



SNS COLLEGE OF TECHNOLOGY

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COIMBATORE-641 035, TAMIL NADU



19FTT302 & FOOD SAFETY AND QUALITY REGULATIONS

UNIT II FOOD QUALITY AND QUALITY EVALUATION OF FOODS

Food Quality - its need and its role in Food Industry

Food plays an important role in human life. The primary goal of eating and drinking is to enable the body to function normally. "We are what we eat" is an old proverb. Access to good quality food has been man's endeavor from the earliest of human existence. We always look forward to the quality of food to assure its safety as its basic requirement. Seeking safe food is a basic human right.

- The availability of safe food greatly contributes to the health of the human beings. It contributes to the productivity and to the countries development.
- Foods prepared and consumed at family level has assured safety to some extent. Due to industrialisation the habit of eating out of home in canteens and hotels has been necessitated. Hence there is a need for quality control regulation and standards in all the commercial food outlets.

History of Quality control in ancient India

The concept of food quality is not totally new. Food Laws in some form existed as religious tenants or prohibitions. They were inherent in all ancient civilizations and have come down to us from early times. The history of food quality is mentioned below.

- In the ancient Egyptian, Chinese, Indian, Greek, and Roman literature food regulations were mentioned.
- The trade guilds (associations) in the middle ages exerted a powerful influence on the regulation of food trade and the prevention of falsification of food products.
- As a consequence of the steps taken for regulation of food trade during Middle Ages, the state, municipal or other local authorities took initiatives in food quality control.
- In seventeenth and eighteenth centuries, chemistry was being used as an analytical tool to fight against food adulteration. Foundation for the scientific detection of the adulteration of food was established using the principles of specific gravity.
- In the nineteenth century due to the industrialization and tremendous increase in urban population there were big changes in food production as well as distribution coupled with health problems. As a result many industrialized countries introduced food laws.
- After the introduction of early food control measures by developed and industrialized countries, some of the larger, better established, non industrialized countries also took initiatives to set up measures of control.

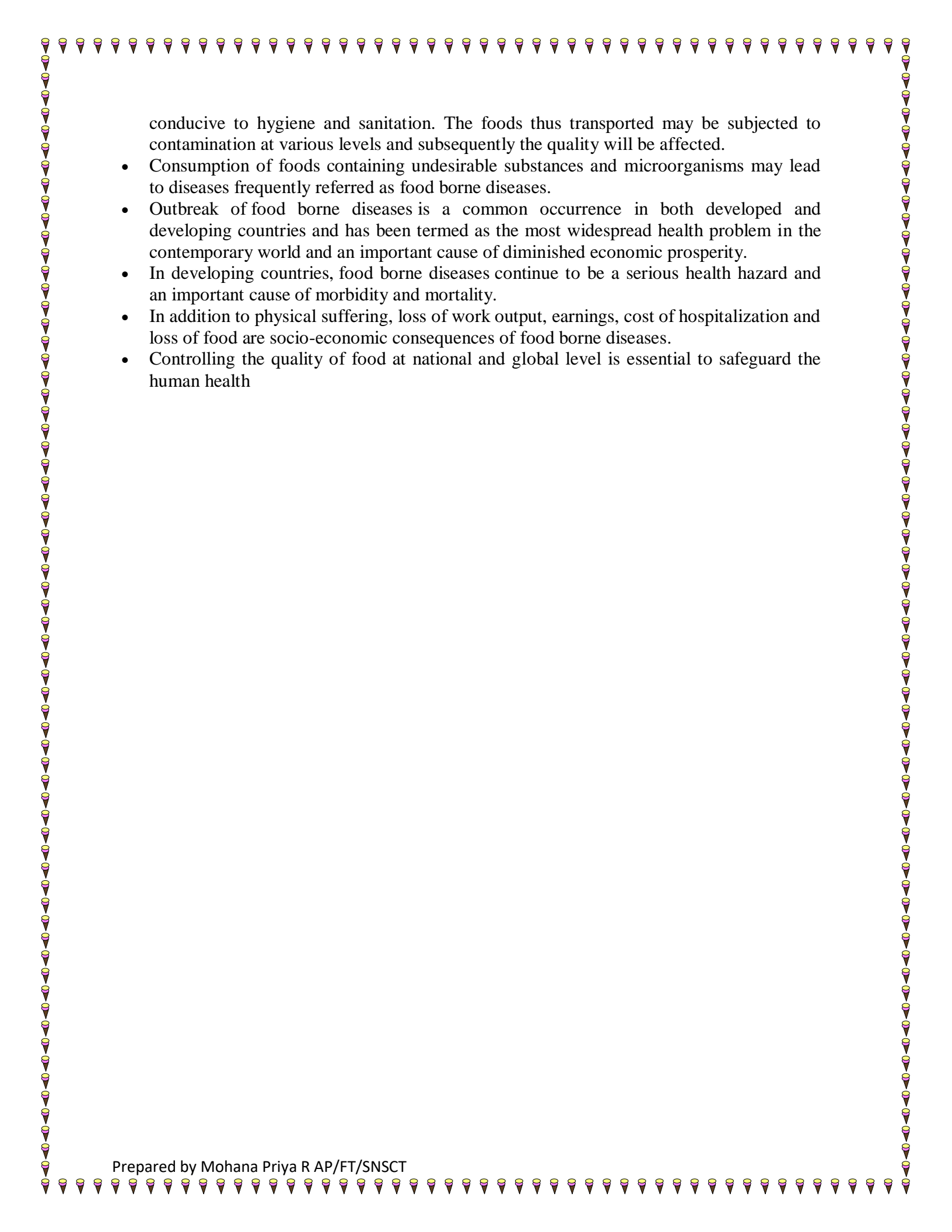
- In the year 1907 attempts were taken to regulate the malpractices in food production by the American Food Industry. During this period, the use of poisonous preservatives like boric acid and formaldehyde were brought to public notice by Dr. Harvey W. Wiley of USDA.
- In the late nineteenth and early twentieth century, all the earlier rules were consolidated and created a separate branch of law relating to foods.
- In 1920s many national standards organizations were established in Europe. The need for improved health and food control and the rapidly expanding international food trade stimulated cooperation on an international level. In the nineteenth century due to the industrialization and tremendous increase in urban population there were big changes in food production as well as

