A BILL FOR AN ACT

JAN 2 1 2016

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MAKING AN APPROPRIATION FOR RESEARCH, DEVELOPMENT, MARKETING, AND CONSERVATION OF '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 an important and consistent food source. This
- 3 illustrious history includes a period during which breadfruit
- 4 played a significant role in providing an annual production of
- 5 millions of pounds of nutritious food that sustained the
- 6 traditional population across the islands. Breadfruit is
- 7 believed to have arrived on the Hawaiian islands approximately
- 8 seven hundred years ago. Since this introduction to the climate
- 9 and soil environment of Hawaii, breadfruit has consistently
- 10 contributed to and enhanced all aspects of Hawaii, including
- 11 traditional diet, culture, and lifestyle. Its distinctive
- 12 beauty and mythical origins, historical, cultural, religious,
- 13 and social significance, and the diversity of its forms in
- 14 traditional methods of food production have all contributed to
- 15 the legacy of breadfruit in the Hawaiian heritage and culture.
- 16 This significant presence and abundance illustrates how



- 1 breadfruit flourishes in modernity as the contemporary
- 2 manifestation of Hawaii Nei.
- 3 The combination and collective force of discrete factors
- 4 over the past decade have demonstrated that breadfruit
- 5 consumption and research is growing in relevance, including the
- 6 availability of large numbers of breadfruit trees, expansion of
- 7 the gluten-free market, confirmation of value in breadfruit by-
- 8 products, and the increasing market movement toward locally
- 9 grown food. For the first time in the technological era,
- 10 breadfruit has the potential to become a major commercial crop,
- 11 even while remaining closely connected to traditional Hawaiian,
- 12 Polynesian, Micronesian, and Melanesian values.
- 13 Conservation of breadfruit agrobiodiversity and development
- 14 of micropropagation methods by the Breadfruit Institute at the
- 15 National Tropical Botanical Garden provide the means to rapidly
- 16 expand breadfruit plantings and utilization for commerce and for
- 17 food sustainability. The Pacific Business Center Program at the
- 18 Shidler school of business administration at the University of
- 19 Hawaii has initiated a program for analysis and testing of
- 20 shelf-stable breadfruit products, such as gluten-free flour, as
- 21 well as developing technology for processing breadfruit latex

- 1 and inflorescence for its insect repellent properties in
- 2 collaboration with the college of tropical agriculture and human
- 3 resources at the University of Hawaii, National Tropical
- 4 Botanical Garden Breadfruit Institute, and Department of Grain
- 5 Science and Industry at Kansas State University.
- 6 Additional research is required to develop sustainable
- 7 breadfruit production methods, postharvest handling, processing
- 8 and refinement, manufacturing methods, scalable flour mill
- 9 design, packaging, market product development and testing,
- 10 distribution and regional sustainable capacity for supply for
- 11 breadfruit flour and by-products for refinement and export from
- 12 Hawaii.
- A projected \$10,000,000 per year farm value is anticipated
- 14 within ten years, with room in local markets to expand
- 15 significantly thereafter. This injection of value may provide
- 16 direct benefit to farmers, as well as ancillary economic impact
- 17 through value-added production. The gluten-free market
- 18 servicing United States consumers is expected to exceed
- 19 \$15,000,000,000 in 2016, on top of the current commodities value
- 20 for organic latex priced at \$900 per gallon. Furthermore, the
- 21 profit projected from processing and marketing the breadfruit

- 1 flower as an organic insecticide is estimated to exceed the
- 2 million dollar mark. This profit may be due to the far more
- 3 potent nature of the breadfruit flower that contains a natural
- 4 tri-chemical compound combination that so powerfully acts as a
- 5 repellant that the breadfruit outperforms its synthetic
- 6 competitors.
- 7 The economic development potential for the processing,
- 8 refinement, packaging, and exporting of breadfruit flour and by
- 9 products for the state and national market is substantial
- 10 considering the general employment and economic benefits to the
- 11 State simultaneously strengthens the authentic Hawaiian
- 12 experience for the visitor industry.
- 13 As everyone who has tasted extraordinary dishes made from
- 14 'ulu knows, there is now high potential for 'ulu to contribute to
- 15 healthy diets and food security ideals based on locally grown
- 16 foods. 'Ulu is a long-lived, easy to grow, productive,
- 17 nutritious, starchy staple crop that will continue to contribute
- 18 to environmental, social, and economic health for generations.
- 19 The purpose of this Act is to make an appropriation for the
- 20 research, development, marketing, and conservation of
- 21 breadfruit.



- There is appropriated out of the general 1
- revenues of the State of Hawaii the sum of \$650,000 or so much 2
- thereof as may be necessary for fiscal year 2016-2017 for the 3
- research, development, marketing, and conservation of
- 5 breadfruit.
- The sum appropriated shall be expended by the college of 6
- 7 tropical agriculture and human resources at the University of
- Hawaii for the purposes of this Act. 8
- 9 SECTION 3. This Act shall take effect on July 1, 2016.

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INTRODUCED BY:

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Report Title:

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

Description:

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

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