

AN ANALYSIS OF WEED MANAGEMENT IN INDIA

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ABSTRACT

Weeds are the most significant impediment to the development of long-term crop production. Weeds control the majority of crop production practices and cause huge losses (37%) as a result of their interference. Farmers use a variety of methods to manage weeds in various crops/cropping systems, the most common of which is the use of herbicides, which is currently at the top of the list due to labor shortages. Environmental, social, and economic concerns about global competition, production costs, soil erosion, environmental pollution, and concerns about the quality of rural life are all raising questions about the systems' long-term viability. The central thesis in new weed management paradigms will be to improve crop competitiveness through preventive methods, cultural practices, mechanical methods, plant breeding, biotechnology, biological control, and crop diversification. Integration of the aforementioned techniques will be critical for long-term weed control that maintains or improves crop productivity, profitability, and environmental quality. The goal of this review is to make it easier to develop environmentally friendly alternative weed management methods that will support crop production systems that use less tillage, herbicide, and other inputs. To achieve this goal, crop ecology research and the development of ecologically based weed management technologies must be dramatically expanded. Adoption of sustainable agricultural practices reduces the intensity of soil manipulation, making it more difficult for weed seeds to germinate, as well as reducing organic matter depletion and soil erosion. As a result, sustainable approaches to weed and soil management may be an option for ensuring long-term crop production.

KEYWORDS: Agriculture, Food, Management, Plant, Weed.

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