FOOD STANDARDS AND HUMAN WELL-BEING

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Food is a necessity of life but living beings, for example the humans, who are the consumers of food, are being handicapped by the fact that food is also a perishable commodity. In order to meet with the ever-increasing demand of the population explosion of today's world food has to be produced at the expense of valuable resources. One may define food as a palatable substance which when metabolised by living beings, produces an array of materials and energy in different forms, that would enable them to manifest the characteristics inherent to living beings which essentially distinguish themselves from the dead. A food could either be a solid or a liquid in its form but is invariably made up of one or, more commonly a mixture of, six components known as 'nutrients'. Each nutrient possesses a characteristic and an unique chemical composition that gives it a set of inherant properties, which qualify it to perform at least one specific and significant body function of the living beings. Out of the six nutrients the first three namely, the Carbohydrates, Lipids (Fats and Oils) and Proteins mainly provide the energy necessary for living. The all important dietary fibres which are known to facilitate proper digestion of food and reduce the incidence of alimentary tract diseases of humans are also provided by Carbohydrates. The Proteins in addition are essential for growth and tissue replacement. Water the fourth nutrient is the life sustaining solvent and medium through which vital body functions are performed. One could survive for several days or perhaps weeks on-end without food, but would sooner perish without water as a result of dehydration. Vitamins and Minerals are the last two of the six nutrients. Though they are required in very much smaller quantities than the rest, Vitamins and Minerals nonetheless are essential for the regulation of body functions. Vitamin and Mineral deficiencies are quite well known to bring about various disease syndromes not only in man but also in his farm animals.

A human being should ideally consume food which would provide at least the adequate (but not excessive) quantities of the six essential nutrients mentioned above required to supply sufficient energy and building materials necessary to maintain life so that he could remain healthy and perform normal biological functions smoothly and continuously. A wholesome food that meets the above criterion is known as a 'balanced diet'. A balanced diet should provide a man with sufficient energy, not just to keep him alive but also for any specific individual to carry out his normal day-to-day activities. It has been estimated that about 1 Kilocalory (K cal) of energy is required to just keep a human being alive. This figure has been arrived at by measuring the energy required by a normal human being at 'complete rest' or 'asleep' to perform the involuntary body functions such as breathing, continuity of heart beat and blood circulation, maintenance of body temperature, functioning of the brain and so on. This measure which is known as the 'basal' or 'resting metabolism' rate has been found to increase from adults to growing young children to infants. More work the people do more energy do they require depending on how strenuous the tasks are. It has been estimated that an average healthy human being requires about 1700 K cal of energy a day for normal body functions.[1] This should increase as required by the demands of individuals engaging in light to strenuous daily activities. If the basic 1 K cal / minute energy requirement for resting metabolism of people and more over the additional energy required for today's hectic activities of man are to be met satisfactorily he should be pure and wholesome and free from any risk of being laced with contaminants irrespective of whether they are microbiological or chemical which if present in the food at or over certain specific levels as determined by scientific research could be injurious to public health.

Therefore, the need arises to ensure that the food one consumer is pure, wholesome and devoid of contaminants. This necessitates the acceptance that a given food item, inclusive of processed, prepared and raw food, should meet with certain material requirements, in terms of properties, characteristics, values etc, so that the consumption of such food on the one hand is safe and provides the expected energy for wellbeing of the consumer on the other. These requirements expressed verbally or in writing depend upon the purpose for which the individual food item has been intended for use, be it for infants or invalids. The level of acceptance of these requirements would stretch from a local situation, to national status and from there though international boundaries to universally adopted criteria, because of international trade. The requirements for a good, pure wholesome food may vary from the colour of a ripe and sound fruit to the fat content of milk powder for infants, to sugar content in the food intended for diabetics, and they are layed down (specified) as required by user demand or law. If such requirements for a food item were found to be satisfactory in use, and were documented, intended and decided upon to be put into practise to achieve an expected end - purpose, that document becomes what is called a 'specification' for that particular food item, and may be also called a 'food specification'. A food specification when 'recurrently' used to achieve and 'end-purpose' eventually becomes a 'standard food specification' or more simply a 'food standard'.

Therefore, the necessity for food standards stems out of the need for the recurrent use of specification required for different food items in order to ensure that those specifications are constantly met in practise at the user's-end. In other words food standards are simply a means by which a purchaser of food is ensured that what he buys is what it is supposed to be at each and every purchase. It is also a guarantee to ensure that the purchaser had neither been subjected to any forms of deception or frand with regard to the food he purchased nor had he received a short measure, Food standards have also become essential in order to prevent unnecessary spoilage and waste of good food on the one hand and also to minimise or completely eliminate the outbreak of food-borne diseases on the other; all of which individually and collectively contribute to heavy economic losses both at the national and international levels, consequently. It is obvious, therefore, that food standards are necessary at all levels of food production, be it processing, packing, food hygiene, storage, safe handling, transport, marketing and so on.

