

JAN 26 2011

A BILL FOR AN ACT

RELATING TO TARO SECURITY.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Kalo, *Colocasia esculenta*, the Hawaiian word
2 for taro, is a culturally significant plant to the kanaka maoli
3 (Hawaii's indigenous peoples) and the State of Hawaii. Kalo
4 intrinsically embodies the interdependency of the past, the
5 present, and the future, the essence of procreation and
6 regeneration, as the foundation of any sustainable practice.
7 Kalo expresses the spiritual and physical well-being of not only
8 the kanaka maoli and their heritage, but also symbolizes the
9 environmental, social, and cultural values important to the
10 State. This relationship is represented in the use of the kalo
11 plant on the crown of King Kalakaua. The state seal,
12 established in 1959, includes eight taro leaves below the
13 shield, honoring the connection between the health of the land
14 and the health of the State. Today, the logo of the office of
15 Hawaiian affairs and many commercial enterprises throughout the
16 State use this symbol to communicate ohana, integrity, and a
17 connection to Hawaiian culture. The State of Hawaii further



1 recognized the cultural and historic significance of taro by
2 designating it as the official state plant.

3 Over three hundred kalo varieties may have existed at the
4 time of the arrival of European explorers (Pukui and Elbert,
5 Hawaiian Dictionary, 1986). Today, there are eighty-five known
6 traditional varieties of taro remaining, including Bun-Long
7 (Chinese) whose use in Hawaii dates back more than one hundred
8 fifty years. Of these varieties, sixty-nine are unique to the
9 Hawaiian islands due to the horticultural skills of native
10 Hawaiian farmers (Bulletin 84: Taro Varieties in Hawaii, 1939).
11 Some are extremely rare. The State is also a repository for
12 many taro varieties from around the world. Leaf blight-
13 resistant cultivars were developed from this resource using
14 conventional hand-pollination methods to restore taro crops in
15 Samoa in the 1990s. Protecting and maintaining the genetic
16 identity of these varieties is critically important to the
17 recovery of old taro varieties in Hawaii and the Pacific.

18 Kalo is an important food crop in Hawaii and a complex
19 carbohydrate whose hypo-allergenic properties are life-saving
20 for those with digestive disorders and allergies, particularly
21 young children and the elderly. The health implications of
22 non-taro genes in genetically engineered kalo have never been



1 studied, nor has genetically modified taro ever been approved
2 for human consumption. Historically, there were thousands of
3 acres under taro cultivation in Hawaii. Today, however, there
4 remain less than five hundred acres of taro in production in the
5 State. In 2006, the most recent year for Hawaii agriculture
6 statistic services market values, 4,500,000 pounds were produced
7 on three hundred eighty acres of commercial taro land (11,842
8 pounds per acre) at a value of \$2,565,000 farm gate, amounting
9 to an estimated per acre value of \$6,750, excluding lu'au leaf.
10 Raw taro and value-added taro products represent a multi-million
11 dollar crop in Hawaii with great potential for further growth as
12 the State moves towards food security and self-sufficiency.
13 Control of the single worst taro pest, the apple snail, *Pomacea*
14 *canaliculata*, will increase taro production on existing acreage
15 by as much as twenty-five per cent (Levin 2006). Cold water and
16 adjusting growing regimes will further reduce taro disease.
17 Neither of these issues requires a genetically engineered taro
18 solution. Most locally-grown taro is consumed within the State,
19 indicating a highly specialized market. Millers and consumers
20 have specifically and consistently rejected the use of
21 genetically modified taro or poi.



1 In 2008, the legislature established a two-year taro
2 security and purity task force under Act 211, Session Laws of
3 Hawaii 2008, to address matters ranging from non genetically-
4 modified-organism alternatives to taro farmer issues, including
5 land and water concerns, threats from pests, diseases and taro
6 imports, educational opportunities, and economic issues. In the
7 same year, the counties of Hawaii, Maui, and Kauai supported a
8 moratorium on genetically-modified taro. In November 2008, the
9 county of Hawaii passed ordinance 361 banning the testing,
10 propagating, cultivating, raising, planting, growing,
11 introduction, or release of genetically modified taro on that
12 island. In October 2009, the county of Maui passed ordinance
13 3694 prohibiting the same practices on the islands of Maui,
14 Molokai, and Lanai.

15 The purpose of this Act is to further protect:

- 16 (1) The cultural integrity of kalo as part of the heritage
17 of the Hawaiian people and the State;
- 18 (2) The genetic biodiversity and integrity of all
19 traditional taro varieties in the State as part of the
20 sacred trust between the State and the indigenous
21 peoples of the Pacific; and



1 developed exclusively through traditional methods of breeding,
2 hybridization, or nondirected mutagenesis.

3 "Release" means a discharge, emission, or liberation of any
4 genetically engineered organisms, or the product of a
5 genetically engineered organism, into the open environment.

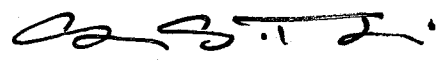
6 § -2 **Genetically modified taro; prohibited.** No
7 genetically modified taro shall be developed, tested,
8 propagated, released, imported, planted, or grown in the State
9 of Hawaii."

10 SECTION 3. This Act shall not serve as an expression by
11 the State on the merits of biotechnology nor be applicable to
12 any other crop. Nothing in this Act shall be construed to
13 prohibit the use of controlled hand-pollination taro breeding
14 methods (taro-to-taro) to improve taro as a crop.

15 SECTION 4. This Act shall take effect on July 1, 2011.

16

INTRODUCED BY:



By Request



Report Title:

Taro Security

Description:

Prohibits genetically modified taro from being developed, tested, propagated, released, imported, planted, or grown in the State.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

