

UNIVERSITI TEKNOLOGI MARA

**AGE STRUCTURE OF *Sitophilus*
Oryzae USING FRAGRANT RICE,
BASMATI RICE, BROWN RICE AND
LOCAL WHITE RICE**

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of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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ABSTRACT

Stored product insect cause more than one fifth of total damages in rice in developing countries commonly and one of the insect that contributes to this problem is rice weevil *Sitophilus oryzae*. The huge amount of loss could be associated with their biology because their all four larval stage and pupal stage occurred inside the grain. Hence causing their control and elimination are very difficult. Thus this thesis focuses on the rice weevil *S. oryzae* age structure relationship with morphological characteristics based on the amount of nutrient used which might gain information on the preference and development of rice weevil *S. oryzae*. Through that, a new process can be developed later to protect the food grain in a better way. The tests were conducting by rearing this species in the four types of rice and were measured according to their age. Rice weevil *S. oryzae* were exposed to fragrant rice, basmati rice, brown rice and local white rice. Results shows there is no significant difference between each type of rice, particularly on the 1st until 28th day range. However, the growth development of rice weevil *S. oryzae* are correlated with the types of nutrient used in this study. It is found that rice weevil *S. oryzae* which that reared in brown rice shows the fastest growth development compared to the other type of rice.

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