

# Kauai County Farm Bureau

*Affiliated with Hawaii Farm Bureau Federation*

P.O. Box 3895 • Lihue HI 96766-6895

808-332-8189 (phone/fax) 808-652-3217 (cell)

[kcfb.org/hawaiiantel.net](http://kcfb.org/hawaiiantel.net)

*The Voice of Kauai's Agriculture*

LATE  
Testimony



March 3, 2009

ATTN: Rep. Clift Tsuji, Chair  
Rep. Jessica Wooley, Vice Chair

RE: HB 1663: Relating to Taro Security

HEARING DATE: Wednesday, March 4, 2009; 9:00am, room 312

Aloha Chair Tsuji and members of the committee:

**The Kauai County Farm Bureau opposes HB1663 which prohibits the development, testing, propagation, release, importation, planting or growing of genetically modified taro in the State of Hawaii.**

Affiliated with the Hawaii Farm Bureau Federation, the Kauai County Farm Bureau is a non-profit organization representing over 300 farming families on Kauai united for the purpose of analyzing problems and formulating action to ensure the future of agriculture and promoting the well-being of farming.

This measure will have direct impact on our commercial taro farmers many of whom are located on Kauai. As Farm Bureau, we agree that taro is important and that it has cultural significance. At this time there is no GM taro grown in fields in Hawaii.

At the same time, research is an essential ingredient of innovation, not only to move the industry forward but also to help protect farmers from challenges that arise. Commercial farmers and ranchers are in constant search of new technologies to advance the long term sustainability and viability of their operations. Genetic modification of crops is the latest technology that has advanced the development of new varieties providing farmers with a tool to outpace the increasing costs faced by the industry.

It is possible to grow taro commercially and put it on the table for us, while respecting the cultural significance of taro. However some of our farmers face intolerance on this issue, even when they are coming forward to give their testimony on this matter. Techniques are available to protect the genetic integrity of culturally important varieties and we strongly support the implementation of those practices for cultural plantings in contrast to commercial plantings.

GM has demonstrated some benefits already in this area related to other crops. Without GM the papaya industry in Hawaii would not exist and the pockets of organic papaya would not be possible due to the prevalence of the Ringspot virus. This kind of research can be an asset to all growers, even if these farmers never plant GM crops. Farmers already face many challenges to face in developing a viable commercial operation. We urge the committee to consider all of the ramifications as a decision on this measure is made.

Please support our commercial Taro farmers on Kauai by supporting continued research in this area. Our farmers work hard to grow the taro that is consumed by the people of Hawaii and deserve our support as a community to have the best possible chance of sustaining their operations and success in the future.

For these reasons, Kauai County Farm Bureau respectfully urges that HB1663 be held. Mahalo for your time and consideration. Please do not hesitate to contact me should you have any questions.

Sincerely,

Roy Oyama, President

On behalf of the Kauai County Farm Bureau board

Personal contacts: 808-332-9426 [oyama\\_farm@yahoo.com](mailto:oyama_farm@yahoo.com)

**Orchid Growers Of Hawaii**  
P.O. Box 4153 Hilo Hawaii 96720  
Website : www.ogoh.org Email : info@ogoh.org

**LATE  
Testimony**

HB 1663, Taro Security  
Hse AGR, Weds, March 4, 2009  
9:00 am – Room 312  
Position: **Oppose**

Chair Tsuji and Members of the House Agriculture Committee:

My name is Thong-Teng Neo, President of the Orchid Growers of Hawaii, located on Hawaii Island. OGOH is an alliance of professional potted and cut flower orchid growers in the state of Hawaii. Its goals are to promote the development of this industry by supporting marketing, research and educational projects. As a non-profit service organization, it is dedicated to being an active, ethical member of the business and public sectors of Hawaii. OGOH is the combination of two former organizations, Hawaii Orchid Growers Association and Big Island Dendrobium Growers Association. It is also the new state-wide orchid organization.

OGOH's mission is to help its members to enhance their position in the increasingly competitive global orchid trade. Working closely with UH CTAHR and local breeders to create and produce new orchid hybrids for member-growers and for consumer markets is the key to remain competitive in this global economy. Biotechnology not only provide a tool for us to create novelty orchids in a relatively short time but also help us to improve cultivation skills.

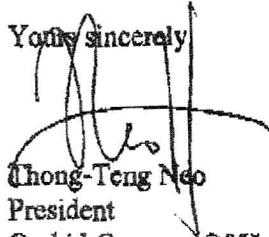
This bill calls for a ban of genetic engineering research and development on all taro. OGOH appreciates the cultural significance of taro to the Hawaiian community. However, this bill does not address only Hawaiian taro, and calls for a ban of all taro varieties in Hawaii.

This ban of all taro goes to far. Other countries such as Dominican Republic, Samoa and the Solomon Islands are asking Hawaii researchers for their expertise in coping with the decimation of taro in their countries.

Genetic engineering is one of the many tools of biotechnology and we must continue to support technology advancement. We also must provide equal opportunities to our community to be able to use these technologies in times of need.

Thank you for the opportunity to present testimony.

Yours sincerely

  
Thong-Teng Neo  
President  
Orchid Growers Of Hawaii

**wooley1-Christopher**

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Tuesday, March 03, 2009 5:21 PM  
**To:** AGRtestimony  
**Cc:** devorah@ilhawaii.net  
**Subject:** Testimony for HB1663 on 3/4/2009 9:00:00 AM

LATE  
Testimony

Testimony for AGR 3/4/2009 9:00:00 AM HB1663

Conference room: 312  
Testifier position: support  
Testifier will be present: No  
Submitted by: Debra Kaplan  
Organization: Individual  
Address: Pahoia, HI  
Phone: 808-  
E-mail: [devorah@ilhawaii.net](mailto:devorah@ilhawaii.net)  
Submitted on: 3/3/2009

Comments:  
Bill to Ban GMO-Taro HB1663  
I strongly support HB1663!!!!!!

It is so important that we do not impact our local agriculture with GMO contamination of crops. Once this occurs we can never go back. As a consumer and a parent, I oppose GMO foods. Taro is central and essential to our culture. Please protect the health of taro and consumers by banning genetically engineered, GMO-taro!

Debra Kaplan  
Teacher

**wooley1-Christopher**

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**From:** Jose Bulatao, Jr. [mrb@hawaiiink.net]  
**Sent:** Tuesday, March 03, 2009 6:34 PM  
**To:** AGRtestimony  
**Subject:** casting YES vote to support HB 1663

LATE  
Testimony

Please continue to support any legislation that will protect our kalo. No GMO kalo, please.

Jose Bulatao, Jr.

Kekaha, HI 96752  
Jose/Mr B

Testimony transmitted by email 4 March 2009 from:

Penny Levin

Wailuku, Maui 96793

**TO:** Committee on Agriculture  
Rm 312, March 4<sup>th</sup>, 9:00am

**RE: Testimony for HB1663 *Relating to Taro Security***

Aloha Honorable Committee members;

Regarding HB1663 *Relating to Taro Security*, I support the proposed legislation to protect taro in the State of Hawaii from genetic engineering.

Taro farmers have been coming out of the lo'i and traveling to the legislature for three years to lay this threat to their crop, their food, their livelihood and their culture to rest. Last year, over 7,000 people testified in support of similar legislation including taro farmers, Hawaiians, three County Councils, consumers, organic farmers, scientists, health practitioners and specialists, and other supporters from across the state. In November 2008, the County of Hawai'i passed an ordinance banning the genetic engineering of taro.

As a taro farmer with a background in science and biodiversity conservation, I have weighed the benefits and risks of genetically engineered taro carefully and found it to be too great a risk to the integrity of the plant as a traditional food crop, the environment, taro biodiversity, fragile taro markets, and consumer health. It is also inappropriate in the context of the significance of taro in Hawaiian culture.

For every proposed benefit, there are serious questions that remain in the highest standards of the science regarding the safety of transgenic crops for human consumption and the natural environment, as well as its true productivity and economic impact. The National Academy of Science, the highest regarded scientific organization in the US, along with the International Assessment of Agricultural Science and Technology for Development [IAASTD] project, the UN/Food and Agriculture Organization (FAO) and World Health Organization (WHO) support this conclusion. In 2008, IAASTD produced a rigorous 2,500 page report after a four year study involving more than 400 scientists worldwide which concluded that organic agriculture, greater biodiversity within smaller contiguous fields, and improving access to markets would have a far greater impact than GE crops towards shifting world hunger and reducing crop disease. The study was supported by more than 30 governments and 30 global funders, including the US, England, other European nations, the World Bank, UN/FAO, WHO and the biotech industry, who recently pulled out of the project because they did not agree with the recommendations of the report.

The State of California, recognizing the uncontrollable persistence and irreversibility of gmo plants that hybridize non-gmo crops or escape into adjacent fields (whether they hybridize or not), passed into law this year landmark legislation (AB541) protecting farmers from

crippling lawsuits by the biotech industry over cross-contamination. The companies do not compensate farmers for contaminating their fields even when organic certification is destroyed; rather, they consider cross-pollination or escape into other farmers' fields which can occur by wind, birds or insects to be theft of property rights. This says a great deal about who these companies really are and where their concerns lay.

But more important for taro in Hawai'i are three clear facts;

First, there are many problems that face taro that cannot be resolved by genetically modifying the plant. I have spent the last six years documenting the impacts and researching solutions with taro farmers to control the invasive apple snail, which is responsible for the highest percentage of crop and huli loss annually (Levin for DLNR-DAR, 2006; Hawaii Agricultural Statistics Service, multiple years). The apple snail is a major vector for other diseases that attack the taro; its razor sharp mouth creates a wound through which fungi and parasites can enter the corm, setting the stage for many forms of root rot. We know from experience and observation that solving the apple snail problem; improving soil organics, fallow durations and cultivar diversity; and restoring water to lo'i kalo will significantly reduce pests and disease occurrence and increase crop productivity. Removing the apple snails alone will eliminate an 18-25% crop loss and increase the available time a farmer has to care for his farm and his family by 50%. Proposed yield increases and disease resistance for GMO taro are hypothetical and untested; the apple snail will eat it anyway. There is no need or demand to grow GMO taro from local taro farmers or consumers. Indeed, even those few farmers who support continued gmo taro research, will not plant it in their fields. Better and safer options exist.

The genetically engineered taro has been developed using a variety called Bunlong, also known as Chinese, along with portions of wheat, rice and grapevine DNA. This variety has been used by taro farmers for more than 150 years in Hawaii – as a *leaf* crop and dryland table taro. It lacks the qualities of a good poi taro. It is used today mostly for the chip industry where tissue culture for clean planting material, good site selection, mulching and spacing practices significantly reduce disease. Poi millers use primarily Lehua and Moi, both Hawaiian varieties. A genetically engineered Bunlong taro does *nothing* to improve disease resistance or production for poi taro farmers. Millers will not buy it and consumers will not eat it (UH CTAHR survey 2008).

Second, taro will survive without genetic engineering long into the future if we attend to the sources of the problem. Taro is one of the oldest human-managed food crops in the world; its use dates back more than 50,000 years by some accounts, but it's regular cultivation can be documented to 7,000 -10,000 years ago in South and Southeast Asia. For an estimated 1,200 years, taro in Hawai'i has survived volcanic fallout, floods, droughts, pests and disease. The presence of the word, *kakane* (a leaf blight on plants) in the Hawaiian language illustrates that taro leaf blight has been around a very long time. Agricultural records show that several taro disease events occurred from the mid-1800s to the mid-1900s; but, this was *not* the primary reason for the decline of taro in Hawai'i as some would suggest. Only since the apple snail reached critical destructive mass (1990s), has the confluence of lack of cold

water and poor soil quality created a corresponding persistence in disease occurrence in taro. A close look at data presented by HASS (2001) and UH CTAHR Cooperative Extension Services (Feb 2007) actually supports this understanding.

By the 1900s, many Hawaiians had lost access to both land and water. Many others died from disease, taking with them the knowledge of best growing practices and the taro varieties. In the 1930s, Chinese and Japanese farmers dominated commercial cultivation of taro, changing planting, mulching and fallow practices and cycles. Part of the decline in taro production can be attributed to changes in the market and in society. The demand for poi during the war declined significantly. A new era after WWII saw farming families urging their children to become doctors, lawyers and teachers rather than farmers; by the 1950s many people, including Hawaiians, preferred rice to poi. At the same time, farmers shifted away from organic mulching methods to chemical fertilizer applications initiating a long, slow decline in soil quality that persists today. The number of natural disasters during that same period severely impacted the productivity of taro-growing lands. Of the 50 tsunamis reported in Hawaii since the 1800s, seven inflicted major damage. The tsunamis of 1868, 1946, 1960 and 1975 and the hurricanes of 1940, 1957, 1959, 1982, 1986 and 1992 wiped out significant portions of low-lying taro lands, including those of Waipio and Pololu, Hawai'i; Halawa, Molokai; Keanae and Wailuanui, Maui; and Hanalei, Kauai (USGS and SOEST records). Major flooding events also took their toll, including in 1956, 1970, 1974-75, 1978-79, 1980-1983, 1987-88, 1991-92, 1999-2000, 2004 and the rains of Feb-March, 2006 that devastated Kauai growers fields (USGS; greater than 10,000ft<sup>3</sup>/sec). It takes an average two years to recover from such events; sometimes longer.

Archival records dating back to the early 1800s indicate it was attention to the soil and the water that kept the taro robust. Queen Emma herself grew taro whose corms averaged 22in. long and 22in. around and documented the careful management of the soil and plants by which she achieved this standard; something very few taro farmers still practice. She writes; *“the size of the roots depend upon the depth of loose soil, and the care bestowed on its cultivation. I have produced kalo which averaged twenty-two inches in length and the same in circumference when it was cultivated under my own eye, but far less in the same locality when the cultivation was somewhat neglected by my konohiki”* (HEN Vol. Arch. Collection, pp 76-83; undated manuscript, Bishop Museum; Queen Emma collection 71, nd, pg8).

Third, protecting the biodiversity of taro is critical to future survival, food and economic security. Hawai'i retains many of the ancient Hawaiian taro varieties, some of which are extremely rare, along with extensive ex-situ collections of taro from throughout the Pacific, and Asia. A ban on genetically engineered taro in Hawai'i provides a buffer of protection not just from cross-pollination but more importantly from simply the inability to visually distinguish between a gmo taro and a non-gmo taro in the field. The ban would protect not just the Hawaiian varieties, but all taro cultivars found in the state, an important resource for continuing to build leaf blight resistance using conventional hand-pollination techniques - or restoring traditional varieties back to their original islands throughout the region.

What we are asking for is a return to ethics in agriculture in Hawai'i - one where the researchers, institutions, agencies and industries who *say* they wish to help farmers are actually engaged in what farmers really need and ask for, rather than the pursuit of patents; where researchers also understand and take responsibility for the risks and burdens they place on us and our markets when they follow a path of their own making.

