

Codex in relation to Functional Foods

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Outline of Presentation

- Introduction
- Functional Foods and Health Benefits
- Regulatory Matters
- Codex and Functional Foods
- Concluding Remarks

Introduction

- Research and development over the years have shown that in addition to nutrients, there are various other components in foods that may be beneficial to health.
- These bioactive or functional ingredients are believed to be able to serve physiological roles beyond provisions of simple nutrient requirements, for example ability to promote general well being or even reduce the risk of chronic diseases.

Introduction (Contd.)

- Foods containing such functional ingredients are termed 'functional foods'. These foods are similar in appearance to conventional foods and are intended to be consumed as part of a normal diet.
- Functional foods should be in conventional food form and possess inherent or added bioactive/biologically active components that have characteristics of promoting health benefits beyond basic nutrition that can be substantiated scientifically.

Commonly consumed foods with potential functional properties and health benefits

Foods	Probable bioactive component(s) responsible for health benefits	Possible health benefits
Grain Products, Fruits and Vegetables	Dietary Fiber	Reduce risk to cancer
Grain Products, Fruits and Vegetables	Fiber, particularly Soluble Fiber	Lower risk of coronary heart disease

Soya bean

Phytosterols,
isoflavones, saponins,
phenolic acids, phytic
acid

Anticarcinogens,
lower blood
cholesterol

Broccoli and
Other
Cruciferous
vegetables

Glucosinolates are
converted to indoles,
isothiocyanates

Reduce risk to
cancer

Tomato,
Papaya
watermelon

Lycopene

Reduce risk to
cancer

Hawthorn
Fruit

Flavonoids

Reduce risk to
coronary heart
disease

Mushroom

Eritadenine

Lower blood
cholesterol

Marine fish

Omega 3 fatty acids

Reduce risk to
coronary heart
disease

Tea (green
and black)

flavonoids, especially
catechins

Reduce risk to
coronary heart
disease

Yoghurt

Bifido bacteria

Improve gut health
and reduce risk to
colon cancers

Turmeric

Curcumin

Carminative,
astringent and
antiseptic; reduce
risk to cancer

Ginger

Gingerol

Relieves
flatulence, anti
Inflammatory
action

Garlic

Allyl sulphur
compounds

Lower blood
cholesterol, inhibit
cancer process

Rice bran oil

Phytosterols, oryzanol,
tocotrienol

Lower blood
cholesterol

Functional Foods

It can be stated that:

All foods are Functional

But

Functional Foods are **MORE** Functional

Regulatory Matters

- Functional foods must comply with national regulations on nutrition. All functional foods must meet the necessary requirements for food safety, labelling and claims as determined by national regulations or such guidelines as provided by Codex Alimentarius.

Regulatory Matters (Contd.)

- For regulatory clearance of functional foods, an approval system consisting of expert committee members from different disciplines is encouraged to be in place in each country within the framework of the existing regulatory system.
- False claims through advertising and promotion must be controlled through regulatory agencies. A minimum effective level of the bioactive component(s) must be established for the functional claim, and this level must be maintained throughout its shelf life.

Regulatory Matters (Contd.)

- The safety level of the claimed bioactive component(s) must be stipulated.
- Approved analytical methods must be available for testing the food, preferably carried out by accredited laboratories.
- Regulatory activities on functional foods should be established within the existing regulatory system and should also regularly keep abreast with Codex guidelines. Effective monitoring and evaluation of such activities should be central to such a regulatory system.

Codex and Functional Foods

- Recognizing the need for an enhanced coordinated approach to the global development of functional foods, the FAO/WHO Regional Coordinating Committee for Asia (CCAsia), at its 13th session in Kuala Lumpur held in September 2002, first commenced discussions on this subject.
- The Coordinating Committee recommended that FAO and WHO organize an expert consultation to discuss various aspects of functional foods.

Codex and Functional Foods (Contd.)

- Following on that initial development, at the 14th session of CCAAsia meeting held in 2004 in South Korea, a pre-Codex workshop on functional foods was organized. A wide variety of topics were discussed, including safety evaluation, scientific substantiation as well as consumer perceptions, concerns, and behaviours.

Remarks

Codex and Functional Foods

It may be noted that so far there was no consideration of functional foods as such in Codex, and no definition.

However, there are Guidelines on Use of Nutrition and Health Claims that define the conditions for health claims including nutrient function claims

Remarks (Contd.)

At present there is no work in Codex on “Functional Foods”, Codex work was completed with the finalization of the scientific criteria for health claims included in Guidelines on Use of Nutrition and Health Claims, and there was no proposal in the CCNFSDu or CCFL to discuss " Functional Foods"

Functional Foods and Codex- Nutrition Claims

- Nutrition claims should be consistent with national nutrition policy and support that policy. Only nutrition claims that support national nutrition policy should be allowed.
- Health claims should be consistent with national health policy, including nutrition policy, and support such policies where applicable.

Nutrition Claims (Contd.)

- Nutrition and Health Claims (CAC/GL 23-1997)
- Example:
- “Nutrient A (naming a physiological role of nutrient A in the body in the maintenance of health and promotion of normal growth and development).
- Food X is a source of/ high in nutrient A.”

Nutrition Claims (Contd.)

Other function claims – These claims concern specific beneficial effects of the consumption of foods or their constituents, in the context of the total diet on normal functions or biological activities of the body. Such claims relate to a positive contribution to health or to the improvement of a function or to modifying or preserving health.

Examples:

“Substance A (naming the effect of substance A on improving or modifying a physiological function or biological activity associated with health). Food Y contains x grams of substance A.”

Nutrition Claims (Contd.)

Reduction of disease risk claims – Claims relating the consumption of a food or food constituent, in the context of the total diet, to the reduced risk of developing a disease or health related condition.

Risk reduction means significantly altering a major risk factor(s) for a disease or health-related condition.

Diseases have multiple risk factors and altering one of these risk factors may or may not have a beneficial effect. The presentation of risk reduction claims must ensure, for example, by use of appropriate language and reference to other risk factors, that consumers do not interpret them as prevention claims.

Examples:

“A healthful diet low in nutrient or substance A may reduce the risk of disease D. Food X is low in nutrient or substance A.”

“A healthful diet rich in nutrient or substance B may reduce the risk of disease F. Food Y is high in nutrient or substance B.”

Nutrition Claims (Contd.)

NUTRITION LABELLING

Any food for which a nutrition or health claim is made should be labelled with a nutrient declaration in accordance with Section 3 of the *Codex Guidelines on Nutrition Labelling*.

NUTRITION CLAIMS

The only nutrition claims permitted shall be those relating to energy, protein, carbohydrate, and fat and components thereof, fibre, sodium and vitamins and minerals for which Nutrient Reference Values (NRVs) have been laid down in the *Codex Guidelines for Nutrition Labelling*.

Nutrition Claims (Contd.)

NUTRIENT CONTENT CLAIMS

When a nutrient content claim that is listed in the Table to these Guidelines or a synonymous claim is made, the conditions specified in the Table for that claim should apply.

Where a food is by its nature low in or free of the nutrient that is the subject of the claim, the term describing the level of the nutrient should not immediately precede the name of the food but should be in the form “a low (naming the nutrient) food” or “a (naming the nutrient)-free food”; say, Low-sodium or Sodium-free.

Concluding Remarks

- As such there is no work in Codex on “Functional Foods”
- Codex work was completed with the finalization of the scientific criteria for health claims included in Guidelines on Use of Nutrition and Health Claims
- **National Authority** therefore, is the key for regulating Functional Foods in the market

**Thank You
for
Your Kind Attention**

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