Ecologically-based rodent management 20 years on - progress, challenges and where next

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Ecologically-based rodent management (EBRM) was first formulated in 1997, and has been a key approach to tackle important rodent impacts globally. Food security is a major concern in developing countries, where a 5% reduction of rodent losses on cereal staples could prevent 280 million people from being undernourished. In developed countries and oceanic islands, rodents are an important conservation issue. Alas, the conservation issue is not on the radar screen for most developing countries. Another major rodent issue in both developing and developed countries is that rodents are an important avenue for zoonoses in urban and rural environments. This paper will focus on progress and challenges in agricultural systems. Ecologically-based rodent management (EBRM) was developed based on adaptive research conducted to manage eruptions of mouse populations in Australian wheat fields, and chronic and acute annual losses by rats in Southeast Asian rice fields and in mixed cropping systems in eastern Africa where maize is the dominant crop. We will review progress of EBRM over the past 20 years with brief case studies from Africa, Asia, Australia and Europe and provide examples how EBRM helps to minimize rodent abundance, losses and the use of rodenticides. Although there has been strong progress, there is still much to be done. Further intensification of agriculture coupled with an increase in occurrence of extreme climatic events are likely to lead to more rodent outbreaks globally. Also minimum tillage agriculture and the re-designing of agricultural lands to include more corridors and increased heterogeneity at a landscape scale may lead to resurgence in chronic rodent problems both pre- and post-harvest. We also need to pay more attention to the extent and economic impacts of rodent borne diseases on smallholder communities.
Jens Jacob, Jana Eccard (Editors)

6th International Conference of Rodent Biology and Management and
16th Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts
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Bibliografische Information der Deutschen Nationalbibliothek
Die Deutsche Nationalbibliothek verzeichnet diese Publikation

ISSN 1868-9892
ISBN 978-3-95547-059-3
DOI 10.5073/jka.2018.459.000

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Printed in Germany by Arno Brynda GmbH, Berlin.