The State of Hawai'i made a commitment to taro by designating it as the State Plant and by establishing the Taro Security and Purity Task Force to address non-gmo issues for farmers in 2008. I urge the members of the Committee on Agriculture to further this commitment by passing in full support HB1663 without changes.

Mahalo nui loa.  
Respectfully,

Penny Levin  
Taro Farmer and conservation planner, Maui

MYTH	FACT	Evidence
1. Taro decline is due to disease, especially since the 1940s.	Taro decline is directly linked to loss of water resources and acreage (from over 1,200 to 380ac in 70 years); tsunami, hurricane and flood damage; changes in soil management practices; a decline in the number of farmers (from many hundreds in the early 1900s to 110 in 2008); a decline in the number of Hawaiians practicing taro cultivation or with access to watered land; and the presence and increase in apple snail populations since 1983/84 to the present. Disease events play a minor role and are often a secondary result of these other causes because of weakened plants from lack of good water and soil or snail damage.	Graphs (2); UH CTAHR, Bishop Museum records, apple snail damage on taro corms which create open wounds (vectors for disease); long term observation in the field by taro farmers.
2. Taro flowers rarely, if ever, flower and therefore cross-contamination is not a threat.	All taro cultivars in Hawaii flower at least once a year and often simultaneously. They produce viable seed. Taro farmers observe this in their fields regularly. IRETA (UNDP/FAO) promotes traditional hand-pollination in its taro breeding programs in the Pacific.	Taro flowers presented to HAW (2/18/09); Bishop Museum records; IRETA (J. Wilson 3/89)
3. Genetic engineering is the best technique for solving disease problems for taro in Hawaii.	GE taro researchers failed to evaluate less controversial, longer lasting solutions to taro problems, including improving soil conditions, increasing cultivar diversity, fallow time, and water availability. In fact, they have not done a single comparison. The EPA is currently investigating charges that the seed crop industry has prevented researchers from fully investigating both GE crop impacts and comparisons with non-GE plants. A 2,500 page report by the UN supports these findings and challenges the industry on economics, productivity, chemical use, speed, nutrition, health, disease and drought resistance.	February 20, 2009 NY TIMES Crop Scientists Say Biotechnology Seed Companies Are Thwarting Research; National Academy of Sciences, UN/FAO
4. Taro farmers must have the GE taro in Hawaii as a back up, "just in case".	The GE Bunlong (Chinese) taro created in Hawaii will not help existing commercial wetland poi taro growers. Bunlong is <i>not</i> a poi taro. Internationally recognized germplasm facilities dedicated to the preservation of biodiversity conduct research using conventional breeding methods or GE. These sites have higher research standards and adhere to the Cartagena Protocol (the precautionary principle). UH, HARC and PBARC do not. Even if research was allowed, response and federal permit time lags would be too late (see below)	WHO, FAO, UN, IINBR, Leuven University, Belgium in cooperation with Biodiversity International; Fiji University with FAO

MYTH	FACT	Evidence
5. Taro farmers who want GE taro as a backup, will plant it and be able to sell it to millers or consumers.	No taro farmer has said they will plant it in their fields, even those who want the research to continue. No miller will buy it and consumers will not buy it. Consumers in Hawaii demand GE foods be labeled so that they can choose.	Taro farmer, poi miller testimony; consumer survey UH CTAHR 2008
6. Recombinant DNA technology is merely an extension of traditional breeding and is necessary to analyse and genetically map Hawaiian taro cultivar varieties.	Recombinant DNA is a new technology that is "a form of synthetic DNA combining DNA sequences that would not normally occur together" While genetic mapping uses high tech equipment and processes found in the biotech industry; the techniques, the science, the practices nor the equipment are exclusive to the industry and are available as part of the science of microbiology and microecology where the protocols are also more rigorous and researcher ethics more clear.	J. Berg, J. Tymoczko, L. Stryer. <i>Biochemistry</i> . San Francisco, W.H. Freeman ISBN 0-7167-8724-5
7. GMO DNA does not impact our foods or our health.	A recent study published by the National Academy of Sciences states that dietary DNA can find its way into the blood, opening up the possibility of GMO DNA transforming somatic cells. Bt toxin may also cause perforation of blood cells. [Gutierrez, D. 4/10/07]. Monsanto's GM corn MON863 approved for human consumption shows kidney, liver toxicity in animal studies as well as hormonal changes in rats in a study performed by researchers from the independent CIRGE (France). The science of the FDA, the agency responsible for protecting our health, has been severely compromised by its own admittance. If ge research were safe, then universities wouldn't need to have strict IBC protocols to govern research in this field. Biotech research in Hawaii has been fined by EPA for careless and unpermitted field trials on several occasions in the last ten years.	NAS 2008, ICAR (P. M. Barghava; father of biotech in India); Com. for Independent Research and Genetic Engineering (France); FDA: Science and Mission at Risk, Nov 2007
8. Genetically engineered crops take less time to develop than conventional hybrids and produce more.	Conventional hybrids take few years to develop, as in the case of Samoan taro hybrids to counter leaf blight epidemics in the 1990s. They do not need permits from the FDA or EPA to move from the lab to the nursery, to field tests, to farms and tables. Exhaustive evidence and the industry's own admittance shows GE crop development lags far behind in speed. The physiology of plants is now reaching the limits of the productivity that could be achieved.	IAASTD; UK Dept for Environment, Food and Rural Affairs 2008; USDA; Lester Brown, Earth Policy Institute; S. Evans-Freke, Cibus chairman (BASF); Royal Society of Canada

MYTH	FACT	Evidence
9. GE "debris" does not spread to the surrounding environment	<p>A 2007 study provides evidence that toxins from Bt corn travel long distances in streams and may harm stream insects that serve as food for fish. These results compound concerns about the ecological impacts of Bt corn raised by previous studies showing that corn-grown toxins harm beneficial insects living in the soil. This may have serious consequences for near shore reefs in Hawaii.</p> <p>If crops are able to breed with wild relatives, the new genes will be spread to those wild plants. For example, sorghum can breed with the common weeds johnson grass and shattercane, and canola can breed with wild mustard plants. If the plant is Roundup-ready the weed will end up Roundup-ready.</p>	NAS, NSF 2007 (J. Tank et al); Dr. P. Goldsbrough, Purdue University
10. GMO crops reduce chemical use	<p>Chemical use has declined on some crops but there is little or no change on others. Insect resistance to Bt toxin has already been demonstrated in the lab and observed in the field. Farmers must take other measures to slow down the development of resistance in insects, but it will eventually happen. Those who plant crops that are genetically engineered to resist the herbicide Roundup are now applying more of it to their fields. A study of over 8,000 university-based field trials suggested that farmers who plant Monsanto's engineered soy use 2.5 times more herbicide than non-GMO farmers who use integrated weed-control methods. Roundup Ready" (RR) seed and RoundUp, a chemical weed killer, is Monsanto's biggest money-maker and is sold together with the RR seed.</p>	IAASTD; C. Benbrook, Pesticide Outlook (2001); Dr. P. Goldsbrough, Purdue University
11. GMO crops provide better economics for small farmers	<p>IAASTD, FAO and WHO concluded it was unequal distribution of resources and environmental degradation, not crop productivity that are the most important factors in the current global food crisis, and concludes "small-scale farmers and ecological methods provide the way forward to avert the current food crisis and meet the needs of communities."</p>	IAASTD; People, Land Management and Ecosystem Conservation program, UNEP (M. Pinedo-Vasquez 2009)

**wooley1-Christopher**

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**From:** Glenn N Hontz [hontz@hawaii.edu]  
**Sent:** Tuesday, March 03, 2009 9:47 PM  
**To:** AGRtestimony  
**Subject:** support HB 1663 and oppose HB 1226

LATE  
Testimony

Agriculture Committee Hearing  
HB 1226 Preemption  
Hearing Wednesday March 4, 2009 at 9:00 a.m. in Room 312  
Chair: Clift Tsuji

I request that you support HB 1663 and oppose HB 1226

Mahalo Nui for your time and energy put forth to protect all the advances that have been made over the years to protect the people, the farmers, and the lands of Hawai'i from experimental genetically engineered varieties.

Aloha,

Glenn Hontz  
Kauai Community College

**House Committee on Agriculture**  
Representative Clift Tsuji, Chair  
Representative Jessica Wooley, Vice-Chair

LATE  
Testimony

Lydi Morgan  
[lydi\\_morgan@yahoo.com](mailto:lydi_morgan@yahoo.com), 808-

Wednesday, March 4, 2009, 9:00 a.m.  
Room 312

**SUPPORT HB 1663: Relating to Taro Security**

Chair Tsuji, Vice-Chair Wooley, and members of the Committee,

Please join me and THOUSANDS of other caring citizens in **strong** support of HB 1663.

Genetic modification of food crops is UNNECESSARY and ill-intended. It is an insult to creation and to the peoples and cultures that share a relationship with these foods.

We speak with one voice. NO GM TARO.

**House Bill:** HB 1663 2009 Regular Session  
**Title:** Relating to Genetically Engineered Taro  
**Position:** Oppose  
**Submitted By:** Robert Paull  
Honolulu, HI 96821

**Testimony:**

I have been a Professor at the University of Hawaii at Manoa for nearly thirty years in the area of crop production and plant sciences. This testimony is submitted as a private citizen and voter, and not as a representative of the University.

I have been involved in plant sciences and plant breeding for forty years and published in journals on the use of this technology.

In the last five years, the legislature has considered a number of Bills on genetic engineered crops. All these bills are designed to place restrictions on this technology and limit freedom of choice. The Bills are not scientific or risk-based but based upon the misuse and abuse of science, and belief that there must be a possible unknown risk. All the Bills heard by the Legislature refuse to compare risks amongst all plant breeding methods, this Bill is no exception.

There is a claim in this Bill that diseases can be controlled by using cold water and adjusting growing regime. If this is the case then why have not the diseases been controlled and therefore no longer a problem. This control method probably does not work for a new viral disease. Banning the use of genetic engineering limits the approaches available to solve present and potential future problems.

In addition, this Bill in the definitions excludes non-directed mutagenesis. Non-directed mutagenesis is done with high levels of irradiation and very toxic chemicals. The exclusion is not justified on scientific grounds as the National Research Council has concluded that this technology has a greater potential for unwanted changes than genetic engineering. It is not obvious how this exclusion requirement help human health or the environment or in this Bill the “cultural integrity of kalo”.

The definitions in this Bill are so overly broad with no definition of “traditional methods of breeding, hybridization, or non-directed mutagenesis.” Later in the Bill it talks about “controlled hand-pollination” suggesting this is the only method allowed. This means that all breeding methods including tissue culture developed in the last 100 years are banned to improve taro in Hawaii.

It is unclear which ‘Bun-Long’ (Chinese) taro is referred to in this Bills. In China, the general term “Bun-Long” is used to refer to a number of very distinct varieties of taro depending upon where it is being grown. Since different “Bun-Long” taro varieties have been brought to Hawaii in the last fifty years from South-East Asia, Taiwan and China are they covered by this ban.

**wooley1-Christopher**

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**From:** Eden Peart [hawaiifarmersunion@gmail.com]  
**Sent:** Wednesday, March 04, 2009 7:19 AM  
**To:** AGRtestimony  
**Subject:** Fwd: Hawaii Farmers Union testimony on HB 1663 and HB 1226

LATE  
Testimony

----- Forwarded message -----

**From:** **Eden Peart** <hawaiifarmersunion@gmail.com>  
**Date:** Wed, Mar 4, 2009 at 7:07 AM  
**Subject:** Hawaii Farmers Union testimony on HB 1663 and HB 1226  
**To:** [AGR@capitol.hawaii.gov](mailto:AGR@capitol.hawaii.gov)

Hawaii Farmers Union

[www.hawaiifarmersunion.org](http://www.hawaiifarmersunion.org)

Eden M. Peart

P.O. Box 1863

Honokaa, HI. 96727

**TESTIMONY ON HB 1663 and HB 1226**

HB 1663 Moratorium on the growth of genetically modified taro

HB 1226 GMO Pre-emption, Exceptions

House Agriculture Committee

Wednesday, March 4, 2009 9 a.m.

State Capitol Bldg.Rm. 312

Rep. Clift Tsuji, Chair

Rep. Jessica Wooley, Vice Chair

Rep. Isaac Choy

Rep. Cindy Evans

Rep. Joey Manahan

Rep. James Tokioka

Rep. Barbara Marumoto

Aloha Representatives,

HB 1663

Hawaii Farmers Union fully supports HB 1663. Such a moratorium is well within the objectives of Farmers Union Policy (*provided below.*). We support such a moratorium covering all varieties of taro, including Chinese Bun Long. The current bill reflects the recommendations of the Hawaiian caucus and represents the wishes of the vast majority of Hawai'i taro farmers who have expressed their support abundantly both in the current and last legislative session.

Hawaii Farmers Union is the newest subdivision of the National Farmers Union. Established in 1902, NFU is the oldest general farming organization in the United States, representing nearly 300,000 family farmers, ranchers and fishers.

Farmer/producer grassroots-developed policy is the hallmark of Farmers Union. The NFU policy on Genetically Modified Organisms and Biotechnology articulates the position of family farmers in relation to GMO crops. *This policy is a result of farmer/producers actual experience with genetically modified crops.* For that reason, if NFU policy had been considered before the release and commercialization of GMO varieties of papaya, the resultant widespread contamination of identity-preserved (non-GMO,) papaya and the subsequent plummeting of market value and loss of markets could have been avoided.

Recently, some testimony for the concurrent GMO taro moratorium bill, SB 709 misrepresented NFU policy by suggesting that GMO research is promoted. Careful reading of NFU policy dispels that assertion. In fact, during the 2008 NFU annual meeting and adaption of policy, the biotech/GMO portion was actually clarified to include language that calls for prohibition of any research conducted in open field tests, such as the thousands of unregulated field tests that have taken place in Hawai'i. 2008 policy changes further called for public disclosure of all aspects of any research. This conservative policy is in harmony with the late Congressman Patsy Mink's statement about the growing of GMO corn in Hawai'i, "I am not satisfied that such experimentation can be done safely in a place like Hawai'i with so many endangered species."

The overall intent of NFU policy is to advocate for family farmers and calls for decisions affecting them, including research, to be based on farmers' self-identified and prioritized needs. In that light, HFU urges lawmakers to address the concerns and challenges that groups like Hui Kalo have articulated including access to land and water, and by all means honor their request to cease and desist from GMO related activity related to taro due to its cultural and practical inappropriateness.

HB 1226

Hawaii Farmers Union categorically opposes HB 1226 which is an affront to the democratic process and a very real threat to the exercise of 'Home Rule' - the right of local communities to legislate and participate in the decisions that affect them. In these days of increasing challenges...and opportunities - let's find ways to include more citizens in decision making, rather than mistakenly disenfranchising them with this kind of legislation.

Sincerely,

Eden Marie Peart

Hawaii Farmers Union

**2008 Policy of the National Farmers Union**

[www.nfu.org](http://www.nfu.org)

12. Genetically Modified Organisms and Biotechnology

Genetically modified organisms (GMOs) have created a series of ethical, environmental, food safety, legal, market and structural issues that impact everyone in the food chain. Consumer and producer concerns need to be addressed.

