

WEED SEED BIOLOGY

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PREFACE

Weeds have been existing on the earth ever since the man started domesticating/cultivating plants and animals around 10,000 B.C. Out of 2,50,000 plant species, weeds constitute about 250 species, which are prominent in agricultural and non-agricultural system. In the world, there are 30,000 weed species and out of these 18,000 species cause damage to the crops. Weeds are the most severe and widespread biological constraint to crop production and cause invisible damage till the crop is harvested.

Weeds are the most underestimated crop pests in tropical agriculture although they cause maximum reduction/loss in the yields of crops than other pests and diseases. They decrease quantity and quality of produce/food, fibre, oil, forage/ fodder, animal products (meat and milk) and cause health hazards for humans and animals.

Contamination of food grains with poisonous weed seeds fetches low price. Foundation or certified seed is rejected, if weed seeds exceed 2% and also the market value of seed is drastically reduced. Thus, knowledge of weed seed biology, seed dormancy and germination, allelopathic effects on germination inhibition and seed production, will be helpful to adopt strategic plan in weed management in seed production, so that good quality seeds could be produced free from weed seed contamination.

Keeping in mind the importance of weed seed, this book on “Weed Seed Biology” provides information on origin, distribution, habit, habitat, floral biology (Flower type and fruit structure), flowering, fruiting, pollination, propagation, seed dispersal, life cycle, seed dormancy and germination, seed storage including seed burial and longevity, effects on crop production, control, uses and past work done on Seed Science and Technology for 42 dryland weeds, 33 gardenland weeds and 21 wetland weeds.

The book on “Weed Seed Biology” is first of its kind in India. We hope this publication would be extremely helpful to the Students, Academicians, Extension functionaries, Seed certification officials, Seed producers, Seed growers and those who are actively engaged in agriculture research and in particular Seed Science Technology.

Authors

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