

JAN 17 2020

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# 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 Today it is just as important, if not more, than ever before.  
4 This history includes a period during which breadfruit played a  
5 significant role in providing the annual production of millions  
6 of pounds of nutritious food that sustained the population  
7 across the islands. Research has shown that the district of  
8 Kona alone produced approximately twenty to forty million pounds  
9 of breadfruit annually on ten thousand acres of land.  
10 Breadfruit is believed to have arrived in the Hawaiian islands  
11 approximately seven hundred years ago. Since its introduction  
12 to Hawaii, breadfruit has consistently contributed to and  
13 enhanced the Hawaiian traditional diet, culture, and lifestyle.  
14 Its distinctive beauty, mythical origins, historical, cultural,  
15 religious, and social significance, and the diversity of its  
16 forms in traditional methods of food production have all  
17 contributed to the legacy of breadfruit in the Hawaiian heritage



1 and culture. Then and now, breadfruit is a manifestation of  
2 Hawaii nei.

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

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



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

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



1 breadfruit is expected to increase at least six-fold in the  
2 coming years. There is some investment into research and  
3 development, but additional research, outreach, and education  
4 are required to develop sustainable breadfruit production  
5 methods, postharvest handling, processing and refinement,  
6 manufacturing methods, scalable flour mill design, packaging,  
7 market product development and testing, distribution, and  
8 regional sustainable capacity for supply for breadfruit  
9 products. In order to realize breadfruit's potential as a major  
10 contributor to local food and food security, financial and  
11 ancillary support for the burgeoning industry are 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. The  
2 breadfruit flower contains a potent natural tri-chemical  
3 compound combination that outperforms its synthetic insecticide  
4 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 the research and  
11 development of breadfruit, as the breadfruit industry grows  
12 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 2020-2021 for



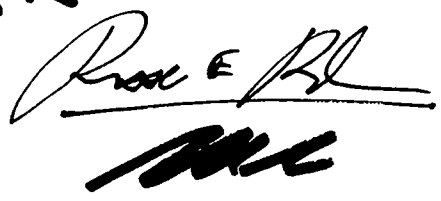

1 the research, development, marketing, and conservation of  
2 breadfruit as follows:

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

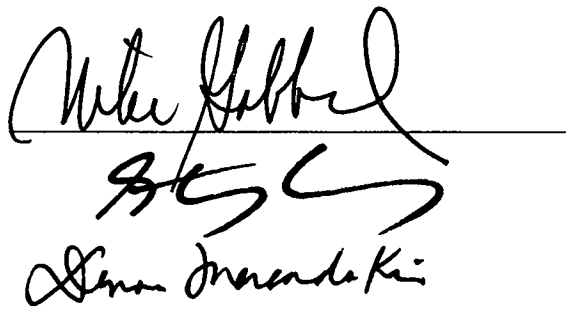
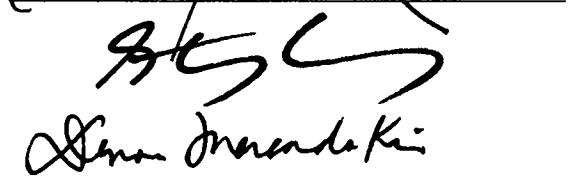
14 The sum appropriated shall be expended by the college of  
15 tropical agriculture and human resources at the University of  
16 Hawaii for the purposes of this Act.

17 SECTION 3. This Act shall take effect on July 1, 2020.

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INTRODUCED BY:

*Bill Review*  
~~*and*~~ *auth. ag.*



# S.B. NO. 2730

**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.

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

