

Biological Control of Weeds: An Alternative to Pesticides and Herbicides

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Abstract—Weeds cause serious ecological problems and out of about 30,000 weed species, 1800 species cause yield loss by about 9.7% of total crop production every year in world. In addition, invasion of many alien weeds in natural ecosystems is one of the biggest threats to biodiversity. The recent awareness of problems associated with the use of chemical pesticides and herbicide on both human and animal health along with environmental problems have prompted researchers to focus on biological control alternatives. Bioherbicides are biological control agents, is the deliberate use of natural enemies to suppress the growth of a weed. Most commonly, the microorganism used for biological control is a fungus and referred as mycoherbicide. Host-specific mycoherbicide have the potential of specifically controlling weeds, especially when the weeds are closely related to the crop. Mycoherbicides are a safe and practical alternative to agrochemicals for controlling weeds. Over the past 25 years, more than one hundred microorganisms have been identified as candidates for development as commercial biological control agents.