when almost all societies on Earth are connected to each other, we cannot imagine a fad’s going so far that an important technology would actually be discarded. A society that temporarily turned against a powerful technology would continue to see it being used by neighboring societies and would have the opportunity to reacquire it by diffusion (or would be conquered by neighbors if it failed to do so).”

*--Jared Diamond
in Guns, Germs and Steel;
W.W. Norton, 1998, p. 257*

Thank You!

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