

## FOODS AND DRINKS

Food and drinks for consumption are derived from four broad sources:

- 1) The plant kingdom
- 2) The animal kingdom
- 3) The mineral kingdom
- 4) Bio-technologically produced foods and drinks.

### The Plant Kingdom

People of the world have been close to consensus about the permissibility of foods and drinks of plant origin. Islam allows all the foods and drinks of plant origin, with the following exceptions:

- a) Anything that adversely affects the nervous system thereby impairing the senses, memory, and judgement. Example: fermented grapes, dates and barley, etc.; plants that produce wine, liquor and other alcoholic beverages; opium, cocaine, and other such intoxicating drugs.
- b) Anything that harms life and/or health such as poisons.

### The Animal Kingdom

People of the nations have widely varying attitudes towards food and drinks of animal origin. Most food-borne diseases result from the consumption of food of animal origin such as milk, meat, poultry, fish, and eggs. Islam allows certain foods of animal origin while forbidding others. This includes land animals and marine animals. All freshwater and saltwater animals (those which live in water all the time) are permitted unless they are harmful to health. There is no requirement to slaughter the marine animals.

### The Mineral Kingdom

Material/ingredients generally derived from minerals such as petroleum sources are permissible except that which might adversely affect the nervous system or harm life or health.

### Bio-technologically produced foods and drinks

With advanced food technology, foods and drinks are produced by bio-technological and bio-engineering techniques. The techniques are likely to manipulate many genetically controlled characteristics of animals and plants. Specific introduction of genetic material from other cultivars,

microorganisms, and species into animals and plants offers the potential to increase production efficiency and enhance the disease and pest resistance of many animals and plants.

In bio-technologically produced foods and drinks, it is not only the sources of origin, but the processes of manufacture that are to be reviewed by Islamic jurists to determine the permissibility of these products for consumption on a case by case basis.

### **Bacterial Fermentation and their Products:**

Many useful products can be made by having bacteria produce them in fermentation tanks. The Islamic religion is concerned with the actual components of these fermentation vats.

The fermentation process has been used to produce cheese, bread, fermented milk, vinegar and many other products for the millennia. Muslims consider the fermentation process to be useful for food production. It is the use of products thus produced that is permitted or prohibited according to the scriptures. If purified food chemicals through biotechnological techniques have traditional equivalents that are halal, they are also halal.

Consequently, products such as monosodium glutamate, citric acid and lactic acid are produced through biotechnology are halal provided they are free from prohibited contaminants.

### **Gene Products (Transgenically Produced Enzymes and Cultures)**

Enzymes are widely used as biological catalysis in the food industry. Some enzyme cultures are used internally in food products like bread and cheese, while others are used in intermediary media to carry out reactions to produce certain food products.

There are two distinct benefits of biotechnology reaped by the food industry:

Firstly, the biotechnological products have improved yields and decreased batch-to-batch variations in enzyme characteristics compared with those from traditional sources.

Secondly, in some cases where traditional sources of such enzyme culture were unacceptable to Muslim consumers transgenically produced enzymes are permitted for use in the production of halal foods.

For example, a Muslim does not accept bovine rennet produced from calves that have not been slaughtered according to Islamic requirements. Whereas chymosin (the main enzyme found in rennet) produced microbially through transcription from the bovine chymisin gene is universally accepted by Muslims.