Benefits of microorganisms

Literature, Russian Literature

Microbes or microorganisms are minute living things that individually are too small to be seen with the naked eye. There are several benefits of microorganisms; in fact, most microbes are beneficial, only a minute percentage of microbes are hazardous or can cause disease (J. Black, 2012). The following are benefits of microbiology: 1. Certain microbes play important roles in photosynthesis thereby generating food and oxygen which is critical to life. 2. Microbes have great applications in the food industry; they are used to produce vinegar, pickles, alcoholic beverages, soy sauce, and cheese, just to name a few. 3. Marine and fresh water marine organisms form the basis of the food chain in oceans, lakes, and seas. 4. Microorganisms are present in the intestines of humans and animals; they are needed for digestion, and synthesis of some vitamins that their bodies require (these include some B vitamins for metabolism and vitamin k for blood clotting). 5. Microorganisms are used to produce antibiotics that kill or inhibit other microbes; molds such as Penicillium and bacteria such as Streptomyces and Bacillus are used to make antibiotics. 6. Vaccines are substances derived from microorganisms and are used to immunize against disease. The microbes that are the cause of infectious disease are usually the ultimate source of vaccines. 7. Microbes help to purify waste water in waste water treatment facilities. 8. Microorganisms help reduce atmospheric nitrogen and transform it to ammonia important for agriculture. 9. The microbes that normally live in association with humans on the various surfaces of the body (called the normal flora), such as Lactobacillus and Bifidobacterium, are known to protect their hosts from infections and otherwise promote nutrition and health. 10. Microorganisms play a central

role in recombinant DNA technology and genetic engineering. Important tools of biotechnology are microbial cells, microbial genes and microbial enzymes.