First things first . . . what does Act 120 do?

1) Says that a food produced with genetic engineering must say on the label that it’s produced with genetic engineering.

2) Says that a food produced with genetic engineering can’t say on the label that it’s “natural.”

3) Establishes a “Food Fight Fund.”

Wanna donate?
www.foodfightfund.org
Vermont Right to Know GMOs
A Collaborative Project of Cedar Circle Farm, NOFA-VT, Rural Vermont and VPIRG
How a bill becomes a law . . . .

February 6, 2013
H.112 introduced to House Committee on Agriculture & Forest Products

House Judiciary 4.18.13
House Commerce & Economic Development 5.8.13

House Ag & Forest Products 5.10.13

Passed House 5.10.13

Senate Agriculture 1.8.14

House Ag & Forest Products 4.16.14

Passed House (and Senate) 4.23.14

Senate Judiciary 3.11.14

Senate Appropriations 4.8.14

Passed Senate 4.16.14

May 8, 2014
Signed into Law Act 120
Who did the House Ag Committee hear from?

- Representative Kate Webb
- Legislative Counsel Michael O’Grady
- Assistant AG Bridget Asay
- Dr. Michael Hansen, Consumers Union
- Steven Druker, Alliance for Bio-Integrity
- Dan Barlow, VBSR
- Andrea Stander, Rural Vermont
- Falko Schilling, VPIRG
- Jillian Bernstein, Alex Funk, Laura Murphy, ENRLC
- Jim Harrison, VT Grocer’s Association
- Jim Leland, Chelsea Lewis, Tim Schmalz, AAF&M
- Rob Michalak & Jerry Greenfield, Ben & Jerry’s
- Margaret Laggis, Laggistics
- Val Giddings, Information Technology & Innovation Foundation
- Dale Johnson, Abbott Labs
- Michelle Kropp, Gringo Jack’s
- Robert Merker, FDA
- Jane Clifford, Green Mountain Dairy Farmers Cooperative Federation, Inc.
- Representative Duncan F. Kilmartin
- Mel Fields, Birnn Chocolates of Vermont
- George Schenk, American Flatbread
- Cathy Bacon, Freedom Foods
- Kari Bradley, Hunger Mountain Coop
- Jordan Gonda, Office of Legislative Counsel
- Jeffrey Smith, Institute for Responsible Technology
- Conrad Brunk, Editor
- Dr. Dyeanne Racette, Copley Hospital
- Rev. Daniel Buford, Allen Temple Baptist Church
- Rabbi Elihu Gevirtz, Council of Netiya
- Stephen Pintauro, Professor UVM
Who did the House Judiciary Committee hear from?

- Representative Kate Webb
- Representative Carolyn W. Partridge
- Representative Teo Zagar
- Representative John L. Bartholomew
- Legislative Counsel Michael O’Grady
- Assistant AG Bridget Asay
- Assistant AG Wendy Morgan
- Laura Murphy, ENRLC
- Karin Moore, Grocery Manufacturers Association
- Representative Paul Ralston
- Representative Anne B. Donahue
- Representative William F. Johnson
Label GMOs Now!

vtrighttoknow.org
Who did the Senate Ag Committee hear from?

- Legislative Counsel Michael O’Grady
- Jim Harrison, Vermont Grocer’s Association
- Lucy Leriche, Agency of Commerce & Community Development
- Falko Schilling, VPIRG
- Laura Murphy, ENRLC
- James Maroney
- Dan Barlow, VBSR
- Margaret Laggis, Laggistics
- Dave Rogers, NOFA-VT
- Gary Hirshberg, Stonyfiled Farm
- Dr. Martin Donohoe, Oregon Physicians for Social Responsibility
- Val Giddings, Information Technology & Innovation Foundation
- Assistant AG Bridget Asay
- Mike Tetreault, VT Feed Dealers & Manufacturers Association
- Jane Clifford, Green Mountain Dairy Farmers
- Representative Harvey Smith
- Andrea Stander, Rural Vermont
- Janet Anderson, EPA
- Chris Miller & Jerry Greenfield, Ben & Jerry’s
- Dr. Dyeanne Racette, Copley Hospital
- Steven Druker, Alliance for Bio-Integrity
- Dr. Michael Hansen, Consumers Union
- Jane Kolodinsky, Center for Rural Studies, UVM
- Representative Teo Zagar
- Representative Tristan Toleno
- Representative Kristina Michelsen
- Attorney General William Sorrell
- Chuck Ross, AAF&M

Plus 50+ Vermonters at joint Ag/Judiciary public hearing.
Who did the Senate Judiciary Committee hear from?

