AN ACT

To direct the Milk Industry Regulation Office (ORIL, Spanish acronym), attached to the Department of Agriculture, to promulgate regulations to establish temperature and quality controls for Ultra High Temperature milk (UHT) marketed in Puerto Rico; prohibit the sale of any type of milk for human consumption from farms where the stimulant or hormone known as “recombinant bovine Somatotropin,” commonly known as “rbST,” has been used; and for other purposes.

STATEMENT OF MOTIVES

Milk is an essential food in the human diet. This Legislative Assembly recognized, through the approval of Act No. 34 of June 11, 1957, as amended, known as “Regulation of Milk Industry Act” (hereinafter, “Act No. 34”), the importance of establishing a regulatory mechanism for all phases of said industry, so as to guarantee the production of such a precious liquid as well as to establish uniform safety and quality standards. As a result, the Milk Industry Regulation Office (ORIL, Spanish acronym) was created and attached to the Department of Agriculture. Its main purpose is to establish regulations to standardize the production, marketing, distribution, and sale of milk in Puerto Rico.

Since the approval of Act No. 34, in 1957, new processing technologies have increased the variety of dairy products in the market. While it is true that such advances have globally increased milk production and extended its shelf life, many of these new technologies alter the composition of milk and affect its nutritional value, prompting the establishment of measures that guarantee the milk’s safety and quality from the time it leaves the farm to the time it reaches the peoples’
Ultra High Temperature milk (UHT) is milk that has been pasteurized through an aseptic and chemical process at at least two hundred eighty degrees Fahrenheit, followed by quick refrigeration. This process allows milk to keep its freshness for nine (9) to twelve (12) months, without the need to refrigerate until the container has been opened. The U.S. Department of Agriculture, however, does not recommend the use of UHT milk after a six-month period, provided that it is kept in a cool and dry place. In other words, that the recommendation in favor of the consumption of said milk for a period of six (6) months depends on keeping such product in optimum temperature conditions from its production until its consumption.

Moreover, scientific research has shown that the nutritional value and quality of UHT milk decreases according to the storage time and the temperature to which it is exposed from the time it is produced to the time it reaches the homes of consumers. A study conducted by the Paris-Grignon National Agronomic Institute in 2005 revealed that the Vitamin C content in UHT milk at the time of packaging is similar to that of fresh milk. Depending on the type of packaging and the temperatures at which milk is stored after being processed, the content of Vitamin C can degrade completely after a month, or in the best of cases, it can decrease to reach 25% after four months if the milk is stored in a package that provides greater protection. Among its recommendations, the study stated that keeping milk stored at low temperatures is one of the limited options available to retard Vitamin C degradation in this type of dairy product. Furthermore, a study conducted by the University of Puerto Rico, Mayagüez Campus, to determine the effect on different nutritional values of UHT milk.
enzymes and in the concentration of Whey showed the state of decomposition of milk when it is exposed to inappropriate temperatures. It is necessary to point out that the degradation of these proteins is indicative of decomposition in milk.

The study showed that the higher the storage temperature, the lesser concentration of Whey that includes lactoglobulin and lactalbumin, which means that the decomposition process in milk accelerates significantly if stored at high temperatures, higher than twenty degrees Celsius (20°C) or seventy degrees Fahrenheit (70°F). For example, according to said study, when milk is exposed to a temperature higher than twenty degrees Celsius (20°C) or seventy degrees Fahrenheit (70°F), the levels of Whey degrade as time passes. This is proven when high levels of hydroxymethylfurfural (HMF) a non-assimilable protein compound are detected. In fact, consistently with the conclusions of the aforementioned study, it is recommended that UHT milk be stored at temperatures no higher than 70°F.

When establishing temperature controls in the transportation, storage, and distribution processes of UHT milk marketed in Puerto Rico, we ensure that this type of milk is exposed to high temperatures for the shortest period of time possible, since once the product reaches its selling point, any exposure to temperatures higher than 70°F are minimal. In view of the foregoing and given milk’s shelf life, it is vital to ensure that Puerto Rican consumers, in particular our children and the elderly, receive the necessary nutrients and proteins to stay healthy; it is our duty to guarantee that ORIL enact the necessary regulations to ensure the quality of UHT milk throughout its shelf life. We recognize that this is a highly specialized issue that requires the expertise that only ORIL can provide. For such reason, said office is hereby directed to establish regulations specifically to enforce the provisions of this Act.
Furthermore, the use of synthetic products to increase milk production has harmful effects on cattle. RbST is a protein hormone produced in the pituitary gland of cattle. It is also called the bovine growth hormone, or rBGH. Recombinant bovine somatotropin (rbST) can be synthetically produced using recombinant DNA technology. The end product is called recombinant bovine somatotropin (rbST), recombinant bovine growth hormone, or artificial growth hormone. It is injected into dairy cows to make them produce more milk (up to 10% more).

