

James M. Jeffords Center's  
Vermont Legislative Research Service

Labeling Genetically Engineered Foods

The Food and Drug Administration (FDA) is "responsible for assuring that foods sold in the United States are safe. Although the FDA does not have the legal power to enforce labeling standards of commodities and food products "on consumer interest alone...producers are allowed to label their own food products as long as they meet conditions set by the FDA. Since labeling is done voluntarily, consumer interest has grown regarding the labeling of products that have been genetically engineered. This has prompted states to introduce legislation that would establish labeling standards on genetically engineered commodities such as food products, seed stock,<sup>3</sup> etc.

On January 23, 2013, the Vermont State legislature introduced H12 An Act Relating to the Labeling of Food Produced with Genetic Engineering.<sup>4</sup> The central component of the bill is to provide that food is misbranded if it is entirely or partially produced with genetic engineering and is not labeled as genetically engineered.<sup>5</sup> Similarly, on February 8<sup>th</sup>, 2013, Washington State Initiative 522 "The People's Right to Know Genetically Engineered Foods" was approved by Secretary of State Kim Wynn and submitted to Washington State Legislature which may either pass it, allow it to be placed on November ballot, or put a legislative

alternative on the ballot.<sup>6</sup> This report examines the fiscal, health and environmental issues associated with these proposed laws regarding genetic engineering of foods.

### Definitions

In this report, Genetic Engineering (GE) is defined as products produced through modern methods of biotechnology such as recombinant DNA techniques and cell fusion.<sup>7</sup> Transgenic Crops refers to

cautioned that “the potential for occupational and consumer risks needs to be [properly] assessed.”<sup>14</sup>

The question of toxicity within GE crops was initially raised when a study emerged regarding the negative effect of a lectin transgene on rat’s intestines. This study was later deemed

canola. Crops that are resistant can withstand application of the herbicide, which in turn, kills weeds that do not have the transgene.<sup>19</sup>

### Insect Resistance

Insect-resistant crops most often contain the bacteria called *Bacillus thuringiensis* (Bt), which is lethal to the larvae stage of many insects. Traditionally, insects such as moths, butterflies, flies, and bees<sup>27</sup> are killed by Bt. In 1993, a larval Bt gene was inserted into a corn plant, creating a Bt corn. This Bt corn produces a protein that is lethal to the larvae of many insects, including the European corn borer, a major pest of corn. Bt corn is also used in soybeans, cotton, and alfalfa. Bt corn is also used in soybeans, cotton, and alfalfa. Bt corn is also used in soybeans, cotton, and alfalfa.

Additionally, a wild plant that is not desired in an agricultural environment, defined as a weed, can receive a gene and therefore takes on the same herbicide resistant traits as the original.<sup>26</sup>  
Weeds with glyphosate resistance have been emerging and there are six known species in the United States

have a choice of which to consume and ideally dilute their exposure.<sup>32</sup>

#### Conclusion on Environment Effects

This section has provided information for the potential effects associated with the use of genetically engineered crops, but due to their relatively recent use, there is not much research on the long-term environmental impacts. In conclusion, weed control has been demonstrated to be a problem, while reduced use of pesticides is an advantage. Evidence to support the rest of the concerns regarding the impact of GE crops on the environment will not be available until additional research is completed.

#### Current State Legislation Regarding the Labeling of Genetically Engineered Products

##### Washington

On February 8, 2013, Washington's Secretary of State certified Initiative 520, known as The People's Right to Know Genetically Engineered Food Act.<sup>33</sup> This initiative "would require most raw agricultural commodities, processed foods, seeds and seed stocks, if produced using genetic engineering ...to be labeled as genetically engineered when offered for retail sale."<sup>34</sup> The Department of Health would be in charge of enforcing state regulations. In addition, the Attorney General, through the Department of Health, would be in charge of overseeing claims and cases against those who violate the law.<sup>35</sup> If the measure passes through the legislature or

## Vermont

On January 29<sup>th</sup>, 2013, H-112, “An Act Relating to the Labeling of Food Produced with Genetic Engineering” was introduced to the Vermont state legislature.<sup>39</sup> Sponsors of the bill argue that since the FDA and U.S. Congress do not require genetically engineered food to be produced, state mandated labeling laws will “prevent inadvertent consumer deception, promote food safety, respect religious beliefs, protect the environment, and promote economic development.”<sup>40</sup> The Commissioner of Health would be in charge of ensuring state GE labeling standards are being adhered to.<sup>41</sup> If H-112 passes, it would go into effect on July 1, 2014.<sup>42</sup> Highlights of H-112 state that any processed food that contains “one or more ingredients that have been produced with genetic engineering” is exempt from labeling until July 1, 2019, as long as “[n]o single such ingredient accounts for more than half of 0.9 percent of the total weight of the processed food; and the processed food does not contain more than 10 such ingredients.”<sup>43</sup> In addition, food or seed that has been determined by an independent organization to not be produced with genetic engineering will be also exempt.<sup>44</sup>

### Components and Exemptions regarding “Right to Know” Legislation

Since there are so many similarities between the components and exemptions surrounding Right to Know legislation, this report has compiled two tables to better examine right to know legislation in Vermont and Washington. See Appendix A and B. Table 1 lists the components associated with state legislation and Table 2 lists its exemptions. In both tables, Y is defined as Yes, meaning that this component/exemption is a part of the State’s “Right to Know” legislation.

As seen in Appendix A, Vermont does not require genetically engineered seed stock to be labeled. Vermont prohibits the use of terms such as “natural,” “naturally made,” “naturally grown,” and “all natural” on food products that have been “produced entirely or in part from genetic engineering.”<sup>45</sup>

In Appendix B, Vermont and Washington exempt the labeling of food products administered for the treatment of medical conditions. Washington exempts food products that are consistent with the most recent guidelines on performance criteria and validation of methods for detection, identification, and quantification of specific DNAs and specific proteins in foods and does not require testing of processed foods in which no DNA is detectable. Vermont does not require the following to be labeled: alcoholic beverages and the identification of any ingredient(s) that were genetically engineered. Washington exempts animals fed or injected with GE materials as long as animals themselves are not produced through genetic engineering.

<sup>39</sup> Vermont State Legislature, “Journal of the House,” 78-79

<sup>40</sup> Vermont General Assembly, 112, p. 8.

<sup>41</sup> Vermont General Assembly, 112, pp. 16-17.

<sup>42</sup> Vermont General Assembly, 112, p. 19.

<sup>43</sup> Vermont General Assembly, 112, p. 19.

<sup>44</sup> Vermont General assembly, 112, p. 14.

<sup>45</sup> Vermont General Assembly, 112, p.13.

## Potential Fiscal Impacts of Implementing “Right to Know” Legislation

Since there have been few states that have introduced “Right to Know” Legislation, this report will be referring to the fiscal impact concerns raised in Connecticut’s HB522 since they have explicitly stated and addressed them.

### Connecticut and HB117

Regarding the fiscal costs surrounding HB117, the Connecticut Office of Fiscal Analysis cited potential cost regarding the State’s General Fund. The requirements surrounding Section 3 “may result in significant costs to [the] Department of Agriculture as the agency would need to hire a consultant with the scientific knowledge required to draft regulations.”<sup>46</sup> However, there would be no municipal impact. In addition, the Department of Consumer Protection “currently has information available to publish the online list required under [Section 5] of the bill.”<sup>47</sup>

### Conclusion

Due to the recent nature of genetic







