

DAVID Y. IGE
Governor

JOSH GREEN
Lt. Governor



PHYLLIS SHIMABUKURO-GEISER
Acting Chairperson
Board of Agriculture

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 FAX: (808) 973-9613

TESTIMONY OF THE DEPARTMENT OF AGRICULTURE
BEFORE THE SENATE COMMITTEE ON WAYS & MEANS

FEBRUARY 25, 2019
10:30 A.M.
CONFERENCE ROOM 211

SENATE BILL NO. 1436 SD1
RELATING TO AGRICULTURE

Chairperson Dela Cruz and Members of the Committee:

Thank you for the opportunity to present testimony on Senate Bill 1436 SD1 that requires the Department of Agriculture to conduct a study on the feasibility of authorizing the Department to establish and designate “ag-tech” zones in the Kalihi-Palama, Kakaako, Moanalua, and the Waianae coast areas. The Department is to request the assistance and resources of the departments of Land and Natural Resources, and Business, Economic Development, and Tourism; the University of Hawaii; the Hawaii Community Development Authority; and the City and County of Honolulu. There is a two-year appropriation and the feasibility study is to be submitted to the 2020 Legislature. The purpose of an “ag-tech” zone is to promote technological innovation in agriculture to increase food production in a more effective and environmentally responsible way that also contributes to State revenues. The Department of Agriculture offers comments.

The Department is concerned about redirecting our very limited departmental resources away from current duties and responsibilities to undertake the many tasks specified in this measure in a comprehensive and realistic manner. The Department supports all forms of agricultural production including small-scale niche operations. The Department supports the development and integration of technology to all agricultural practices to help reduce irrigation needs, increase yields and quality, and to reduce the



need to apply soil supplements and pesticides. While some crop and animal production and businesses prosper in their unique situations in urban Honolulu, the resources that are to be allocated to the endeavor expressed in this bill should reflect its likely contribution to Hawaii's overall food self-sufficiency.

A quick online search on urban farming and agriculture technology in Honolulu shows that MetroGrow in Kakaako grows lettuce and micro greens for restaurants and organic food retailers. The Institute for Human Services in Iwilei has a rooftop aquaponics and hydroponics operation that produces 100 pounds of leafy vegetables per month and about 50 pounds of tilapia every two months. Most of their product is made into meals for their clients. Smart Yields is a technology startup that seeks to improve small to medium sized indoor farms increase productivity by combining field environmental sensors with real-time data monitoring, and digital record-keeping to correlate crop performance with environmental conditions.

Relevant to the purpose of this bill and its application in urban areas of Honolulu is a 2016 report from the Center for a Livable Future at Johns Hopkins University. The report concluded that growing food in cities has benefits, and urban farming plays a role in community health and development, but it is insufficient as a unique tool to address food insecurity and dietary quality.

Thank you for the opportunity to testify on this measure.



Corey Rosenlee
President
Osa Tui, Jr.
Vice President
Logan Okita
Secretary-Treasurer
Wilbert Holck
Executive Director

TESTIMONY BEFORE THE SENATE COMMITTEE ON WAYS AND MEANS

RE: SB 1436, SD1 - RELATING TO AGRICULTURE.

MONDAY, FEBRUARY 25, 2019

COREY ROSENLEE, PRESIDENT
HAWAII STATE TEACHERS ASSOCIATION

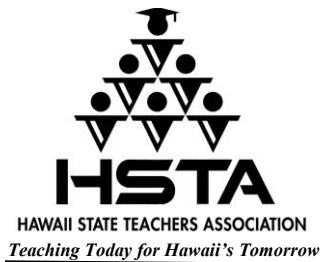
Chair Dela Cruz, and Members of the Committee:

The Hawaii State Teachers Association **supports SB 1436, SD1**, relating to agriculture.

This purpose of this Act would be to require the Department of Agriculture to conduct a feasibility study on the establishment of ag-tech zones within the City and County of Honolulu and appropriate funds for conducting the feasibility study. It also would also protect and expand Hawaii's agricultural production for in-state consumption and export; create a new industry that recognizes and responds to the challenges of the future of food production in context of population growth, recruit and train Hawaii's youth for the new agricultural economy, and promote vertical farming techniques that reduce the use of water and pesticides. These goals are for our future. Our students are our future and exploring the feasibility of ag-tech in Hawaii will help us expand the agricultural careers in our state that will be available for our students when they become adults.

