

## Nutritional and sensory aspects of edible insects

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Edible insects represent an interesting alternative source of protein and feed for animals (1). According to the latest data, there are 2111 species of edible insects that have been consumed by humans of different countries. The insect is also notable for its low greenhouse gas emissions, high feed conversion efficiency, low rearing costs, and the insect's ability to transform low-value organic by-products into high-value protein products.

Insects contain 13-77 g of crude protein in 100 g of dry matter and include all essential amino acids important for a balanced diet. It also contains several non-protein nitrogenous substances such as chitin, taurine, and purines (2,3). Concerning lipids, their content in insects is 10-60 g/100 DM, and the major fatty acids are linoleic, palmitic, oleic, stearic, and linolenic. The composition of fatty acids depends mainly on the species, the life stage of the insect and the composition of the feed.

When using insects as food, undesirable aspects such as allergens and antinutritional substances must also be considered. Heat treatment of insects also contributes to microbiological safety. An important aspect of accepting insects as food is also their sensory quality and overcoming neophobia in countries where insects are not traditionally consumed.

This contribution therefore deals with the positive and negative aspects of entomophagy, summarizing the results of several years of research dedicated to the nutritional and sensory quality of edible insects: the effect of developmental stage, feed composition, sex, and rearing conditions on nutritional value of insects, purines, chitin, and taurine in insects, sensory analysis of insects and their acceptance by consumers.

**Keywords:** edible insects; nutritional value; sensory acceptance; potential risks

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