

## Summary of the dossier: Honey bee drone brood (*Apis mellifera* male pupae)

Applicant: Finnish beekeepers' association, Ullanlinnankatu 1 A 3, 00130 Helsinki, Finland

The application as a novel food is submitted in accordance with the requirements of Commission Implementing Regulation (EC) 2015/2283 of the European Parliament and of the Council of 25th November 2015 on novel food and has been drafted according to the requirements of Commission Implementing Regulations (EU) 2017/2469. This application for authorisation falls under the transitional period for insect products that currently have been lawfully placed on the market as mentioned in the article 35.2 of the Regulation (EU) 2015/2283.

Condition of use: whole drone brood of honey bee is produced for human consumption as such and /or as an ingredient in other foods. Drone brood as food is intended for the whole population.

Honey bee (*Apis mellifera* (Linnaeus, 1758)) is a *Hymenoptera* species of insect belonging to the *Apidae* family. The species is used in beekeeping practice in the EU and all over the world. The drone (male) brood of honey bees is naturally found in bee hives during the honey production season (summer in Europe). The major task of the drones in the bee colony is to mate with young queens, thus assuring natural reproduction of bee colonies.

In many countries drone broods are removed from the hive nowadays, as a means to control varroa mites who prefer drone brood to worker bee brood in their reproductive cycle. In this respect, using drone brood as a food by-product of beekeeping and honey production proves having both ecological and economic sense. As a foodstuff, drone brood has a high nutritional value. It contains a lot of protein, fat (including monounsaturated oleic acid), vitamins B3 and B5 and a range of minerals. Thus, it offers an alternative source of protein for human consumption.

Drone larvae are fed by worker bees with honey and pollen and they grow up in ultimate clean beehive environment, in sealed beeswax cells of combs built by the bee colony. When produced according to the production process presented in this dossier and following the Finnish Good Hygiene and Good Manufacturing Practices in Beekeeping, the food quality and safety of the drone brood is ensured. In addition, traceability and labelling requirements have to be followed.

Due to a possibility of an allergic cross reaction, people allergic to shellfish, crustaceans and mites should avoid eating drone brood. This warning has to be clearly presented on the labels of products containing drone brood.

Marketing of drone brood as a foodstuff has been possible in Finland until now thanks to transitional authorizations for the commercialization of this insect species under specific conditions nationally. During this time, no negative impact on human health after eating drone brood have been reported. In addition, literature review did not reveal any reported concerns about absorption, digestion, metabolism or antinutritional factors in drone brood. Therefore, no toxicological analyses were conducted to support the current dossier. We conclude that drone broods of *Apis mellifera* is safe as a foodstuff and as a food ingredient. It can be considered as a valuable, protein rich meat alternative.