We acknowledge concerns that biotechnology is being used as a trade barrier. We respect all nations sovereignty and food policies and thus urge open dialogue, cooperation and understanding in trade negotiations relating to biotechnology. We support:

a) A moratorium on the patenting and licensing of new transgenic animals and plants developed through genetic engineering until the broader legal, ethical and economic questions are resolved. The moratorium should include the introduction, certification and commercialization of genetically engineered crops, including all classes of wheat, until issues of cross-pollination, liability, commodity and seed stock segregation and market acceptance are adequately addressed. Research conducted in an environmentally secure facility should be exempt from this moratorium. Research conducted in open field production should be subject to mandatory public disclosure of; persons or entities initiating the research, location of test sites, and specific species and traits involved and the characteristics of the intended resultant genetically modified plant to be created. Should commercialization of a new GMO become imminent, we encourage the appropriate regulatory authority to provide for a public input and review process, including production of economic and environmental impact analysis prior to

commercialization;

b) Legislation to exempt farmers from paying royalties on patented farm animals and technical fees on seeds which have been genetically modified;

c) Legislation to prohibit the patenting of heritage seed, animal and biological genetics;

d) Legislation to prohibit the further use of tax dollars in developing terminator technology, e.g., a gene to ensure that seed will not reproduce;

e) Legislation to prohibit the development and selling of seed that is sterile;

f) The right of farmers to plant seed derived from proprietary organisms on their own land;

g) New products involving GMOs be certified as safe by the FDA in testing done independently of the patent holder, at the specific patent holder's expense before being allowed on the market. Such testing is to be done at the expense of the specific patent holders seeking to market such products;

h) Legislation requiring that patent holders or owners of GMO technology be held strictly liable for damages caused by genetic trespass including safety, health, economic and environmental effects. Farmers are not to be held liable for food safety, human health or environmental problems, including cross pollination, related to the use of GMOs as long as generally accepted crop production practices are followed;

i) Congressional action to regulate the biotech industry's technology agreements. Farmers should not have to sign away their fundamental rights, including, but not limited to, a jury of their peers in court in exchange for the privilege of growing biotech crops. Grievances should be settled in the home state of the farmer, not the state of the biotech corporation;

j) Any damages caused to farmers through lower prices, lost markets or contamination shall be fully reimbursed to farmers, including legal fees, by the company producing the

genetically modified product;

k) All data used in the analysis of the health and environmental effects of GMOs be public record, and that criminal penalties be established for the willful withholding or altering of such data;

l) Prohibiting government regulatory agencies from licensing genetically modified products that are not acceptable for both human consumption and animal feed;

m) Until USDA and FDA improves oversight and regulation of pharma crops, NFU cannot endorse or support pharma farming based on economic, environmental, food safety and liability risks to producers and consumers;

n) Requiring government regulatory agencies and input suppliers to ensure that farmers are informed of all potential market risks and segregation requirements associated with planting any licensed genetically modified crop;

o) Government regulatory agencies shall consider domestic and foreign consumer acceptance of the product when licensing;

p) Requiring all GMO seed to be clearly labeled with the following information: 1) markets (foreign or domestic) where the product is not accepted; and 2) all planting restrictions;

q) Development of a paper verification system and a storage and marketing plan to aid farmers with non-GMO grains;

r) Identity-preserved systems and insist they receive protection from cross contamination; and

s) Requiring genetically altered or engineered food products to be appropriately labeled to inform consumers. Food products derived from cloned animals should be labeled at the retail level.

All of the following individuals submitted exactly the same written testimony in support of HB 1663 and in opposition of HB 1226. See attached sample of written testimony.

1. Sandra Gray
2. Nina Puhipau
3. Catherine Noto
4. Sharon Fairclo
5. Rob Biggerstaff
6. Valancy Rasmussen
7. Dwayne Tarletz
8. Guadalupe Rodriguez
9. Gloria Faltstrom
10. Christine Innes
11. Grace Pretre
12. Gina Kahai
13. Katherine Schwind
14. Lance Springer
15. Carol Holcomb
16. Eleu Puhipau
17. Rebecca Branham
18. Sherill Adams
19. Mary Ann Saindon

**wooley1-Christopher**

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**From:** radport@interpac.net  
**Sent:** Tuesday, March 03, 2009 5:08 PM  
**To:** AGRtestimony  
**Subject:** Protect Hawaii! Oppose HB1226, Support HB1663

LATE  
Testimony

Representative Clift Tsuji  
Hawaii State Capitol, Room 403  
415 South Beretania Street  
Honolulu, HI 96813-2425

Dear Representative Tsuji,

As a consumer and supporter of healthy food and agricultural practices in Hawaii, I strongly urge you to oppose H.B. 1226 and any law prohibiting the state or county from regulating GMOs in Hawaii. The federal government has proven itself incapable of adequately regulating GM crops, as evidenced by scores of contamination episodes. Thus, state and county officials must retain their authority to set stricter standards than lax and unreliable federal regulators. This applies particularly to GM plants engineered to produce potentially hazardous, experimental pharmaceuticals, many of which have been grown in Hawaii. In 2006, a federal district court ruled that the USDA had failed to conduct a meaningful environmental assessment before granting permits to grow such hazardous "pharma crops." The state legislature must not rob state and county officials of the ability to protect Hawaiian citizens and Hawaii's fragile environment from such reckless activities. Community and consumer safety is endangered when local governments are prohibited from taking every step to ensure public safety.

Recent food safety disasters (i.e., peanut butter and spinach recalls) affirm the need to establish the broadest safety net possible. Consumers deserve and demand a comprehensive web of food safety standards, which must include state and county governments.

In addition, I urge you to support HB1663, the prohibition on the development, testing, propagation, release, importation, planting, or growing of genetically modified taro in the State of Hawaii.

Hawaii needs local community oversight of GMO crops, such as the ban on GMO taro, to protect our health; our unique environment; our local farmers, laborers and economy; and consumer and community rights.

The people of Hawaii want, need and deserve more safe, healthy food--and should expect that their State and local government will be at work to protect them. I urge you to oppose attempts to weaken or limit State or County authority to regulate genetically modified crops and food in Hawaii.

Please oppose the preemption bill, HB 1226, and support the ban on GMO taro in the state, HB 1663.

Sincerely,  
Sandra Gray  
po box 641  
kapaau, HI 96755

**wooley1-Christopher**

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**From:** mailinglist@capitol.hawaii.gov  
**Sent:** Wednesday, March 04, 2009 10:41 AM  
**To:** AGRtestimony  
**Cc:** starmullins@hotmail.com  
**Subject:** Testimony for HB1663 on 3/4/2009 9:00:00 AM

LATE  
Testimony

Testimony for AGR 3/4/2009 9:00:00 AM HB1663

Conference room: 312  
Testifier position: support  
Testifier will be present: No  
Submitted by: Star Mullins  
Organization: Individual  
Address:  
Phone: 808 !  
E-mail: [starmullins@hotmail.com](mailto:starmullins@hotmail.com)  
Submitted on: 3/4/2009

**Comments:**

Bill to Ban GMO-Taro HB1663

We need to protect the public's right to have access to non GMO traditional food sources.  
Please support this bill.

**wooley1-Christopher**

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**From:** LindaofHawaii@aol.com  
**Sent:** Wednesday, March 04, 2009 11:24 AM  
**To:** AGRtestimony  
**Subject:** Protect Hawaii! Oppose HB1226, Support HB1663

LATE  
Testimony

Dear Decision Maker:

As a consumer and supporter of healthy food and agricultural practices in Hawaii, I strongly urge you to oppose H.B. 1226 and any law prohibiting the state or county from regulating GMOs in Hawaii. The federal government has proven itself incapable of adequately regulating GM crops, as evidenced by scores of contamination episodes. Thus, state and county officials must retain their authority to set stricter standards than lax and unreliable federal regulators. This applies particularly to GM plants engineered to produce potentially hazardous, experimental pharmaceuticals, many of which have been grown in Hawaii. In 2006, a federal district court ruled that the USDA had failed to conduct a meaningful environmental assessment before granting permits to grow such hazardous "pharma crops." The state legislature must not rob state and county officials of the ability to protect Hawaiian citizens and Hawaii's fragile environment from such reckless activities. Community and consumer safety is endangered when local governments are prohibited from taking every step to ensure public safety.

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Please oppose the preemption bill, HB 1226, and support the ban on GMO taro in the state, HB 1663.

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Worried about job security? [Check out the 5 safest jobs in a recession.](#)

Attention: State Senators  
State House of Representatives

LATE  
Testimony

Re: Testimony in support of Ban on all GMO Taro

From: Jerry Konanui  
Moku O Keawe

Aloha mai Kakou,

I have been growing kalo for over 60 years. I had the honor of assisting my father Joseph Kepa Konanui and my Grandfather David Kawika Konanui as they fulfilled their kuleana to malama our Kupuna Haloa in order to provide mea ai for our ohana and extended ohana.

I am presently the Kahu for Ka Mala Ai O Konanui Ohana, ma Puna Moku O Keawe.

I service as president of Hui Kalo Moku O Keawe.

As a member of the State Taro Task Force – I represent the largest statewide taro growers and kalo practitioners “Onipa’a Na Hui Kalo”.

I am a Kanaka Maoli.

We have come before you for three years now begging for your help to protect our elder brother Haloa from Genetic Engineering. We had introduced a limited moratorium on GMO kalo two years ago. There were no hidden agenda, what you read is what we meant. We had simply asked for more time so that as reasonable people we could together take that time out to reach a just and proper solution to our difficult problem while protecting our Kupuna Haloa. Although there were over 7000 supporters for and 213 against, justice and the democratic process were shackled and discarded.

We have continuously presented to you all the hard evidence and reasons why we the majority of taro growers, the kalo practitioners, the Hawaiian Community, and the kalo consumers and others are strongly against all GMO kalo.

You were presented with the “Evidence of Flowering and Seeding of Taro (*Colocasia Esculenta*): A Review of Hawaiian Literature, Manuscript and Researches by P. Levin

The myth that is often and commonly repeated by researchers over the years that “Taro (*Colocasia Esculenta*) rarely, if ever flowers and that it does not produce viable seed is born out of the understanding of the plant and a lack of consistent time in the field.

Taro stakeholders are not only about commercial taro growers. There are thousands of non commercial kalo growers, who actively grow kalo for their families as well as others. There are also the kalo consumers, product producers, processors with their related business relationships and associations, of course the host culture, the Hawaiian Community as well as the Hawaiian religious practitioners. All of these stakeholders will be forever impacted, and their voices each and every one of them is important and equal. A poor backyard kalo grower feeding his family and extended family voice is no less important then the millionaire business man growing taro.

The voices of the majority stakeholders have already spoken, so please allow justice to prevail and most important do the right thing by supporting and passing the Ban on all GMO kalo.

Malama Kupuna Haloa  
He Kahu O Haloa  
Jerry Konanui

LATE  
Testimony

WE, THE TARO FARMERS OPPOSE SB709  
AND HB1663 WHICH WILL PLACE AN  
INDEFINITE MORATORIUM ON THE  
RESEARCH OF NON-HAWAIIAN  
VARIETIES OF TARO.

OUR OPPOSITION TO THESE BILLS DOES  
NOT MEAN THAT WE ARE PRO GMO.

WE SUPPORT THE NATIVE HAWAIIAN  
CULTURE AND AGREE THAT THERE BE  
NO GMO RESEARCH ON HAWAIIAN  
TARO.

NAME	FARM ACREAGE	YEARS FARMING
Ken A. Dubs	19	17
Keith Wong	9	12
Bobby Bets	15	28
Wayne O. Lee	2	20
Alan Tardun	5	30
Alvin Tardun	5	15
Ken Pinka		
Dwight Montize	15	30
Chosini Akoten	6	15
Meteri Lamatan	3	5
Conrad Shenzel	5	15
James Manuka	9	30
Ivni Hongwah	4 1/2	26
David Hongwah		58
Russell Watson	6	29
Riley Tai Hook	8	44
Wilbert Tai Hook	8	44
HENRY K. Tai Hook	5	8
Clarence P. Kaone	6	45





**NAME** **FARM ACREAGE** **YEARS FARMING**

John [unclear] 30 15

Mike Fitzgerald 25 34

Raymond Stannus 1 1/2 25

John Stannus 2 25

John Conant III 3 1/2 35

John [unclear] 1 1/2 70

John [unclear] 11 14

Franklin [unclear] 7 25











Testimony for AGR 3/4/09 9:00AM HB1663

LATE  
Testimony

Conference Room: 312  
Testifier Position: Oppose  
Testifier will be present: Yes  
Submitted by: Rodney Haraguchi, President  
Organization: Kauai Taro Growers Association (KTGA)  
Address: P. O. Box 427, Hanalei, Hawaii 96714  
Phone: (808)826-6202  
E-mail: [hvtaro@hawaiiintel.net](mailto:hvtaro@hawaiiintel.net)  
Submitted on: 3/4/09

Chair Clift Tsuji, Vice Chair Jessica Wooley and committee members:

Mahalo for the opportunity to present our testimony, we almost didn't make this hearing as we have been receiving calls from Maui, Oahu and the mainland threatening to boycott our taro unless we support the Senate and House bills. Even though we feel it's an invasion of our privacy and threatening, we feel even more strongly that the 42 taro farms representing 396 acres opposes a ban on research of non-Hawaiian varieties of taro, must be heard.

We support the Native Hawaiian culture and that there be no GMO research on the Hawaiian varieties. And that all research on non-Hawaiian varieties is done in a safe and permitted facility and that no open field test is conducted in Hawaii. Last week I presented testimony for SB709 SD1 and have attached it here. Please refer to the information and charts that are presented in that testimony.

According to DOA, new pests and diseases are entering uninspected since 2006, due to a change in federal procedures since 9/11 that doesn't allow our state inspectors to check the 900,000+ pounds of taro entering Hawaii per year. From 1997 to 2005 there were over 345 insects, mollusks, weeds and nematodes (and this does not include possible bacteria, fungus or diseases) that the state inspectors used to stop prior to 2006 and it would be a matter of time before a disease like the one in the Solomon Islands that decimated the taro crops. The insect vector required to transmit this disease is found in Hawaii.

Dr Miyasaka's team inserted an oxalate oxidase gene from wheat in Chinese Bun Long taro that increased tolerance to the leaf blight. Based on this research, they can look for similar genes found naturally within the Hawaiian taro gene pool and improve disease resistance using conventional breeding. This will also allow them to identify which taro variety has the specific gene their looking for, and then to cross breed with better accuracy, to avoid matching plants by trial and error, which takes many trials and a lot of time finding the right one in a process of elimination. This bill will remove the option of using genetic engineering as a tool to identify important disease resistance genes within the taro gene pool.

We want it to be **very clear** that there are no GMO taro plants in any fields, that there are no GMO taro to plant and that the farmers do not want to have GMO taro to plant.

