We must decolonise the science and industry of insects as food and feed

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OPEN ACCESS

EDITORIAL

Colonialism has played a major role in the history of insects as food and feed. Early descriptions of insect foods written by people from colonial powers – among them Linnaeus, founder of modern taxonomy, who noted the deliciousness of *Rhynchophorus phoenicis* larvae (Linnaeus, 1771, quoted in Bodenheimer, 1951) – are positive. However, in the late 19th and early 20th centuries, colonial policy towards food was to reject it or to transform it using European cooking methods (Singley, 2012), and negative depictions of insect foods are common and often presented with racist undertones (for examples see Bergier, 1941). The apprehension and disgust that many Western and non-Western consumers express towards insects as food (House, 2016; Vanhonacker *et al.*, 2013; Verbeke, 2015) are rooted in this colonial legacy (Defoliart, 1999; Yen, 2009).

Colonialism has not only shaped attitudes towards insect foods, but has also contributed to structural inequalities in industry and science that can be seen in the field of insects as food and feed (Müller *et al.*, 2016). We see evidence of this in terminology. The term ‘entomophagy’ has negative, othering connotations (Evans *et al.*, 2015). The term ‘edible insect’ may reinforce the assumed status of insects as an inedible category – we do not use the classifier ‘edible bird’ when talking of chicken.

We also see evidence of othering in the media. Insects are frequently exoticised by the media, or portrayed as a modern food trend. Their association with the ‘paleo diet’ implies that they are a throwback to a stone age past; their portrayal as a food we may one day need to eat in order to survive implies that they are a necessary evil, a famine food.

In the science of insects as food and feed, a great amount of valuable work takes place in the Global South. While this provides rich opportunity for more equitable partnerships between the Global North and Global South, the reality is that research questions are frequently generated by Global North scientists, data and specimens are often stored in the Global North, and authorship is skewed towards scientists from the Global North (Müller *et al.*, 2016). Given the wide ranging impacts that colonial attitudes and structures continue to have, we believe that there is a strong case to be made for active decolonisation by all stakeholders in insects as food and feed.

Decolonisation is the process of undoing colonialism. Colonialism refers to the practice of one country taking political control of another country and controlling the rights of its indigenous inhabitants. To decolonise is to recognise the legacy of colonialism and work to dismantle it.

Terminology is one area in which we can all work towards decolonisation. One way to do this may be to use traditional names wherever possible. This is already practiced in many scientific papers (Ayieko *et al.*, 2012; Kinyuru *et al.*, 2012, 2013; Matojo and Yarro, 2013) and by some industry partners, and signals the role of insects as a culturally important food.

Media engagement is another arena in which we as stakeholders have the power to actively dismantle colonial legacies. We can ask journalists for their collaboration in this: we can discuss with them the importance of celebrating the cultural value and role of insects as food, and the indigenous knowledge systems that mean we too are able to enjoy eating insects today.

To actively decolonise research collaboration, we must ensure that scientific collaborations are truly equitable, beginning with the collaborative design of research questions and ending with equitable co-authorship and ownership of intellectual property. Capacity building, open knowledge sharing and ethically sensitive research design should be key priorities for all collaborative projects.

The food and feed industry must also decolonise by combating food stereotypes, and by understanding the difference between cultural appropriation and appreciation. It is only through working closely with global consumers across cultures that a food and feed revolution in the industry will be possible, to bring insects to the masses in a way that is equitable. The industry must also take advantage of the fact that consumers have power to support the culture where food comes from, and should use cultural knowledge in collaboration with owners of that knowledge, to produce and sell insect based food products.

In conclusion, we must remove the white gaze from use of insects as food and feed, and all the players in the food system must therefore play a role in doing this. This will ensure that insects play their role in supporting food security and nutrition to the global population in an economic, social and environmentally sustainable manner.

Acknowledgements

We co-chaired a panel discussion on the topic of decolonisation at the International Conference of Insects as Food and Feed in Wuhan, 2018. The verbal and written contributions of all participants of the panel informed this editorial. We intend to follow this editorial with a longer commentary outlining in detail why and how all stakeholders should make active decolonisation a top priority for a more equitable and sustainable future. We are extremely grateful to all the participants of the panel for their active participation in our panel, and their verbal and written contributions to, an ongoing discussion on the topic of decolonisation of the science and industry of insects as food and feed.

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