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Novel Foods and Fitness

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M. Radhika

*Assistant Professor/Seln, PG and Research Department of Economics
Seethalakshmi Ramaswami College, Tiruchirappalli, Tamil Nadu, India*

J. Indirani

*Assistant Professor, PG and Research Department of Economics
Seethalakshmi Ramaswami College, Tiruchirappalli, Tamil Nadu, India*

Abstract

Food is a essential and basic nutritional requirements of human beings. Today malnutrition and hunger issues growing at alarming rate in world and the nation. This issue arises due to increasing population and lifestyle change. This alters the pattern and composition of food intake of human beings. Recently the emerge of novel food is visualised in the economy. The novel foods are non-traditional foods that require a food safety assessment by food standard department of a country. To eradicate all the forms of malnutrition and to bring sustainable food production, Novel foods and Novel technologies plays an important role in bridging the gap between food and nutrition. So, the present paper aims to study the novel food and its fitness.

Objectives

1. To know the reasons for commercialisation of novel foods.
2. To study the novel food approval regulation of different countries.
3. To know the categories of novel foods listed by European Commission.

Review of Literature

Maria Vittoria Conti and others in their article on “Novel Foods and Sustainability as Means to Counteract Malnutrition in Madagascar” stated that the an increase of overweight and obesity worldwide even in developing countries, there are still areas of the world strongly affected by under nutrition. Madagascar is one of the developing countries in which the under nutrition condition still represents a huge health concern. These forms of malnutrition represent a major impediment to achieve sustainable development, with crippling consequences for human health, environment, and human capabilities. It is a place rich in natural cheap and available food sources, for the local population. M. oleifera leaves and insect consumption instead of farmed or farmyard animal products or intensive cultivation of cereals (such as rice which is often imported from India) could improve dietary quality and diversity of the diet, conferring great environmental benefits, with significant reductions in greenhouse gas emissions, water, and land use.

Hans Verhagen and others in their article on “Novel foods: an explorative study into their grey area” intended to stated the problems that give rise to the existence of the grey area and to illustrate these

problems and challenges by means of several actual and clear examples. This paper also indicated that the Novel Foods Regulation, currently being revised, should take this ‘grey area’ of novel foods into consideration. In any case in addition to the suggestions of the European Commission, follow-up studies, such as Post-Launch Monitoring could be put in place in order to shed light on the intake and magnitude, if present, of potentially adverse health effects of these products.

Sharadha Arun and others in their article on “Prospects of novel foods as complete Human Nutrition” stated that food is one of the most basic and unavoidable nutritional requirements of all living organisms. Humans have acquired the art of cooking since decades and have mastered themselves in culinary skills. With increasing population and lifestyle changes, the pattern and composition of food is also rapidly altered. The novel foods being rapidly developed are more focused not only on novel varieties but also on sustainability, nutritional balance, consumer acceptability, scalability, and cost more novel foods and technologies are researched and made accessible to increasingly vulnerable population. Sustainable nutrition plays a tremendous role in overall development. The Global policies must emphasize on research towards sustainable food systems and embrace novel technologies which offer comprehensive solution to global nutrition gap.

Recently, Commercialisation of novel foods are increasing in the society. These foods not only available in novel varieties but it also has sustainability nutritional balance, consumer preference, and cost of production. For this reason, the consumer should commercialisation of novel food:

1. Chemical synthesis in creation of novel food through modern technologies.
2. Creating novel foods or ingredients from by-product.
3. Creating novel ingredients by having low environmental impacts.
4. Rapeseed protein isolate.
5. Tail oil phytosterol esters.
6. Diacylglycerol oil.

Novel Food Approval Regulations of Different Countries by Safety Assessment for Marketing

Countries	Year	Regulation Route
Canada	1920	Food and Drugs Act and Regulations
US	1994	New Dietary Ingredients from FDA
EU	2015	European Food Safety Authority (EFSA)
China	2013	Administrative measures of Safety Review of new food material National Health and Family Planning Commission (NHFPC)
Australia	1991	Food Standards Australia (FSANZ)
New Zealand	1991	Food Standards New Zealand (FSANZ)
India	2017	Food Safety and Standards Authority of India (FSSAI)
Singapore	1997	Singapore Food Agency

The first novel foods regulation was came into force in European Union in the year 1997. The regulation number of European Commission was 258/97 about novel foods and the ingredients. The regulation about foods and food ingredients was applicable to a significant degree which is not use for human consumption. So the paper aims to know the information about the different food and food ingredients concern for the food standards code. This is authorized by European Commission under above regulations.

Categories of Novel Foods Authorised by European Commission

Name	Categories of novel foods
Ecklonia cava phlorotannins	Foods which are isolated or produced from micro organisms, fungus or algae.
L-ergothioneine	Foods which are introduced newly or intentionally modified their molecular structure.
Vitamin D2 mushroom powder	Foods which are isolated or produced from various micro organisms, fungi or algae’ etc.,
Lactoferrin	Foods isolated from or produced from animal material.
UV-treated milk	Foods introduced from new production process.
Organic silicon (monomethylsilane-triol MMST) as source of silicon	Sources of vitamins, minerals and other substances

Conclusion

The novel foods are manufactured and processed by innovative process to bridge the gap between food availability and nutrition. The size, structure of food and its components, nutritional properties of novel food comes under non-specified food category and should be assessed as safety for human consumption by scientific panel of different nation. The novel food which is assessed as safe can be approved and consumed by human beings.

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