



PHD PROGRAM OF BMEL

ContamInsect: Contamination status evaluation and safety aspect exploration for an intensified utilization of edible insects in Kenya

Country/countries	Kenya
Funding agency	Federal Ministry of Food and Agriculture - BMEL
Project management	Federal Office for Agriculture and Food – BLE
Project coordinator	German Federal Institute for Risk Assessment (BfR)
Project partner(s)	Jomo Kenyatta University of Agriculture and Technology
Project budget	159.148,25 €
Project duration	01.11.2019 – 31.01.2023
Key words	Insects, mycotoxins, carry over, toxicity, metabolism
Background	<p>Insects are a promising source of protein rich food and feed of animal origin due to their high efficiency and small CO₂ and water footprint.</p> <p>Especially in African countries, an intensified use of insects could improve the food supply. However, aspects of food and feed safety in relation to</p>

	insects used as food or feed needs to be carefully evaluated.
Objective	<p>The present project focuses:</p> <ul style="list-style-type: none">a) on the clarification of the contamination status of the most frequently used insect species in Kenya, in particular their contamination with mycotoxins, dioxins, PCBs and PAHs,b) on the improvement of the food supply- and security-situation when using insects as a source for protein of animal origin andc) to show up a way for making use of highly Aflatoxin-contaminated cereals in the food and feed chain by feeding it to insects.
Short description	<p>The initial sampling of edible insects will take place in Kenya, while the subsequent analytical measurements will be carried out at the Federal Institute for Risk Assessment (BfR). In a further project phase, a feeding experiment with highly aflatoxin-contaminated cereals will be carried out in Kenya using larvae of the black soldier fly (<i>Hermetia Illucens</i>), one of the most commonly used insect species in Africa. The subsequent chemical analysis should show whether the larvae are able to tolerate the mycotoxin contamination in the feed and, if necessary, to excrete the toxin efficiently without showing bioaccumulation. The obtained results will be compiled for a report and used to prepare codes of practice that will be communicated especially to local farmers and insect processors.</p>