With limited land in our state, we need to study the feasibility of vertical farming, such as AeroFarms in New Jersey, with its sixty-nine thousand square foot facility, has demonstrated the potential of vertical farming to grow healthy fruits and vegetables and to spur economic activity at the same time. According to Cornell University and the University of California, "Every year, AeroFarms has the potential to produce up to thirty harvests and yield two million pounds of greens. In comparison, a traditional outdoor farm in New York state produces about three lettuce harvests in a good year."

We need to restore the balance in our public educational system in Hawaii. Hawaii's Career and Technical Education programs need to be expanded to provide greater opportunity to prepare young people to design their own futures. The agriculture workforce needs have changed over time, and expanding our ag-tech industry, and



Corey Rosenlee
President
Osa Tui, Jr.
Vice President
Logan Okita
Secretary-Treasurer
Wilbert Holck
Executive Director

exploring the feasibility of vertical farming is ideal for our islands as it incorporates sustainability in agriculture that will help Hawaii. According to the Hawaii Agriculture Skill Panel Report from the Workforce Development Council, the average age of Hawaii's commercial farmers is over 60 years old. Interest in agriculture is waning in our youth and this is worrisome to the industry and to the economy and self-sustainability of our state.

There is a common misconception that farming is a low-paying, low-skilled trade. Our youth need to understand that there are a variety of careers within the agricultural industry that need to be filled. They need more workers that are not only technical in nature, but also those who will help to solve the problems listed in the report such as developing new technology and developing ideas for innovation that are critical components to the growth and expansion of the agricultural industry in Hawaii, especially in the areas of sustainability.

Passage of this bill would help provide our youth with opportunities to gain the knowledge they need to promote ag-tech career paths as a possible career choice.

Hawaii, like most states, is working toward the goal of getting their students 'college-and career-ready,' but CTE experts are concerned that what we mean by 'career-ready' is not always clear, and the supply of quality career-technical education programs has not kept pace with demand. Students must have several options available to them in order to explore a variety of career options, one of them being in innovation in agriculture. This bill supports these efforts.

According to a national study, *The Shocking Truth About The Skills Gap* (2015), only 25 percent of polled job seekers reported receiving career path in high school, and 41 percent said they wished they had received more guidance.

Because a robust education involves developing all aspects of learning for our ever-changing world including the changes in agriculture, the Hawaii State Teachers Association asks your committee to **support** this bill.



Testimony of
MetroGrow Hawaii
Kerry Kakazu, Ph.D., President

To the
Senate Committee on Ways and Means
Senator Donovan Dela Cruz, Chair
Senator Gilbert S.C. Keith-Agaran, Vice Chair

DATE: Monday, February 25, 2019
TIME: 10:30 a.m.
PLACE: Conference Room 211
State Capitol
415 South Beretania Street

Chair Dela Cruz and Members of the Committees:

Measure: S.B. No. 1436

Title: RELATING TO AGRICULTURE

Description: Requires the department of agriculture to conduct a feasibility study on the establishment of ag-tech zones within the city and county of Honolulu. Appropriates funds to conduct the feasibility study.

Position: MetroGrow Hawaii is in strong support of this measure.

Testimony: Thank you for consideration of S.B. 1436 to authorize and fund a feasibility study for ag-tech zone development in Honolulu. I am the owner and president of MetroGrow Hawaii, the first indoor hydroponic vegetable farm in Hawaii and am in full support of this measure. As the measure recognizes, vertical farms are able to produce vegetables in a fraction of the space and with approximately 5 - 10% of the water required for traditional agriculture. The enclosed environment of vertical farms allows them to control light, temperature, humidity and other variables to optimize the growing conditions for crops and thereby maximize productivity and quality. The controlled environment also negates unpredictable weather conditions, minimizes pest and disease problems and the need to use pesticides, and prevents contamination from chemical or biological agents.