The taro farmers are asking for help to preserve their livelihood and future, by not banning research on the other varieties that may someday provide an answer to a disease or problem that may occur. To start research at the time of occurrence will be too late and time will be wasted to undo the ban while the taro crops decline.

There are some inferences that the commercial taro farmers are only after the money, control and profit, but that is not the case. With the price of poi reaching \$8.99 - \$10.00 per pound of poi in Hawaii, the farmers are only receiving 6% of that at \$.60 per pound. Many years back our farm had been approached by large firms that are willing to buy huge quantities of taro from us that would have left no taro for the poi market. Even though we could get a better price for our taro, we didn't want to leave our locals without poi. Now, we're being subjected to this boycott because we are bringing the farmers' voice here.

This issue has divided farmers, families and communities within Hawaii, and many don't see the bigger picture, that other countries see Hawaii's taro shortages as an opportunity and that there's a market to import taro. In Australia, there's a Taro Growers Association comprised of 50 farmers and increasing. There are considerations for the government to assist in funding for mechanization to increase production for the farmers. They also hold conferences and are looking at research to deal with the Samoan leaf blight and other diseases that may affect their industry. There's also taro from China that is supplying McDonald's taro pie and they probably would prefer to have Hawaiian taro for better marketing and public relations.

Last night at a meeting with members of the Kauai Taro Growers Association, the members voted to request that the bill be amended: to a moratorium until the broader legal, ethical and economic questions are resolved. Research conducted in an environmentally secure facility should be exempt from this moratorium. All field tests will be conducted outside of Hawaii. No genetic engineering research on Hawaiian varieties.

In my perspective, every farmer, whether big or small, full time or part time, works hard and I respect them for continuing this way of life. In doing so, this is the farmers' satisfaction, having the consumers enjoy our product.

**Statistics show the declining trend for taro farming in Hawaii and the taro farmers need help and are asking for help so that you will not say to us, "Why didn't you tell us?" And what will be the answer when the poi consumers ask, "Where's our poi, Where are the taro farmers?" So let's support our Hawaii taro farmers so that there will be Hawaiian taro in the future and not taro from Australia, China, Malaysia, Costa Rica, Puerto Rico and the largest importer to Hawaii at this time – Africa.**

Testimony for AGR 3/4/09 9:00AM HB1663

Conference Room: 312  
Testifier Position: Oppose  
Testifier will be present: Yes  
Submitted by: Rodney Haraguchi, President  
Organization: Kauai Taro Growers Association (KTGA)  
Address: P. O. Box 427, Hanalei, Hawaii 96714  
Phone: (808)826-6202  
E-mail: [hvtaro@hawaiiantel.net](mailto:hvtaro@hawaiiantel.net)  
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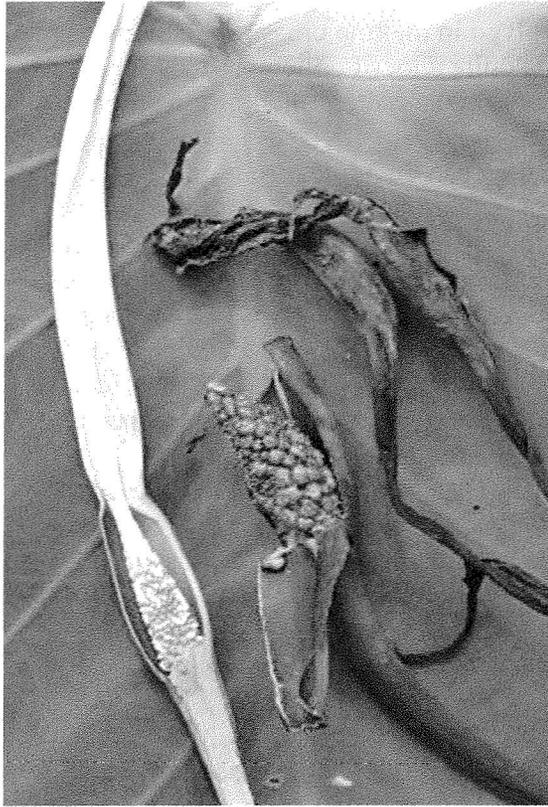
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# *2008 Policy of the National Farmers Union*

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EXPLANATION OF CROSS POLLINATION  
BY: JOHN CHO, PHD. UH PLANT PATHOLOGIST

Taro inflorescences (pictured on the left) contain both female flowers located at the bottom portion of the inflorescence and male flowers at the upper end of the inflorescence. Pollination occurs when the pollen from the male flowers produce pollen that pollinates the female flowers. This however generally does not occur within the same inflorescence containing the female and male flowers, because the female flowers within the same inflorescence matures usually a day prior to the male flowers shed their pollen. In my experience with working with cross pollinations in taro for over 10 years, I have never observed natural self pollinations with any of the Hawaiian varieties nor have I observed natural cross pollinations in any fields containing any Hawaiian or Bun Long plants. Further, I have never observed natural flowering to occur in Bun Long in any farm or any of my experimental plants as long as I have been working with taro.

A Southeast Asian insect pollinator did not make it east to Polynesia to Hawaii and cross pollination would have to take place by other insects. There are insects that visit taro inflorescences including what I have observed that include the oriental fruit fly and honey bees. The oriental fruit fly is attracted by the fruit-like scent of the taro inflorescences when the female flowers are receptive but are not present when the pollen is shed by the male flowers and therefore would not be able to transfer pollen between inflorescences in different stages of female/male flowers development. Honey bees are not present when the female flowers are fertile but are present collecting pollen when the male flowers

shed pollen and therefore also would not be involved in making cross pollinations. When pollen is shed from mature male flowers, there is quite a lot of pollen produced that I can easily blow out from its inflorescence by blowing into the pollen filled inflorescence.

The questions whether wind generated blown pollen can be moved from one inflorescence to another female receptive inflorescence. This is not a frequent event in Hawaii; otherwise one should easily find Hawaiian taro plants developing seeds in the field, which I have never observed in any farm or any of my experimental plots. One of the problems for wind generated cross pollinations to occur naturally is that Hawaiian inflorescences open only very slightly when the female flowers are receptive and this slight opening may be difficult because of the air currents that would occur about an opening of that small size as to inhibit the inward movement into the inflorescence, this and other experiments if conducted can easily determine if that was possible.

In my experience, I have never observed Bun Long to naturally produce inflorescences in any of my field trials nor on any farm that I have visited. Some growers that I have asked have said that they have observed Bun Long to flower but I question that. In my experience, the only means to induce Bun Long plants to generate inflorescences is by applying high levels of gibberellic acid onto plants of at least 3 to 4 months old.

Development of fertile seeds occurs at about 30 days after pollination; fertile seeds take at least 7 days from the literature but in my hands it is about 14+ days; seedlings take at least 2 months to attain a size of about 3 to 4 inches in height.

The major questions for natural cross pollinations in the field would be the inflorescence barrier for wind pollination and the natural flowering of Bun Long.

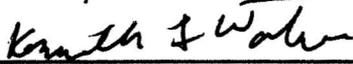
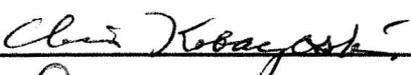
# LATE Testimony

We are taro farmers and planters who support a ban to prohibit the development, testing, propagation, release, importation, planting, or growing of any variety of genetically modified taro in the State of Hawaii.

We may not claim or cultivate large acreages, but we are growers of kalo nonetheless. We are commercial farmers, educators, and small-scale subsistence growers. Many of us are all of the above, and grow kalo for the same reasons as it was grown for centuries—to feed our families and community, and perpetuate traditions and values.

We know that taro flowers and can cross pollinate, regardless of the variety. We believe that taro can easily become mixed up in the fields as huli are shared. Therefore, our Hawaiian varieties will not be safe.

As a Hawaiian food and medicine, well known for its hypoallergenicity, it is unacceptable that taro be genetically modified with foreign genes from other plant species like rice, wheat and grapevine, not to mention the added insertion of viruses and bacteria and antibiotic resistant genes.

Name	Signature	Farm Area (in acres)	Location
Stacy Grant-Beck		2 acres	Waipa
DAVID W BECK		7 acres	Waikoloa
Ryan Like		2 acres	Waipa
Catherine Han Young Pfeiffer		1.5 acres	Kona huli
Kenneth Watari		1.5a.	Waiali
	MANGROER	4	Waiali
Russell WATARI		5.0	Waiali 3/3/09
Chris Kobayashi		5.	Waiali
Demetri Rivera		5.	Waiali

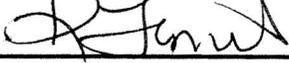
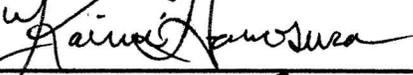
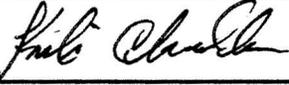
56  
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We know that taro flowers and can cross pollinate, regardless of the variety. We believe that taro can easily become mixed up in the fields as huli are shared. Therefore, our Hawaiian varieties will not be safe.

As a Hawaiian food and medicine, well known for its hypoallergenicity, it is unacceptable that taro be genetically modified with foreign genes from other plant species like rice, wheat and grapevine, not to mention the added insertion of viruses and bacteria and antibiotic resistant genes.

Name	Signature	Farm Area (in acres)	Location
JASON ITO		0.33	MANALEI
Atta Forrest		4	Wainiha
Kainoa Forrest			Kapaa / <del>Wainiha</del>
RA Jont	RA FORREST	.1	KAPAA
Ka'imi Hermasura		5	Haena
Kaili Puulei Chandler		5	Haena
LUKA CHANDLER		.1	WAINIHA
Paula Chandler			Wainiha

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**Name      Farm Area**

<i>Feta Janda</i>	<i>Makaweli</i>
<i>Chanee Taala</i>	<i>Makaweli</i>
<i>Taro Apo</i>	<i>Waimoa</i>
<i>Willet Apo</i>	<i>Waimoa</i>
<i>Yanna Ryan</i>	<i>Waimoa</i>
<i>Daniel Bonasile</i>	<i>Waimoa</i>

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Name Farm Area

Wendy K. Jeda	MAKAWELI Valley
Jim K. Jona PAUL AKANA	Waimea Kaula WAIMEA KAULA
Tama Izala	Makawela Valley
Delbert Hooker	Makawela Valley
Norman Hooker	Makawela Valley
Kelcea Aana	Makawela valley
Brian M K Aya	" "
Robert D.K. Aya	" "
Kaulawehi Kaula	Waimea valley
Andy Kahala	Waimea valley

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Name	Farm Area	
Jane Kookelaui		Waikea
Anna Kachelauin		waikea
Yvonne Kookelaui		WAIKEA
Laura Kookelaui		WAIKEA
Kyoko Ueda		waikea
Frankie Dunbar		waikea
Wilson Aera		Waikea / Makaweli
John K. Aana		Makaweli
Jackie Gray		Waikea
Puanani McHale		Waikea
Tafafoga (Tala)		Waikea
Dolly K. Jones		Waikea

# ★ = KNOWN TARO FARMERS

(209)

## RESOLUTION ON GENETICALLY ENGINEERED TARO

We, the undersigned, TARO FARMERS are issuing the following resolution regarding genetically engineered taro, urging our local and state officials, the University of Hawaii, and other research institutions to take action to protect the integrity of taro.

We oppose the research and development of all varieties of genetically engineered taro.

Specifically,

We call for a statewide ban on any research or release of all varieties of genetically engineered taro and a ban on any patents involving taro.

**LATE**  
Testimony

Name (Print)	Signature	Address	Phone Number	Email	Comments or Need more info?
* Charles F. Reppun	<i>Charles F. Reppun</i>	47-410 Lulani St. Kaneohe 96744	2396123		
* Paul Reppun	<i>Paul Reppun</i>	47-415 Mahukel Rd. Kaneohe	2394223		
* DAVID REPPUN	<i>David Reppun</i>	1310 Pahoa	9604788		
* Jayson Mock Chew	<i>Jayson Mock Chew</i>	PO Box 627 Honolulu	775-0816 96727		
* Albert Mock Chew	<i>Albert Mock Chew</i>	P.O. Box 627 Honolulu, HI	96727	PH# 775-0815	
* Kalae Mock Chew	<i>Kalae Mock Chew</i>	P.O. Box 627 Honolulu, HI	96727	775-0815	
* Kualei Badua	<i>Dorothy Badua</i>	P.O. Box 5109 Kukuiahae	96727	bdbadua@aol.com	
* Debbie Toko	<i>Debbie Toko</i>	P.O. Box 500 Kukuiahae	96727		
* Donald Cooke	<i>Donald Cooke</i>	47146A Pulama Rd	2395873	mana uloa@hotmail.com	
* David McEntee	<i>David McEntee</i>	151 Hanalei, HI	96714	635-0308	

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Name (Print)	Address or Town/Island	Phone Number	Email	Signature	Would you like more info?
* Elaine Watari	p.o. box 132 Hanalei, HI 96714	826-6748		<i>Elaine Watari</i>	
* <del>Clarence Koon</del> E. Koon	P.O. Box 1289 Hanalei, HI 96714	823-9567		<i>Clarence Koon</i>	
* Stacy Spout-Beel	Wai'anae Foundation PO Box 1189 Hanalei, HI 96714	689-1815	sspout@hawaii.edu	<i>Stacy Spout-Beel</i>	
* <del>Demetri Rivera</del> Demetri Rivera	Naena 96754	826-6757		<i>Demetri Rivera</i>	
* Demetri Rivera	P.O. Box 114, Kilauea	826-7836		<i>Demetri Rivera</i>	
* Gray Koga	P.O. Box 323	828-1489		<i>Gray Koga</i>	
* Adam Asquith	4654 Hannala Rd. Kapaemahu	823-6598		<i>Adam Asquith</i>	
* Irwin Haraguchi	P.O. Box 1606 Hanalei, HI 96714	828-0087		<i>Irwin Haraguchi</i>	
* Glenn Haraguchi	P.O. Box 88 Hanalei	826-6459		<i>Glenn Haraguchi</i>	
* Susan Mahuki	P.O. Box 861 Hanalei	826-1629		<i>Susan Mahuki</i>	

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Name (Print)	Signature	Address	Phone Number	Email	Comments?
* GLADYS KANA	<i>Gladys Kana</i>	PO B 791300 PAA, HI 96779	248-8449		<i>Parmer</i>
* Kumei Badaa	<i>Dorothy Badaa</i>	POB 5109 Kukuihale HI	775-9894		
* Kāwika Winter	<i>KAWIKA WINTER</i>	PO Box 808 Halei, HI 96714	826-1668		<i>Ma Kaku e malama iā Hāloa!!!</i>
<del>* Paul Reppan</del>	<del><i>Paul Reppan</i></del>	<del>47-415 Mahalo Rd. Kaneohe 96744</del>	<del>2394223</del>		
* Keeki Fukumitsu	<i>Keeki Fukumitsu</i>	49-077 Johnson Rd Kaneohe HI 96744	277-1823		
* SAMSON SANTOS	<i>SAMSON SANTOS</i>	46-257 Pinnawala Kaanawa HI 96744	342-3261		
* Ann Tsuha	<i>Ann Tsuha</i>	PO Box 38 Wailuku, HI	242-4040		
* John L. Reppan	<i>John L. Reppan</i>	47-229 Mimiokop. Kaneohe, HI 96744	239-4810		
	<i>Gwen Kim</i>	PO Box 300305 Kaanawa HI 96730	2398673		
<del>* Charlie Reppan</del>	<del><i>Charlie Reppan</i></del>	<del>47-410 Lulani St Kaneohe 96744</del>	<del>2396123</del>		

