

Weeds and society:

challenges and opportunities

J. S. Mishra¹

ICAR Research Complex for Eastern Region, Patna (Bihar) 800 014

Weeds have negative economical, environmental and social impacts on the society. The negative economic impacts include competition with crop for nutrients and water leading to reduced productivity, input-use efficiency and quality; competition with grasslands and pastures leading to reduced stocking capacity, loss of ecotourism values, impact on water quality and irrigation, increased management costs by way of using different control methods. It was estimated that weeds cause an annual loss of 11 billion US \$ in 10 major crops in India. The major environmental impacts of weeds are: degradation of natural vegetation and biodiversity. Weeds like Parthenium, Chromolaena, Mimosa, Lantana etc. have the potential to completely destroy all native vegetation, and pose a serious threat to biodiversity in India. The social impacts include effects on human health, recreation, safety and aesthetics. Weeds harbor a variety of disease vectors and therefore, a threat to human living directly. Parthenium is known to cause many health hazards. Aquatic weeds such as water hyacinth and Salvinia cause safety hazards. These weeds cause practical problems for marine transportation, fishing and at intakes for hydro-power and irrigation schemes.

Key words: Challenges, Opportunities, Society, Weeds

Weed management is an integral component of crop production. Despite the development and adoption of modern weed management practices, weeds, continue to be a constant threat to agricultural productivity and environment. Weed management practices may also have environmental impacts. Excessive tillage can result in soil erosion and subsequent pollution of aquatic systems. When herbicides are not used properly, they cause adverse impact on the environment and human health. The development of herbicide resistant weeds, weed shift, problem of alien invasive weeds, herbicide residue, etc. continue to generate new challenges for agriculture and weed scientists. Therefore, continuous monitoring

and refinement of technologies are needed for effective weed management.

The Indian Society of Weed Science, (established in 1968, promotes research, education, and extension outreach activities related to weeds provides science-based) information to the public and policy makers, create awareness of weeds and their impacts on managed and natural ecosystems in the country. During half century of its existence, the Society has been organizing national symposia, biennial conferences and workshops on current themes and specific issues in different parts of the country. It is a On completion of its 50 years of journey the Indian Society of Weed Science Golden Jubilee International Conference is organized at

Directorate of Weed Research Jabalpur from 21 to 24 November, 2018. The Conference will provide an excellent opportunity to all stakeholders dealing with different aspects of weeds, to share their ideas and learn from international experiences.

This issue contains articles on major aspects of weed management by eminent scientists of the country, which will be useful to all our stakeholders including the young scientists, teachers, students, extension workers, and the farmers.

¹Head, Division of Crop Research, ICAR Research Complex for Eastern Region, ICAR Patna, P.O. Bihar Veterinary College, Patna (Bihar) 800 014.

Corresponding authors' e mail: jsmishra31@gmail.com

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