Decreases in arable land, changing climate, reduction of fresh water availability and the tremendous pest pressures in Hawai'i necessitate research and development of alternative forms of agriculture. Vertical farming and other forms of protected agriculture that incorporate technological innovation can supplement traditional growing systems to increase local food production. Technology driven growing operations are capital and energy intensive so government support to encourage and incentivize these

350 Ward Ave. Suite 106-13
Honolulu, HI 96814
<http://metrogrowthawaii.com>

businesses are essential to their success. The establishment of ag-tech zones is an important step to provide that support.

Our state's goal of food self-sufficiency is laudable and I look forward to increased funding for our existing agricultural infrastructure to support current and future traditional farming. However, new technologies to increase agricultural productivity in a sustainable fashion have to be incorporated into our food systems in order to succeed. It will require "out of the box" thinking and innovative new companies to rapidly move our food production systems forward. I appreciate that funding for new initiatives is difficult when existing programs need additional resources, but diversification of the agricultural production system cannot be ignored. The investment suggested by this measure is a small, but critical step toward our future food production goals.

I applaud the legislature for their recognition of the benefit that new agricultural paradigms can provide to our state and strongly encourage that this development continues with the passage of S.B. 1436. MetroGrow Hawaii will be happy to provide any assistance to these efforts. Thank you very much.

LATE



O`ahu County Committee on Legislative Priorities (OCCLP)

COMMITTEE WAYS AND MEANS

Senator Donovan M. Dela Cruz, Chair
Senator Gilbert S.C. Keith-Agaran, Vice Chair

DATE: Monday, February 25, 2019

TIME: 10:30 a.m.

PLACE: Conference Room 221
State Capitol

RE: SB 1436, SD 1, Relating to Agriculture

To the Honorable Donovan M. Dela Cruz, Chair; the Honorable Gilbert S.C. Keith-Agaran, Vice Chair; and Members of the Committee on Ways and Means:

I am Melodie Aduja, Chair of the O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i. Mahalo for this opportunity to submit testimony on SB 1436, SD 1. The O`ahu County Committee on Legislative Priorities ("OCCLP") hereby submits its testimony in **SUPPORT of SB 1436, SD 1, relating to Agriculture.**

SB 1436, SD1, provides that the department of agriculture conduct a study on the feasibility of authorizing the department to establish and designate ag-tech zones within the city and county of Honolulu, specifically the Kalihi-Palama, Kaka'ako, Moanalua, and Waianae coast areas, wherein technological innovation in agriculture will be used to increase food production in a more effective and environmentally responsible way that also contributes to state revenues.

SB 1436, SD 1, further provides that in conducting the study on the feasibility of ag-tech zones, the department of agriculture shall be guided by the following goals and objectives: (1) to protect and expand Hawaii's agricultural production for in-state consumption and export; (2) to create a new industry that recognizes and responds to the challenges of the future of food production in the context of population growth; (3) to recruit and train Hawaii's youth for the new agricultural economy; and (4) to promote farming techniques that reduce the use of water and pesticides.

Agriculture in our state must be preserved and its future strengthened. Sufficient prime agricultural lands must be maintained for the health, economic well-being and sustenance of the

people. DPH believes in an integrated approach to agricultural innovation and sustainability. DPH encourages the responsible development of ocean resources and aquaculture to achieve sustainability in our State of our marine resources an ensure and improve the health of our reef and marine life.

This approach includes, but is not limited to, the adoption of the Native Hawaiian concept of ahupua`a, an integrated approach to land management. This could also include development of economic, land and ocean use policies that foster sustainable crops both for local consumption and for export, polices to foster agriculture-related infrastructure at shipping points, and increased inspection to protect against invasive species and to encourage reduced holding times. We need to ensure food safety, strive towards food security an strive to set the highest standards for food quality and nutrition. *Democratic Party of Hawai`i Platform (2018), p. 9, ln. 5-16.*

For the foregoing reasons, i.e., to support the development of economic and land use policies that foster sustainable crops both for local consumption and for export, OCCLP supports SB 1436, SD 1, and urges its passage out of the Committee on Ways and Means.

Mahalo nui loa
Me ka `oia`i`o

/s/ Melodie Aduja

Melodie Aduja

Chair, O`ahu County Committee on Legislative Priorities of the Democratic Party of Hawai`i

Ph. (808) 258-8889

Email: legislativepriorities@gmail.com