The FDA has stated that there are no significant differences between milk obtained from cows injected with rbST and cows that are not injected with rbST⁴. Furthermore, in 1990, an independent panel summoned by the National Institutes of Health approved the FDA’s opinion which states that the milk and meat from rbST-treated cows are safe for human consumption⁵.

Nonetheless, there are many studies that contain evidence about the adverse effects of said hormone on the health of cows. Two meta-analyses have been published on rbST’s effects on bovine health⁶[⁷]. Findings indicated: (i) an average increase in milk output ranging from 11%–16%, a nearly 25% increase in the risk of clinical mastitis and consequently an increase in the use of antibiotics, a 40% reduction in fertility and 55% increased risk of developing clinical signs of lameness (any number of conditions where the animal fails to travel in a regular and sound manner on all four legs). The latter often results in severe suffering for animals.

⁴ http://www.fda.gov/AnimalVeterinary/SafetyHealth/ProductSafetyInformation/ucm130321.htm and http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm130356.htm
⁵ http://www.ncbi.nlm.nih.gov/books/NBK15180/
⁶ http://www.ncbi.nlm.nih.gov/pmc/articles/PMC280709/?tool=pmcentrez
⁷ http://www.ncbi.nlm.nih.gov/pmc/articles/PMC280708/?tool=pmcentrez
Consequently, American consumers have demanded producers to stop the use of this hormone. According to the Center for Food Safety, thanks to consumer pressure, approximately 60% of US milk is rbST free\(^8\).

Furthermore, Japan, Australia, New Zealand, and Canada have banned the use of rbST. In 1990, the European Union placed a moratorium on its sale by all member nations. In 2000, said moratorium became a permanent ban. An in-depth report published in 1999 analyzed in detail the various human health risks associated with rbST\(^9\).

The Codex Alimentarius Commission, a United Nations body that sets international food standards, has to date refused to approve rbST as safe\(^10\). The Codex Alimentarius does not have authority to ban or approve the hormone—but its decisions are regarded as a standard and approval by the Codex would have allowed exporting countries to challenge countries with a ban on rbGH before the World Trade Organization.

In Puerto Rico, ORIL issued an administrative order in 1994 that bans the use of the rbST hormone in the milk locally produced. Furthermore, milk producers have to present a sworn statement stating that they do not use said hormone in their milk production. Owing to international resistance to the use of this hormone given the effects thereof on cows and, in order to raise awareness and establish standardized regulations for all milk distributors in Puerto Rico, it is necessary to extend said ban to all milk distributors in Puerto Rico, including those distributors whose raw material is produced in other states of the United States or in other countries.

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\(^8\) [http://www.centerforfooodsafety.org/](http://www.centerforfooodsafety.org/)
\(^10\) [http://www.foxbghsuit.com/codex063099.htm](http://www.foxbghsuit.com/codex063099.htm)
BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF PUERTO RICO:

Section 1.- The sale of any type of milk for human consumption from farms where the stimulant or hormone known as the “recombinant bovine Somatotropin” or “rbST” is used is hereby prohibited. The Milk Industry Regulation Office shall require appropriate evidence by regulations, such as a sworn statement from milk producers that supply said product, stating that no such stimulant hormone was used to ensure compliance with the provisions of this Section.

Section 2.- The Milk Industry Regulation Office is hereby directed to promulgate regulations to establish temperature and quality controls in the transportation, storage, and distribution process of UHT milk marketed in Puerto Rico. The foregoing shall guarantee that the UHT milk sold has not suffered any nutrient degradation for having been exposed to temperatures higher than 20 degrees Celsius (20°C) or 70 degrees Fahrenheit (70°F), which causes a rapid decline in nutritional value in UHT milk, considerably losing its quality. ORIL shall require attesting evidence of compliance with this Act.

Section 3.- If any part or provision of this Act were held to be null by a Court with competent jurisdiction, such holding or Order shall not affect or invalidate the remaining provisions of this Act.

Section 4.- This Act shall take effect immediately after its approval.
CERTIFICATION

I hereby certify to the Secretary of State that the following Act No. 221-2011 (S. B. 1237) (Conference) (Reconsidered) (Conference) of the 6th Regular Session of the 16th Legislative Assembly of Puerto Rico:

AN ACT to direct the Milk Industry Regulation Office (ORIL, Spanish acronym), attached to the Department of Agriculture, to promulgate regulations to establish temperature and quality controls for Ultra High Temperature milk (UHT) marketed in Puerto Rico; prohibit the sale of any type of milk for human consumption from farms where the stimulant or hormone known as “recombinant bovine Somatotropin,” commonly known as “rbST,” has been used; and for other purposes.

has been translated from Spanish to English and that the English version is correct.

In San Juan, Puerto Rico, on this 18th day of August, 2016.

Juan Luis Martínez Martínez
Director