- Legislative Counsel Michael O’Grady
- Dr. Michael Hansen, Consumers Union
- Val Giddings, Innovation Technology & Innovation Foundation
- Stanley H. Abramson, Arent Fox PLLC
- Andrew Homan & Laura Murphy, ENRLC
- Stacey Chagnan
- Assistant AG Bridget Asay
- Dan Barlow, VBSR
- James H. Maroney Jr.
- Margaret Laggis, United Dairy Farmers of Vermont
- Bill Moore, Legislative Director
- Jane Clifford, Green Mountain Dairy Farmers Cooperative Federation, Inc.
- Diane Bothfeld, AAF&M
- Steven Druker, Alliance for Bio-Integrity
- Chris Miller, Ben & Jerry’s
- Jim Harrison, VT Grocer’s Association

Plus those 50+ Vermonters from the joint public hearing.
House Floor Vote
April 2014
Final: 114-30
Why did Vermont pass this law . . . ?

- “Federal law does not provide for the labeling of food that is produced with genetic engineering . . . .”

- “Federal law does not require independent testing of the safety of food produced with genetic engineering . . . .”

- “The FDA does not use meta-studies or other forms of statistical analysis to verify that the studies it reviews are not biased by financial or professional conflicts of interest.”

Act 120, Sec. 1 FINDINGS, (1), (2), (2)(c)
Why did Vermont pass this law (con’t)?

“There have been no long-term or epidemiologic studies in the United States that examine the safety of human consumption of genetically engineered foods.”

“There is a lack of consensus regarding the validity of the research and science surrounding the safety of genetically engineered foods . . . there are peer-reviewed studies in international scientific literature showing negative, neutral, and positive health effects.”

Act 120, Sec. 1 FINDINGS, (2)(D), (E)
Why did Vermont pass this law (con’t)?

“... limited from conducting safety and risk assessment ... patent restrictions ...”

“... increasingly available for human consumption. ... 80 percent of the processed foods ...”

“... conflicting studies assessing the health consequences ...”

“... unintended consequences ...”

Act 120, Sec. 1 FINDINGS, (2)(F), (3), (3)(A), (4)(A), (B)
Why did Vermont pass this law (con’t)?

“… genetic homogeneity, loss of biodiversity, increased vulnerability of crops to pests, diseases, and variable climate conditions”

“Cross-pollination of or cross-contamination by genetically engineered crops may contaminate organic crops, and, consequently, affect marketability of those crops.”

“… adverse effect on native flora and fauna … displacement of … native plants …”

Act 120, Sec. 1 FINDINGS, (4)(C)-(E)
Why did Vermont pass this law (con’t)?

“Public opinion polls conducted by the Center for Rural Studies . . . large majority of Vermonters want foods produced with genetic engineering to be labeled . . . .”

“Polling by the New York Times indicated that many consumers are under an incorrect assumption about whether the food they purchase is produced from genetic engineering . . . .”

“Persons with certain religious beliefs . . . need food to be labeled as genetically engineered in order to conform to religious beliefs . . . .”

Act 120, Sec. 1 FINDINGS, (5)(A), (B), (D)
Is there a reasonable basis for these findings?

- Please see above.
  (2 years, 50+ committee meetings, 130+ presentations of testimony from folks including
   - Science & medical professionals
   - Policy experts
   - Attorneys
   - Business owners
   - Agency personnel)

- Anything else?
E.g., studies & other info on health effects, environmental harms, consumer confusion, costs, & religious practices:
Gone to Seed, Transgenic Contaminants in the Traditional Seed Supply by the Union of Concerned Scientists.


Recent Long-Distance Transgene Flow into Wild Populations Conforms to Historical Patterns of Gene Flow in Cotton (Gossypium hirsutum) at its Centre of Origin by A. Wegier, et al.

The Establishment of Genetically Engineered Canola Populations in the U.S. by M. Schafer, A. Ross, J. Londo, et al.

Environmental Concerns with the Development of Herbicide-Tolerant Plants by Rebecca J. Goldburg.

