

The process of untangling the government and the dairy industry's intertwined relationship will require strategic intervention on multiple levels. Legislation effecting even one aspect of farming can have far reaching consequences that impacts international trade, the environment, food security, domestic and international economies and people's livelihoods. Any changes to legislation must also coincide with public education programs that support the reform to make for a smoother transition. The Farm Bill is the federal government's primary legislative tool used to create policy related to agriculture and food. The bill is up for revision every five years and its modification would have the most potential impact on decreasing the spread of zoonotic oncoviruses like BLV as well as support a more financially and environmentally sustainable agricultural system.

The initial amendments to the Farm Bill should include a reinstatement of the original safety net programs. This would require participating farmers to once again laying fallow a portion of land to better manage supply. Controlling over-production would elevate the need for several subsidize programs connected to the dairy industry. To estimate the potential savings for the taxpayers, data from the Environmental Working Group's farm subsidy data based was used to analyze total payouts that benefit the dairy industry (Environmental Working Group, 2004). Corn and soy subsidies were also included in addition to direct dairy payouts because the cost of feeding cattle contributes to the price of milk. Subsidies payed to the corn, soy and dairy industry between 1995 – 2014 were totaled and divided by 10 years to calculate an average and account for fluctuations in payouts. The average payout for each cash crop directly involved in the dairy industry was totaled at \$13,170,778,502 per year which is 40 % of the total subsidy programs (Environmental Working Group, 2004).

<u>Crop</u>	<u>1995 – 2014</u>	<u>Average</u>
Corn	\$ 94,349,576,890	9,434,957,689
Soy	\$31,788,292,472	\$3,178,829,247
Dairy	\$5,569,915,662	\$556,991,566
<b>Total</b>		<b>\$ 13,170,778,502</b>

Several strategies to decrease the demand for milk and milk products would have to be implemented to control price surges. A petition to review the Dairy Production Stabilization Act with the intention to eliminating it from legislation would be a potential starting point. The act includes a clause for check-off programs that use funds, contributed by the farmer, for marketing campaigns such as Got Milk and 3 a Day (USDA, 2006) The check-offs also fund the National Dairy and Research Board, a committee that promotes dairy as a healthy beverage (USDA, 2006). The legislation could be dismissed on the grounds that the congressional findings include statements such as “dairy products are basic foods that are a valuable part of human diet” and “dairy products must be readily available and marketed effectively to ensure that people of the United States receive adequate nourishment” (USDA, 2010). It has been established that dairy is no longer necessary for complete nourishment making this policy illegitimate.

Another strategy to decrease the demand for dairy would be to modify many of the programs funded by the USDA’s Food and Nutrition Services to promote dairy alternatives in place of milk. Currently the National School Lunch Program requires enrolled institutes to serve

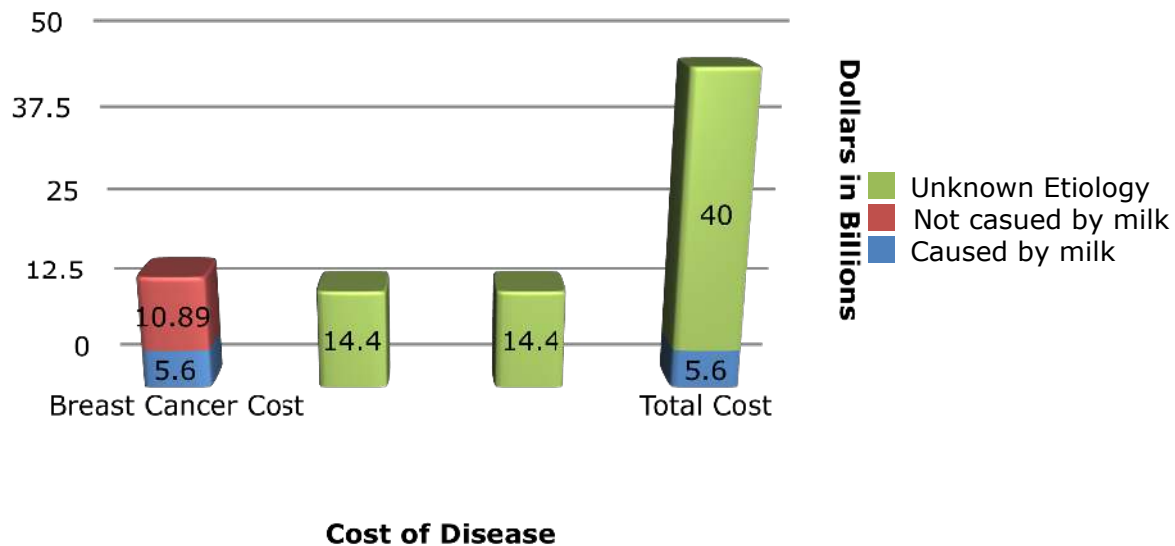
milk to qualify for federal reimbursement and the Special Milk Program provides milk to schools that do not participate in other federally funded food programs (NSLP, 2017; SMP, 2016).

