

FUNCTIONAL, ECOLOGICAL AND NOVEL FOOD

Authors: | Sophie W. | Manuela B. | Marc V. | Emma S. | Helena T.



In this article the three topics functional, ecological and novel food will be discussed. The article contains something about the history and where these specific foods are used for.

FUNCTIONAL FOOD

Nutraceutical or functional foods are foods that provide both health benefits to reduce the risk of chronic diseases and basic nutrition. Functional foods may be defined as any food that has a positive impact on an individual's health, physical performance, or state of mind, in addition to its nutritious value. Examples of nutraceuticals are natural foods, including antioxidants, dietary supplements, fortified dairy products, and citrus fruits, and vitamins, minerals, herbals, milk, and cereals.

What is the aim of production of functional foods?

When we eat food, our first and most basic aim is to obtain nutrients for our body and to satisfy our metabolic needs. However, some groups of foods, in addition to their nutritional properties, present other additional properties for health.

Concepts in nutrition are expanding from emphasis on survival, hunger satisfaction, and preventing adverse effects to emphasizing the use of foods to promote a state of well-being and better health and to help reduce the risk of disease. The positive effects of a functional food can be either maintaining a state of well-being and health or reducing the risk of pathologic consequences.

Among the most promising targets for functional food science are gastrointestinal functions, redox and antioxidant systems, and metabolism of macronutrients. Ongoing research into functional foods will allow the establishment of health claims that can be translated into messages for consumers that will refer to either enhanced function or reduction of disease risk.



Erasmus#HowCanWe Feed OurGenes?

This project has been funded with support from the European Commission.

5 FOODS LINKED TO **BETTER BRAINPOWER**

GREEN VEGGIES



1. Leafy greens such as kale, spinach, collards, and broccoli are rich in brain-healthy nutrients like vitamin K, lutein, folate, and beta carotene. Research suggests these plant-based foods may help slow cognitive decline.

FATTY FISH



2. Fatty fish are abundant sources of omega-3 fatty acids, healthy unsaturated fats that have been linked to lower blood levels of beta-amyloid — the protein that forms damaging clumps in the brains of people with Alzheimer's disease.

BERRIES



3. Flavonoids, the natural plant pigments that give berries their brilliant hues, also help improve memory, research shows.

TEA + COFFEE



4. Coffee and tea might offer more than just a short-term concentration boost. In a recent study, participants with higher caffeine consumption scored better on tests of mental function.

WALNUTS



5. Nuts are excellent sources of protein and healthy fats, and walnuts in particular might also improve memory, according to a study.

Created by:

www.health.harvard.edu



Erasmus#HowCanWe Feed OurGenes?

This project has been funded with support from the European Commission.

NOVEL FOOD

Novel food is food not used for human consumption to a significant degree in the EU before 15 May 1997.

This covers a wide range of products, such as food with a new or intentionally modified molecular structure, food using a new food production process (bread treated with UV-light to increase vitamin D content) or produced from microorganisms, fungi or algae (e.g. the use of the micro-algae *Schizochytrium* sp in foods such as cereal bars, cooking fats, etc. as an alternative source of Docosahexaenoic acid).

The underlying principles underpinning Novel Food in the European Union are that Novel Foods must be:

- Safe for consumers
- Properly labelled, so as not to mislead consumers
- If novel food is intended to replace another food, it must not differ in a way that the consumption of the Novel Food would be nutritionally disadvantageous for the consumer.



From Exportiamo.it



ECOLOGICAL FOOD

First, organic food and ecological food are used as if they are the same. They almost are but there is a small difference.

- Organic food: this is a term referring to products produced following organic farming practices, which includes no synthetic fertilizers; synthetic pesticides; synthetic herbicides or GMO foods. There are other restrictions but those are the main ones.
→ For meat: the animals must be fed organic feed; pastured a "reasonable amount of time"; no antibiotics; no hormones, etc.
- Ecological food: this term refers to food that should be good for the environment.

In many articles the two terms are wrongly mixed. But now you know that the two terms have something in common but they are not the same.

Why is it important and why it's used.

First an example of an organic production and a conventional production:

Agriculture:

Organic: Pests are controlled using natural methods (birds, insects, traps) and naturally-derived pesticides.

Conventionally: Pests are controlled with synthetic pesticides

With meat, eggs and dairy:

Organic: Livestock are given all organic, hormone- and GMO-free feed.

Conventionally: Livestock are given growth hormones for faster growth, as well as non-organic, GMO feed.

In Holland we for example have 'de plofkip';

- live with 18 to 20 chicks on one square meter;
- slaughter after only 41 days;
- already weighs more than two kilos;
- can never go outside;
- foot ulcers, fire heels and / or joint pain in 15-20 percent of the cases;
- receives an average of one and a half daily doses of antibiotics in her short life.

So this is really not organic at all.

How your food is grown or raised can have a major impact on your mental and emotional health as well as the environment. Organic foods often have more beneficial nutrients, such as antioxidants, than their conventionally-grown counterparts and people with allergies to foods, chemicals, or preservatives often find their symptoms lessen or go away when they eat only organic foods.

A few more benefits are:

-Organic produce contains fewer pesticides

-Organic food is often fresher

-Organic farming is better for the environment: Organic farming practices reduce pollution, conserve water, reduce soil erosion, increase soil fertility, and use less energy. Farming without pesticides is also better for nearby birds and animals as

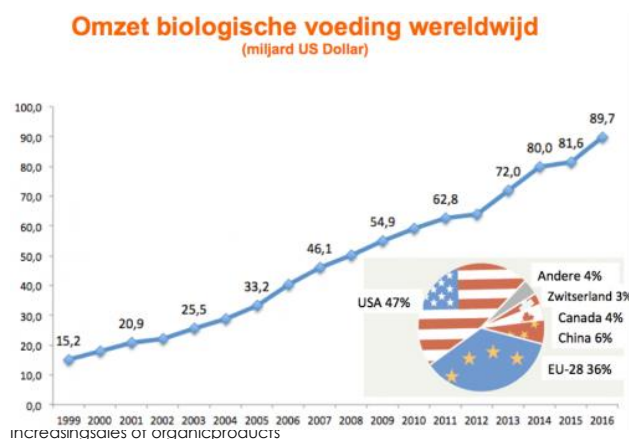


well as people who live close to farms.

-Organically raised animals are NOT given antibiotics, growth hormones, or fed animal byproducts.

-Organic meat and milk are richer in certain nutrients

It's best to buy these products at local markets cause otherwise they could be quite expensive.



CONCLUSION

Taking everything into account, the functional food is food which makes sure you stay healthy or it helps to heal diseases. The novel food is food which has never been consumed before the year 1997 in Europe, it's for example to make sure that the consumption of meat decreases (insects). Ecological food is food that is good for the environment by decreasing the amount of pesticides.

<https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/functional-foods>

<https://www.nature.com/articles/ejcn2010101?proof=trueIn>

<https://www.ncbi.nlm.nih.gov/pubmed/24558987>

https://ec.europa.eu/food/safety/novel_food_en

<https://www.wakkerdier.nl/campagnes/plofkip/kip-van-morgen/>

<https://sguforums.com/index.php?topic=43877.0>

<https://www.helpguide.org/articles/healthy-eating/organic-foods.htm>



Erasmus+ How Can We Feed Our Genes?

This project has been funded with support from the European Commission.



Erasmus+ How Can We Feed Our Genes?

This project has been funded with support from the European Commission.