

JAN 18 2019

A BILL FOR AN ACT

RELATING TO 'ULU.

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

1 SECTION 1. Hawaiian breadfruit ('ulu) has a long history in
2 Hawaii as a significant and culturally important food source.
3 This illustrious history includes a period during which
4 breadfruit played a significant role in providing the annual
5 production of millions of pounds of nutritious food that
6 sustained the population across the islands. Research has shown
7 that the district of Kona alone produced approximately twenty to
8 forty million pounds of breadfruit annually on ten thousand
9 acres of land. Breadfruit is believed to have arrived in the
10 Hawaiian islands approximately seven hundred years ago. Since
11 its introduction to Hawaii, breadfruit has consistently
12 contributed to and enhanced the Hawaiian traditional diet,
13 culture, and lifestyle. Its distinctive beauty, mythical
14 origins, historical, cultural, religious, and social
15 significance, and the diversity of its forms in traditional
16 methods of food production have all contributed to the legacy of
17 breadfruit in the Hawaiian heritage and culture. This



1 significant presence and abundance illustrates how breadfruit
2 flourishes in modernity as the contemporary manifestation of
3 Hawaii Nei.

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

13 Hawaii is poised to be a global leader in breadfruit
14 research and development. Significant global resources exist
15 for breadfruit in Hawaii, including the largest conservation
16 effort of breadfruit agrobiodiversity by the National Tropical
17 Botanical Gardens, significant product research and development
18 by the University of Hawaii, statewide research efforts on
19 breadfruit agronomy and cropping systems through the college of
20 tropical agriculture and human resources, Pacific-wide
21 relationship and development efforts through the Pacific



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

16 More support is needed to utilize the projected increase in
17 breadfruit production. A recent statewide survey indicates that
18 there are over nine thousand breadfruit trees planted, with more
19 trees expected to be planted, yet only approximately one
20 thousand five hundred trees are currently productive in
21 commercial settings. Thus, the state commercial production of



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

12 A conservative estimate of \$2,000,000 per year of farm-gate
13 value, e.g., two million pounds of fruit per year, is
14 anticipated within five years, with an additional
15 four-to-eight-fold impact on economic development coming from
16 processing, marketing, and distribution of the fruit. The
17 global gluten-free market was valued at \$14,940,000,000 in 2016
18 and is expected to grow at a compound annual growth rate of 9.3
19 per cent from 2017 to 2025, illustrating the potential external
20 market for breadfruit. Furthermore, the profit projected from
21 processing and marketing the breadfruit flower as an organic



1 insecticide is estimated to exceed the million dollar mark, due
2 to the far more potent repellent nature of the breadfruit
3 flower, which contains a natural tri-chemical compound
4 combination that outperforms its synthetic competitors.

5 The economic potential for the processing, refinement,
6 packaging, and exporting of breadfruit products for the state
7 and national market is substantial considering the general
8 employment and economic benefits to the State. Furthermore, as
9 one of the leading breadfruit locations on the planet, Hawaii
10 has the opportunity to be a global leader in breadfruit research
11 and development, thus creating a niche role for itself as the
12 breadfruit industry grows exponentially.

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

19 SECTION 2. There is appropriated out of the general
20 revenues of the State of Hawaii the sum of \$ or so
21 much thereof as may be necessary for fiscal year 2019-2020 and



1 the same sum or so much thereof as may be necessary for fiscal
2 year 2020-2021 for the research, development, marketing, and
3 conservation of breadfruit as follows:

4 (1) Performing production-based research for farmer
5 support into essential aspects of nutrient management
6 for tree performance and yield;

7 (2) Performing processing-based research to support post-
8 processing and the development of new breadfruit
9 products;

10 (3) Providing consumer education to aid in the continued
11 growth of the market demand; and

12 (4) Ancillary support for producers, processors, and
13 consumers such as tree production, trainings,
14 technical expertise, and consumption guides.

15 The sums appropriated shall be expended by the college of
16 tropical agriculture and human resources at the University of
17 Hawaii for the purposes of this Act.

18 SECTION 3. This Act shall take effect on July 1, 2019.

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S.B. NO. 265

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S.B. NO. 265

Report Title:

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

Description:

Appropriates funds for the research, development, marketing, and conservation of 'ulu.

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