Evidence of Reduced Arbuscular Mycorrhizal Fungal Colonization in Multiple Lines of BT Maize by Tanya Cheeke, Todd N. Rosentiel, and Mitchell B. Cruzan.


Increasing Cropping System Diversity Balances Productivity, Profitability and Environmental Health by Adam S. Davis, Jason D. Hill, Craig A. Chase, Ann M. Johanns, and Matt Liebman.

Impacts of Genetically Engineered Crops on Pesticide Use in the U.S.-the First Sixteen Years by Charles M. Benbrook.

G. Séralini et al., Genetically modified crops safety assessments: present limits and possible improvements. Environmental Sciences Europe (2011).


M. Schrøder, M. Poulsen, A. Wilcks, et al. A 90-day safety study of genetically modified rice expressing Cry1Ab protein (Bacillus thuringiensis toxin) in Wistar rats. Food and Chemical Toxicology. 45(3): 339-349 (2007).


Michael Antoniou, GM Soy, Sustainable? Responsible?: A Summary of Scientific Evidence Showing that Genetically Modified (GM) Soy and the Glyphosate Herbicide it is Engineered to Tolerate are Unsustainable From the Point of View of Farming, the Environment, Rural Communities, Animal and Human Health, and Economies, GLS Bank (2010).


Roberto I. Vásquez-Padrón, Cry1Ac Protoxin from Bacillus Thuringiensis sp. Kurstaki HD73 Binds to Surface Proteins in the Mouse Small Intestine, Biochemical and Biophysical Research Communications (2000).


Jose L. Domingo, Toxicity Studies of Genetically Modified Plants: A Review of the Published Literature, Critical Review in Food Science and Nutrition (2007).

G. Séralini et al., Long term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize, Journal of Food and Chemical Toxicology (2012).

G. Séralini et al., Answers to critics: why there is a long term toxicity due to a Rounduptolerant genetically modified maize and to a Roundup herbicide, Journal of Food and Chemical Toxicology (2012).


Alejandra Paganelli, et al., Glyphosate-Based Herbicides Produce Teratogenic Effects on Vertebrates by Impairing Retinoic Acid Signaling, Chemical Resources Toxicology (2010).


Aziz Aris and Samuel Leblanc, Maternal and Fetal Exposure to Pesticides Associated to Genetically Modified Foods in Eastern Townships of Quebec, Canada, Reproductive Toxicology (2011).


Memorandum from Dr. Samuel I. Shibko to Dr. James Maryanski, FDA Biotechnology Coordinator. Subject: "Revision of Toxicology Section of the Statement of Policy: Foods Derived from Genetically Modified Plants." Dated January 31, 1992.


R. Mesnage, et al., *Cytotoxicity on Human Cells of Cry1Ab and Cry1Ac Bt Insecticidal Toxins Alone or With a Glyphosate-Based Herbicide*, Journal of Applied Toxicology (2011).


Comments from Dr. Linda Kahl, FDA Compliance Officer, to Dr. James Maryanski, FDA Biotechnology Coordinator, on the “Statement of Policy: Foods from Genetically Modified Plants.” Dated Jan. 8, 1992.

Kaiser Permanente, “What you need to know about GMOs,” Partners in Health Newsletter Fall 2012.


Guide to U.S. Regulation of Genetically Modified Food and Agricultural Biotechnology Products by the Pew Initiative on Food and Biotechnology.
FDA Regulation of Genetically Engineered Foods by the Environmental and Natural Resources Law Clinic at Vermont Law School

Safety Testing and Regulation of Genetically Engineered Foods by William Freese and David Schubert

Appendix by the Environmental and Natural Resources Law Clinic at Vermont Law School

Dictionary.com - "Natural"


Memo from Dr. Gerald B. Guest, Director, Center for Food Safety and Applied Nutrition, to Biotechnology Coordinator, on the “Regulation of Transgenic Plants – FDA Draft Federal Register Notice on Food Biotechnology.” Dated Feb. 5, 1992.


Caring for Life: Genetics, Agriculture and Human Life by the World Council of Churches.

Book of Resolutions and Advocacy Issues of the United Methodist Church.


Faith and GMOs: Christian, Jewish and Hindu Congregations Urged to Vote Yes on 37 by Faith & GMOs.

