

## Host preference of *Tribolium castaneum* (Herbst) on six kinds of flour

<b>Title</b>	Host preference of <i>Tribolium castaneum</i> (Herbst) on six kinds of flour
<b>Author Order</b>	2 of 2
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<b>Abstract</b>	<p>The red flour beetle, <i>Tribolium castaneum</i> (Herbst) is a major pest of flour from various grains. The infested flour is discoloured and will emit a disagreeable odour due to the secretion of benzoquinone from the insect's abdominal glands. Considering the economic losses effected by <i>T. castaneum</i>, new alternative control measures are needed for this pest. This study sought to determine the host preferences of <i>T. castaneum</i> from amongst six kinds of flour to assess their vulnerability to infestation. The research was conducted in the Plant Pest Laboratory, Department of Plant Pests and Diseases, Faculty of Agriculture, University of Brawijaya. The host preferences of <i>T. castaneum</i> were examined using a six-arm olfactometer. Feeding preference tests were performed for a duration of 12 hours at 200 ml/minute airflow in each chamber-arm, followed by oviposition preference observations one week later. Feeding preference was calculated for the total pool of adults observed, segregated by sex, whereas oviposition preference was calculated as the number of eggs laid. Flour nutrition (proximate composition, phenolic content, and riboflavin content) were analyzed. Our results showed a feeding preference by <i>T. castaneum</i> for bran, soy and tapioca flour was greater over wheat, corn, and white gelatinous rice flour, while for oviposition, bran flour was the most preferred.</p>
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