The Beginning of FDA

- During the year 1848 a patent office was created to carry out chemical analysis of agricultural products which was later inherited by agricultural department in 1862.
- In 1906, Food and Drug Act, was introduced which is also known as the "Wiley Act" after its chief advocate. This Act prohibited, the interstate transport of food which had been "adulterated", interstate marketing of "adulterated" drugs, also banned "misbranding" of food and drugs. The responsibility for examining food and drugs for such "adulteration" or "misbranding" was given to Wiley's USDA Bureau of Chemistry.
- In 1930 laws on safety and purity of foods were made in USA. The Food and Drug Administration is the oldest comprehensive consumer protection agency in the U. S. federal government.
- FDA of USA prescribed standards and regulations that are taken as guidelines by developing countries for establishing their own standards.
- After the World War II, intensified activities were started in international standardization in the framework of ISO(International Organisation of Standardisation).
- In the year 1962 a Joint FAO/WHO Food Standards Program was established, and also a joint subsidiary body was created known as the Codex Alimentarius Commission (CAC). The trend in the field of food regulation is characterized by growing efforts for harmonization at an international level.

Importance of food quality

- Quality is the ultimate criterion of the desirability of any food product. The overall quality of a food depends on the nutritional and other hidden attributes, and sensory quality as assessed by means of human sensory organs. The absence of the nutritional qualities and possible presence of food toxins and chemical additives will affect the quality of food which in turn may harm the food consumer.
- For a food manufacturer the quality of raw material is very important as the end product quality entirely depends on it. For example red colour of tomato is a desirable quality to prepare tomato ketchup.
- The rapid urbanization and stretching the urban services beyond their limits, lead to inadequate supplies of potable water, sewage disposal and other necessary services. This scenario further stresses the food distribution systems, as greatly increased quantities of food need to transport from rural to urban locations in an environment that is not



conducive to hygiene and sanitation. The foods thus transported may be subjected to contamination at various levels and subsequently the quality will be affected.

- Consumption of foods containing undesirable substances and microorganisms may lead to diseases frequently referred as food borne diseases.
- Outbreak of food borne diseases is a common occurrence in both developed and developing countries and has been termed as the most widespread health problem in the contemporary world and an important cause of diminished economic prosperity.
- In developing countries, food borne diseases continue to be a serious health hazard and an important cause of morbidity and mortality.
- In addition to physical suffering, loss of work output, earnings, cost of hospitalization and loss of food are socio-economic consequences of food borne diseases.
- Controlling the quality of food at national and global level is essential to safeguard the human health