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THE PRINCIPLES OF
F I E L D D R A I N A G E

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PREFACE

Since the inception of the Government's schemes of assistance for the various forms of field and land drainage, advertisements have frequently appeared in the daily and weekly press for persons 'skilled, experienced, or trained in the business of the cleaning and re-grading of watercourses, farm ditches, tile and mole drainage, able to estimate costs, competent to carry out surveys and prepare schemes, including plans', and so on. This is asking a good deal. There is certainly no harm in asking, even in a country where the opportunity to acquire these accomplishments in practice has been conspicuously lacking for over a generation. The object of this little book is to interest and perhaps assist those whose business it is to organise, devise, advise on and supervise works of field drainage. Its contents are compounded of the elements of soil science, of the results of some ten years' study of field-drainage problems, especially those of heavy land, and of the experience gained since the beginning of the war, by close co-operation with many War Agricultural Executive officials and farmers in dealing with drainage problems in the field. It should not be necessary to apologise for adding to the published works on this subject. Reference to the Bibliography on p. 162 will show that over a period exceeding a hundred years it is not extensive. No effort has been made in this account to deal with the technicalities of surveying, engineering, or even the drainer's art. The author's aim has been to draw attention to the fundamentals of the subject, to portray a philosophy of draining, and to deal with the factors involved and the way in which they influence events in the soil, in the belief that the sounder and more complete the appreciation of any situation is, the more effective the measures taken to deal with it can be made.

In the preparation of this book I have been greatly indebted to my colleague, Dr E. C. Childs, who has read the script and made many helpful comments; to Mr J. Norfolk, for preparing the diagrams; and to Mr C. W. Williamson, for preparing the accompanying photographs. I owe a good deal to a number of friends among the officials of War Agricultural Executive Committees and the County Organisers in the Eastern Counties, as well as to individual farmers, for affording me opportunities to study their

drainage problems. Frequent and lively discussions and arguments with Mr R. G. Kendall, a farmer and drainage contractor, have helped to keep me face to face with realities. In investigational work, too, I am very conscious of all the help and encouragement which I have received from Mr W. S. Mansfield, the Director of the University Farm, and from Professor F. L. Engledow, who has persistently and consistently fought for the recognition of the importance of field-drainage work.

My thanks are due also to those periodicals and journals which have so willingly allowed me to reprint contributions made to them of recent years, as specified in the text, and to the Ministry of Agriculture for permission to make use of the figures shewing the areas approved for mole draining, in Table XI.

H. H. N.

May 1942

PREFACE TO THE SECOND EDITION

This is a new edition in the sense that some alterations and additions have been made to the text. But they are few because, the occasion for reprinting having arisen, it is felt that the book, which was written originally in the context of the national war effort, should contain some reference to more recent events and circumstances. Accordingly slight additions have been made to Chapters I and II, while the Table on pp. 150 and 151, the Appendix giving particulars of Government assistance for Drainage Work, and the Bibliography on page 160 have all been brought up to date.

H. H. N.

September 1952

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