

Foreword

Insects: an overlooked food source

Globally, entomophagy or the practice of insect consumption is carried out by more than 2 billion people and approximately 2000 species are reported as food. Across Africa, commonly consumed species include beetles, caterpillars, grasshoppers, locusts, crickets, termites, cicadas, wasps and ants. This sustainable food source should be managed in the interest of food and nutrition security. Mounting scientific evidence suggests that insects are not inferior to other sources of protein such as fish, chicken or beef. In fact, the nutritional value of insects compares favourably with that of meat and fish (Musundire *et al.*, 2014; Paul and Dey, 2014). However, most edible insects are only available seasonally and have a short shelf life; thus, various harvesting and preservation methods are practised.

To further popularize edibility of insects, there is the need for research for development (R4D) activities to address the entire edible insect value chain, from production to legislation to consumer attitudes. Incidentally, some of the top 10 ‘most-cited’ *International Journal of Tropical Insect Science (IJT)* papers in 2014 were on edible insects or on laboratory diet for rearing insects (Gahukar, 2011; Singh, 1983).

Indeed, there is a mounting effort to popularize insects as a potential substitute protein source for food and feed. Several forthcoming or concluded conferences (and related initiatives) will help change attitudes towards entomophagy (see below). These endeavours point to a bright future for entomophagy and insects as an alternative food and feed.

- In 2008, the Food and Agriculture Organization (FAO) of the United Nations organized a workshop in Chiang Mai, Thailand, titled ‘Forest Insects as Food: Humans Bite Back’, which focused on edible insects in the Asia-Pacific region. More commercial development of insects as food sources was encouraged, and the follow-on FAO report revealed insects as a much more efficient source of protein than beef.
- In 2014, Wageningen University and the FAO organized the first major international

conference on insects for food and feed titled, ‘Insects to Feed the World’. It was held in Wageningen, The Netherlands, and brought together over 450 participants from 45 countries to discuss edible insect research, business and policy. The consensus was that insects are a viable solution for the protein-deficit problem. A new *Journal of Insects as Food and Feed* was also launched at the conference.

- Also in 2014, The Future Food Salon Group in collaboration with the Montreal Space for Life Insectarium hosted the first multidisciplinary conference on edible insects in North America titled ‘Eating Innovation: The Art, Culture, Science and Business of Entomophagy’ in Montreal. It focused on the research, promotion, distribution, culinary preparation and business of insects as food. The Insectarium is one of the leading museums dedicated to insects in North America. The next conference will be held in Detroit in 2016.
- The African Association of Insect Scientists (AAIS) will host a symposium on edible insects during its 21st Scientific Conference on the theme ‘Impacts of Climate Change on Insects in Africa: Opportunities and Threats’ to be held from 19 to 23 October 2015, in Cotonou, Benin.
- The International Centre of Insect Physiology and Ecology (*icipe*) is a partner institution of a global consortium, GREEiNSECT – insects for green economy. The lead institution is the University of Copenhagen, Denmark. GREEiNSECT brings together a multidisciplinary consortium of public, private and international partners to research the potential of insects for food and feed as an instrument in developing a pro-poor green economy in Kenya. The knowledge generated by this consortium will be disseminated to national and international stakeholders.
- INSFEED – Insect Feed for Poultry and Fish is an *icipe*-led newly funded International Development Research Centre project, which proposes to improve income-generation, food

and nutritional security in Kenya and Uganda by developing insect-based feeds for sustainable, safe and cost-effective poultry and fish production.

- The *IJT* plans to publish a Virtual Issue on Insects as Food and Feed as well as a special issue arising from the AAIS conference. In addition, we now invite interested scientists to propose suitable review papers on the topic, which will be included in regular issues of the journal.

At the end of my first year as Editor-in-Chief of *IJT*, I would like to thank our Associate Editors, editorial board members and reviewers, and the teams, both at *IJT* and Cambridge University Press, as well as readers, for support to the *IJT*. I look forward to working with all of you in moving forward, as we continue to publish research content in insect science and its application.

Segenet Kelemu
Editor-in-Chief

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