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Applied Red Palm Weevil Farming

得獎獎項

四等獎

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Abstract

The Red Palm Weevil is a kind of pest commonly found in all coconut and palm growing areas, causing considerable damage to palm trees. The pest at larva stage was found to be a popular food dish for both local people and visitors and has been commercially bred for consumption. This project aimed to develop a farming method to increase the quantity of red palm weevil larvae for commercial use, instead of the natural farming which fed the insects on rare natural materials. Firstly, the most appropriate food formula to boost the multiplication of red palm weevil using local raw materials was determined. Four food formula were developed: 1.combination of palm leaves, coconut fibers, and pig food, 2.palm leaves, coconut fibers, and rice bran,3. palm leaves, coconut fibers and cassava,4. a combination of crushed palm leaves and coconut fibers. The mixture ration were 1:1:1 for formula1-3 and 1:1 for formula 4. Equal number of the adult weevils were raised in the different food formula, the length and weight of the larvae obtained were measured every week for seven weeks. The gross weights and the effectiveness of the red palm weevil farming were analyzed using the feed conversion ratio (fcr), the daily growth rate, and the percentage increase in weight. It was found that. the weevils raised with food formula 1 yielded the larvae which grew the fastest with highest effectiveness. The most appropriate ratio of the food mix which yielded the satisfactory larvae size was determined to be 1:1:1 3.Next, experiment was carried out to improve the quality of the insect larvae for consumption. The larvae produced had some distinct smell which some consumers do not like.To improve the smell, the larvae were fed with the selected food mix added with minced fresh Pandanus leaves 2 days prior to consumption. Food mix with coconut fibers instead of Pandanus were used as control. Consumers were most satisfied with the larvae fed with added

Pandanus leaves. Analysis of the food mix, larvae and Pandanus leaves found the common compound, Coumarins. In conclusion, our project found a suitable system of red palm weevil farming an alternative to conventional method which farmed the pest on cut palm trees. The new method resulted in the best yield of insect larvae with the highest consumer satisfaction and reduce destroying natural resource.

評語

We welcome and thank your attending 2012 Taiwan International Science Fair. We wish you may continue your interesting project in the future. Your research in insect food fomula may be helpful in control of weevils.