

Crop Management

2nd Edition



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The Authors

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Dedicated to

My Late Parents

Sardar: Sarwan Singh

(November 1916 to January, 1971)

and

Sardarni : Parsin Kaur

(April 1921 to January, 2005)

With Respect and Love

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I am grateful to the almighty who blessed me with patience and fortitude for the completion of this noble job. Secondly, I feel privileged to express my heartfelt gratitude and indebtedness to late Dr. H.S. Gill, Sr. Agronomist (weed control) cum Head (Retd.) Department of Agronomy, PAU, Ludhiana and major advisor during my M.Sc. and Ph.D. programmes, who shaped my mind set and existence among weed science scientists to serve farmers, teachers, researchers and students. Also, I express my sincere regards and thankfulness to Dr. L.S. Brar Sr. Agronomist (weed control) cum Head (Retd.), Department of Agronomy, PAU, Ludhiana, who inspired me to undertake an arduous job. It is beyond my access to acknowledge in words, the over encouraging moral support and co-operation which I enjoyed from Sardarni Parmjit Kaur Walia (wife) Er. Gurpreet Singh Walia and Er. Gaganpreet Singh Walia (sons) as well as Neena Walia and Rakhi Walia (daughter-in-law) throughout the completion of this revised manuscript. Above all, adorable and cuddly (Manvik Walia and Mehransh Walia), my grandsons, whose cheerful presence has provided a perfect milieu to my writing.

Dr. U.S. Walia

PREFACE

Agriculture is the largest enterprise in India which has been and will continue to be the lifeline of the Indian economy in the foreseeable future. However, due to urbanization, agricultural land is shrinking and human population is increasing year by year. So, there is a need for vertical increase in agricultural produce to feed the increasing population. Due to changing climatic conditions, there is a need for reorientation of presently practiced agricultural technologies. At the same time there is a need to save/conservate the natural resources. Crop yields can be improved with the adoption of improved production and protection technologies for raising field crops. In order to increase profit in agriculture, the farm inputs like tillage practices, fertilizers, irrigation water, pesticides etc. must be used judiciously and more stress should be laid on conservation agriculture.

The book covers basic but very comprehensive information on history of agriculture and relationship of Agronomy with other disciplines, tillage practices, nutrient elements for plant growth, weed and their management, irrigation management, crop physiology, crop ecology, integrated farming system and organic farming. A detailed information on history and origin, improved varieties, agronomic practices and plant protection techniques for important field crops viz. cereals, oilseeds, pulses, sugar crops and fiber crops has been given. Also information on cultivation practices for important medicinal, aromatic and spice crops as well as plantation crops along with their uses/medicinal values has been provided. Apart from this, information on dry land agriculture, crop production under special situations and hints for achieving higher yield of field crops are also given in details. This book will be very helpful for B.Sc. Agriculture as well as M.Sc. Agronomy students throughout the country as it covers nearly the entire syllabus for Agronomy courses framed by ICAR.

Authors

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