Christian Faith Leaders, GMOs, and Prop 37/Labeling by Faith & GMOs

Why the Venture to Genetically Engineer our Food Offends Science, Religion, and the Bill of Rights by the Alliance for Bio-Integrity
The Three Main Monotheistic Religions and GM Food Technology: An Overview of Perspectives by Emmanuel B. Omobowale, Peter A. Singer, and Abdallah S. Daar.

Vermont Religions available at city-data.com.


Institute of Science in Society, Open Letter from World Scientists to All Governments Concerning Genetically Modified Organisms (GMOs), http://www.i-sis.org.uk/list.php.

Memo from Michael Hansen, PhD, to Representative Carolyn Partridge, Chair, House Agriculture Committee re: H.112 (Feb. 25, 2013).


Mezzomo et al., Hematotoxicity of Bacillus thuringiensis as Spore-crystal Strains Cry1Aa, Cry1Ab, Cry1Ac or Cry2Aa in Swiss Albino Mice, Journal of Hematology & Thromboembolic Diseases (2013).


Hans-Wolfgang Hoppe, Determination of Glyphosate Residues in Human Urine Samples from 18 European Countries, Report from the Medical Laboratory Bremen (June 6, 2013).


- Letter from ENRLC to Senate Committee on Judiciary re: H.112 (Mar. 28, 2014).
- Memo from Center for Food Safety to Senate Committee on Judiciary re: H.112 (Mar. 28, 2014).
A few highlights (just a few) ....
“We feel compelled to issue this statement because the claimed consensus on GMO safety does not exist. The claim that it does exist is misleading and misrepresents the currently available scientific evidence and the broad diversity of opinion among scientists on this issue. Moreover, the claim encourages a climate of complacency that could lead to a lack of regulatory and scientific rigour and appropriate caution, potentially endangering the health of humans, animals, and the environment.”

European Network of Scientists for Social & Environmental Responsibility, Statement: No Scientific Consensus on GMO Safety 1 (Oct. 21, 2013)

Published in Environmental Sciences Europe, January 24, 2015
“In the preceding paragraphs, we have described the US regulatory system for GE foods, and with specific examples pointed out serious deficiencies in both regulatory oversight and corporate testing procedures. It is clear that the US regulatory process must be made mandatory, as well as more stringent and transparent.”

“The results of most studies with GM foods indicate that they may cause some common toxic effects such as hepatic, pancreatic, renal, or reproductive effects and may alter the hematological, biochemical, and immunologic parameters. However, many years of research with animals and clinical trials are required for this assessment.”

“With the precautionary principle in mind, because GM foods have not been properly tested for human consumption, and because there is ample evidence of probable harm, the AAEM asks . . . [f]or a moratorium on GM food, implementation of immediate long term independent safety testing, and labeling of GM foods, which is necessary for the health and safety of consumers. “

American Academy of Environmental Medicine, Genetically Modified Foods 2 (May 8, 2009)
“there remain sizeable gaps in our ability to identify compositional changes that result from genetic modification of organisms intended for food; to determine the biological relevance of such changes to human health; and to devise appropriate scientific methods to predict and assess unintended adverse effects on human health”

“Contrary to often-repeated claims that today’s genetically-engineered crops have, and are reducing pesticide use, the spread of glyphosate-resistant weeds in herbicide-resistant weed management systems has brought about substantial increases in the number and volume of herbicides applied.”


*Graph created for Powerpoint*
“But an equally alarming source of the decline, both Mr. Taylor and Mr. Vidal said, is the explosive increase in American farmland planted in soybean and corn genetically modified to tolerate herbicides.

The American Midwest’s corn belt is a critical feeding ground for monarchs, which once found a ready source of milkweed growing between the rows of millions of acres of soybean and corn. But the ubiquitous use of herbicide-tolerant crops has enabled farmers to wipe out the milkweed, and with it much of the butterflies’ food supply.”


