

JAN 21 2010

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# SENATE CONCURRENT RESOLUTION

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REQUESTING A FEASIBILITY STUDY ON ESTABLISHING VERTICAL FARMS IN  
THE STATE.

1           WHEREAS, if climate change and population growth progress  
2 at their current pace, in roughly fifty years traditional  
3 farming practices will no longer be possible; and  
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5           WHEREAS, the floods and droughts that have come with  
6 climate change are wreaking havoc on traditional farmland,  
7 including massive loss of crops and devastating loss of topsoil;  
8 and  
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10           WHEREAS, the amount of arable land per person decreased  
11 from about an acre in 1970 to roughly half an acre in 2000, and  
12 is projected to decline to about a third of an acre by 2050; and  
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14           WHEREAS, traditional soil-based farming claims seventy per  
15 cent of the fresh water used in the world for irrigation  
16 purposes, and the runoff is contaminated with pesticides,  
17 herbicides, and fertilizers; and  
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19           WHEREAS, viable alternatives to traditional soil-based  
20 farming practices exist and can be used in urban settings for  
21 vertical farming; and  
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23           WHEREAS, hydroponics allows plants to grow in a water and  
24 nutrient solution, while aeroponics grows plants in a nutrient  
25 laden mist, and both methods use approximately ninety per cent  
26 less water than traditional techniques; and  
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28           WHEREAS, a vertical farm would behave like a functional  
29 ecosystem, in which waste was recycled and the water used in  
30 hydroponics and aeroponics was recaptured by dehumidification  
31 and used again, these technologies are being used in controlled  
32 environment agriculture facilities but have not been integrated



1 into a seamless source of food production in urban high-rise  
2 buildings; and  
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4 WHEREAS, urban high-rise buildings, upper floors of  
5 apartment complexes, schools, and restaurants can house vertical  
6 farms to supply a continuous quantity of fresh vegetables and  
7 fruits to city dwellers; and  
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9 WHEREAS, vertical farms would produce crops year-round that  
10 contain no agrochemicals, and reduce fossil fuel use and  
11 greenhouse gas emissions by eliminating the need for heavy farm  
12 machinery and trucks that deliver food from farm to fork; and  
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14 WHEREAS, vertical farms would bring a great concentration  
15 of plants into cities which would absorb carbon dioxide produced  
16 by automobile emissions and give off oxygen; now, therefore,  
17

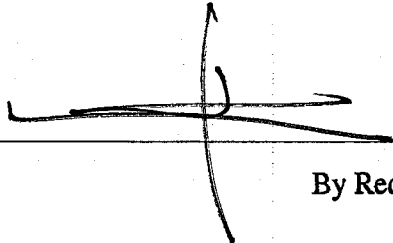
18 BE IT RESOLVED by the Senate of the Twenty-fifth  
19 Legislature of the State of Hawaii, Regular Session of 2010, the  
20 House of Representatives concurring, that the Department of  
21 Agriculture is requested to conduct a feasibility study on the  
22 establishment of vertical farms in the State; and  
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24 BE IT FURTHER RESOLVED that the Department of Agriculture  
25 is requested to consult with the counties in the development of  
26 the feasibility study; and  
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28 BE IT FURTHER RESOLVED that the Department of Agriculture  
29 submit a report on its findings and recommendations, including  
30 any proposed legislation, to the Legislature no later than  
31 twenty days prior to the convening of the Regular Session of  
32 2011; and  
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34 BE IT FURTHER RESOLVED that certified copies of this  
35 Concurrent Resolution be transmitted to the Chairperson of the  
36 Board of Agriculture and the county mayors.  
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39

OFFERED BY:

  
By Request

