
A BILL FOR AN ACT

RELATING TO 'ULU.

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

1 SECTION 1. Hawaiian breadfruit, otherwise known as 'ulu,
2 has a long history in Hawaii as a significant and culturally
3 important food source. This history includes a period during
4 which breadfruit played a significant role by being the source
5 of millions of pounds of nutritious food that sustained the
6 population across the islands annually. Today, breadfruit is
7 just as important, if not more important, than ever before.
8 Research has shown that the district of Kona alone annually
9 produced approximately twenty to forty million pounds of
10 breadfruit on ten thousand acres of land. Breadfruit is
11 believed to have arrived in Hawaii approximately seven hundred
12 years ago. Since its introduction to Hawaii, breadfruit has
13 consistently contributed to and enhanced the traditional
14 Hawaiian diet, culture, and lifestyle. Breadfruit's distinctive
15 appearance; mythical origins; historical, cultural, religious,
16 and social significance; and diverse uses in traditional food
17 preparation have all contributed to the legacy of breadfruit in



1 Hawaiian heritage and culture. Breadfruit has been, and
2 continues to be, a manifestation of Hawaii nei.

3 Several factors over the past decade have demonstrated that
4 the consumption, research, and value of breadfruit are growing
5 in relevance, including the availability of large numbers of
6 breadfruit trees, expansion of the gluten-free market, and
7 increasing market movement toward locally grown food. For the
8 first time in the technological era, breadfruit has the
9 potential to become a major commercial crop, while remaining
10 closely connected to traditional Hawaiian, Polynesian,
11 Micronesian, and Melanesian values.

12 Hawaii is poised to become a global leader in breadfruit
13 research and development. Significant global efforts have been
14 made to address breadfruit production in Hawaii, including the
15 National Tropical Botanical Gardens' conservation efforts to
16 increase and maintain breadfruit agrobiodiversity, significant
17 breadfruit-related product research and development by the
18 university of Hawaii, statewide research efforts on breadfruit
19 agronomy and cropping systems through the university of Hawaii's
20 college of tropical agriculture and human resources, Pacific-
21 wide relationship and development efforts through the Pacific



1 business center program at the university of Hawaii's Shidler
2 college of business, and the Hawaii 'Ulu Producers Cooperative's
3 implementation of cooperative development structures and a
4 processing infrastructure for breadfruit. Dozens of small
5 breadfruit producers around the State make diverse products
6 including chips, hummus, pies, and baking mixes. Additionally,
7 a growing number of restaurants, distributors, and retail
8 vendors are carrying breadfruit products. These are real
9 economic and social impacts for Hawaii, representing dozens of
10 jobs, local produce and products, and infrastructure for broader
11 agricultural development. Over a span of just two years, the
12 Hawaii 'Ulu Producers Cooperative has grown to represent more
13 than seventy farmers, hired ten employees, been a key supplier
14 to the department of education's aina pono program, and
15 developed processing capabilities that have expanded to include
16 additional crops.

17 More support is needed for the projected increase in
18 breadfruit production. A recent statewide survey indicates that
19 there are more than nine thousand breadfruit trees planted, with
20 more trees expected to be planted. However, only approximately
21 one thousand five hundred trees are currently productive in



1 commercial settings. The State's commercial production of
2 breadfruit is expected to increase at least six-fold in the
3 coming years. There is some investment into research and
4 development, but additional research, outreach, and education
5 are required to develop sustainable breadfruit production
6 methods, postharvest handling, processing and refinement,
7 manufacturing methods, scalable flour mill design, packaging,
8 market product development and testing, distribution, and
9 regional sustainable capacity for supply for breadfruit
10 products. In order to realize breadfruit's potential as a major
11 contributor to local food and food security, financial and
12 ancillary support for the burgeoning industry are needed.

13 A conservative estimate of \$2,000,000 per year of farm-gate
14 value, i.e., two million pounds of fruit per year, is
15 anticipated within five years, with an additional
16 four-to-eight-fold impact on economic development coming from
17 processing, marketing, and distribution of the fruit. The
18 global gluten-free market was valued at \$14,940,000,000 in 2016
19 and is expected to grow at a compound annual growth rate of 9.3
20 per cent until 2025, illustrating the potential external market
21 for breadfruit. Furthermore, the profit projected from



1 processing and marketing the breadfruit flower as an organic
2 insecticide is estimated to exceed the million-dollar mark. The
3 breadfruit flower contains a potent natural tri-chemical
4 compound combination that outperforms its synthetic insecticide
5 competitors.

6 The economic potential for the processing, refinement,
7 packaging, and exporting of breadfruit products for the state
8 and national market is substantial considering the general
9 employment and economic benefits to the State.

10 The purpose of this Act is to make an appropriation to the
11 university of Hawaii college of tropical agriculture and human
12 resources for the research, development, marketing, and
13 conservation of breadfruit. The university of Hawaii has
14 initiated a vibrant breadfruit research program that is well-
15 positioned to execute the objectives of this Act.

16 SECTION 2. There is appropriated out of the general
17 revenues of the State of Hawaii the sum of \$ or so
18 much thereof as may be necessary for fiscal year 2020-2021 for
19 the research, development, marketing, and conservation of
20 breadfruit as follows:



- 1 (1) Supporting farmers by performing production-focused
2 research of essential aspects of nutrient management
3 for tree performance and yield;
- 4 (2) Performing processing-focused research to support
5 post-processing and the development of new breadfruit
6 products;
- 7 (3) Providing consumer education to aid in the continued
8 growth of the market demand; and
- 9 (4) Providing ancillary support to producers, processors,
10 and consumers, including tree production, training,
11 technical expertise, and consumption guides.

12 The sum appropriated shall be expended by the college of
13 tropical agriculture and human resources at the university of
14 Hawaii for the purposes of this Act.

15 SECTION 3. This Act shall take effect on July 1, 2050.



Report Title:

University of Hawaii College of Tropical Agriculture and Human Resources; Agriculture; Breadfruit; 'Ulu; Appropriation

Description:

Appropriates funds for the research, development, marketing, and conservation of 'ulu. Effective 7/1/2050. (SD1)

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