

ATOMIC ENERGY CENTRAL SCHOOL

SUBJECT: BIOLOGY

CLASS: XII

MODULE = 6/7

UNIT- VIII

CHAPTER-10-MICROBES IN HUMAN WELFARE

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Chemical pesticides cause serious environmental pollution. Chemical pesticides are toxic and extremely harmful, to human beings and animals. Continuous use of chemical pesticides cause pollution of soil and reduction in fertility of soil.

Conventional and holistic are different approaches of pest control measures. The organic farmer holds the view that the eradication of the creatures that are often described as pests is not only possible, but also undesirable, for without them the beneficial predatory and parasitic insects which depend upon them as food or hosts would not be able to survive and these measures will greatly reduce our dependence on toxic chemicals and pesticides.

The biological farming approach is to become familiar with the various life forms that inhabit the field, predators as well as pests, and also their life cycles, patterns of feeding and the habitats that they prefer. This will help in developing appropriate means of bio-control.

When we use natural enemies to reduce invasive species populations, we refer to the natural enemies as "biological control agents," or sometimes "bio-control agents." Biological control can be defined as the use of living organisms to depress the population of a pest. This is an important component of integrated pest management.

Bacillus thuringiensis is a microbe which secrete certain toxin which are insect specific. *Bacillus thuringiensis* toxin is a crystal protein produced by "cry" genes. Trichoderma is a microbe used for bio- control against pathogens. Baculoviruses are used against pathogens as a bio-control measure.

REFERENCE

- 1) NCERT TEXT BOOK FOR CLASS XII, BIOLOGY
- 2) TODAR,S ONLINE TEXTBOOK OF BACTERIOLOGY, BY KENNETH TODAR
- 3) MODERN'S ABC BY Dr. B B ARORA & A K SABHARWAL
- 4) GOOGLE IMAGES
- 5) WIKIPEDIA