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Name (Print)	Signature	Address	Phone Number	Email	Comments?
Justin Ledford-Castro	<i>Justin Ledford-Castro</i>	47-529 Melekula rd.	239-4663		
Kamachū Lapili	<i>Kamachū Lapili</i>	P.O. Box 10079 Hilo, HI, 96721	808-854-1258		
Kaleo Kamakea-Onalo	<i>Kaleo Kamakea-Onalo</i>	41-272 HULI ST 96745, HI	(808) 239-7452		
Moani Heimuli	<i>Moani Heimuli</i>	47-471 AFAU LOOP	239-6559	moaniheimuli@yahoo.com	
Shyla Pakele	<i>Shyla Pakele</i>	48-477 E Kaim. Hwy. Kaneohe HI. 96744	223-9046		
<del>Calvin Hoe</del>	<del><i>Calvin Hoe</i></del>	PO BOX 5432	393 8762	calvinhoe_hic@yahoo.com	Mahalo
Charlene Hoe	<i>Charlene Hoe</i>	P.O. Box 5432	235-9155	chhoe_hic@yahoo.com	
Donald Dean Cooke	<i>Donald Dean Cooke</i>	47-146A PULAMARD 96744		manaulu@hotmail.com	
<del>Paul Reppun</del>	<del><i>Paul Reppun</i></del>	<del>47-915 Mahakoa Rd. Kaneohe 96744</del>	<del>239-223</del>		
Alex Bode	<i>Alex Bode</i>	1942-C-ALLOLA Kihikihi, MAUI	283-0738		

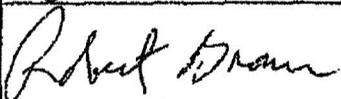
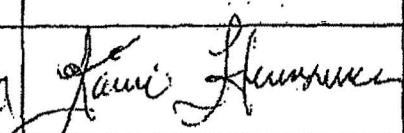
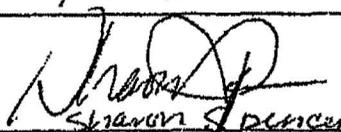
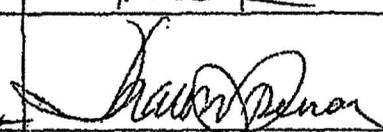
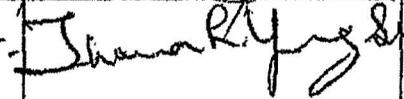
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Name (Print)	Signature	Address	Phone Number	Email	Comments?
Robert Brown		1747A Hula ST.	599-2727		
Kane Turalde		PO Box 1022 Waimoa HI 96796	6515984	kane@swahine @A-OK.COM	
JACKIE SEELEY	JACKIE SEELEY	51-215 KE NUIRD #E HALEIWA, HI. 96712	343-4414	bluuocce@ hotmail.com	
Kalimi Hermosura		P.O. Box 202 Haleiwa HI 96714	346-7870		
Kewi Hookano		4344 Anahala Rd	348-1478	hookano maui	
Kawewehi Pundia		P.O. Box 880361 Kalahehi 96786	757-2556	Maoliola@ hotmail.com	
Nesaka Husky		44139 Kahina: Lk Kaneohe HI 96744	271 2847	ihusky@ hawaii.edu	
Gene Kim		PO Box 300300 Kaanapali, HI 96720	2378673		
 Sharon Spencer		P.O. Box 678 Haunalei HI 96717	953 0257	/	
Thomas L Young Sr.		46-193 Lilipuna Rd Kaneohe, HI 96744	381-9221	kalogizer @yahoo.com	

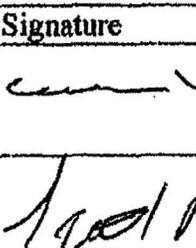
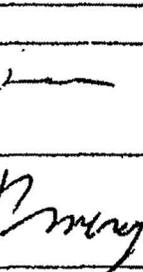
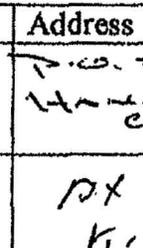
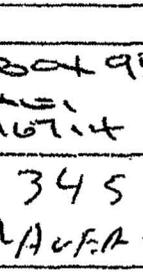
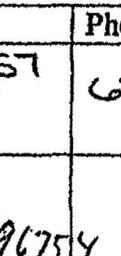
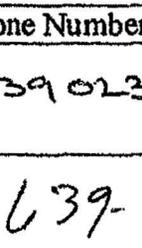
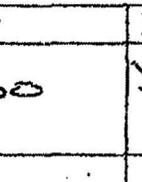
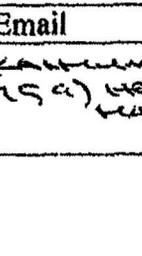
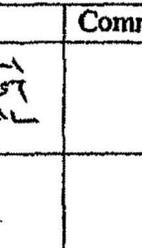
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Name (Print)	Signature	Address	Phone Number	Email	Comments?
* Emerson Leung		P.O. Box 957 Hanalei 96714	639 0230	leung@hawaii.edu	
Scott Pomfrey		P.O. Box 345 Kilauea, HI 96754	639-8630		
Roland D. Sabum III		P.O. Box 95896705 Lanai, Hawaii	(808) 580-6280	ross@kilauea.com	
Michael Kaleikini		PO Box 30 Paaoa, HI 96778	808.965.6233		
Marti Townsend		P.O. Box 270112 Honolulu 96827	808-524-8220	martie@kalea.org	
MATTIE KAEO		38 Kaneohe Pl. Kula 96790	298-3793	Mattiekaeo@gmail.com	AWESOME!
ORRIN KUPAU		694 N. Kuukini St. Hon. Hawaii 96817	585-0755	okupau@hotmail.com	
Cherise Kanehailua		891157 Pihaiolena St Waianae 96792	375-7580	pulaa1950@yahoo.com	
Mel Celko		1246 Mowai Dr. Kailua HI 96734	285-2450	ejmelko@hotmail.com	
Juanita Kawamoto-Brown		1747A Huli St. Hon., HI 96817	808-429-3013	Juanita@farmtechhawaii.com	

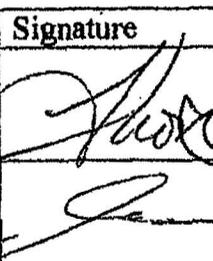
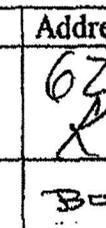
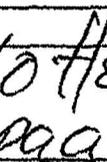
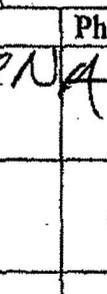
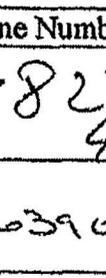
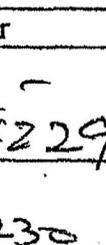
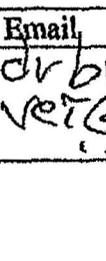
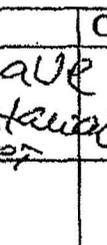
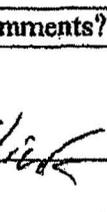
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Name (Print)	Signature	Address	Phone Number	Email	Comments?
Z Hor BASKO		6240 Helena Kapaa	822-4229	drbwave vet@hawaii.ink .net	
EMERSON LEANI		Box 957 HAWAII	6390230		
FLORENCE QUINN		Box 19 HAWAII	6393698		
JULIANA DONA		Box 19 HAWAII	634-7037		
NED WIFITZOCK		PO BOX 689 KILAUEA HI 96754	651-1446		
Charlotte Kaai		5116 Kawahau Rd Kapaa HI 96746	822-4168		
Wu Hylton		1644 Kaneohe rd. Kapaa	822-1590		
MARY KEKUEWA		P.O. Box 1282 Kapaa, HI 96746-1282	(808) 965-1688		
Genevieve Schreiner		PO Box 1492	808 245 2038		
MARIE DAR		5116 KAWATHAU RD KAPAA, HI 96746	822-4168		

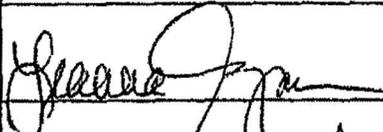
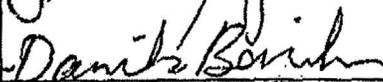
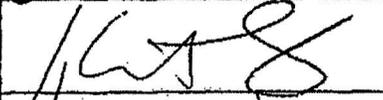
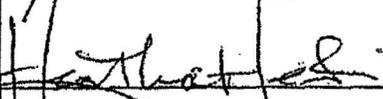
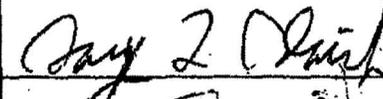
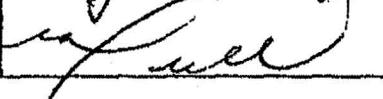
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Name (Print)	Signature	Address	Phone Number	Email	Occupation/Comments Need more info?
* Leanna Campos		P.O. Box 1096 Waima HI 96796	305-0075	keraimalu_26@yahoo.com	KTGA *
Derrick Barasihan		P.O. Box 1096 Waima HI	335-0075	" "	
Keith Edwards		6801 F Wiponiki Rd Kapaa HI 96746	246-0233	kerithie@ischool.org	teacher @ T.School
Heather Hefner		7060 Kahunarua Kapaa HI 96746	651-1671		
<del>Sill Richardson</del>	<del></del>	<del>1659 Wanaaw Kapaa HI</del>	<del>651-0717</del>	<del>jr. @ Kawainature.com</del>	<del>Conservation TART</del>
Richard DeMarco		PO Box 1797 Kapaa HI 96746	822-0804		
Hope DeMarco		6719 Wiponiki Kapaa HI	822-4723		
Suzanne Kashiwada		P.O. Box 862 Kalaheo HI 96741	332-8406		SW
GARY BLAICH		POB 1434 Wailanae, HI 96754	82-814-38		
* DEAN NICOL NONAKA		PO Box 227 Haleiwa	335-5136	nonaka @ aol.com	KTGA *

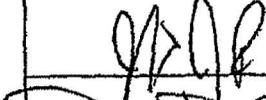
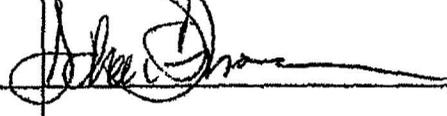
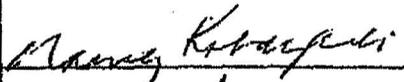
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Specifically,

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Name (Print)	Signature	Address	Phone Number	Email	Occupation/Comments Need more info?
Marleen Fu		Box 581 Hanalei	826-0162	hawaii.girl@gmail.com	
* Matthew Field		Box 229 Kilauea	6511084	—	TARO FARMER
* MUKOND MARTIN		Box 1172 Hanalei	826-6948		"
Kehaulani Kekua		POB 1261 Kapaa	346-7574	Kauaiheritagecenter@kairie.org	
	JAMES W. J. PARSONSON	P.O. Box 1333 Koloa			
	DESICCE DULLA/AVI PARSONSON	Box 1333 Koloa	346-1052	jdparsonson@hotmail.com	
Schar Freeman		Box 261 Eleele HI 96705	639 2670	scharbeate@yahoo.com	Artist
Blanca Kobayashi		Box 44 Hanalei	826 7836		
MICHAEL SUSSMAN		907 LEANING	822-1675		
Sherrie Orr		P.O. Box 119 96796	335-6868		

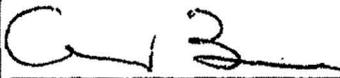
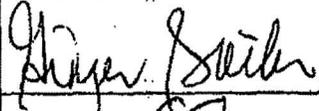
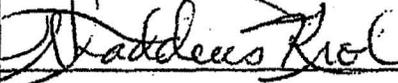
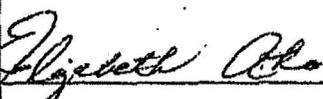
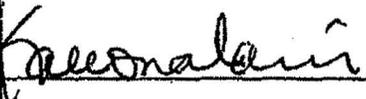
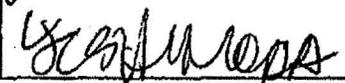
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Name (Print)	Signature	Address	Phone Number	Email	Occupation/Comments Need more info?
Carrie Brennan		6050 A Kapahi Rd, Kapaa, HI 96745	822-4123	carriejbrennan @hotmail.com	natural path physician
Ginger Saiki		332 Kihapai St. Kapaa, HI 96746	822-7346	gsaiki@ hawaii.vv.com	—
NICK GOOD		4669 <del>LAKEWA</del> Kapea, HI 96746	828 1706	nickgood@ sneakernet.com	—
Daniel Mc Carthy		3735 C Aua O Rd. Kaloa 96756	6340348	daniel@vnet 009@ya.com	*network notify
Thaddus Krol		P.O. Box 306 Friday Harbor WA	360 3786938		Self emp.
*JoAnne Kaona		P.O. Box 98250 1289 Hanalei HI 96714	(808) 652-1159	jkaona@hawaii .edu	
Elizabeth Aka		P.O. Box 1584 Kapaa, HI 96746	822-5606		
Arlecia Booth		6412 Karheke St Kapaa HI 96746	822-1702		SELF-EMP.
Kalee		PO Box 624 Anahola	634 5038	gassytutu @excite.com	KUMU KOKI
Linda Shimoda		2092B Mananalea Lihue HI 96766	245-9818	ljo@shimoda	artist

Works.com

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Name (Print)	Signature	Address	Phone Number	Email	Comments/ or Need more info?
* Kari Shozuya		1540 Waiianuenuue Ave Hilo, HI 96720	808-256-0816	shozuya@hawaii.edu	
* Ryan Like		489 P.O. Box 1189, Hanalei HI 96714	808-489-0848	rllike@hawaii.edu	
* Penny Levin		224 AINAHOU PLACE WAILUKU, HI 96793	808-285-3947	pennysph@hawaii.cc.com	
Leven Kim		P.O. Box 300308 Kaanapali, HI 96730	2378673 # 2938577 0	gkim@glcc.org	
Mele Coelho		333 Aoloo St. # 318 Kailua, HI 96734	285-2450	cjmel@hotman1.com	
* SAMSON SANTOS		46257 Pinnawai St Kamohi HI 96744	247-1063	FishN-poi 4-me.com	
Torao Nakamura		5361 A Hanaaia Rd	821-2521		
Daniel Angulo		5-5522 Kuhio Hwy Hanalei HI 96714	826-1065	Pallini@cyber.com	
Kathleen Davis		616 Partee Dr. Grand Junction, CO 81504	970-242-4575	—	
James Oranillas		P.O. Box 150 Kilauea Ikaiki 96764	808-1521	—	