Speaking of food standards, a point of interest to be noted here is that the earliest recorded 'controls' (standards as they are known to us today) in the human history on merchandise were originated and intended for the simple purpose of 'keeping people honest.' Cheating and shortchanging each other in their daily trade transactions were the order of the day among people from time immemorial with no conspicuous shifting in frequency to what is being the practise today. The principle aim of the earlier 'controls' was then to protect the consumer and watch his interests, and today these same controls are being applied universally with a broader sense of vision than they had been at any time in the human history.

With the advancement of food technology and other allied fields of science the diversity of food preparations has become so large so that the demand for checks and controls for food, has increased. This is simply because of the ease with which the food could be adulterated and as a consequence, avenues for cheating and misleading, defaulting and decieving the consumer by misuse and misinterpretation of specifications of food has increased by many folds than ever before. Therefore the significance of food standards has become much more evident today for the wellbeing of human beings in general in the complexity of the modern society. Thus the constantly increasing choices and selections of what people regard as the necessities of the modern living have to be fulfilled to the consumer satisfaction, culminating in the protection of the consumer as the ultimate goal.

Food standards in any country are based on and regulated by the appropriate governmental laws and regulations which are enacted from time to time by the legislature. The first general pure food law to be published in an English speaking country is belived to be 'The Adulteration of Food and Drinks Act - 1860'

of the United Kingdom.[2] The objectives of any legal measures taken by any country with regard to food control policies are purely and basically, to provide the consumer with solid legal grounds to guide him and enabling him to select at his will a healthy, wholesome and nutritious food (diet) from a wide range of safe foods availabel for sale, at very competitive and economical prices. The compositional or recipe food laws that were in vogue upto a several decades ago are now been deregulated and replaced the world over by the more comprehensive pieces of legislation concentrating on the more signeficant and practical safety and labelling regulations. With regard to the specifications layed down for each food, uniformity is being adopted universally.

Such uniformity and consensus with regard to food standards around the globe has been made possible, primarily through the work of the Codex Alimentarius Commission which is an international body established in the early 1960's under the auspicies of the Food and Agricultural Organization (FAO) of the United Nations (UN) and the World Health Organization (WHO). Experts in food standards representing governments world-wide sat together in a joint committee in pioneering the work of the Codex Alimentarius Commission. A conference co-sponsored by the UN/FAO and WHO took place in 1962, where a timely proposal for the establishment of a joint FAO/WHO. Food Standard Programme was endorsed by the conference. The principal role of the Codex Alimentarius Commission is to implement the joint FAO/WHO Food Standards Programme, which is aimed at facilitating international trade in food stuffs while ensuring for all consumers a sound, wholesome product free from adulteration; correctly labelled and presented. The Codex Alimentarius itself is primarily a substantial collection of food and commodity standards for almost all raw, semi-processed and processed foods. They are adopted in their entirety or as applicable to national situations when they are used as guidelines for the formulation of food standards. The Codex standards are presented in a uniform format where all the relevant factors such as essential composition and quality factors, Food additives, Contaminants, Hygiene, Labelling etc. in addition to the general criteria are given under separate headings.[3] The Codex Alimentarius renders a valuable service in guiding the developing countries in the food standards formulation.

A code of ethics for International Trade in Food has also been adopted by the Codex Alimentarius Commission, which was established with a view to protect the people of developing countries from food-related health hazards and from fraud, as it is a recognized fact that there are many such countries around the world which are not yet in a position to come up with the necessary prerequisites.[4] The Codex Food Standards are based on sound scientific know how acquired by years of experience of the work of experts in the field of food throughout the world. It is not surprising that food standards of many countries are derived from the Codex Alimentarius and further the 'Food Act's and any subordinate or related legislation specially in most developing countries have provisions set out in them which are essentially the same as the underlying principles of the Food Standards Programme implemented by the Codex Alimentarius Commission. As layed down as one of the roles of the Codex Alimentarius Commission, the purpose of food standards is then.

'To protect the health of consumers and to ensure fair practises in the food trade'.

We living in the world today and those humans yet to be borne are all dependants on food standards to stay healthy as they are an essential part of human well being eternally.

References

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4. Codex Alimentarius Commission, Code of Ethics for International Trade in Food. FAO/WHO Rome 1980.