“results strongly suggest that a loss of agricultural milkweeds is a major contributor to the decline in the monarch population”

traditional varieties of seeds used by U.S. farmers are “pervasively contaminated” with low levels of DNA sequences originating in genetically engineered varieties of those crops.
Margaret Mellon & Jane Rissler, Gone to Seed-Transgenic Contaminants in the Traditional Seed Supply 1 (2004)

... *genetically modified cotton genes in wild populations* in Mexico...
Wegier et al., Recent Long-Distance Transgene Flow into Wild Populations Conforms to Historical Patterns of Gene Flow in Cotton (Gossypium hirsutum) at Its Centre of Origin, 20 Molecular Ecology 4182, 4188-92 (2011)

gene flow “injury has an environmental as well as an economic component”
Monsanto Co. v. Geertson Seed Farms, 130 S. Ct. 2743, 2756 (2010)

Feral populations of canola were “large and widespread” based on a roadside survey of canola plants that found *two GE varieties growing in the wild*, as well as “*novel combinations of transgenic forms.*”
Fewer than half polled said they knew large amount of processed foods they buy at supermarkets is GE; almost half said they thought most or a lot of their fruits and vegetables were GE.


Only 69.2% of those polled knew that some of the food available in stores had been genetically engineered; for those earning less than $25,000/year, only 51.3% were aware of this fact.


“Over the 13 year period, on average 88.9 percent of Vermonters agree there should be GMO labeling.”

Jane Kolodinsky, *Vermont’s Views on GMO Labeling* 2 (Jan. 29, 2014)
For multiple health, personal, religious, and environmental reasons, the State of Vermont finds that food produced from genetic engineering should be labeled as such, as evidenced by the following . . . .

“...”

Act 120, Sec. 1 FINDINGS, (5)
“Because both the FDA and the U.S. Congress do not require the labeling of food produced with genetic engineering, the State should require food produced with genetic engineering to be labeled as such in order to serve the interests of the State, notwithstanding limited exceptions, to prevent inadvertent consumer deception, prevent potential risks to human health, protect religious practices, and protect the environment.”

Act 120, Sec. 1 FINDINGS, (6)
“Reduce and prevent consumer confusion and deception by . . . promoting the disclosure of factual information on food labels to allow consumers to make informed decisions.” Act 120, Sec. 2, § 3041(3).

“Establish a system by which persons may make informed decisions regarding the potential health effects of the food they purchase and . . . if they choose . . . avoid potential health risks of food produced from genetic engineering.” Act 120, Sec. 2, § 3041(1).

“Inform the purchasing decisions of consumers who are concerned about the potential environmental effects of the production of food from genetic engineering.” Act 120, Sec. 2, § 3041(2).

Provide consumers with data from which they may make informed decisions for religious reasons. Act 120, Sec. 2, § 3041(4).
How many other states have labeling laws?

TWO!!! But they have trigger clauses.

And the great state of Maine.

The great state of Connecticut.
More than 70 bills have been introduced in over 30 states to require GE labeling.

In 2014, at least 35 bills were introduced in 20 states.

source: www.centerforfoodsafty.org
How many other countries have labeling laws?
About 64.

source: www.centerforfoodsafety.org
Bill Signing Day
May 8, 2014
Why is Vermont’s law constitutional?

Vermont had really good reasons for passing it and
A label is the best way to convey info about a product.

Want more?
See the briefing on the big three
(First Amendment, Preemption, Commerce Clause)
at:
(URL also in materials)
“It appears to be feared that if the pharmacist who wishes to provide low cost, and assertedly low quality, services is permitted to advertise, he will be taken up on his offer by too many unwitting customers. They will choose the low-cost, low-quality service and drive the ‘professional’ pharmacist out of business. They will respond only to costly and excessive advertising, and end up paying the price. They will go from one pharmacist to another, following the discount, and destroy the pharmacist-customer relationship. They will lose respect for the profession because it advertises. All this is not in their best interests, and all this can be avoided if they are not permitted to know who is charging what.

There is, of course, an alternative to this highly paternalistic approach. That alternative is to assume that this information is not in itself harmful, that people will perceive their own best interests if only they are well enough informed, and that the best means to that end is to open the channels of communication rather than to close them. If they are truly open, nothing prevents the ‘professional’ pharmacist from marketing his own assertedly superior product, and contrasting it with that of the low-cost, high-volume prescription drug retailer.

GROCERY MANUFACTURERS ASSOCIATION TO SUE VERMONT FOR PASSING GMO LABELING LAW.

WHAT DOES VERMONT HAVE TO SAY?

WELCOME TO VERMONT
GREEN MOUNTAIN STATE
BRING IT ON, GMA

www.facebook.com/gmofreeusa www.gmofreeusa.org facebook.com/gmofreecanadagroup