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Name (Print)	Address or Town/Island	Phone Number	Email	Signature	Would you like more info?
David B. Haua ea	P. Box 23 Anahulu	82205850		David B. Haua ea	
CHARLES B PEREIRA	P. BOX 441 ANAHULU	82208945		Charles B. Pereira	
Danny Apana	P.O. Box 104 Kapaa			Danny Apana	
Cathy Han Young	Box 232 Hanalei	8266265			
Yany # Han Young	Box 232 Hanalei	8266265			
Richard Han Young	" " "	8269279			
Dudley Han Young	" " "	8267678			
Shain Han Young	" " "	8264717			
Waiwan Han Young	" " "	8266097			
Chris Han Young	" " "	8267285			

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Name (Print)	Signature	Address	Phone Number	Email	Comments! or Need more info?
Warren Isip	Warren Isip	46-260 Heeia St Kāneohe, HI 96744	(808) 358-0495 (808) 247-7249	kimi-warren@hotmail.com	
* STEVEN HOOKANO	[Signature]	245 WAILUA RD. HAIKŪ HI 96708	248-7847	1panahi@yahoo.com	
* Shawn Reelo	Shawn Reelo	P.O. Box 211 Hana, Maui 96713	248-8410		Stick to your roots
* John Zind	John Zind	P.O. Box 254	248-8974		
* Pauahi Boyce	[Signature]	245 Wailua Rd HAIKŪ HI 96708	248-7847	1panahi@yahoo.com	
* Alapaki Luke	[Signature]	P.O. Box 11085 Honolulu, HI 96822	945-1413		
* Ken Sotawa	[Signature]	52-234 Kymaukua Wailua, HI 96707	237-1231		
* #9 Donald Cooke	[Signature]	4714 A PULAMANA RD 96744	234-7770	beenhadagain@hotmail.com	
DAVID STRAUGH	[Signature]	CITIZEN CONVENES HONOLULU 96822	945-1697	straugh@greenhopstacks.com	
Virginia McMennamin	VIRGINIA McMENNAMIN	22 W. Union St Burlington, NJ	609-386-9640	VMCMENNAMIN@comcast.net	

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Name (Print)	Signature	Address	Phone Number	Email	Occupation/Comments Need more info?
Harmonie Hawthorne		PO Box 969 Kilauea	635-5735	Bakingirl@msn.com	chef
Sonia Gordines		6721 Kawaihau Rd.	822-3894	SurfJill@msn.com @hotmail.com	
* Catherine & Ham Young		PO Box 222 <sup>Hanalei</sup> 96744	652-0485 876-6865		
* Stacy Sproat-Bell		Box 596 <sup>Hanalei</sup> 96714	639-1815	s.sproat@hawaii.net	
JNA ROESSLER		PO BOX 223749	828 1760	US@KAUAI GENS.COM	
NORBERT ROESSLER		"	"	"	
Melissa Hosano		9084 Albert Promilla		melhosano@msn.com	
Mason Edmonds		4701 Waiakalanu Rd.		mcedmonds@hawaii.net	
Robert Day		4136 NALANI LN.	826-9714	bob day 1@ hawaii.net	
Koko DAY		4136 NALANI LN.	8269714	bob day 1@ hawaii.net	

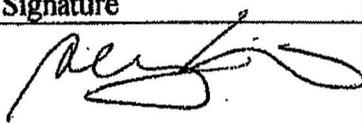
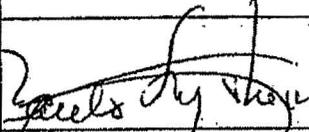
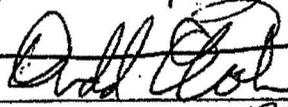
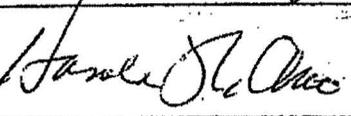
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Name (Print)	Signature	Address	Phone Number	Email	Comments?
* PENNY LEVIN		224 ANAHOU PL WAILUKU, HI 96793	(808) 288-3947		Apperice Parent
* KEONA MARK		P.O. Box 2 HALEIWA HI 96712	637-2778	Huikalo@ aol.com	
* PAUL FUJISHIRO		P.O. Box 1967 WAILUKU, HI 96793	357-8812	popkama@kakaoweb.com	been had again KISU.com
* DONALD D. COOKE		47146A PULAMA RD. KANEHE, HI 96744		<del>been had again @hotmail</del>	
* VALENTINE CHANG JR.		41 KANEHE BOY DR. KAILUA, HI 96734	2542590	makui@hawaii. .rr.com	
* HAROLD W. ANGE		P.O. Box 713 ANAHOU, HI, 96703	823-9776	STEPHANIE ANG@AOL. COM	

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Name (Print)	Address	Phone Number	Email	Signature	Would you like more info?
* Michael Fitzgerald	P.O. Box 816 Hanalei, HI	631-7590	fitzgerald@environment		
* Sanson Mauiki Jr	P.O. Box 861 Hanalei HI	826-1629			
* Marvin Masada	P.O. Box 284 Kilaua	828-1081			
* Gary Masada	" " "	" "			
* James Masada	P.O. Box 128 Hanalei	826-9874			
* Charles Spencer	P.O. Box 98 Hanalei	826-6247			
* Diana Spencer	P.O. Box 98 Hanalei	" "			
* Reid K. Yoshida	P.O. Box 73	652-9930			
* Chris Kobayashi	PO Box 135 Hanalei	826-7836			
* Demetri Rivera	P.O. Box 114 Kilaua	826-7836			

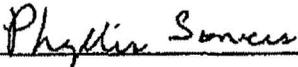
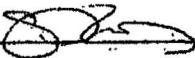
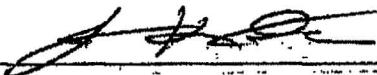
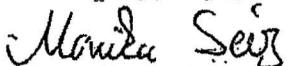
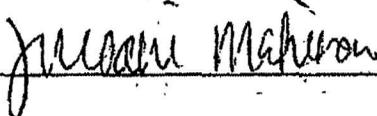
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Name (Print)	Signature	Address	Phone Number	Email	Occupation/Comments Need more info?
Phyllis Somers		4334 Tolana St.		p.somers@ntbc.org	Public Outreach Spice
Stephanie Ramsey		2290 Kaha'ou St P.O. Box 211	651 6978	ramseykawai@msn.com	
* Jason K. Lee		HANALEI HI 96744	620 1760	jkenjrt@jphos.com	
MONIKA SEIZ		P.O. BOX 876 KILAUEA 96754	635 7317	monikalaha@earthlink.net	LMT
Moani Mahiron		POB 292 <sup>andrew</sup> 96705	346 0271	SMO_MAHIRI@yahoo.com	



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TARO \*  
Farmer

\*

\*

\*

Name (Print)	Address	Phone Number	Email	Signature	Would you like more info?
Bernard Mak	Waimoa Box 212	337-1557		Bernard K Mak	
Raullio K. CHAN	P.O. Box 927 Kilauea	337-1428		Raullio K Chan	
Linda Dusenberry	P. Box 404 Waimoa	338-1075		Linda Dusenberry	
John K. AANA	P.O. Box 734 Waimoa	335-3588		John K Aana	
Jimmy Tyler	PO Box 812 Waimoa	338-2425		JT	
Tyson Nakamitsu	P.O. Box 109 Waimoa 96796	338-8326		T.N	
Michael Karrathi	P.O. Box 601 Waimoa	337-9927		MK	

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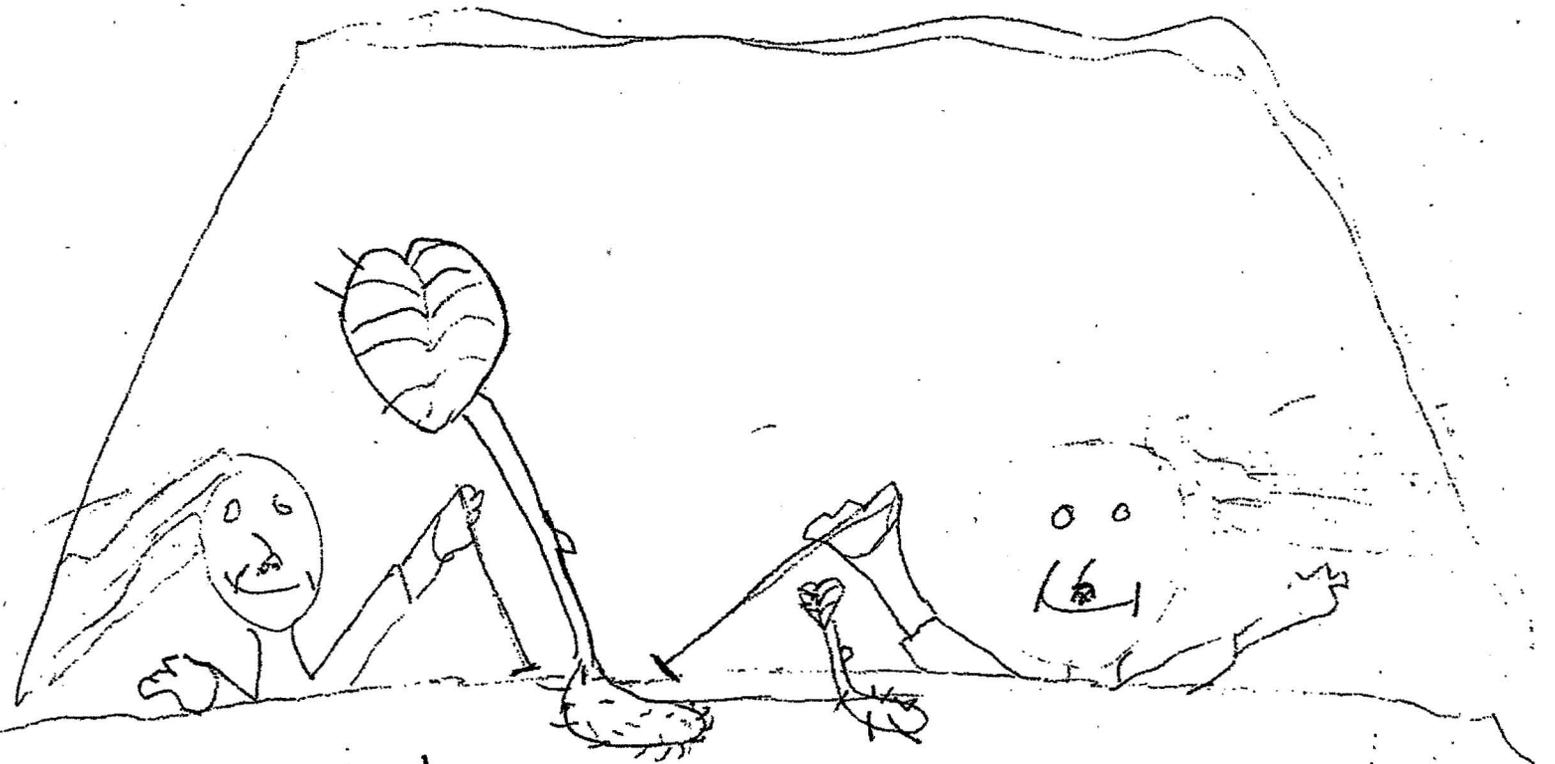
We call for a statewide ban on any research or release of all varieties of genetically engineered taro and a ban on any patents involving taro.

Name (Print)	Address	Phone Number	Email	Signature	Would you like more info?
* Thelma Aana	P.O. Box 1151	338-1810		<i>Thelma Aana</i>	
* WILSON A. AANA	P.O. Box 1151	338-1810		<i>Wilson Aana</i>	
* Kane Turalde	PO Box 1072	651-5984		<i>Kane Turalde</i>	
* <del>John C. Aana</del>	<del>PO Box 342</del>	<del>338-9788</del>		<del>John C. Aana</del>	
* HOKO AANA	P.O. Box 734	335-3508		<i>Hoko Aana</i>	
* Kiyoshi Ueda	P.O. Box 145	334-1430		<i>Kiyoshi Ueda</i>	
* BERNARD MAKUAOLE	Box 212	337-1557			
* RAWLINS CAAR	Box 927 KEKAAHA	337-1428			
* LINDA DUSENBERY	Box 404 WAIMEA	338-1075			
* JOHN K. AANA	Box 734 WAIMEA	335-3508		<i>John K. Aana</i>	

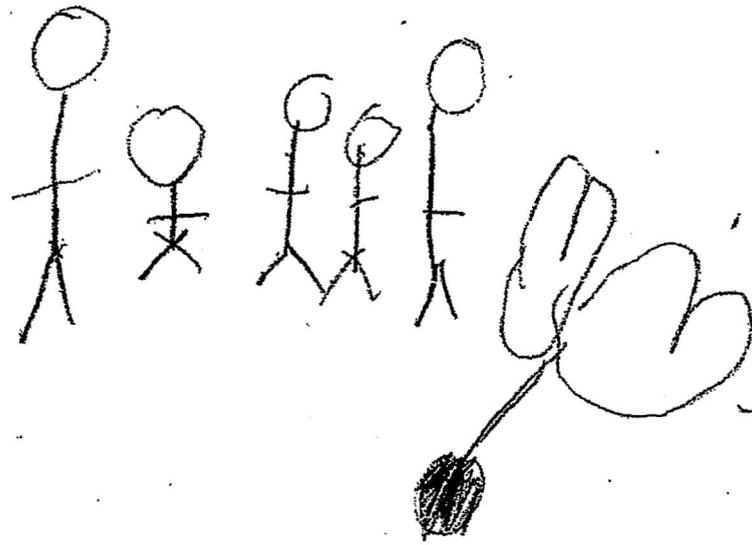
Don't Law makers, we are trying to help Kalo. other  
People want to make Kalo a Super Plant but God thinks  
its perfect. It is the only Food that will  
not give people the GMS. But people are making  
it worse. that's why we need to protect it from Gmo  
pretty soon there won't be any Kalo left for  
the people of Hawaii. Gmo is not  
good for the Kalo and it can kill it. We are trying  
to stop Gmo but the people won't  
listen to us at all. We are running out of  
Kalo. soon there won't be any Kalo at all.  
We need to protect Kalo and not let them  
hurt them. Lets help the Kalo.

LATE  
TESTIMONY

Love,  
BRONSON



Dear Lawmakers, we support SB 709  
Leave kalo the way God made it.  
Some people can only  
eat kalo. It's pure and good. If we  
add things into it, it  
may make you sick  
Kaiea Ahuna



Dear law makers  
I support SB 709 Kalo needs  
to be safe.

It needs to be protected.

We like Hala naka law  
Kapa lili. Kalo is natural.

Halo is strong because  
God gave us. He made perfect  
rice and sacred. If you add  
any stuff, it's not

Good you will get sick.

