TRINITY COLLEGE FOR WOMEN
NAMAKKAL

DEPARTMENT OF NUTRITION & DIETETICS

FOOD MICROBIOLOGY
EVEN SEMESTER

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Food is very important in part of all living organisms. We get our food from various sources. Microbiology is the study of microbes that are known to affect the animals and human beings around us. Some microbes are also useful in nature and they can be used for the preparation of food products but many of them are harmful in nature and are the main causes of death around the world. The microbes are also the major cause of spoiling the food in our daily lives. So, food microbiology is the mixture of food and microbiology where we learn about the effects of microbes on the food we eat.

SOURCES OF FUNGI AND BACTERIA

There are various types of microorganisms in food. It is food as a substrate for microorganisms that help them to grow.

Soil and Water: The soil and water are the main sources of bacteria and fungi in the food. By the action of wind, the soil organisms can enter the air and later enter water bodies when it rains. They also enter the water when rainwater flows over soils into bodies of water. Aquatic organisms are often deposited onto soils through the actions of cloud formation and subsequent rainfall. This common cycling leads to soil and aquatic organisms being one and therefore the same to an outsized degree. Some aquatic organisms, however, are unable to continue soils, especially those that are indigenous to marine waters. Alteromonas spp. are aquatic forms that need seawater salinity for growth and wouldn't be expected to continue soils. The bacterial biota of seawater is actually Gram-negative.

Plants and Plant Products: It is going to be assumed that a lot of or most soil and water organisms contaminate plants. However, only a comparatively small number find the plant environment suitable for their overall well-being. People who persist on plant products do so by virtue of a capacity to stick to plant surfaces so that they're not easily washed away and since they're ready to obtain their nutritional requirements. Notable among these are the carboxylic acid bacteria and a few yeasts.

Food Utensils: When vegetables are harvested in containers and utensils, one would expect to seek out the surface of contaminators to contact. As more and more vegetables are placed within the same containers, a normalization of the microbiota would be expected to occur. In a similar way, the cutting block during a butcher shop alongside cutting knives and grinders are contaminated from initial samples, and this process results in a buildup of organisms, thus ensuring a fairly constant level of contamination of meat-borne organisms.

Gastrointestinal Tract: This biota becomes a water source when polluted water is employed to scrub raw food products. The intestinal biota consists of the many organisms that don't persist as long in waters as do others, and notable among these are pathogens like salmonellae. Any or all of the Enterobacteriaceae could also be expected in fecal wastes.

Food Handlers: The microorganisms that are present in the hands of handlers generally reflect the environment and habits of people, and therefore the organisms in question could also be those from the soil, water, dust, and other environmental sources. Additional important sources are people who are common in nasal cavities, the mouth, and on the skin, and people from the alimentary canal who will enter foods through poor personal hygiene practices.

Animal Feeds: This is often a source of salmonellae to poultry and other livestock. Within the case of some silage, it's a known source of Listeria monocytogenes to dairy and meat animals. The organisms in dry animal feed are spread throughout the animal environment and should be expected to occur on animal hides.

Animal Hides: Within the case of milk cows, the kinds of organisms found in milk are often a mirrored image of the biota of the udder when proper procedures aren't followed in milking and of the overall environment of such animals. From the udder and also from the hide the organisms can contaminate the sources. They can also do so at the hands of the handlers.

Air and mud: They may sometimes be found in air and dust during a food-processing operation, those which will persist include most of the Gram-positive organisms listed. Among fungi, a variety of molds could also be expected to occur in air and mud, along with some yeasts. Generally, the kinds of organisms in air and mud would be people who are constantly reseeded to the environment.

THANK YOU

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