

CAB ABSTRACTS **HOT TOPIC:**

Insects for sustainable food and feed

Insects are attractive as an alternative source of cheap, sustainable protein and fat for livestock feeds and for food. The possibilities include the common housefly, the black soldier fly, the mealworm, locusts and silkworms. Researchers are addressing several questions: what cheap substrate or waste product could the insects be raised on, what nutrients would they provide, do they contain any antinutrients and are there safety concerns? And for foods – do people find them acceptable?

CAB Abstracts enables the work of scientists and researchers and specialists by providing access to the current research on sustainable feeds and foods to help improve food security and prevent environmental damage.

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CAB Abstracts sources the world literature to provide the complete picture on foods, feeds and nutrition including information on: composition, safety, health and consumer behaviour:

- **Growth substrates:** growth substrates that have been tried include food waste, vegetable peelings and brewing waste. Feed conversion efficiencies are similar to those of pigs and poultry.
*Carrot supplementation does not affect house cricket performance (*Acheta domesticus*).*
Journal of Insects as Food and Feed, 2017

Feed conversion, survival and development, and composition of four insect species on diets composed of food by-products.
PLoS One, 2015
- **Safety issues:** for insects microbial contamination, allergen, heavy metal contamination, and antinutritional factors such as phytate are of concern.
*Safety assessment of freeze-dried powdered *Tenebrio molitor* larvae (yellow mealworm) as novel food source: evaluation of 90-day toxicity in Sprague-Dawley rats.*
Regulatory Toxicology and Pharmacology, 2016
- **Nutritional value:** insects have a diverse composition. Comparison with meat suggests some insects may be more healthy.
Are edible insects more or less 'healthy' than commonly consumed meats? A comparison using two nutrient profiling models developed to combat over- and undernutrition.
European Journal of Clinical Nutrition, 2016

Nutritional composition of five commercial edible insects in South Korea.
Journal of Asia-Pacific Entomology, 2017
- **Acceptability:** in some cultures insects are already an accepted part of diet and in places where there are cultural barriers, insects may be acceptable as feed ingredients.
Consumer preferences regarding edible, deep-fried insects in Northern Germany.
Berliner und Münchener Tierärztliche Wochenschrift, 2018

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