Aloha Kalo Da Godwin

# ★ Dear Law makers

to keep kalo pure and safe  
kalo can grow strong and green  
and big so it can be healthy  
so if people eat it  
they can be really healthy  
so they can have energy to plant  
and to do other stuff and if the  
kalo don't die and make people sick  
and die so protect the kalo and  
if you take care of the kalo it will  
take care of you and if you give it  
bad stuff the kalo might die and  
give the kalo lots of water or  
if you don't the kalo will  
dry up so give them water every  
day so the kalo can be healthy  
and strong. From,  
Seth Drake Williams

Dear, Senators and Law makers,  
Me and my class would like to  
save Hāloa and not use fertertilize  
and G.M.O. for plants just to make  
a super plant. Kawaihae's School wants  
to save Hāloa. If we don't take  
care of Hāloa he wont take care  
of us. Then when we eat it will make  
us sick. Then people will die, and the  
amount of people will shrink and  
shrink. Please help us save Hāloa.  
God gave us Hāloa as a gift. We are  
going to have to respect God's gift.

To: Law makers  
From: Kaciobian saves

maker  
por Lok Kalo is good Food  
Daha its a healthy Food  
We show Product ALL  
the different kind of  
Kalo We need to keep Kalo  
natural and pure Lets  
make sure we keep Kalo  
safe and good for everyone.  
Kainon k- all i and  
ALLHA

doing  
STOP ~~doing~~ BAD THINGS

SO KALO CAN GROW.

IF YOU DONT STOP KALO  
WONT GROW.

IF YOU DO  
KALO WILL GROW

IF WE DO  
AND KEEP DOING  
IT ALL OVER THE WORLD.

KALO WONT GROW BECAUSE

THEY DIERING SO DONT ~~do~~  
BAD THINGS FOR KALO  
WILL DIER SO MY

CLASS IS TRYING TO NOT DO THAT  
AND SKALO IS THE ONLY FOOD  
THAT NO ONE IS LOGIC TO  
SO THAT IS WHY WE  
SHOULD KEEP KALO SAFE

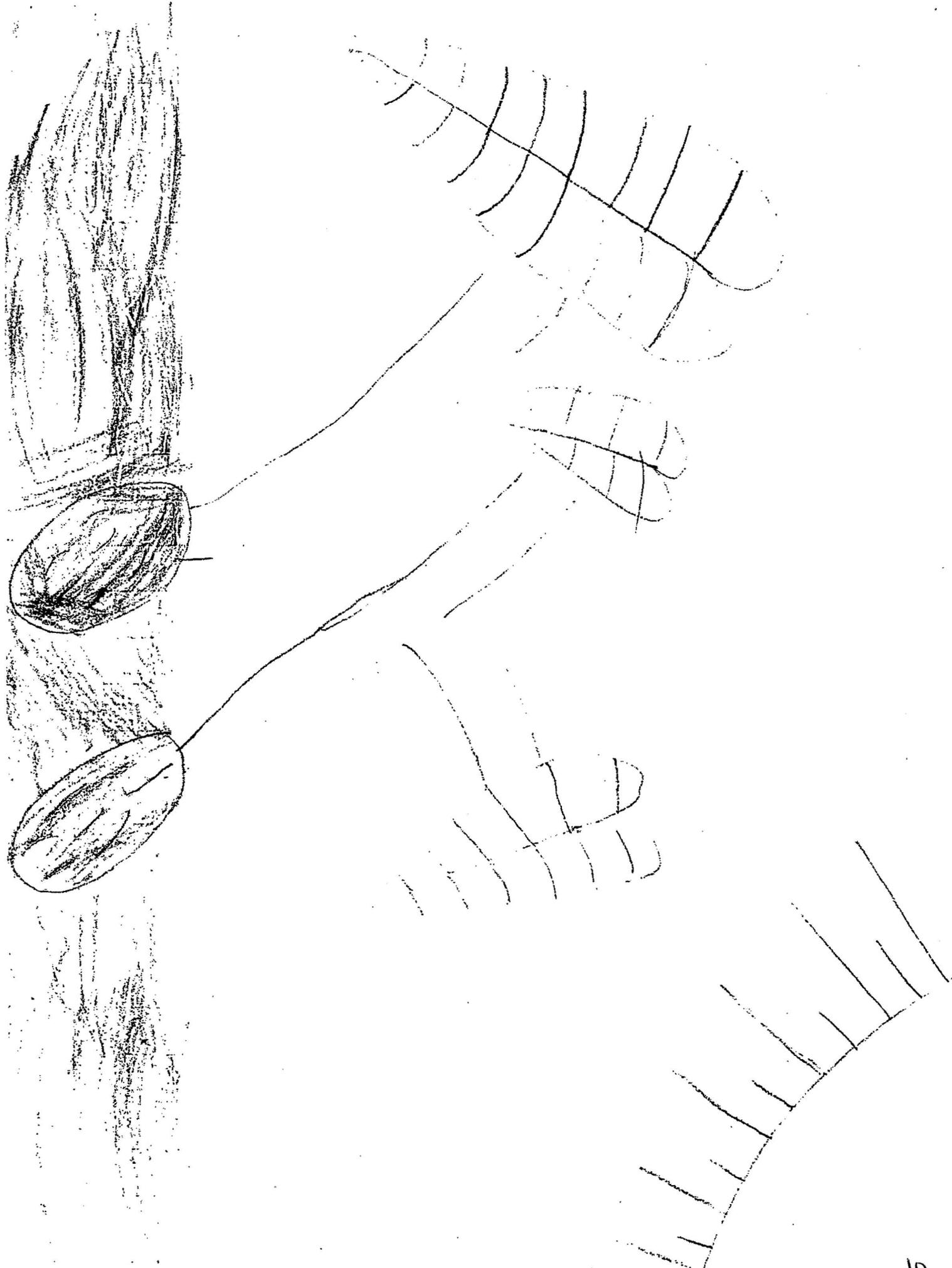
LOVE NOTHG



Dear law make for we CU Apart  
 BB 700. Protect the plant Kalo  
 and the air. If you take care  
 of Kalo he will take care of you  
 so don't give the Kalo 9. m. if you  
 don't give Kalo 6 m. then it is go  
 ing to be fine. Love kamawon 9.

Dear law makers. Please make  
Hajira Safe. GOD made Hajira. Every  
Body can eat it. Kalo is good  
medicine too.  
Please keep Hajira safe and  
keep Hajira healthy. My  
Dad is khalifa. He has a  
kalo kitchen at his house. My  
Dad takes Hajira. Hajira is safe.  
There are many Hajira. Kalo  
GOD gave Hajira to take  
care of it and GOD gave Hajira  
to eat it. Kalo is important to  
everyone in the world. Kalo  
is healthy for all. So let's  
keep it this way forever. Let's  
never put Hajira in Kalo  
ever.

Love Aali



1) We need to help Kalo grow. 2) We need  
to protect Kalo because people keep  
putting stuff into it with g.m.o.  
people are getting sick from it 3)  
if people keep on putting ingredients  
into the Kalo, it won't be safe then  
the people who can eat Kalo safely  
now will get sick. God made it special  
for us to eat 5) Kalo is special because  
it is a pure food and it feeds us. 6) Kalo  
is the only food that nobody is allergic  
to that's why we need to keep it  
pure safe and natural.  
Thank you He is



Dear Lawmakers we should

please take my name

out of the list which is

that is why I understand

the reason for the over-reaction

is that people can be of

some kind of people

People can be of some kind

union take care of it it

will not take care of it and

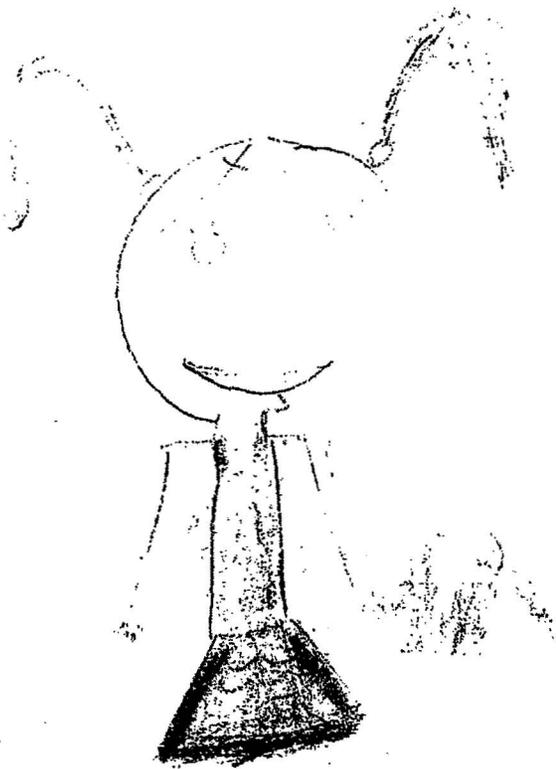
people will be able to do

things that are called guns

please take care of it

Use

Lawmakers



Dear senators and law makers,  
We ~~supp~~ it law CE 7eq. we should  
protect Kalo because Kalo is a very  
good plant because it feeds people and  
they take care of Hāloa. Hāloa is my  
favorite food because it is really healthy  
for me. Hāloa is a Gift from God. We don't  
need to change it because it's already

perfectly pure and safe. So we need you to take  
care of Hāloa then we will take care of you.

Then we will be strong and we like to take  
care of you and it is a work out for us.

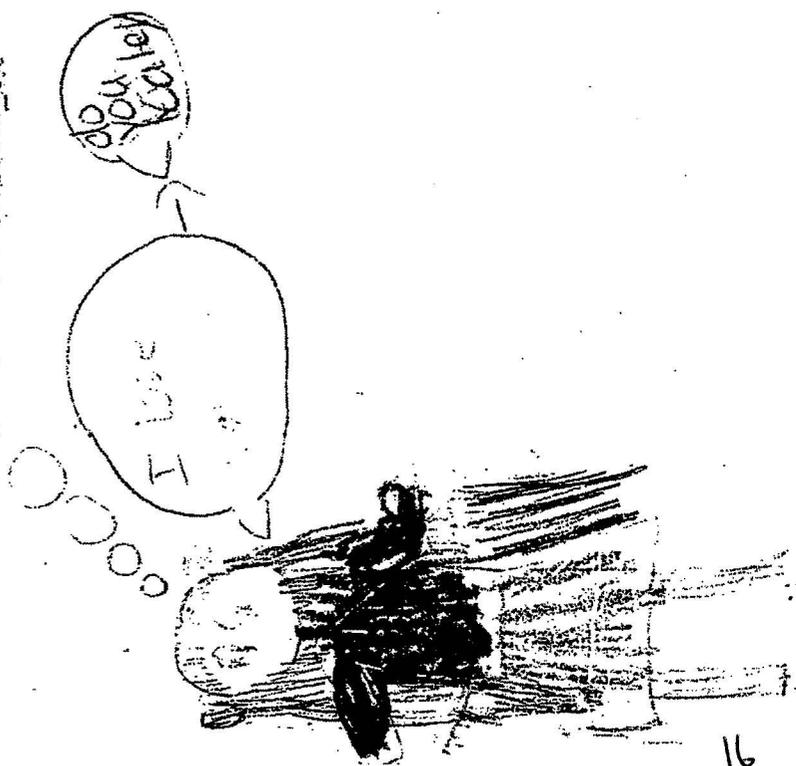
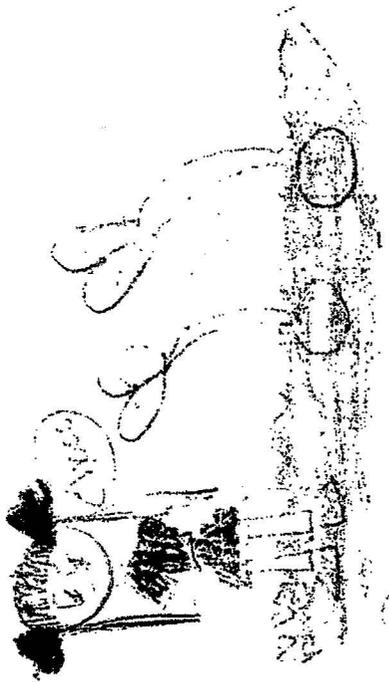
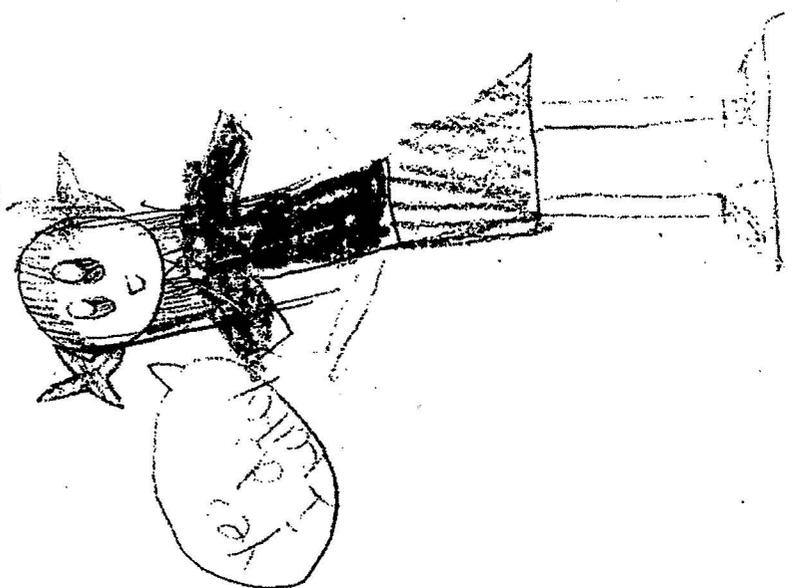
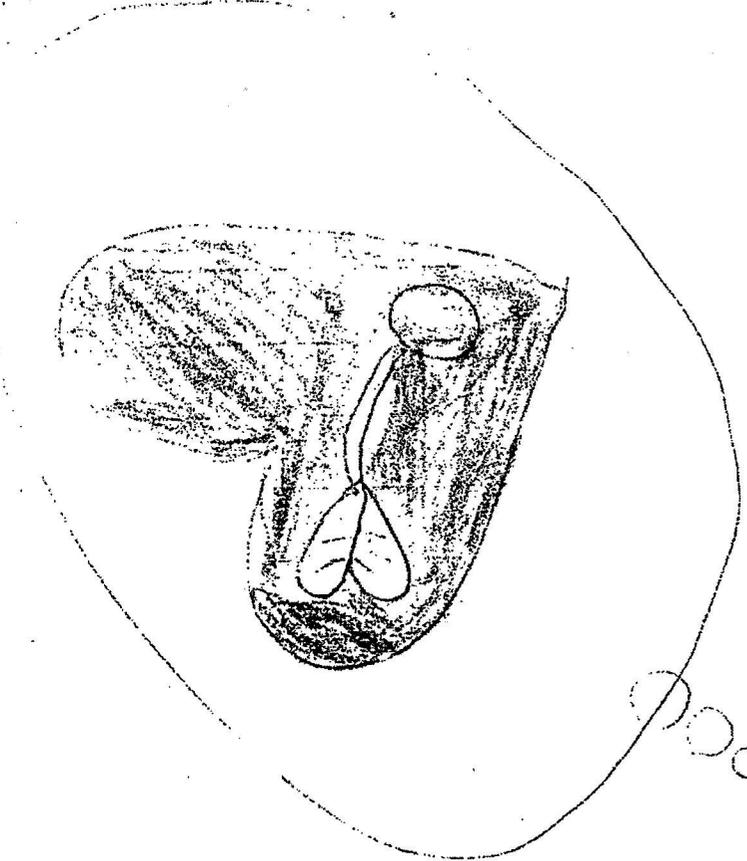
It helps us to do more things. Hāloa is very  
special because it is food and we need

it to live. It is safe. Please give  
us the chance to live. Thank you.

