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## **Rodent Management – Session 1**

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### **The occupancy of barn owl in artificial nest boxes to control rice field rats in Yogyakarta Indonesia**

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To overcome rat problem in Indonesia, we implement an integrated pest management. One of the components implemented was a biological control using barn owls by constructing barn owl nest box in rice crop. The goal of the study was to evaluate occupancy of barn owl in an artificial nest box, rat population and rat damage. The research was conducted in three locations by allocating 10 nest boxes randomly in Yogyakarta in 2016. A separate location was selected as a control without barn owl nest boxes with 5 km distance. The assessment of their occupancy was monitored by the presence of the barn owl in their nest box (egg, chick and adult), used nest and their feces. An active burrow method was performed to monitor the rat population along 100 m of irrigation channel bank with three replicates. Rat damage intensity was estimated by sampling 150 tillers randomly (Aplin et al., 2003) then counting the total tiller number and cut tillers. The result indicated that 20% of nest boxes were occupied by the barn owl, 40% of them were ever occupied, and the rest 40% were never occupied. About 44% of active burrows was found with an average of one rat per 2 m length of the irrigation channel bank. The rat damage area was accounted for 44% with 6.5% for their intensity and was no significantly different to the control site. Constructing of barn owl nest boxes in rice fields did not affect the population of the rice field rat or their damage.

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# Julius-Kühn-Archiv

Jens Jacob, Jana Eccard (Editors)

6<sup>th</sup> International Conference of Rodent  
Biology and Management  
and  
16<sup>th</sup> Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



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