Растителна защита
електронно списание за растителна защита
семена, торове и земеделие
ISSN 2815-522X

The Food of the Future

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Date: 23.10.2018 *Issue:* 10/2018

Over the last decade, in addition to the rapid growth of the planet's population, a significant increase has been observed in the connection between nutrition and health. Interest is growing in the so-called functional foods which, besides meeting basic nutritional needs, also have positive effects on people's health status.

Various food supplements that improve the nutritional value of meat are increasingly coming into use. However, alongside those that have become widespread in recent years as biologically active food additives in human and animal nutrition, such as the blue-green algae of the species Spirulina platensis, the demand for alternative protein sources is also increasing.

What's for dinner?

ISSN 2815-522X

All data indicate that insects will become the food of the future. According to scientists, around 1,900 species of insects such as grasshoppers, crickets, pupae of the silkworm and moth larvae around the world may be suitable for consumption because they are rich in high-quality proteins.

And while in countries such as Thailand, Mexico and Uganda it is perfectly normal for dinner to consist mainly of insects, in Europe and America there is still a certain discomfort even at the mere sight of crispy crickets or grasshoppers. Changing the European's diet is not a short-term solution with unclear goals, but a well-thought-out strategy backed by international organizations, corporations, start-ups, the food industry, gastronomy and legislative bodies that define the framework of new eating habits. In its reports on the growing population, the Food and Agriculture Organization often highlights the advantages of insects as a safe and inexpensive way to ensure healthy nutrition. A large proportion of global investors are turning towards companies that rear insects for animal feed.

Eccentric or standard menu for animals and humans

Insect meal is produced by collecting and drying larvae of the insect Hermetica illucens, which are fed with biodegradable waste. Processed insects represent a good alternative to unsustainable or resource-intensive ingredients such as fishmeal, fish oil and soy, most commonly used in fish farms. In 2013, the renowned Research Institute of Organic Agriculture (FiBL), together with the Swiss corporation COOP, launched a global project for the production of fly meal (Hermetica illucens) for feed. Interest in this investment is growing because in recent years the price of fishmeal has increased significantly. On the world markets in China and South Africa, insect meal is officially and widely used without administrative obstacles. At the same time, in the USA and Europe the regulatory authorities are still in the process of examining this type of feeding.

The rules on the two continents do not allow the use of insects in animal feed – the reason being concerns regarding feeding livestock with processed animal proteins.

Despite all this, the EU is working intensively towards adopting legislation and developing the production of food from insects. Proof of this is the PROteINSECT project, which is engaged in building a platform in Europe for the use of insect proteins in animal feed in the short term and as a direct component of human food in the long term.

In North America, progress is faster – there the Canadian company "Enterra" (Enterra) has already received approval to sell its insect meal (Hermetica illucens) for feeding trout species in the USA and for feeding domestic and wild birds in zoos in Canada. The adult insect Hermetica illucens is widespread throughout the world, is not

ISSN 2815-522X

a pest and is also not a vector of diseases. The larvae of the insect feed on decomposing organic matter. In the Canadian company, the process of feeding and breeding the insects is carried out under controlled conditions. After a 14-day feeding cycle, the larvae are collected and processed into ingredients for animal feed or into organic natural fertilizer rich in nutrients and a beneficial microbial environment.

In the future, the concept of traditional food will increasingly be displaced by the need to satisfy quickly and efficiently the rapidly expanding market. The taste habits of individuals will be sacrificed in favour of a growing new industry for which beetles, caterpillars and flies will become an essential additive to the menu of billions of people around the world.