Replacing dairy with nut milks, such as Good Karma's Protein+ Flaxseed milk or Ripple's Pea Protein milk would easily meet the nutritional needs of children without exposing them to potentially harmful contaminants found in cow's milk. Exchanging animal milk for plant alternatives will not have a direct savings impact on taxpayers. Seventy one percent of the USDA's budget is distributed to nutrition assistant programs but the subsidies for the crops used in dairy alternatives would no longer be necessary. This means the federal government will not be paying out twice, first in payouts to farmers and second in reimbursements to the schools.

Despite not having direct effects on taxpayers, when switching to plant based alternatives, there may be substantial savings in health care. Many serious chronic illnesses have been link to dairy consumption such as type1 diabetes, Parkinson's disease and recently breast cancer (Ridel, 2005; Vaarala, 1999; Buehring, 2015). Estimations for the potential savings in health care for child onset diabetes and Parkinson's disease would be unreliable because the percentage of cases caused by milk consumption is unknown at this time. However, a study that investigated the relationship of active BLV DNA in breast tissue and rates of cancer concluded that as much as 37% of breast cancer diagnoses are caused by the oncoviruse (Buehring, 2015). The National Institutes of Health estimates that the current cost a breast cancer, including direct and indirect costs, at \$16.5 billion (NIH, 2015). If 37% percent of those cancers are caused by a preventable exposure to a virus, \$5,610,000,000 (16.5 billion \* 37%) could easily be saved in health care costs for breast cancer. Both Parkinson's disease and diabetes are estimated to cost \$14.4 billion by the Parkinson's disease Foundation and The American Association of

Endocrinologists respectively (AACE; Parkinson’s disease Foundation, 2013). Even though the actual savings are unknown it is highly probable that there is a significant amount of money that could be saved by modifying dairy related policies based on the tight correlation that exists between these disease and milk consumption (Dahl-Jorgensen, 1991; Ridel, 2005; (Buehring, 2015).

## Medical Costs Caused by Milk Consumption



To coincide with the legislative changes new education materials and campaigns will have to be developed to support the new policies. To make the launch of the education effective several of the cues to action in the Health Belief Model will be utilized. *You need to explain the health belief model here in several sentences with some examples of it being used as well as how you will use the different components for your educational material.*

The other two safety net regulations from the original Farm Bill would also be critical for the success of the new agriculture policy and would have to be introduced in conjunction with the previous mentioned amendments. Restoring crop reserves would be essential because this would control for price fluctuations during low yielding harvests. Reestablishing marketing orders that require producers to pay farmers above the cost of production and protect consumers from price gouging would also be mandatory. This returns the burden of cost back to the producers. Lowering seed, fertilizer, pesticide and processing monopolies' profit margins could potentially decrease the money spent on lobbying.

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