**Insect material as innovative feed ingredient in animal nutrition**

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The increasing global need to find alternative protein/energy sources has triggered research in the field of non-conventional feed ingredients, with insect proteins being one of the most promising. Insects contain high level of protein and fat; therefore, insect should be considered as promising alternative feed ingredients for livestock production. In addition to the nutritional value, they also represent a way by which food waste biomasses/streams can be upgraded to valuable feed ingredients. This brief lecture outlines the main nutritional characteristics of insects, and also considers the legal framework involved. The importance of the type of insect in term of species and development/metamorphosis and tailored substrates that could lead to the production of a premium feed is also described. For both ingredients a critical review of the safety issues is provided. Based on the current data available insects have an excellent potential use as alternative feed ingredients for livestock production. When produced in line with the criteria set by major feed/food authorities, they are characterized by high quality and safety standards. This makes them comparable to other feed materials and ingredients currently available on the market, although their full nutritional, functional, safety and sustainability evaluation cannot be considered complete.