Like it is safe. It is healthy.

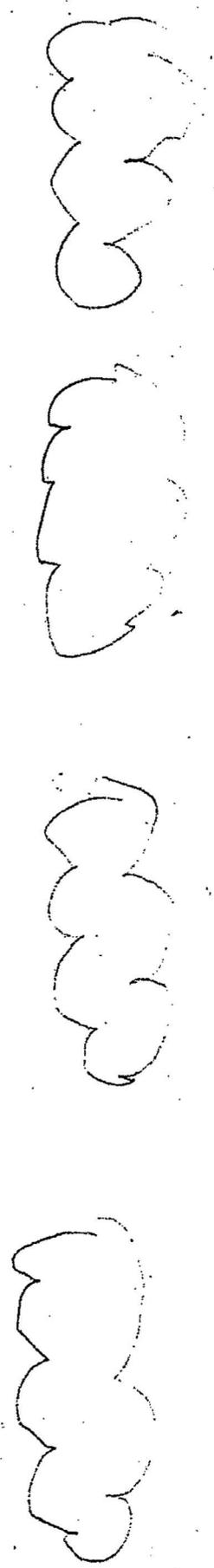
Thank you for your help.

Look in  
the back →



Dear lawmaker, please make a  
law that will stop the people that  
are putting stuff in kolo. Kolo  
is the perfect food. - if people  
are allergic to stuff they can  
kolo. If you put stuff in the kolo,  
when people eat kolo they will get  
sick. Also you don't need to  
change gods food that he  
eat - or us because it is  
perfect and made for us  
to eat and you don't need to  
make gods food better than  
his works is pure safe and  
Healthy.

Aloha: mailani wong



Oluok mai no'olodi i ke kolo.

He lela kaka i na laha i ike

ia ma HD 1663 a kwe noho

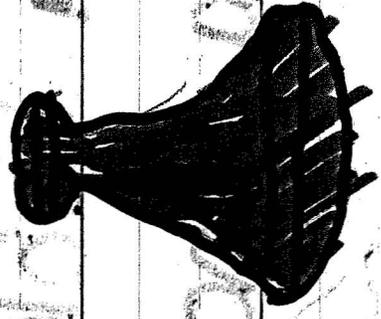
'au i ka pib HP 1226.



HALOA

me ke aloha

RAA Domingo



3/2/09  
Aloha mai kākou,

He haumana au ma ke kula

o Samuel Manaiakalani Kamakou.

Waiwai ke kabo ia'u no ka mea

'O haloa ka'u kupuna. Kū'e au i

ka ho'ohi 'o nā kabo a'pau no ka

mea o'no ka poi/po'i ia'u. E

Aloha mai kōkōu,

He haumana aema ke kula 'o Samuel

Mōnaicakalani Kamakau. Waiwai ke kabo iā

no ka mea he 'ohana iā iā mākou kūe

au no ka mea eole i pōeei ka ho'omaka

iā hebe. E oluolu emai ho'oholi i ke kōa. He

leka kōkōo kēia i nā lōaia i 'ike ia

3/3/08

ma HD 1663 a kūrē nō hōriau i

ka pila HBI 226

Me ke ahoā

Ka waihanu Flores

Aloha mai kakou,

He hua maia au ma ke

Kula o Siamelina Kahi

Kamokou. Maikai kēka'o ia fu

hokamea. E mea hoi ka i loa nou.

Ku'e au i ka hōhōhi ana i ke

kalo.

Handwritten scribbles and marks at the bottom of the page.

e' auobu mai thoolivike

Kalo.

ke leka kälöfo kēia imāse o' dā

lā' ana i' i' kē' a' ma HD1663

a kē' ē' kō' hōi' au i' ka Pila HB126

Me ke Abko i' ip' s' i'

Makana  
Phillips

o' bok

Aloha mai kākou,

He haumana au ma ke kula 'o Samuel

Maniākalani kamakau. Waiwai ke kalo

ia'u nō ka mea kū'i 'ai au i ke kalo no

kōv kailkaina. kū'ē au no kaimēa 'ai'ole

pololei ka hō'omahe aha ia haloa. E 'ō'ō'ō

mai hō'ololi i ke kalo. He leka kākōo keia

inā lā'ana i 'ike 'ia ma HD 1663 a kū'e

nō hō'i au i ka pila HB1226. ♡



Me ke aloha, ♡

Kaliko Nagao - Vallijo



363/A

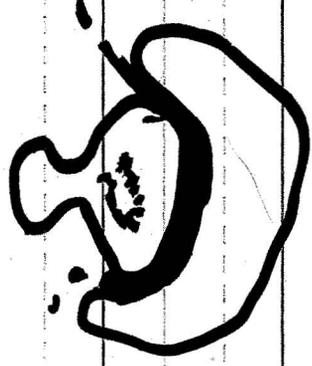
Aloha mai kākou

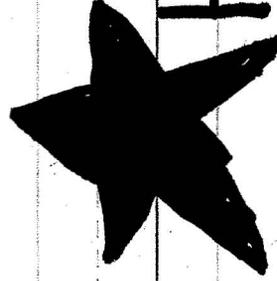
He hounana au ma Kekula'o Samel'm  
ka makau. Waiwai kekalo nōhōmea pono ka ai.

Oloua mai ehō'oli de i ke kalo. he leha kakoo

Keāi hō la'ana i ike iama HD 6630 hū ēnōi

auika Pilo HBI 226.



 Meheala Ha  
Hilina'i

12/10/01  
Aloha mai kākou,

He haumana au ma ke kūla'o Samuel

Manaiakalani Kamakou. Waiwai ke kalo

i'au no ka mea kūi mākou i ke kalo i nā

manawa a pau. Kū'ē au i ka ho'ololi ana

i ke kalo no ka mea e'ole pōlodei ka

ho'omake ana iā halaa. E'olu'olu mai

ho'ololi i ke kalo. He leka kāko'o kēia inā

ka'ana i'ike ia ma HD 1663 a ka'e no

ho'i i ka pila HBI 226.

oia ka'ana i'ike ia ma HD 1663 a ka'e no

ho'i i ka pila HBI 226.

Me Ke aloha

Malialani

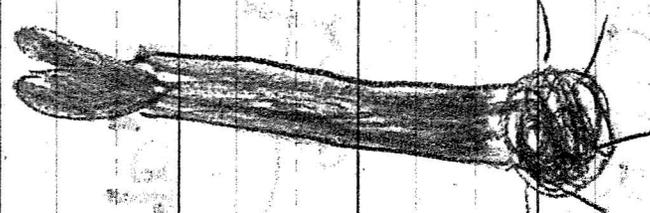
oia ka'ana i'ike ia ma HD 1663 a ka'e no  
ho'i i ka pila HBI 226.



kākōō kēia inā kā'ana i ike ia ma

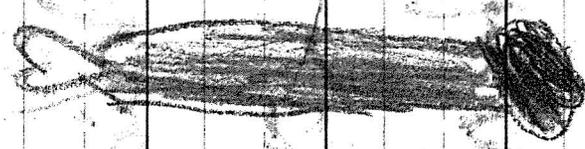
HP 1636 a kū'ē no hāi au

ika pika HP 12-26



Mēkeakaha

Mele ana Lee-Opdinet



Aloha mai kākou,

He haumana au ma ke kula 'o Samuel

Mānaiakalani Kamakau. Waiwai ke kalo ia'ou

no ka mea 'o ke kalo ka 'ōhana. kū'ē au

no ka mea 'o ke kalo ka mea e 'ai ai

nā kanaka Hawai'i a hoomaopopo ke kalo

i na aumākua keho'i o Hāloa. E 'olu'olu

mai hō'olodi i ke kalo. He leka kākō'o

kēia mā'ō'ana i 'ike 'ia me HD1663

a kū'enokū'au i ka pila HB1226.

me ke aloha,

Kahiau

Maka



haka

Aloha mai hākoā,  
Aloha mai hākoā,

He haumāna au ma he Kūia 'o Samuel Mamiakalani

Kamākau. Waiwai he kato iāq no ka mea ano like oia

me kōu hōa hānauyide makemake wai kōu hōa hānauy e

koqō kōna like. Hūē au no ka mea he hiapo o

hāloa iā mākou. E 'ohuola māi hōōli i he kato. He laka

kāko'o keia i nū lā'ana i ike iā māi HD 1663 a

kūē no hōi au i kapila HF 226.

Me ke aloha,

Liloa Oana

Aloha mai Kākou,

He hāumāna 'au ma kula o Samuel Manaia Kalani

Kama Kāu. Waiwai ke Kalo ia'u no ka mea:

o. Hāloa kōmoku 'ōhona hū au me ke Kalo.

E 'ōlu'olu mai ho'ololi ke Kalo. He IeKa Kāko'o

Kēia i nā lā'ana i. Hō kōps a kū'e nō hōi

au i kō pila Hōl226. I Me ke 'aloha

Ompoa ohs

Aloha mai kākou,

He haupāna ma ke kula.

Samuel Maniakalani Kamakau. Vaihāi ke

kalo iau nōka meā hā ihānāi mākou.

Kūe au nō ka māka hiki ke hā i nō kupa.

E'olūhū mai hōhōhō i ke kolo kēka kōkō.

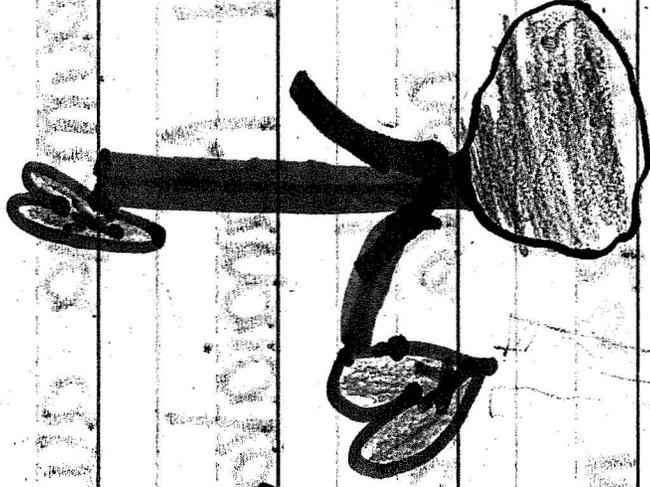
Kēa i na lāna i ike 'io ma HD 1603

a kū'e nō hōi au i ka pila

HBlazab.

Me ke aloha,

Kai Smith



1-4-17 12/10/17  
Aloha emā! kākōpūš! o'osloš! o'kō! o'kō! o'kō!

Hē! hōmānā! pafēma! Ke pōlōiō Samiē!

Manaiakalani Kamakahi / Waimāi ke kabo

ia'u no ka mea kui ai kākōu i ke

kabo no kākōu e ai! o'kū'ē! au'no ka mea

'āole pōlōi i'no hōmānā! hāloq. E

'ōlū'ōlū mai hō'ōlōi i ke kabo.

He leka kalzo'o keiqi'ina k'ama ino'k

sike'ia'ina HD 166309 k'et'ina'no'ho'i

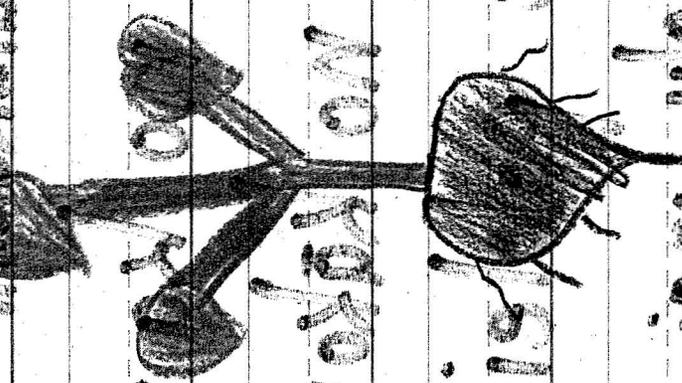
awo'ika pilan HB/202607 ino'pina'no'k

sh'i'wobol'ip'it' p'ama'no'w'oi

new'ol' Me'wke's'walo'ha'eno'wobol'ow'ol'ol'

I'wobol'ok'ama'no'ke'awie'is'wobol'

ow'ol'ol'is'wobol'ow'ol'ol'



Aloha mai kākou,

He haumana au ma ke kula 'o

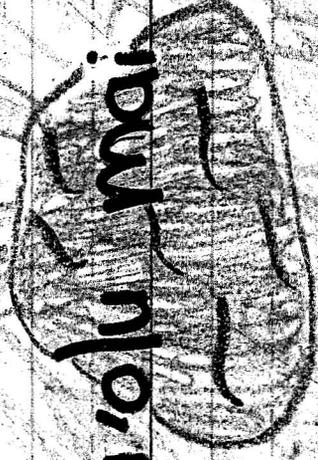
Samuel Mānaiakalani Kamekaha.

Waiwai ke kalo no ka mea 'o Haloa

ka u ohana kua au i ka ho'ololi ana

i ke kalo, 'olu'olu mai ho'ololi

i ke kalo.



He leka kōko'o kēia i nā

lā'ano i ike'ia ma HD 1663

a kū'ē nō hoi au i ka pila

HB/226.

Me Kealoha

ŌPū'a Napoleon-Ahn

Aloha māi kākou,

He haumana au ma ke kula o

Samuel Mancia kalani kamakau.

Waiwai ke ia'u no kame inā

ʻā'ole loaia ke kalo e make ʻana ka

ʻāina me ka ʻole o ka'ai. Kū'e au

nokame ʻa'ohē me e ai ʻānana

holoholona. E'olu'olu mai holo'oli'i

ke'ia ma HD 1663 a kū'e nō

ho'i au ika pila HD 1226

me ke aloha

me ke aloha

me ke aloha

Ka'ula wena Perez

10/04/01  
Abba mai katou, He Haumana au ma ke  
kula o Samuel manaiakalani ka ma kau. Waiwai  
ke kabo ia'u no ka mea i na a'oha ai hiki  
kekabo ke libi ai. Kū'ē au i ke hōddi ana i  
ke kabo e du'olu mai hōddi mai hōddi i ke kabo. He  
leka kakōo keia ina lā'ana i ike ia ma HD  
1663 a kū'e hōhōi au i ka Pili HB 1226

kekai no man