

Janta Vedic College, Baraut (BAGHPAT)

Dairy Science and Technology Department

M.Sc Ag (III) Semester (D.S.T.) J-3012 Elementary Food Science Topic 1 (2022-23)

Introduction –Food Production-Significance of Agriculture (Crop and live stock) ,food constituents-specific nutrient, functions of food. Basic food groups-energy giving, body building and protective food- status, prospectus and constraints in development of food industry in India, World food problem and role of food processing industry in solving it.

Food may be considered as the composite of those substances that are consumed by the human for their own growth, maintenance and reproduction. Modern food production allows not only to produce maximum products from minimum amount of raw material, using rational processing and other methods but also to preserve products for a longer period of time to avoid damage and rejection, which is no less important.

Food Constituents-They are divided in to two groups-one is major and second is minor. Water, carbohydrates, fat, protein, minerals and vitamins.

Functions of foods

A Physiological function-I The need for food nutrient to supply energy.

II. The need of food nutrient to build and maintain body .

III. The need of food nutrient to regulate body processes.

B. Social function

C. Psychological functions.

Specific functions of nutrient- 1 Carbohydrates-To provide energy.

2. **Protein** –building of new tissues and repair those already built.

3. **Fat**- to provide energy and fat soluble vitamins. 4. **Minerals**- To regulate body building. 5. **Vitamins**- Needed for growth and for regulation of body process.

Food groups and classification-Food may be broadly classified into following groups based on their nutritive values-1. Cereal and millets 2. Legumes 3. Oilseeds. 4. Fruits 5. Vegetables. 6. Nuts and dry fruits 7. Milk and milk based products. 8. Meat eggs poultry fish 9. Sugar jiggery 10. Spices.

The above food may be classified as **1. Energy Yielding**-Cereal millet, root and tubers oil fat, sugar. **2. Body building**-pulse, meat, fish, egg, poultry, nuts. **3. Protective food**- green leafy vegetables fruits.

All living organism required food for their survival, plant required nutrient supplied by soil, water and air, sunlight for survival, if any one missing ,plant will die. Human health reflect their diet –depending upon plant, dairy and meat.

Status- The Indian food industry account for 32% of the country total food market, one of the largest industry in India ranked 5 in terms of production, consumption and export and expected growth. India organic food market is expected to increase by 3 times by 2020.

Prospectus-major industries constituting the food industry are grain, sugar, edible oils, beverages and dairy products. The key sub segments of the food processing industry in India are dairy, fruits and vegetables, poultry and meat processing fisheries ,focal retails.

Constraints-Major constraints for the growth of Indian food processing industry include the absences of adequate infrastructure, particularly rural roads connectivity, inadequacy of information and marketing linkage, lack of electric supply and absence of cold chain system.

World food problem—The global food problem consists of the lack of food provision for the earth's population. The total no. of people suffering from lack of food is over one billion people worldwide. The fact is that population growth out paces agricultural production and development of agricultural technologies.

Role of food processing industry-1. Export the growth strategy. 2. Enhancing the level of processing. 3. Creat environments 4. Infrastructure development 5. Improve linkages.

Reference-Food Nutrition Health, Dr. Vijaya Khader. Food preservation and peocessing – M, Kalia and Sanggeta sood , www.google.net