

IMPLEMENTATION OF BIOLOGICAL CONTROL PRACTICES IN BIODIVERSITY CONSERVATION

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Abstract: Agriculture is the main source of food, fibre, fuel and other useful products. It provides livelihood and subsistence to the large number of people. Agriculture largely relies upon the biodiversity of the ecosystem for pollination, the creation of genetically diverse plants and crop varieties, development of robust, insect resistant strains, crop protection and water shed control. Land overuse, climate change and chemical pesticide usage are the three important factors responsible for biodiversity loss. It is known that intensified agriculture, particularly the use of chemical pesticides, can suppress and displace local natural enemy populations, often resulting in pest resurgence, experience suggests that natural enemies can survive in such events, probably by exploiting natural habitats and other crops in the local area, and recover when conditions improve. Sustainable agriculture is possible through holistic approach towards crop protection through biological control of crop pests and alternative safe agricultural practices. Biological control is achieved by the introduction of biological material and natural pest control agents into the field by inundation and inoculation or through conservation of already existing beneficial organisms in the ecosystem. Such organisms and their products are manipulated by scientists to achieve a check on harmful agricultural and household pests. Many of them have been commercialized and are effectively used worldwide to achieve the target. Isolation, culture, formulation, conservation and application of better biological control agents for potential use in crop protection, is the need of the hour so that the biological diversity of the planet can be conserved.

Keywords: Biodiversity, Ecosystem, Biological control, Conservation, Sustainable agriculture

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