

# Preface

Many excellent texts are available on the theoretical science and mathematics of soil physics. These cover in detail the principles and theories behind the science and how many of the equations were derived. However, most of these texts are heavily mathematics based, requiring calculus and differential equation training in order to understand how these were derived and are functional.

The goal of *Applied Soil Physics* is to demystify the complicated math necessary to derive many of the formulas used in soil physics and to concentrate on the applications of these. We avoid complicated mathematics in our approach, focusing on how to use these in actual field and laboratory situations with numerous examples of how practitioners can successfully use the information covered in this book.

Four chapters are included: (1) Soil Physical Properties; (2) Soil Drainage; (3) Rootzone Selection and Modifications; and (4) Water Management and Conservation. Chapter 1 covers the basics of soil physical properties which will be applied in subsequent chapters. Chapter 2 covers the principles and practices of necessary calculations when determining appropriate and sufficient drainage for a particular situation and site. Chapter 3 covers the science of determining an appropriate rootzone profile for playability and sufficient drainage while Chap. 4 covers irrigation practices to maximize water management and conservation.

Our wish is to provide a useful text to help students, architects, field designers, construction supervisors, governing boards, greens committee chairs and members, as well as other interested parties on how to scientifically design, test, and construct a successful facility that meets the playability needs of the

participants yet provide the necessary moisture management for field supervisors. We welcome your comments and suggestions and wish you the best in applying the science of soil physics.

Clemson, SC, USA  
Clemson, SC, USA  
Clemson, SC, USA

Lambert B. McCarty  
Lewis Ray Hubbard, Jr.  
Virgil Quisenberry

Applied Soil Physical Properties, Drainage, and  
Irrigation Strategies.

McCarty, L.B.; Hubbard Jr., L.R.; Quisenberry, V.  
2016, XX, 314 p. 153 illus., 125 illus. in color.,  
Hardcover

ISBN: 978-3-319-24224-8