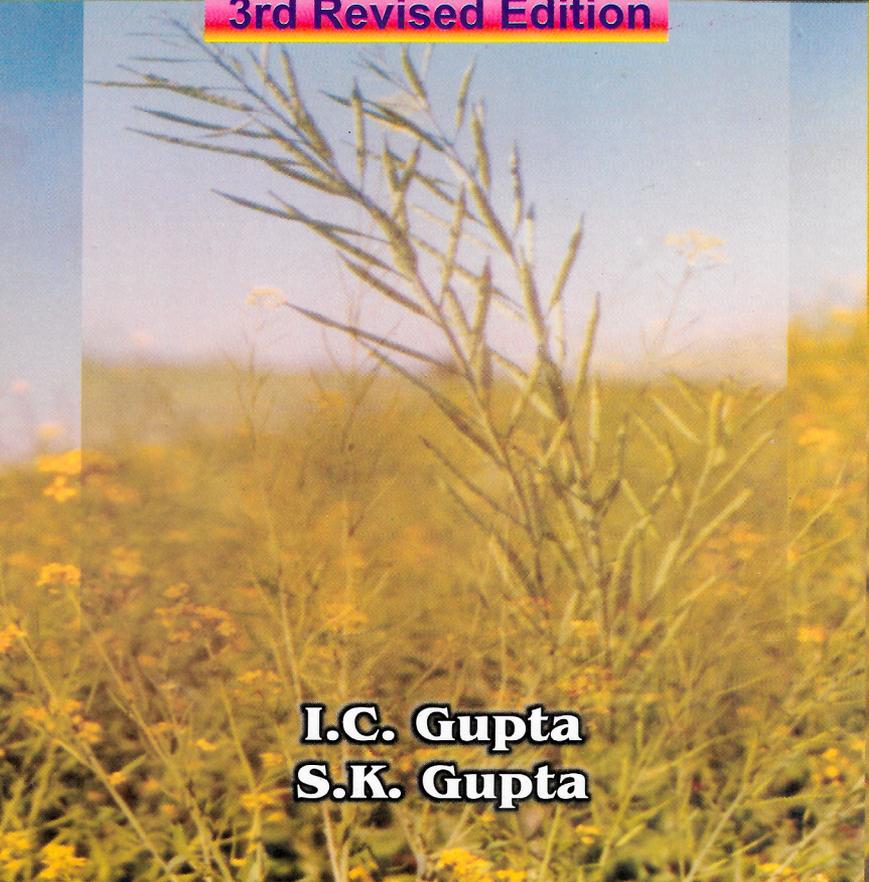


# **Use of Saline Water in Agriculture**

**3rd Revised Edition**



**I.C. Gupta  
S.K. Gupta**



# **USE OF SALINE WATER IN AGRICULTURE**

**A Study of Arid and Semi-arid Zones of India**

**Revised Third Edition**

**I.C. Gupta  
S.K. Gupta**



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## **PREFACE TO THE THIRD EDITION**

Water is a renewable natural resource. On an average at global scale, water available per capita is 7000 m<sup>3</sup>/annum, which is much above the desired limit of 2000 m<sup>3</sup>/annum. India is also fortunate in having water/capita/annum at a comfortable level. However, spatial and temporal distribution are such that we have an annual cycle of water scarcity and excess periods. Even during excess, as a result of pollution, water for drinking purposes is limited.

Agriculture has been and would continue to be one of the major consumers of fresh water. With burgeoning population and increasingly high standard of living, demand of the domestic and industrial sectors is increasing at a much faster rate. Thus, all eyes are on the agricultural sector to release a part of the fresh water for other sectors. Agricultural sector being the least paying sector, in an open economy, the water to this sector in anyway is going to be snatched by sectors which are able to pay more per unit. Thus, use of saline water and the waters that have been used once and have not lost their potential for use in agriculture need to be exploited for crop production. For arid and semi-arid regions, the use of saline water in agriculture is of vital importance as fresh water through inter-basin transfer of water is quite limited. Moreover, waterlogging and soil salinisation that are inevitable consequences of the introduction of irrigation can be delayed or minimized by exploiting the saline groundwater.

The book, in its third edition, is a compilation of information and technologies that are available for use of saline water in agriculture. In this latest revised edition, old data, which is a treasure of information, has been kept intact but most recent information and supportive data have been included. The last chapter on management technologies has been thoroughly revised to make it a handy source of information to field officers and workers who often find it difficult to search the literature to know about the latest technologies. Although, as before, the book contents have been limited to naturally occurring saline water, some information on other poor quality waters has been included in the first chapter.

Dr. J.S.P. Yadav, Formerly Chairman, ASRB and Ex-Director of the Central Soil Salinity Research Institute, Karnal has been the inspiration behind the first edition of this book. His inspirational goading and advice to revise the book thoroughly in a new edition has been instrumental in bringing the book at the present level. We express our sincere gratitude for his advice and motivation, which has made us to accomplish this difficult task.

We express our sincere thanks to all those who have helped in the first two editions of this book. At this stage, we would like to express our sincere thanks to the teams that have been working tirelessly at various centers in the All India Co-ordinated Project on Research on Use of Saline Water in Agriculture and Management of Salt Affected Soils. Our thanks are also due to Dr. P.S. Minhas, Project Coordinator, and Dr. D.P. Sharma, Principal Scientist at CSSRI, Karnal who have provided all help during the preparation of the revised edition.

We sincerely believe that the book in its revised format would be quite useful to the researchers, planners and policy makers, officers of the line departments and the students. We are confident that this book would not only increase the awareness on this vital subject but also help in preparing scientifically devised plans for implementation in the field.

**I.C. Gupta**  
**S.K. Gupta**

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Haryana	Ambala*	1094.4
	Gurgaon	618.7
	Karnal	622.1
	Kurukshetra	572.3
	Rohtak	541.7
	Mahendragarh	623.9
	Sonepat	461.8
Karnataka	Bangalore	793.6
	Balgaum	607.7
	Bellary	623.0
	Bidar	907.5
	Bijapur	552.8
	Chikmagalur	808.5
	Chitradurg	594.8
	Dharwar	642.0
	Gulbarga	702.3
	Hassan	698.3
	Kolar	730.5
	Mandya	691.2
	Mysore	761.9
	Raichur	661.0
	Shimoga	733.9
Madhya Pradesh	Bhind	658.3
	Datia	739.9
	Dhar	779.1
	Gwalior	761.2
	Jhabua	828.3
	Morena	720.3
	Mandsaur	806.2
	Nimar	844.2
	Nimar (Khargone)	764.7
	Ratlam	798.3
Ujjain	769.0	

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